



MARINA COAST WATER DISTRICT

11 RESERVATION ROAD, MARINA, CA 93933-2099

Home Page: www.mcwd.org

TEL: (831) 384-6131 FAX: (831) 883-5995

DIRECTORS

JAN SHRINER
President

HERBERT CORTEZ
Vice President

BRAD IMAMURA
THOMAS P. MOORE
GAIL MORTON

Agenda

**Regular Board Meeting, Board of Directors
Marina Coast Water District
and**

**Regular Board Meeting, Board of Directors
Marina Coast Water District Groundwater Sustainability Agency
Hybrid Meeting**

**920 2nd Avenue, Suite A, Marina, California
and Zoom Teleconference**

Tuesday, December 13, 2022, 6:30 p.m. PST

Due to Governor Newsom's Executive Order N-29-20 and recommendations on protocols to contain the spread of COVID-19, some staff and some Board members will be attending the December 13, 2022 meeting in person and others remotely from various locations. Members of the public may not yet attend the Board meeting in person but can continue to attend remotely via Zoom conference. The public is strongly encouraged to use the Zoom app for best reception.

There may be limited opportunity to provide verbal comments during the meeting. Persons who are participating via telephone will need to press *9 to be acknowledged for comments. Members of the public participating by Zoom will be placed on mute during the proceedings and will be acknowledged only when public comment is allowed, after requesting and receiving recognition from the Board President. Public comment on the action item can also be submitted in writing to Paula Riso at priso@mcwd.org by 9:00 am on Tuesday, December 13, 2022; such comments will be distributed to the MCWD Board before the meeting.

This meeting may be accessed remotely using the following Zoom link:

<https://us02web.zoom.us/j/81289951395?pwd=bFh2bTBRWGxGdllxcHUyUWE5SzdxUT09>

Passcode: 211586

To participate via phone, please call: 1-669-900-9128; Meeting ID: 812 8995 1395 Passcode: 211586

Our Mission: We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.

1. Call to Order

2. Administer Oath of Office

Action: The Oath of Office will be administered to Brad Imamura, Gail Morton and Jan Shriner so they can serve as Directors to the Marina Coast Water District Board.

(Page 1)

This agenda is subject to revision and may be amended prior to the scheduled meeting. Pursuant to Government Code section 54954.2(a)(1), the agenda for each meeting of the Board shall be posted at the District offices at 11 Reservation Road, Marina. A complete Board packet containing all enclosures and staff materials will be available for public review on the District website, Thursday, December 8, 2022. Information about items on this agenda or persons requesting disability related modifications and/or accommodations should contact the Board Clerk 48 hours prior to the meeting at: 831-883-5910

3. Roll Call

4. [Election of Board President and Vice-President for 2023](#)

(Page 4)

5. Public Comment on Closed Session Items *Anyone wishing to address the Board on matters appearing on Closed Session may do so at this time. Please limit your comment to four minutes. The public may comment on any other items listed on the agenda at the time they are considered by the Board.*

6. Closed Session

- A. Pursuant to Government Code section 54956.9(d)(4)
Conference with Legal Counsel – Liability Claim
Claimant: Peter Le
Agency claimed against: Marina Coast Water District

Reconvene to Open Session Estimated to be at 7:00 p.m.

7. Reportable Actions Taken During Closed Session *The Board will announce any reportable action taken during closed session and the vote or abstention on that action of every director present and may take additional action in open session as appropriate. Any closed session items not completed may be continued to after the end of all open session items.*

8. Pledge of Allegiance

9. Oral Communications *Anyone wishing to address the Board on matters not appearing on the Agenda may do so at this time. Please limit your comment to four minutes. The public may comment on any other items listed on the agenda at the time they are considered by the Board.*

10. Presentation

- A. [Adopt Resolution No. 2022-54 to Recognize Matt Zefferman for 4 Years of Outstanding and Dedicated Service as a Director to the Marina Coast Water District](#)
(Page 9)
- B. [Receive a Presentation from Probolsky Research on the Marina Coast Water District General Survey and Accept the Survey Results](#)
(Page 13)

11. [Consent Calendar](#)

- A. [Receive and File the Check Register for the Month of October 2022](#)
(Page 16)
- B. [Receive and File the Check Register for the Month of November 2022](#)
(Page 21)
- C. [Approve the Draft Minutes of the Regular Joint Board/GSA Meeting of October 17, 2022](#)
(Page 27)

- D. [Approve the Draft Minutes of the Special Joint Board/GSA Meeting of November 7, 2022](#)
(Page 33)
- E. [Approve the Draft Minutes of the 5:00 p.m. Special Joint Board/GSA Meeting of November 29, 2022](#)
(Page 36)
- F. [Approve the Draft Minutes of the 6:30 p.m. Special Joint Board/GSA Meeting of November 29, 2022](#)
(Page 39)
- G. [Approve the Draft Minutes of the Special Joint Board/GSA Meeting of November 30, 2022](#)
(Page 43)
- H. [Approve the Proposed Regular Board/GSA Meeting and Workshop Meeting Schedule for 2023](#)
(Page 47)
- I. [Receive the Validated 2021 Water Loss Report](#)
(Page 49)

12. Action Items *The Board will review and discuss agenda items and take action or direct staff to return to the Board for action at a following meeting. The public may address the Board on these Items as each item is reviewed by the Board. Please limit your comment to four minutes.*

- A. [Receive Information on AB 2449 and Consider Authorizing a Return to Traditional Brown Act Requirements for Teleconference Attendance by Board Members](#)
(Page 76)
- B. [Discuss Reconfiguring the Standing Committees of the Board and Director Participation of the Standing Committees](#)
(Page 79)

13. Informational Items *Informational items are normally provided in the form of a written report or verbal update and may not require Board action. The public may address the Board on Informational Items as they are considered by the Board. Please limit your comments to four minutes.*

- A. General Manager's Report
- B. Committee and Board Liaison Reports
- B. Executive Committee
- C. Community Outreach Committee
- D. M1W Board Member Liaison

14. Board Member Requests for Future Agenda Items

15. Director's Comments *Director reports on meetings with other agencies, organizations and individuals on behalf of the District and on official District matters.*

16. Adjournment *Set or Announce Next Meeting(s), date(s), time(s), and location(s):*

Regular Meeting: Monday, January 23, 2023, 6:30 p.m.

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 2

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Administer Oath of Office

Staff Recommendation: Administer the oath of office to Brad Imamura, Gail Morton, and Jan Shriner.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: In accordance with the certified November 8, 2022 election results, three individuals are to be sworn in to begin serving new four-year terms as members of the District Board of Directors. Brad Imamura, Gail Morton, and Jan Shriner will be sworn in at this meeting.

“I, _____, do solemnly swear (or affirm) that I will support and defend the Constitution of the United States and the Constitution of the State of California against all enemies, foreign and domestic; that I will bear true faith and allegiance to the Constitution of the United States and the Constitution of the State of California; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties upon which I am about to enter.”

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: ____ Yes X No **Funding Source/Recap:** None

Other Considerations: None.

Material Included for Information/Consideration: Certified November 8, 2022 election results.

Action Required: ____ Resolution ____ Motion ____ Review X Oath

Board Action

Motion By _____ Seconded By _____ No Action Taken _____

Ayes _____ Abstained _____

Noes _____ Absent _____

CERTIFICATE OF REGISTRAR OF VOTERS

In the Matter of the CANVASS OF THE VOTES CAST
at the **General Election**
held on November 8, 2022

} ss

I, **Gina Martinez**, Registrar of Voters of the County of Monterey, State of California
hereby certify;

THAT an election was held within the boundaries of the **Marina Coast Water District**
on November 8, 2022 for the purpose of electing **(3) Director(s)** to the **Marina Coast Water**
District, and; I caused to have processed and recorded the votes from the canvass of all
ballots cast at said election within the boundaries of the **Marina Coast Water District**.

I HEREBY FURTHER CERTIFY that the record of votes cast at said election is set
forth in Exhibit "A" attached hereto and incorporated herein by reference as though fully set
forth at length.

IN WITNESS WHEREOF, I have hereunto affixed my hand and official seal this
Wednesday, November 30, 2022 and filed this date with the **Marina Coast Water District**.


Gina Martinez
Registrar of Voters



Marina Coast Water District, Director (Vote for 3) **** - Insufficient Turnout to Protect Voter Privacy

District	Turnout	Registered Voters	BRAD IMAMURA		ROLAND LEE SOLTESZ		JAN SHRINER		GAIL MORTON		Total Votes
Countywide											
Electionwide											
Vote by Mail (VBM)	8,340	17,890	3,052	21.26%	2,201	15.33%	4,707	32.79%	4,396	30.62%	14,356
Early Voting (EV)	43	17,890	18	30.00%	10	16.67%	21	35.00%	11	18.33%	60
Polling Place (PP)	654	17,890	230	25.30%	158	17.38%	303	33.33%	218	23.98%	909
Electionwide - Total	9,037	17,890	3,300	21.53%	2,369	15.46%	5,031	32.83%	4,625	30.18%	15,325
Congressional											
19th Congressional District											
Vote by Mail (VBM)	8,340	17,890	3,052	21.26%	2,201	15.33%	4,707	32.79%	4,396	30.62%	14,356
Early Voting (EV)	43	17,890	18	30.00%	10	16.67%	21	35.00%	11	18.33%	60
Polling Place (PP)	654	17,890	230	25.30%	158	17.38%	303	33.33%	218	23.98%	909
19th Congressional District - Total	9,037	17,890	3,300	21.53%	2,369	15.46%	5,031	32.83%	4,625	30.18%	15,325
Senatorial Districts											
17th State Senatorial District											
Vote by Mail (VBM)	8,340	17,890	3,052	21.26%	2,201	15.33%	4,707	32.79%	4,396	30.62%	14,356
Early Voting (EV)	43	17,890	18	30.00%	10	16.67%	21	35.00%	11	18.33%	60
Polling Place (PP)	654	17,890	230	25.30%	158	17.38%	303	33.33%	218	23.98%	909
17th State Senatorial District - Total	9,037	17,890	3,300	21.53%	2,369	15.46%	5,031	32.83%	4,625	30.18%	15,325
Assembly Districts											
30th State Assembly District											
Vote by Mail (VBM)	8,340	17,890	3,052	21.26%	2,201	15.33%	4,707	32.79%	4,396	30.62%	14,356
Early Voting (EV)	43	17,890	18	30.00%	10	16.67%	21	35.00%	11	18.33%	60
Polling Place (PP)	654	17,890	230	25.30%	158	17.38%	303	33.33%	218	23.98%	909
30th State Assembly District - Total	9,037	17,890	3,300	21.53%	2,369	15.46%	5,031	32.83%	4,625	30.18%	15,325
Supervisorial Districts											
4th Supervisorial District											
Vote by Mail (VBM)	8,340	17,890	3,052	21.26%	2,201	15.33%	4,707	32.79%	4,396	30.62%	14,356
Early Voting (EV)	43	17,890	18	30.00%	10	16.67%	21	35.00%	11	18.33%	60
Polling Place (PP)	654	17,890	230	25.30%	158	17.38%	303	33.33%	218	23.98%	909
4th Supervisorial District - Total	9,037	17,890	3,300	21.53%	2,369	15.46%	5,031	32.83%	4,625	30.18%	15,325
City Districts											
City of Marina											
Vote by Mail (VBM)	5,712	12,311	2,159	21.38%	1,596	15.80%	3,213	31.81%	3,132	31.01%	10,100
Early Voting (EV)	20	12,311	8	22.86%	7	20.00%	13	37.14%	7	20.00%	35
Polling Place (PP)	446	12,311	174	27.19%	111	17.34%	200	31.25%	155	24.22%	640
City of Marina - Total	6,178	12,311	2,341	21.73%	1,714	15.91%	3,426	31.80%	3,294	30.57%	10,775
City of Seaside											
Vote by Mail (VBM)	1,091	2,738	377	22.31%	266	15.74%	578	34.20%	469	27.75%	1,690
Early Voting (EV)	5	2,738	2	28.57%	1	14.29%	2	28.57%	2	28.57%	7
Polling Place (PP)	140	2,738	41	23.84%	29	16.86%	62	36.05%	40	23.26%	172
City of Seaside - Total	1,236	2,738	420	22.47%	296	15.84%	642	34.35%	511	27.34%	1,869
City Districts sub-district											
City of Marina Council											
District 1											
Vote by Mail (VBM)	1,121	2,770	388	20.07%	320	16.55%	640	33.11%	585	30.26%	1,933
Early Voting (EV)	2	2,770	1	50.00%	0	0.00%	1	50.00%	0	0.00%	2
Polling Place (PP)	111	2,770	44	27.85%	30	18.99%	46	29.11%	38	24.05%	158
City of Marina Council District 1 - Total	1,234	2,770	433	20.69%	350	16.72%	687	32.82%	623	29.77%	2,093

District	Turnout	Registered Voters	BRAD IMAMURA		ROLAND LEE SOLTESZ		JAN SHRINER		GAIL MORTON		Total Votes
City of Marina Council											
District 2											
Vote by Mail (VBM)	1,803	3,712	696	21.51%	523	16.17%	1,005	31.07%	1,011	31.25%	3,235
Early Voting (EV)	6	3,712	2	20.00%	2	20.00%	4	40.00%	2	20.00%	10
Polling Place (PP)	143	3,712	58	29.15%	37	18.59%	59	29.65%	45	22.61%	199
City of Marina Council District 2	1,952	3,712	756	21.95%	562	16.32%	1,068	31.01%	1,058	30.72%	3,444
- Total											
City of Marina Council											
District 3											
Vote by Mail (VBM)	1,637	3,384	662	22.16%	435	14.56%	955	31.97%	935	31.30%	2,987
Early Voting (EV)	6	3,384	2	16.67%	2	16.67%	5	41.67%	3	25.00%	12
Polling Place (PP)	124	3,384	47	24.87%	29	15.34%	60	31.75%	53	28.04%	189
City of Marina Council District 3	1,767	3,384	711	22.30%	466	14.62%	1,020	31.99%	991	31.09%	3,188
- Total											
City of Marina Council											
District 4											
Vote by Mail (VBM)	1,151	2,445	413	21.23%	318	16.35%	613	31.52%	601	30.90%	1,945
Early Voting (EV)	6	2,445	3	27.27%	3	27.27%	3	27.27%	2	18.18%	11
Polling Place (PP)	68	2,445	25	26.60%	15	15.96%	35	37.23%	19	20.21%	94
City of Marina Council District 4	1,225	2,445	441	21.51%	336	16.39%	651	31.76%	622	30.34%	2,050
- Total											
Unincorporated Area											
Unincorporated County Area											
Vote by Mail (VBM)	1,537	2,841	516	20.11%	339	13.21%	916	35.70%	795	30.98%	2,566
Early Voting (EV)	18	2,841	8	44.44%	2	11.11%	6	33.33%	2	11.11%	18
Polling Place (PP)	68	2,841	15	15.46%	18	18.56%	41	42.27%	23	23.71%	97
Unincorporated County Area - Total	1,623	2,841	539	20.10%	359	13.39%	963	35.92%	820	30.59%	2,681

Marina Coast Water District, Director (Vote for 3) ***** - Insufficient Turnout to Protect Voter Privacy

Precinct	Turnout	Registered Voters	BRAD IMAMURA		ROLAND LEE SOLTESZ		JAN SHRINER		GAIL MORTON		Total Votes
Countywide											
Electionwide											
4072											
Vote by Mail (VBM)	727	1,707	249	21.17%	198	16.84%	392	33.33%	337	28.66%	1,176
Early Voting (EV)	4	1,707	****	****	****	****	****	****	****	****	****
Polling Place (PP)	72	1,707	24	28.57%	14	16.67%	27	32.14%	19	22.62%	84
Total	803	1,707	275	21.72%	213	16.82%	420	33.18%	358	28.28%	1,266
4073											
Vote by Mail (VBM)	361	1,011	128	25.00%	68	13.28%	185	36.13%	131	25.59%	512
Early Voting (EV)	0	1,011	0		0		0		0		0
Polling Place (PP)	48	1,011	16	24.62%	11	16.92%	22	33.85%	16	24.62%	65
Total	409	1,011	144	24.96%	79	13.69%	207	35.88%	147	25.48%	577
4082											
Vote by Mail (VBM)	882	1,885	378	23.95%	222	14.07%	513	32.51%	465	29.47%	1,578
Early Voting (EV)	2	1,885	****	****	****	****	****	****	****	****	****
Polling Place (PP)	77	1,885	26	22.41%	20	17.24%	38	32.76%	32	27.59%	116
Total	961	1,885	404	23.79%	243	14.31%	553	32.57%	498	29.33%	1,698
4083											
Vote by Mail (VBM)	578	1,241	209	20.06%	162	15.55%	341	32.73%	330	31.67%	1,042
Early Voting (EV)	0	1,241	0		0		0		0		0
Polling Place (PP)	53	1,241	21	26.25%	19	23.75%	22	27.50%	18	22.50%	80
Total	631	1,241	230	20.50%	181	16.13%	363	32.35%	348	31.02%	1,122
4084											
Vote by Mail (VBM)	338	786	131	21.44%	103	16.86%	189	30.93%	188	30.77%	611
Early Voting (EV)	2	786	****	****	****	****	****	****	****	****	****
Polling Place (PP)	18	786	11	40.74%	7	25.93%	4	14.81%	5	18.52%	27
Total	358	786	143	22.20%	112	17.39%	195	30.28%	194	30.12%	644
4085											
Vote by Mail (VBM)	543	1,529	179	20.09%	158	17.73%	299	33.56%	255	28.62%	891
Early Voting (EV)	2	1,529	****	****	****	****	****	****	****	****	****
Polling Place (PP)	58	1,529	23	29.49%	11	14.10%	24	30.77%	20	25.64%	78
Total	603	1,529	203	20.91%	169	17.40%	324	33.37%	275	28.32%	971
4086											
Vote by Mail (VBM)	606	1,203	225	21.07%	195	18.26%	319	29.87%	329	30.81%	1,068
Early Voting (EV)	3	1,203	****	****	****	****	****	****	****	****	****
Polling Place (PP)	45	1,203	15	20.55%	11	15.07%	27	36.99%	20	27.40%	73
Total	654	1,203	240	20.98%	206	18.01%	348	30.42%	350	30.59%	1,144
4087											
Vote by Mail (VBM)	859	1,723	340	21.85%	225	14.46%	497	31.94%	494	31.75%	1,556
Early Voting (EV)	1	1,723	****	****	****	****	****	****	****	****	****
Polling Place (PP)	80	1,723	32	32.32%	19	19.19%	28	28.28%	20	20.20%	99
Total	940	1,723	373	22.52%	244	14.73%	525	31.70%	514	31.04%	1,656
4088											
Vote by Mail (VBM)	933	2,018	324	20.43%	256	16.14%	508	32.03%	498	31.40%	1,586
Early Voting (EV)	4	2,018	****	****	****	****	****	****	****	****	****
Polling Place (PP)	59	2,018	21	26.25%	13	16.25%	28	35.00%	18	22.50%	80
Total	996	2,018	347	20.74%	271	16.20%	537	32.10%	518	30.96%	1,673
4089											
Vote by Mail (VBM)	665	1,272	163	15.16%	135	12.56%	430	40.00%	347	32.28%	1,075
Early Voting (EV)	4	1,272	****	****	****	****	****	****	****	****	****
Polling Place (PP)	55	1,272	9	13.24%	12	17.65%	31	45.59%	16	23.53%	68

Precinct		Turnout	Registered Voters	BRAD IMAMURA		ROLAND LEE SOLTESZ		JAN SHRINER		GAIL MORTON		Total Votes
	Total	724	1,272	174	15.13%	148	12.87%	464	40.35%	364	31.65%	1,150
4188												
	Vote by Mail (VBM)	755	1,499	284	20.16%	213	15.12%	442	31.37%	470	33.36%	1,409
	Early Voting (EV)	4	1,499	****	****	****	****	****	****	****	****	****
	Polling Place (PP)	47	1,499	21	28.77%	9	12.33%	22	30.14%	21	28.77%	73
	Total	806	1,499	307	20.60%	223	14.97%	467	31.34%	493	33.09%	1,490
9436												
	Vote by Mail (VBM)	872	1,569	353	23.68%	204	13.68%	486	32.60%	448	30.05%	1,491
	Early Voting (EV)	14	1,569	6	54.55%	1	9.09%	3	27.27%	1	9.09%	11
	Polling Place (PP)	13	1,569	6	20.69%	6	20.69%	10	34.48%	7	24.14%	29
	Total	899	1,569	365	23.84%	211	13.78%	499	32.59%	456	29.78%	1,531
9438												
	Vote by Mail (VBM)	3	20	****	****	****	****	****	****	****	****	****
	Early Voting (EV)	1	20	****	****	****	****	****	****	****	****	****
	Polling Place (PP)	20	20	1	4.35%	4	17.39%	13	56.52%	5	21.74%	23
	Total	24	20	1	3.85%	4	15.38%	15	57.69%	6	23.08%	26
9439												
	Vote by Mail (VBM)	218	427	89	24.79%	62	17.27%	105	29.25%	103	28.69%	359
	Early Voting (EV)	2	427	****	****	****	****	****	****	****	****	****
	Polling Place (PP)	9	427	****	****	****	****	****	****	****	****	****
	Total	229	427	94	24.93%	65	17.24%	114	30.24%	104	27.59%	377
	Electionwide - Total	9,037	17,890	3,300	21.53%	2,369	15.46%	5,031	32.83%	4,625	30.18%	15,325

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 4

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Election of Board President and Vice-President

Staff Recommendation: The Board of Directors elect a President and Vice-President to serve the next 1-year term.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The Board Procedures Manual states in part:

“The Board of Directors shall have a President who is elected by the Board from among the five Directors. The President shall be elected annually in the month of December but not before any newly elected or reelected Director(s) have taken office. No Director shall serve more than three (3) consecutive years as President, unless a majority of the Directors cannot agree on who should be the new President, then the existing President shall remain President until the issue can be resolved.”

“This Board of Directors shall have one Vice-President who shall be elected by the Board from among the five (5) Directors at the same time as the President is elected. The Vice-President shall be elected annually in the month of December but not before any newly elected or reelected Director(s) have taken office. No Director shall serve more than three (3) consecutive years as Vice President. If a majority of the Directors cannot agree on who should be the new Vice President, then the existing Vice President shall continue in office until the issue can be resolved.”

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Action: Not applicable.

Financial Impact: ____ Yes X No **Funding Source/Recap:** None

Other Considerations: None.

Material Included for Information/Consideration: None.

Action Required: ____ Resolution X Motion ____ Review

Board Action

Motion By _____ Seconded By _____ No Action Taken _____

Ayes _____

Abstained _____

Noes _____

Absent _____

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 10-A

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Adopt Resolution No. 2022-54 to Recognize Matt Zefferman for 4 Years of Outstanding and Dedicated Service as Director to the Marina Coast Water District

Staff Recommendation: The Board of Directors adopt Resolution No. 2022-54 recognizing Matt Zefferman for 4 years of outstanding and dedicated service as Director to the Marina Coast Water District.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The Board of Directors would like to present a resolution expressing its appreciation to Matt Zefferman for his unselfish commitment and dedication as a Director on the Marina Coast Water District Board for the past 4 years. His strong leadership in support of the mission and policy governance of the District served as a superior example to others and enabled him to make significant contributions to the many achievements of the District during his tenure on the Marina Coast Water District Board of Directors.

During Matt's tenure as a member of the Board of Directors, the District made great strides with the Regional Urban Water Augmentation Project transmission and distribution pipeline project; completed the Water, Sewer, and Recycled Water Master Plans; completed a Capacity Fee Study; got the A1/A2 Reservoir and B/C Booster Pump project underway; completed the Emergency Generator Project; issued \$23 million in Bonds; adopted the Recycled Water Study; and provided inspiration and insight to the initiation of the Climate Action Plan and the District's first major steps toward reducing greenhouse gas emissions.

Matt contributed significantly to the District and to the Board of Directors by serving as a Director on the Water Conservation Commission, Joint City-District Committee, Community Outreach Committee; Special Districts Association, Monterey One Water alternate, LAFCO alternate, and, the SVBGSA Ad Hoc Committee. Matt's commitment to the ratepayer was front and center at the Community Outreach Committee; he requested the inclusion of the Fort Ord community in our Q&A town halls, he requested the District to maintain a clean and safe space at our properties, he requested our administration office to improve the graphics for water and wastewater use for clarity, he requested that we track the impact of COVID-19 on our monthly household billings and co-lead the initiative to seek COVID-19 relief for our MCWD families for their water bills. Matt's leadership assisted the board in actively showing our ratepayers the positive impacts of the District.

Matt's calm demeanor, ability to distill content of discussion, and create succinct comments as a Director helped to focus the Board on matters to address and pathways to solutions. He has been a pleasure to work with and is welcome to return at any time he and the voters are willing to return him to the work of the Board.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Action: Not applicable.

Financial Impact: _____ Yes X No **Funding Source/Recap:** None

Material Included for Information/Consideration: Resolution No. 2022-54.

Action Required: X Resolution _____ Motion _____ Review
(Roll call vote is required.)

Board Action

Motion By _____ Seconded By _____ No Action Taken _____

Ayes _____

Abstained _____

Noes _____

Absent _____

December 13, 2022

Resolution No. 2022 - 54
Resolution of the Board of Directors
Marina Coast Water District
Recognizing Matt Zefferman for 4 Years of
Outstanding and Dedicated Services as Director
to the Marina Coast Water District

RESOLVED by the Board of Directors (“Directors”) of the Marina Coast Water District (“District”), at a regular meeting duly called and held on December 13, 2022 at 920 2nd Avenue, Suite A, Marina, California as follows:

WHEREAS, Matt Zefferman served as a Director on the Marina Coast Water District Board from 2018 to 2022; and,

WHEREAS, Matt Zefferman’s strong leadership in support of the mission and policy governance of the District served as a superior example to others and enabled him to make significant contributions to the many achievements of the District during his tenure on the Board; and,

WHEREAS, Matt Zefferman contributed significantly to the District and to the Board of Directors by serving as a director on the Water Conservation Commission, Joint City-District Committee, Community Outreach Committee; Special Districts Association, Monterey One Water alternate, LAFCO alternate, and, the SVBGSA Ad Hoc Committee; and,

WHEREAS, Matt’s commitment to the ratepayer was front and center as he requested the inclusion of the Fort Ord community in our town hall meetings; requested the District to maintain a clean and safe space at our properties; requested our administration office to improve the graphics for water and wastewater use for clarity; requested that we track the impact of COVID-19 on our monthly household billings, and co-lead the initiative to seek COVID-19 relief for our MCWD families for their water bills. Matt’s leadership assisted the board in actively showing our ratepayers the positive impacts of the District; and,

WHEREAS, Matt’s calm demeanor, ability to distill content of discussion, and create succinct comments as a Director helped to focus the Board on matters to address and pathways to solutions. He has been a pleasure to work with and is welcome to return at any time he and the voters are willing to return him to the work of the Board.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the District does hereby express its gratitude and commend Matt Zefferman for outstanding leadership and dedicated service to the District during his 4 years on the Board; and,

RESOLVED FURTHER, the District wishes Matt Zefferman continued professional and personal success as he leaves the District.

PASSED AND ADOPTED on December 13, 2022, by the Board of Directors of the Marina Coast Water District by the following roll call vote:

Ayes: Directors _____

Noes: Directors _____

Absent: Directors _____

Abstained: Directors _____

, President

ATTEST:

Remleh Scherzinger, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2022-54 adopted December 13, 2022.

Remleh Scherzinger, Secretary

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 10-B

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Receive a Presentation from Probolsky Research on the Marina Coast Water District General Survey and Accept the Survey Results

Staff Recommendation: The Board of Directors receive a presentation from Probolsky Research on the Marina Coast Water District general survey and accept the survey results.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: Probolsky Research was retained to conduct a general survey of the District's customers to understand how our community receives their information and how they identify the District and its role.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Action: Not applicable.

Financial Impact: ____ Yes X No **Funding Source/Recap:** None

Other Considerations: None.

Material Included for Information/Consideration: None.

Action Required: ____ Resolution X Motion ____ Review

Board Action

Motion By _____ Seconded By _____ No Action Taken _____

Ayes _____

Abstained _____

Noes _____

Absent _____

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 11

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Consent Calendar

Staff Recommendation: The Board of Directors approve the Consent Calendar as presented.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Consent calendar consisting of:

- A) Receive and File the Check Register for the Month of October 2022
- B) Receive and File the Check Register for the Month of November 2022
- C) Approve the Draft Minutes of the Regular Joint Board/GSA Meeting of October 17, 2022
- D) Approve the Draft Minutes of the Special Joint Board/GSA Meeting of November 7, 2022
- E) Approve the Draft Minutes of the 5:00 PM Special Joint Board/GSA Meeting of November 29, 2022
- F) Approve the Draft Minutes of the 6:30 PM Special Joint Board/GSA Meeting of November 29, 2022
- G) Approve the Draft Minutes of the Special Joint Board/GSA Meeting of November 30, 2022
- H) Approve the 2023 Meeting Schedule
- I) Receive the Validated 2021 Water Loss Report

Discussion/Analysis: See individual transmittals.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Action: Not applicable.

Other Considerations: The Board of Directors can approve these items together or they can pull them separately for discussion.

Material Included for Information/Consideration: Check Register for October 2022; check register for November 2022; draft minutes of October 17, 2022; draft minutes of the Special Joint Board/GSA meeting of November 7, 2022; draft minutes of the 5:00 PM Special Joint Board/GSA meeting of November 29, 2022; draft minutes of the 6:30 PM Special Joint Board/GSA meeting of November 29, 2022; draft minutes of the Special Joint Board/GSA meeting of November 30, 2022 and, Validated 2021 Water Loss Report.

Action Required: _____Resolution X Motion _____Review
(Roll call vote is required.)

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____

Abstained_____

Noes_____

Absent_____

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 11-A

Meeting Date: December 13, 2022

Prepared By: Remleh Scherzinger

Approved By: Remleh Scherzinger

Agenda Title: Receive and File the Check Register for the Month of October 2022

Staff Recommendation: The Board of Directors receive and file the October 2022 expenditures totaling \$1,686,039.82.

Background: *Strategic Plan, Objective No. 3 – Our objective is to manage public funds to assure financial stability, prudent rate management and demonstrate responsible stewardship. Our fiscal strategy is to forecast, control and optimize income and expenditures in an open and transparent manner. We will efficiently use our financial resources to assure availability to fund current and future demands.*

Discussion/Analysis: These expenditures were paid in October 2022 and the Board is requested to receive and file the check register.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: ____Yes ____X____No **Funding Source/Recap:** Expenditures are allocated across the six cost centers; 01-Marina Water, 02-Marina Sewer, 03- Ord Water, 04-Ord Sewer, 05-Recycled Water, 06-Regional Water.

Other Consideration: None.

Material Included for Information/Consideration: October 2022 Summary Check Register.

Action Required: ____Resolution ____X____Motion ____Review
(Roll call vote is required.)

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____

Abstained_____

Noes_____

Absent_____

OCTOBER 2022 SUMMARY CHECK REGISTER

DATE	CHECK #	CHECK DESCRIPTION	AMOUNT
10/10/2022	ACH	Friedman & Springwater LLP	62,288.50
10/10/2022	72710 - 72727	Check Register	308,805.96
10/17/2022	72728 - 72762	Check Register	42,134.58
10/24/2022	72763 - 72790	Check Register	749,522.21
10/12/2022	501420 - 501427	Check Register	8,422.75
10/14/2022	ACH	CalPERS	27,154.64
10/14/2022	ACH	Payroll Direct Deposit	124,734.57
10/14/2022	ACH	Empower Retirement	11,695.66
10/14/2022	ACH	Internal Revenue Service	51,456.22
10/14/2022	ACH	State of California - EDD	12,021.70
10/14/2022	ACH	WageWorks, Inc.	698.22
10/14/2022	501428 - 501429	Check Register	1,175.80
10/18/2022	501430	Board Compensation Checks and Direct Deposit	507.92
10/18/2022	ACH	Internal Revenue Service	84.16
10/24/2022	501431	Check Register	75,481.63
10/28/2022	ACH	CalPERS	27,102.68
10/28/2022	ACH	Payroll Direct Deposit	115,475.82
10/28/2022	ACH	Empower Retirement	10,174.54
10/28/2022	ACH	Internal Revenue Service	45,184.73
10/28/2022	ACH	State of California - EDD	10,378.51
10/28/2022	ACH	WageWorks, Inc.	698.22
10/28/2022	501432 - 501433	Check Register	840.80
TOTAL DISBURSEMENTS			<u><u>1,686,039.82</u></u>

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
ACH	09/09/2022	10/10/2022	Friedman & Springwater LLP	Legal Services 08/2022	62,288.50
72710	09/30/2022	10/10/2022	Ace Hardware of Watsonville, Inc.	General Supplies	227.95
72711	09/21/2022	10/10/2022	Grainger	Fuses - Well 11, Reservation LS; General Supplies	667.81
72712	09/21/2022	10/10/2022	Area Communications	Answering Service 08/24 - 09/20	390.71
72713	08/31/2022	10/10/2022	Schaaf & Wheeler	Construction Meetings, Review Submittals - Ord Village LS FM Improvements; Developers (Campus Town, Dunes 1B Promenade, Dunes 2 West, Enclave at Cypress Grove, Wathen-Castanos Homes)	20,344.10
72714	09/27/2022	10/10/2022	Monterey Bay Analytical Services	Laboratory Testing	420.00
72715	09/19/2022	10/10/2022	Rauch Communication Consultants, Inc.	Public Relations 07/2022	7,263.75
72716	09/12/2022	10/10/2022	Carollo Engineers, Inc.	RFI's, Record Drawings, Project Administration - RUWAP	11,268.15
72717	09/28/2022	10/10/2022	O'Reilly Automotive Stores, Inc.	Auto/ General Supplies	8.76
72718	09/14/2022	10/10/2022	Richards, Watson & Gershon	Legal Services 08/2022	92,611.75
72719	09/15/2022	10/10/2022	Remy Moose Manley, LLP	Legal Services 08/2022	117,138.42
72720	09/29/2022	10/10/2022	ICONIX Waterworks (US), Inc.	Gate Valve, Fittings - Neeson LS	369.69
72721	09/16/2022	10/10/2022	Boutin Jones, Inc.	Legal Services 08/2022	418.00
72722	09/22/2022	10/10/2022	Buckles-Smith Electric Co.	General Supplies	58.92
72723	09/20/2022	10/10/2022	Aleshire & Wynder, LLP	Legal Services 07/2022 - 08/2022	18,337.68
72724	09/27/2022	10/10/2022	AT&T	Phone and Alarm Line Services 09/2022	148.07
72725	09/20/2022	10/10/2022	ALK Services, Inc.	Door Lock Replacement - IOP Office	852.15
72726	09/25/2022	10/10/2022	WEX Bank	Fleet Gasoline 09/2022	6,340.33
72727	02/28/2022	10/10/2022	Salinas Valley Basin Groundwater Sustainability Agency	Corral de Tierra GSP Retention	31,939.72
72728	09/27/2022	10/17/2022	Becks Shoe Store, Inc. - Salinas	Boot Benefit - (2) O&M	362.51
72729	09/28/2022	10/17/2022	Carlons Fire Extinguisher	First Aid Supplies	401.50
72730	09/28/2022	10/17/2022	Home Depot Credit Services	General Supplies	227.91
72731	09/28/2022	10/17/2022	Grainger	General Supplies	85.87
72732	09/30/2022	10/17/2022	Peninsula Welding & Medical Supply, Inc.	Gas Cylinder Tank Rental Fee - Welding Supplies	12.90
72733	10/04/2022	10/17/2022	Monterey Bay Analytical Services	Laboratory Testing	840.00
72734	09/30/2022	10/17/2022	Monterey One Water	Sewer Treatment Charge 09/2022 - 10/2022	335.30
72735	09/29/2022	10/17/2022	HD Supply Facilities Maintenance LTD	General Supplies	436.81
72736	09/30/2022	10/17/2022	DataProse, LLC	Customer Billing Statements 09/2022	4,978.81
72737	09/26/2022	10/17/2022	Beck's Shoe Store, Inc. - Monterey	Boot Benefit - O&M	200.00
72738	09/14/2022	10/17/2022	American Supply Company	Janitorial Supplies	431.59
72739	09/26/2022	10/17/2022	BHI Management Consulting	Plan Development - Strategic Plan	2,800.00
72740	08/20/2022	10/17/2022	Don Chapin Co., Inc	Broken Concrete Disposal - O&M Yard	561.49
72741	10/12/2022	10/17/2022	Daihs USA	Coffee Supplies	255.04
72742	09/27/2022	10/17/2022	Edges Electrical Group, LLC	Electrical Wire - Reservation LS, General Supplies	879.62
72743	09/25/2022	10/17/2022	U.S. Bank National Association	IOP Office Copier Lease 09/20 - 10/19	287.34
72744	10/04/2022	10/17/2022	Monterey Bay Technologies, Inc.	IT Support Services 10/2022	3,600.00

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
72745	09/30/2022	10/17/2022	Access Monterey Peninsula, Inc.	Filming and Production 09/2022	460.00
72746	09/23/2022	10/17/2022	Western Exterminator Company	Pest Control - Beach Office 09/2022	106.75
72747	10/06/2022	10/17/2022	TIAA, FSB	Ord Office Copier, eCopy ScanStation Leases 10/2022	422.04
72748	09/30/2022	10/17/2022	Iron Mountain, Inc.	Shredding Service 09/2022	429.91
72749	09/28/2022	10/17/2022	AT&T	Phone and Alarm Line Services 09/2022	88.80
72750	09/29/2022	10/17/2022	Marina Coast Water District (BLM)	BLM Water, Sewer, Fire Service 09/2022	391.26
72751	10/01/2022	10/17/2022	Pure Janitorial, LLC	Janitorial Service - MCWD, BLM Offices 09/2022	5,000.00
72752	09/30/2022	10/17/2022	Cintas Corporation No. 630	Uniforms, Towels, Rugs 09/2022	981.77
72753	09/22/2022	10/17/2022	ALK Services, Inc.	Door Latch Adjustment - IOP Office	135.00
72754	07/01/2022	10/17/2022	David J. Meadows	Legal Services 05/2022	8,957.37
72755	09/26/2022	10/17/2022	Conservation Rebate Program	486 Sunrise Pl - Landscape Rebate	200.00
72756	11/01/2022	10/17/2022	The Ferguson Group, LLC	Grant Writing and Legislative Advocacy 11/2022	1,700.00
72757	09/26/2022	10/17/2022	Conservation Rebate Program	4737 Sea Crest Dr - (2) Toilet Rebates	150.00
72758	09/26/2022	10/17/2022	Conservation Rebate Program	4371 Shoreline Ct - Toilet Rebate	75.00
72759	09/26/2022	10/17/2022	Conservation Rebate Program	134 Peppertree Pl - Washer Rebate	100.00
72760	09/27/2022	10/17/2022	Dell Marketing LP	(2) Dell Monitors, Optiplex 7000 Computer - Engineering	1,786.45
72761	07/27/2022	10/17/2022	American Water Works Association	Utility Membership 12/2022 - 11/2023	2,443.00
72762	10/07/2022	10/17/2022	Customer Service Refund	Refund Check - 340 Metz Rd	2,010.54
72763	09/30/2022	10/24/2022	Insight Planners	Web Development/ Maintenance and Hosting 09/2022	2,169.00
72764	09/20/2022	10/24/2022	Monterey County Tax Collector	Property Fees	2,068.68
72765	09/20/2022	10/24/2022	Monterey County Tax Collector	Property Fees	2,107.52
72766	10/05/2022	10/24/2022	Pitney Bowes Global Financial Services LLC	Postage Machine Lease 08/09 - 11/08	1,089.75
72767	10/13/2022	10/24/2022	PG&E	Gas and Electric Service 09/2022	101,924.30
72768	10/01/2022	10/24/2022	ACWA Joint Power Insurance Authority	Liability Insurance 10/2022 - 09/2023	126,409.91
72769	10/07/2022	10/24/2022	Pitney Bowes Purchase Power (Postage)	Postage Meter Refill	1,026.99
72770	10/03/2022	10/24/2022	WaterReuse Association	2023 Membership Dues	1,312.50
72771	10/05/2022	10/24/2022	Staples Credit Plan	Drafting Table - Engineering, Office Supplies	2,728.23
72772	09/07/2022	10/24/2022	Anderson Pacific Engineering Construction, Inc.	A1/A2 Tanks B/C Booster - Construction Pmt #11	365,275.00
72773	08/18/2022	10/24/2022	Anderson Pacific Engineering Construction, Inc.	Intermediate Reservoir Valve Replacement - Construction Pmt #3	32,629.08
72774	09/26/2022	10/24/2022	Calcon Systems, Inc.	(2) Spare Sewer Site Radios/ Mounting Brackets; Desalination Plant Electrical Assessment; Programmable Logic Controller - Blackhorse Reservoir; PLC/ SCADA Zone Pressure Integration; SCADA/ WIN-911 Server Upgrade	31,131.19
72775	10/11/2022	10/24/2022	Monterey County Water Resources Agency	Technical/ Professional Assistance - Groundwater Sustainability Plan Development	243.50
72776	10/06/2022	10/24/2022	Boutin Jones, Inc.	Legal Services 09/2022	418.00
72777	09/27/2022	10/24/2022	Griffith, Masuda & Hobbs	Legal Services 08/2022	38,690.63
72778	09/30/2022	10/24/2022	Peninsula Messenger LLC	Courier Service 10/2022	249.00
72779	10/01/2022	10/24/2022	Simpler Systems, Inc.	UB Datapp Maintenance 10/2022	500.00
72780	10/01/2022	10/24/2022	Verizon Connect NWF, Inc.	GPS Service - (28) Fleet Vehicles 09/2022	532.00

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
72781	09/29/2022	10/24/2022	Psomas	Construction Management/ Inspection - Gigling LS FM, Ord Village LS FM Improvements	9,840.00
72782	10/05/2022	10/24/2022	Ferguson Enterprises, Inc.	Janitorial Supplies	153.46
72783	10/06/2022	10/24/2022	Conservation Rebate Program	Schoonover Park - (202) Toilet Rebates	25,250.00
72784	10/05/2022	10/24/2022	Health Educational Services, Inc.	First Aid/ CPR Certification - (15) O&M	1,425.00
72785	10/20/2022	10/24/2022	Customer Service Refund	Refund Check - 274 9th St	40.00
72786	10/20/2022	10/24/2022	Customer Service Refund	Refund Check - 3016 Kennedy Ct	35.00
72787	10/20/2022	10/24/2022	Customer Service Refund	Refund Check - 3039 Marina Dr #10	14.85
72788	10/20/2022	10/24/2022	Customer Service Refund	Refund Check - Hydrant Meter	2,163.37
72789	10/20/2022	10/24/2022	Customer Service Refund	Refund Check - 3016 Minaret Way	36.11
72790	10/20/2022	10/24/2022	Customer Service Refund	Refund Check - 152 Lakewood Dr	59.14
501420	09/25/2022	10/12/2022	AFLAC	Employee Paid Benefits 08/2022 - 09/2022	3,621.57
501421	09/14/2022	10/12/2022	Pinnacle Medical Group, Inc.	Drug Test (DOT) - O&M	115.00
501422			Void		
501423	09/17/2022	10/12/2022	Principal Life	Employee Paid Benefits 10/2022	324.33
501424	09/10/2022	10/12/2022	Lincoln National Life Insurance Company	Life, Short/ Long Term Disability, AD&D Insurance 10/2022	2,955.75
501425	09/16/2022	10/12/2022	Transamerica Life Insurance Company	Employee Paid Benefits 09/2022	1,010.10
501426	10/04/2022	10/12/2022	Employee Reimbursement	ASCE Awards Presentation Conference Per Diem Meal	74.00
501427	09/23/2022	10/12/2022	WageWorks, Inc.	FSA Admin Fees 08/2022 - 09/2022	322.00
ACH	10/14/2022	10/14/2022	CalPERS	Payroll Ending 10/07/2022	27,154.64
ACH	10/14/2022	10/14/2022	Payroll Direct Deposit	Payroll Ending 10/07/2022	124,734.57
ACH	10/14/2022	10/14/2022	Empower Retirement	Payroll Ending 10/07/2022	11,695.66
ACH	10/14/2022	10/14/2022	Internal Revenue Service	Payroll Ending 10/07/2022	51,456.22
ACH	10/14/2022	10/14/2022	State of California - EDD	Payroll Ending 10/07/2022	12,021.70
ACH	10/14/2022	10/14/2022	WageWorks, Inc.	Payroll Ending 10/07/2022	698.22
501428	10/14/2022	10/14/2022	General Teamsters Union	Payroll Ending 10/07/2022	599.00
501429	10/14/2022	10/14/2022	MCS	Payroll Ending 10/07/2022	576.80
501430	10/18/2022	10/18/2022	Board Compensation Checks and Direct Deposit	Board Compensation 09/2022	507.92
ACH	10/18/2022	10/18/2022	Internal Revenue Service	Board Compensation 09/2022	84.16
501431	10/04/2022	10/24/2022	ACWA/ JPIA	Medical, Dental, Vision, EAP Insurance 11/2022	75,481.63
ACH	10/28/2022	10/28/2022	CalPERS	Payroll Ending 10/21/2022	27,102.68
ACH	10/28/2022	10/28/2022	Payroll Direct Deposit	Payroll Ending 10/21/2022	115,475.82
ACH	10/28/2022	10/28/2022	Empower Retirement	Payroll Ending 10/21/2022	10,174.54
ACH	10/28/2022	10/28/2022	Internal Revenue Service	Payroll Ending 10/21/2022	45,184.73
ACH	10/28/2022	10/28/2022	State of California - EDD	Payroll Ending 10/21/2022	10,378.51
ACH	10/28/2022	10/28/2022	WageWorks, Inc.	Payroll Ending 10/21/2022	698.22
501432	10/28/2022	10/28/2022	General Teamsters Union	Payroll Ending 10/21/2022	264.00
501433	10/28/2022	10/28/2022	MCS	Payroll Ending 10/21/2022	576.80
Total Disbursements for October 2022					1,686,039.82

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 11-B

Meeting Date: December 13, 2022

Prepared By: Remleh Scherzinger

Approved By: Remleh Scherzinger

Agenda Title: Receive and File the Check Register for the Month of November 2022

Staff Recommendation: The Board of Directors receive and file the November 2022 expenditures totaling \$2,778,252.61.

Background: *Strategic Plan, Objective No. 3 – Our objective is to manage public funds to assure financial stability, prudent rate management and demonstrate responsible stewardship. Our fiscal strategy is to forecast, control and optimize income and expenditures in an open and transparent manner. We will efficiently use our financial resources to assure availability to fund current and future demands.*

Discussion/Analysis: These expenditures were paid in November 2022 and the Board is requested to receive and file the check register. On November 21, 2022, there was a large bond payment of \$892,749.55 which made this month's expenditures larger than normal.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: ____Yes ____X____No **Funding Source/Recap:** Expenditures are allocated across the six cost centers; 01-Marina Water, 02-Marina Sewer, 03- Ord Water, 04-Ord Sewer, 05-Recycled Water, 06-Regional Water.

Other Consideration: None.

Material Included for Information/Consideration: November 2022 Summary Check Register.

Action Required: ____Resolution ____X____Motion ____Review
(Roll call vote is required.)

Board Action

Motion By _____ Seconded By _____ No Action Taken _____

Ayes _____ Abstained _____

Noes _____ Absent _____

NOVEMBER 2022 SUMMARY CHECK REGISTER

DATE	CHECK #	CHECK DESCRIPTION	AMOUNT
11/02/2022	72791 - 72807	Check Register	21,032.36
11/09/2022	72808 - 72826	Check Register	41,953.29
11/16/2022	72827	Check Register	1,600.00
11/17/2022	ACH	Friedman & Springwater LLP	78,210.50
11/17/2022	72828 - 72871	Check Register	1,002,057.83
11/21/2022	Wire	U.S. Bank National Association	892,749.55
11/29/2022	72872 - 72882	Check Register	216,421.69
11/02/2022	ACH	State of California - EDD	16.18
11/08/2022	ACH	CalPERS	200.00
11/10/2022	ACH	CalPERS	27,132.05
11/10/2022	ACH	Payroll Direct Deposit	117,235.10
11/10/2022	ACH	Empower Retirement	9,913.05
11/10/2022	ACH	Internal Revenue Service	45,575.95
11/10/2022	ACH	State of California - EDD	10,524.23
11/10/2022	ACH	WageWorks, Inc.	698.22
11/10/2022	501434 - 501435	Check Register	1,264.80
11/17/2022	501436 - 501446	Check Register	104,383.48
11/23/2022	501447	Board Compensation Checks and Direct Deposit	415.57
11/23/2022	ACH	Internal Revenue Service	68.86
11/25/2022	ACH	CalPERS	27,185.80
11/25/2022	ACH	Payroll Direct Deposit	114,856.71
11/25/2022	ACH	Empower Retirement	9,884.39
11/25/2022	ACH	Internal Revenue Service	43,519.71
11/25/2022	ACH	State of California - EDD	10,078.27
11/25/2022	ACH	WageWorks, Inc.	698.22
11/25/2022	501448	Check Register	576.80
TOTAL DISBURSEMENTS			<u><u>2,778,252.61</u></u>

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
72791	10/19/2022	11/02/2022	Area Communications	Answering Service 09/21 - 10/18	388.73
72792	10/04/2022	11/02/2022	Petty Cash	Replenishment of Funds	60.04
72793	10/01/2022	11/02/2022	Maynard Group	AT&T Wireless Backup, eMVS Cloud, VoIP Services, NEC Phone Equipment Maintenance, General Services 10/2022	4,597.82
72794	10/07/2022	11/02/2022	Core & Main LP	Stainless Steel Saddle - C Reservoir	558.73
72795	10/12/2022	11/02/2022	Univar Solutions USA, Inc.	(659) gals Chlorine - Intermediate Reservoir	2,148.00
72796	09/30/2022	11/02/2022	Pacific Ag Rentals LLC	Mobile Restroom Rental - Beach/ Ord Offices	974.88
72797	09/30/2022	11/02/2022	ECAM Secure	Monthly Security Fees - Ord Wastewater Treatment Facility	1,218.50
72798	09/29/2022	11/02/2022	Green Rubber-Kennedy AG, LP	General Supplies	168.69
72799	10/06/2022	11/02/2022	U.S. Bank Corporate Payment Systems	Employment Advertisements (Engineering Technician, Customer Service Billing Technician I); 2022 ACWA Conference - GM; Sharing Content to ArcGIS Course - IT Administrator; Diversity and Inclusion Certification - Human Resources Manager; Cloud Hosted Server - CityWorks/ ESRI; SCADA Internet Service; SCADA Mobile/ Laptop Hotspot; General Supplies	5,934.74
72800	10/26/2022	11/02/2022	U.S. Bank National Association	IOP/ Beach Office Copier Leases 10/10 - 11/19	562.66
72801	10/04/2022	11/02/2022	Evoqua Water Technologies, LLC	Hydrogen Sulfide Monitoring - East Garrison LS	1,912.98
72802	10/11/2022	11/02/2022	Peninsula Crane & Rigging	Generator Placement Service - Wittenmyer LS	1,320.00
72803	09/30/2022	11/02/2022	AutoZone Parts, Inc.	Fleet Supplies	94.38
72804	10/07/2022	11/02/2022	Conservation Rebate Program	3020 Parson Cir - Toilet Rebate	50.00
72805	10/07/2022	11/02/2022	Conservation Rebate Program	122 Cypress Grove Ct - Toilet Rebate	75.00
72806	10/05/2022	11/02/2022	Conservation Rebate Program	4940 Peninsula Point Dr - Landscape Rebate	165.41
72807	10/01/2022	11/02/2022	Greenwaste Recovery, Inc.	Garbage Collection & Recycling Services 10/2022	801.80
72808	10/20/2022	11/09/2022	Grainger	General Supplies	816.99
72809	10/18/2022	11/09/2022	Monterey Bay Analytical Services	Laboratory Testing	1,134.00
72810	10/18/2022	11/09/2022	Verizon Wireless	Cell Phone Service 10/2022	2,396.81
72811	11/04/2022	11/09/2022	Orkin Franchise 925	Pest Control 09/2022 - 11/2022	615.00
72812	10/07/2022	11/09/2022	Conservation Rebate Program	5100 Coe Ave #99 - Toilet Rebate	50.00
72813	10/11/2022	11/09/2022	Carollo Engineers, Inc.	RFI's, Preston Park RW Pipeline Extension Survey - RUWAP	3,593.80
72814	10/06/2022	11/09/2022	Fastenal Industrial & Construction Supplies	General Supplies	37.77
72815	10/10/2022	11/09/2022	Wallace Group	Developer (Wathen-Castanos Homes)	6,924.92
72816	10/28/2022	11/09/2022	O'Reilly Automotive Stores, Inc.	Auto/ General Supplies	237.20
72817	10/17/2022	11/09/2022	Conservation Rebate Program	246 Cosky Dr - Toilet Rebate	50.00
72818	11/01/2022	11/09/2022	Monterey Bay Technologies, Inc.	IT Support Services 11/2022	3,600.00
72819	10/25/2022	11/09/2022	ICONIX Waterworks (US), Inc.	(2) Hymax Couplings, Ball Corp Stop, Fittings - Booker LS ARV; General Supplies	11,612.06
72820	10/19/2022	11/09/2022	Tope's Tree Service, Inc.	Trailer Rental, Concrete - Barbee Ct, Shuler Cir	272.60
72821	10/28/2022	11/09/2022	AT&T	Phone and Alarm Line Service 10/2022	230.64
72822	11/01/2022	11/09/2022	Pure Janitorial, LLC	Janitorial Service - MCWD, BLM Offices 10/2022	6,200.00
72823	09/07/2022	11/09/2022	Int'l Council for Local Environmental Initiatives	Climate Action Plan Association Membership 12/2022 - 11/2023	1,200.00

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
72824	10/17/2022	11/09/2022	Conservation Rebate Program	244 Reservation Rd - Landscape Rebate	2,681.50
72825	10/17/2022	11/09/2022	Conservation Rebate Program	130 Brookside Pl - Washer Rebate	150.00
72826	10/17/2022	11/09/2022	Conservation Rebate Program	240 Cosky Dr - Washer Rebate	150.00
72827	11/15/2022	11/16/2022	Pacific Monarch LTD	Bus Rental - Cal Am Coastal Commission Meeting	1,600.00
ACH	10/07/2022	11/17/2022	Friedman & Springwater LLP	Legal Services 09/2022	78,210.50
72828	10/31/2022	11/17/2022	Ace Hardware of Watsonville, Inc.	General Supplies	670.84
72829	10/28/2022	11/17/2022	Salinas Valley Ford	Water/ Vacuum Pumps, Rear Brakes, Cover Gaskets - Vehicle #1302	3,444.01
72830	11/05/2022	11/17/2022	Insight Planners	Web Development/ Maintenance and Hosting 10/2022	2,214.00
72831	11/04/2022	11/17/2022	PG&E	Gas and Electric Service 10/2022	95,121.70
72832	09/30/2022	11/17/2022	Schaaf & Wheeler	Construction Phase - A1/A2 Tanks B/C Booster	66,761.35
72833	09/12/2022	11/17/2022	Monterey Peninsula Engineering	RUWAP Distribution System - Construction Pmt #23A	141,011.18
72834	11/01/2022	11/17/2022	Monterey Bay Analytical Services	Laboratory Testing	840.00
72835	11/04/2022	11/17/2022	Staples Credit Plan	Office Supplies	366.17
72836	10/07/2022	11/17/2022	Anderson Pacific Engineering Construction, Inc.	A1/A2 Tanks B/C Booster - Construction Pmt #12	323,101.26
72837	10/12/2022	11/17/2022	Harris & Associates	Inspection Services - RUWAP Distribution; Project Management, Review Permit Applications - Recycled Water; Developers (CHISPA East Garrison Apartments, Dunes 2 East, Enclave at Cypress Grove, Home2 Suites, Wathen-Castanos Homes)	51,169.00
72838	11/11/2022	11/17/2022	Federal Express	Large Fragile Shipping Box	24.57
72839	11/01/2022	11/17/2022	HD Supply Facilities Maintenance LTD	General Supplies	516.88
72840	10/31/2022	11/17/2022	American Supply Company	Janitorial Supplies	186.93
72841	10/26/2022	11/17/2022	Wallace Group	Developer (Wathen-Castanos Homes)	5,095.63
72842	10/30/2022	11/17/2022	BHI Management Consulting	Plan Development - Strategic Plan	2,600.00
72843	09/29/2022	11/17/2022	Calcon Systems, Inc.	Desalination Plant Electrical Assessment; Pressure Alarm Installation; SCADA Alarm Troubleshoot; SCADA Zone Pressure Integration; Troubleshoot WIN-911	7,545.00
72844	09/14/2022	11/17/2022	WIN-911 Software	Annual Software Maintenance and Support	1,600.00
72845	10/20/2022	11/17/2022	Dwyer Instruments, Inc.	General Supplies	76.63
72846	11/09/2022	11/17/2022	Daiohs USA	Coffee Supplies	544.46
72847	11/07/2022	11/17/2022	Marina Tire & Auto Repair	(2) Tires, Oil Change, Replacement Tire Sensor - Vehicle #1101	602.62
72848	10/13/2022	11/17/2022	Richards, Watson & Gershon	Legal Services 09/2022	46,096.69
72849	10/25/2022	11/17/2022	Edges Electrical Group, LLC	General Supplies	1,749.62
72850	10/17/2022	11/17/2022	Remy Moose Manley, LLP	Legal Services 09/2022	62,704.00
72851	11/01/2022	11/17/2022	Monterey Bay Technologies, Inc.	Dell Inspiron Laptop - Climate Action Plan Administrator	873.99
72852	10/06/2022	11/17/2022	Griffith, Masuda & Hobbs	Legal Services 09/2022	24,057.63
72853	10/31/2022	11/17/2022	Lou's Gloves, Inc.	Nitrile Gloves	817.80
72854	10/21/2022	11/17/2022	Aleshire & Wynder, LLP	Legal Services 09/2022	7,947.50
72855	10/31/2022	11/17/2022	Peninsula Messenger LLC	Courier Service 11/2022	253.00
72856	10/21/2022	11/17/2022	Western Exterminator Company	Pest Control - Beach Office 10/2022	106.75

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
72857	11/06/2022	11/17/2022	TIAA, FSB	Ord Office Copier, eCopy ScanStation Leases 11/2022	422.04
72858	10/31/2022	11/17/2022	Iron Mountain, Inc.	Shredding Service 10/2022	285.64
72859	11/01/2022	11/17/2022	Simpler Systems, Inc.	UB Datapp Maintenance 11/2022	500.00
72860	10/31/2022	11/17/2022	Marina Coast Water District (BLM)	BLM Water, Sewer, Fire Service 10/2022	386.54
72861	10/30/2022	11/17/2022	Johnson Electronics	BLM Fire Alarm Monitoring 10/2022 - 12/2022	84.00
72862	10/24/2022	11/17/2022	EKI Environment & Water, Inc.	Groundwater Sustainability Planning Implementation Actions, Monterey Subbasin Groundwater Sustainability Plan Prop 68	74,989.92
72863	10/31/2022	11/17/2022	Cintas Corporation No. 630	Uniforms, Towels, Rugs 10/2022; (2) District Shirts/ Jackets - Engineering, Water Resources	1,455.54
72864	09/26/2022	11/17/2022	Psomass	Construction Management - A1/A2 Tanks B/C Booster	60,339.43
72865	10/25/2022	11/17/2022	WEX Bank	Fleet Gasoline 10/2022	7,632.49
72866	10/28/2022	11/17/2022	TW Associates, LLC	General Supplies	113.74
72867	12/01/2022	11/17/2022	The Ferguson Group, LLC	Grant Writing and Legislative Advocacy 12/2022	1,700.00
72868	10/24/2022	11/17/2022	HPS West, Inc.	(20) Allegro UTG Register Kits	4,911.23
72869	11/04/2022	11/17/2022	Handyman 831	Assembly of Office Chairs, Conference Table - IOP Office	261.25
72870	10/25/2022	11/17/2022	Conservation Rebate Program	3156 Eucalyptus St #29 - Toilet Rebate	75.00
72871	11/01/2022	11/17/2022	Greenwaste Recovery, Inc.	Garbage Collection & Recycling Services 11/2022	801.80
Wire	10/07/2022	11/21/2022	U.S. Bank National Association (Bond Payments)	2015 Series A Bond and 2019 Series Bond Payments	892,749.55
72872	10/25/2022	11/29/2022	Quinn Company	(2) Replacement Generators - San Pablo LS, Wittenmyer LS	80,427.67
72873	11/18/2022	11/29/2022	Federal Express	Shipping Charges	104.75
72874	11/02/2022	11/29/2022	Employee Reimbursement	Cross-Connection Training Per Diem Meals	318.00
72875	11/04/2022	11/29/2022	Richards, Watson & Gershon	Legal Services 08/2022 - 10/2022	123,157.33
72876	11/15/2022	11/29/2022	U.S. Bank National Association	Beach Office Copier Lease 11/10 - 12/09	275.32
72877	10/31/2022	11/29/2022	Access Monterey Peninsula, Inc.	Filming and Production 10/2022	460.00
72878	11/04/2022	11/29/2022	Aleshire & Wynder, LLP	Legal Services 10/2022	7,315.00
72879	11/02/2022	11/29/2022	Employee Reimbursement	Cross-Connection Training Per Diem Meals	318.00
72880	11/15/2022	11/29/2022	Employee Reimbursement	Water Distribution System O&M Course	50.00
72881	10/21/2022	11/29/2022	Conservation Rebate Program	Monterey Meadows HOA - Landscape Rebate	3,882.00
72882	10/21/2022	11/29/2022	Trucksis Ent, Inc.	(2) Recycled Water Posters - Ribbon Cutting Event at Black Horse	113.62
ACH	11/02/2022	11/02/2022	State of California - EDD	State Disability Insurance Adjustment	16.18
ACH	11/08/2022	11/08/2022	CalPERS	Service Fee - Notification of Termination	200.00
ACH	11/10/2022	11/10/2022	CalPERS	Payroll Ending 11/04/22	27,132.05
ACH	11/10/2022	11/10/2022	Payroll Direct Deposit	Payroll Ending 11/04/22	117,235.10
ACH	11/10/2022	11/10/2022	Empower Retirement	Payroll Ending 11/04/22	9,913.05
ACH	11/10/2022	11/10/2022	Internal Revenue Service	Payroll Ending 11/04/22	45,575.95
ACH	11/10/2022	11/10/2022	State of California - EDD	Payroll Ending 11/04/22	10,524.23
ACH	11/10/2022	11/10/2022	WageWorks, Inc.	Payroll Ending 11/04/22	698.22
501434	11/10/2022	11/10/2022	General Teamsters Union	Payroll Ending 11/04/22	688.00
501435	11/10/2022	11/10/2022	MCS	Payroll Ending 11/04/22	576.80
501436	10/24/2022	11/17/2022	ACWA Joint Power Ins Authority	Workers Compensation Insurance 07/01/2022 - 09/30/2022	15,286.27

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
501437	11/01/2022	11/17/2022	ACWA/ JPIA	Medical, Dental, Vision, EAP Insurance 12/2022	83,373.26
501438	10/25/2022	11/17/2022	AFLAC	Employee Paid Benefits 10/2022	1,245.86
501439	10/04/2022	11/17/2022	Pinnacle Medical Group, Inc.	Drug Test (DOT) - (2) O&M	230.00
501440	10/18/2022	11/17/2022	Principal Life	Employee Paid Benefits 11/2022	130.16
501441	09/30/2022	11/17/2022	Justifacts Credential Verification, Inc.	Background Check - (2) New Hires	346.51
501442	10/10/2022	11/17/2022	Lincoln National Life Insurance Company	Life, Short/ Long Term Disability, AD&D Insurance 11/2022	2,850.60
501443	10/25/2022	11/17/2022	WageWorks, Inc.	FSA Admin Fees 10/2022	164.00
501444	10/17/2022	11/17/2022	Transamerica Life Insurance Company	Employee Paid Benefits 10/2022	427.32
501445	10/04/2022	11/17/2022	Employee Reimbursement	2022 ACWA Conference/ Exhibition Per Diem Meals	244.50
501446	10/28/2022	11/17/2022	Employee Reimbursement	Class B License Exam Fee	85.00
501447	11/23/2022	11/23/2022	Board Compensation Checks and Direct Deposit	Board Compensation 10/2022	415.57
ACH	11/23/2022	11/23/2022	Internal Revenue Service	Board Compensation 10/2022	68.86
ACH	11/25/2022	11/25/2022	CalPERS	Payroll Ending 11/18/22	27,185.80
ACH	11/25/2022	11/25/2022	Payroll Direct Deposit	Payroll Ending 11/18/22	114,856.71
ACH	11/25/2022	11/25/2022	Empower Retirement	Payroll Ending 11/18/22	9,884.39
ACH	11/25/2022	11/25/2022	Internal Revenue Service	Payroll Ending 11/18/22	43,519.71
ACH	11/25/2022	11/25/2022	State of California - EDD	Payroll Ending 11/18/22	10,078.27
ACH	11/25/2022	11/25/2022	WageWorks, Inc.	Payroll Ending 11/18/22	698.22
501448	11/25/2022	11/25/2022	MCS	Payroll Ending 11/18/22	576.80
Total Disbursements for November 2022					2,778,252.61

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 11-C

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Approve the Draft Minutes of the Regular Joint Board/GSA Meeting of October 17, 2022

Staff Recommendation: The Board of Directors approve the draft minutes of the October 17, 2022 regular joint Board/GSA meeting.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The draft minutes of October 17, 2022 are provided for the Board to consider approval.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: ___ Yes ___ X No **Funding Source/Recap:** None

Other Considerations: The Board can suggest changes/corrections to the minutes.

Material Included for Information/Consideration: Draft minutes of October 17, 2022.

Action Required: ___ Resolution ___ X Motion ___ Review

Board Action

Motion By _____ Seconded By _____ No Action Taken _____

Ayes _____

Abstained _____

Noes _____

Absent _____



Marina Coast Water District

Marina Coast Water District

Regular Board Meeting/Groundwater Sustainability Agency Board Meeting

Hybrid Meeting

October 17, 2022

Draft Minutes

1. Call to Order:

President Shriner called the meeting to order at 6:33 p.m. on October 17, 2022 with Board members and staff present at 920 2nd Avenue, Suite A, Marina, California; and, via Zoom teleconference for the public in Marina, California. President Shriner then proceeded with a land acknowledgement. “As Marina Coast Water District celebrates its 62nd year providing publicly owned water service to its customers in Marina and the Ord Community, we acknowledge that our service area is located on the traditional lands of the Esselen people. They are known today as the Ohlone/Coastanoan-Esselen Nation. We respect their elders, past, present, and emerging, for they hold the memories, traditions, culture, and hopes of the Esselen people. We also acknowledge the government of the Ohlone/Coastanoan Esselen Nation and appreciate the spiritual role it plays today in preserving the cultural, historical and heritage beliefs of the Esselen people. We are grateful that they share their traditional lands with us.”

2. Roll Call:

Board Members Present:

Jan Shriner – President
Herbert Cortez – Vice President
Thomas P. Moore
Gail Morton
Matt Zefferman

Board Members Absent:

None.

Staff Members Present:

Remleh Scherzinger, General Manager
Roger Masuda, District Counsel
Derek Cray, Operations and Maintenance Manager
Mary Lagasca, Director of Administrative Services
Patrick Breen, Water Resources Manager
Garret Haertel, District Engineer
Dominique Bertrand, Assistant Engineer
Paula Riso, Executive Assistant/Clerk to the Board

Agenda Item 2 (continued):

Audience Members:

Andy Sterbenz, Schaaf & Wheeler
Paula Pelot, Marina Resident
Phil Clark, Seaside Resident
Roland Soltesz, Marina Resident

3. Public Comment on Closed Session Item:

There were no comments made.

The Board entered into closed session at 6:38 p.m. to discuss the following items:

4. Closed Session:

A. Pursuant to Government Code 54956.9

Conference with Legal Counsel – Existing Litigation

Appeal No. A-3-MRA-19-0034 by California-American Water Company to the California Coastal Commission over Denial by the City of Marina for a Coastal Development Permit for Construction of Slant Intake Wells for the Monterey Peninsula Water Supply Project

B. Pursuant to Government Code Section 54956.9

Conference with Legal Counsel – Existing Litigation

Bay View Community DE, LLC; Bryan Taylor; Greg Carter; and Brooke Bilyeu vs Marina Coast Water District; Board of Directors of Marina Coast Water District; County of Monterey and Does 1-25, inclusive, Monterey County Superior Court Case No. 18CV000765 (Petition for Writ of Mandate or Administrative Mandate, and Complaint for Declaratory and Injunctive Relief and Breach of Contract)

C. Pursuant to Government Code Section 54956.9(d)(4)

Conference with Legal Counsel – Initiation of Litigation
One Potential Case

The Board ended closed session at 7:53 p.m. President Shriner reconvened the meeting to open session at 7:56 p.m.

5. Reportable Actions Taken During Closed Session:

Mr. Roger Masuda, District Counsel, stated that there were no reportable actions taken in Closed Session.

6. Pledge of Allegiance:

Director Zefferman led everyone present in the pledge of allegiance.

7. Oral Communications:

Ms. Paula Riso, Executive Assistant/Clerk to the Board, stated that comments had been received by the Board of Directors and will be included as part of the meeting's record.

8. Consent Calendar:

Mr. Remleh Scherzinger, General Manager, stated that staff was pulling item 8-D from the Consent Calendar.

Director Moore made a motion to approve the Consent Calendar consisting of: A) Receive and File the Check Register for the Month of September 2022; B) Approve the Draft Minutes of the Regular Joint Board/GSA Meeting of September 19, 2022; C) Adopt Resolution No. 2022-51 to Proclaim a Local Emergency, and Authorize Remote Teleconference Meetings of All District Legislative Bodies for the Following 30 Days; E) Receive the 3rd Quarter 2022 Sewer Flow Report; and, F) Receive a Report on Current Capital Improvement Projects. Vice President Cortez seconded the motion. The motion was passed by the following vote:

Director Moore	-	Yes	Vice President Cortez	-	Yes
Director Morton	-	Yes	President Shriner	-	Yes
Director Zefferman	-	Yes			

9. Action Items:

A. Adopt Resolution No. 2022-43 to Approve and Execute a Mutual Assistance Agreement Between Marina Coast Water District and Castroville Community Services District:

Mr. Derek Cray, Operations and Maintenance Manager, introduced this item and reviewed that changes and corrections that had been made since the Board last saw the item. The Board was pleased with the agreement and Director Moore suggested looking into other agencies to see if more mutual aid agreements should be created.

Director Zefferman made a motion to adopt Resolution No. 2022-43 to approve and execute a Mutual Assistance Agreement between Marina Coast Water District and Castroville Community Services District. Director Moore seconded the motion. The motion was passed by the following vote:

Director Moore	-	Yes	Vice President Cortez	-	Yes
Director Morton	-	Yes	President Shriner	-	Yes
Director Zefferman	-	Yes			

B. Adopt Resolution No. 2022-53 to Amend the CIP to Include the Castroville Intertie Project:

Ms. Dominique Bertrand, Assistant Engineer, introduced this item and gave a brief presentation on the benefits of the Castroville Intertie Project. The Board asked clarifying questions.

Agenda Item 9-B (continued):

Director Moore made a motion to adopt Resolution No. 2022-53 to amend the CIP to include the Castroville Intertie Project. Vice President Cortez seconded the motion. The motion was passed by the following vote:

Director Moore	-	Yes	Vice President Cortez	-	Yes
Director Morton	-	Yes	President Shriner	-	Yes
Director Zefferman	-	Yes			

C. Receive an Update on the AB 2449 Teleconference Meeting Brown Act Requirement:

Mr. Masuda introduced this item and shared a spreadsheet showing the changes proposed by AB 2449 and the difference from the traditional Brown Act requirement and AB 361. He stated that Governor Newsome is repealing his state of emergency effective February 28, 2023 so AB 361 will no longer be in effect as of that date. Mr. Masuda said that leaves the option of either AB 2449 that will be in effect January 1, 2023 until January 1, 2024, or return to the traditional Brown Act requirements. The Board requested to bring this item back in December so they can vote on which direction they would like to move forward with.

Director Morton made a motion to receive the report. Director Moore seconded the motion. The motion was passed by the following vote:

Director Moore	-	Yes	Vice President Cortez	-	Yes
Director Morton	-	Yes	President Shriner	-	Yes
Director Zefferman	-	Abstained			

10. Informational Items:

A. General Manager's Report:

Mr. Scherzinger gave the following updates:

- 1) Start-up and testing is going on this week at the golf course and the Regional Board will be on-site for the testing.
- 2) The cash audit is complete following the retirement of Ms. Cadiente.
- 3) Staff has trued up the reserves balance which is \$19M.
- 4) Two new generator sets were installed at San Pablo and Wittenmeyer pump stations.
- 5) Donna Meyers has announced her resignation from the SVBGSA.
- 6) In regards to the public correspondence received, the Rate Study had been provided to Mr. Le regarding his questions about recycled water rates.

B. Committee and Board Liaison Reports:

1. Budget and Personnel Committee:

Director Morton and President Shriner gave a brief update.

2. Executive Committee:

This meeting was canceled.

3. Community Outreach Committee:

Director Zefferman gave a brief update.

4. Joint City District Committee:

Director Morton gave a brief update.

5. M1W Board Member Liaison:

Director Moore gave a brief update and noted the next meeting is October 28th.

11. Board Member Requests for Future Agenda Items:

President Shriner suggested maybe discussing the order of the agenda items. If the Board has any other requests they can be emailed to staff.

12. Director's Comments:

Director Moore, Director Morton, Director Zefferman, Vice President Cortez, and President Shriner made comments.

13. Adjournment:

The meeting was adjourned at 9:00 p.m.

APPROVED:

Jan Shriner, President

ATTEST:

Paula Riso, Deputy Secretary

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 11-D

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Approve the Draft Minutes of the Special Joint Board/GSA Meeting of November 7, 2022

Staff Recommendation: The Board of Directors approve the draft minutes of the November 7, 2022 special joint Board/GSA meeting.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The draft minutes of November 7, 2022 are provided for the Board to consider approval.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: ____ Yes X No **Funding Source/Recap:** None

Other Considerations: The Board can suggest changes/corrections to the minutes.

Material Included for Information/Consideration: Draft minutes of November 7, 2022.

Action Required: ____ Resolution X Motion ____ Review

Board Action

Motion By _____ Seconded By _____ No Action Taken _____

Ayes _____

Abstained _____

Noes _____

Absent _____



Marina Coast Water District

Special Board Meeting/Groundwater Sustainability Agency Board Meeting
November 7, 2022

Draft Minutes

1. Call to Order:

President Shriner called the meeting to order at 6:31 p.m. on November 7, 2022, via Zoom teleconference in Marina, California.

2. Roll Call:

Board Members Present:

Jan Shriner – President
Herbert Cortez – Vice President - joined the meeting at 6:32 p.m.
Thomas P. Moore – joined the meeting at 6:31 p.m.
Gail Morton
Matt Zefferman

Board Members Absent:

None

Staff Members Present:

Remleh Scherzinger, General Manager
Roger Masuda, District Counsel
Paula Riso, Executive Assistant/Clerk to the Board

Audience Members:

None.

3. Pledge of Allegiance:

President Shriner led everyone present in the pledge of allegiance.

4. Public Comment on Closed Session Items:

There were no comments made.

The Board entered into closed session at 6:33 p.m. to discuss the following item.

5. Closed Session:

- A. Pursuant to Government Code 54956.9(d)(4)
Conference with Legal Counsel – Initiation of Litigation
One Potential Case

The Board ended closed session at 8:19 p.m. President Shriner reconvened to open session at 8:20 p.m.

6. Reportable Actions Taken During Closed Session:

Mr. Roger Masuda, District Counsel, stated that there were no reportable actions taken in closed session.

7. Directors Comments:

Director Moore, Director Morton, Director Zefferman, Vice President Cortez, and President Shriner made comments.

8. Adjournment:

The meeting was adjourned at 8:24 p.m.

APPROVED:

Jan Shriner, President

ATTEST:

Paula Riso, Deputy Secretary

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 11-E

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Approve the Draft Minutes of the 5:00 PM Special Joint Board/GSA Meeting of November 29, 2022

Staff Recommendation: The Board of Directors approve the draft minutes of the November 29, 2022 special joint Board/GSA meeting.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The draft minutes of November 29, 2022 are provided for the Board to consider approval.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: ___Yes ___X___No **Funding Source/Recap:** None

Other Considerations: The Board can suggest changes/corrections to the minutes.

Material Included for Information/Consideration: Draft minutes of November 29, 2022.

Action Required: ___Resolution ___X___Motion ___Review

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____

Abstained_____

Noes_____

Absent_____



Marina Coast Water District

Special Board Meeting/Groundwater Sustainability Agency Board Meeting
November 29, 2022

Draft Minutes

1. Call to Order:

President Shriner called the meeting to order at 5:11 p.m. on November 29, 2022, at 920 2nd Avenue, Suite A, Marina, California, and via video teleconference.

2. Roll Call:

Board Members Present:

Jan Shriner – President
Thomas P. Moore
Matt Zefferman

Board Members Absent:

Herbert Cortez – Vice President
Gail Morton

Staff Members Present:

Roger Masuda, District Counsel – via video teleconference
Paula Riso, Executive Assistant/Clerk to the Board

Audience Members:

Mike Moeller

3. Action Item:

- A. Adopt Resolution No. 2022-53 to Proclaim a Local Emergency, and Authorize Remote Teleconference Meetings of All District Legislative Bodies for the Following 30 Days:

Director Moore made a motion to adopt Resolution No. 2022-53 to proclaim a local emergency and authorize remote teleconference meetings of all District legislative bodies for the following 30 days. Director Zefferman seconded the motion. The motion was passed by the following vote:

Director Moore	-	Yes	Vice President Cortez	-	Absent
Director Morton	-	Absent	President Shriner	-	Yes
Director Zefferman	-	Yes			

4. Directors Comments:

Director Moore, Director Zefferman, and President Shriner made comments.

Special Board Meeting
November 29, 2022
Page 2 of 2

5. Adjournment:

The meeting was adjourned at 5:14 p.m.

APPROVED:

Jan Shriner, President

ATTEST:

Paula Riso, Deputy Secretary

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 11-F

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Approve the Draft Minutes of the 6:30 PM Special Joint Board/GSA Meeting of November 29, 2022

Staff Recommendation: The Board of Directors approve the draft minutes of the November 29, 2022 special joint Board/GSA meeting.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The draft minutes of November 29, 2022 are provided for the Board to consider approval.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: ___Yes ___X___No **Funding Source/Recap:** None

Other Considerations: The Board can suggest changes/corrections to the minutes.

Material Included for Information/Consideration: Draft minutes of November 29, 2022.

Action Required: ___Resolution ___X___Motion ___Review

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____

Abstained_____

Noes_____

Absent_____



Marina Coast Water District

Special Board Meeting/Groundwater Sustainability Agency Board Meeting
November 29, 2022

Draft Minutes

1. Call to Order:

President Shriner called the meeting to order at 6:33 p.m. on November 29, 2022, via video teleconference.

2. Roll Call:

Board Members Present:

Jan Shriner – President
Herbert Cortez – Vice President
Thomas P. Moore – joined at 6:41 p.m.
Gail Morton
Matt Zefferman

Board Members Absent:

None

Staff Members Present:

Remleh Scherzinger, General Manager
Roger Masuda, District Counsel
Patrick Breen, Water Resources Manager
Paula Riso, Executive Assistant/Clerk to the Board

Audience Members:

Mike Moeller
Andy Sterbenz
Ashley Collick
Tori Klopstock

3. Pledge of Allegiance:

Vice President Cortez led everyone present in the pledge of allegiance.

4. Marina Coast Water District Groundwater Sustainability Agency Matters:

A. Action Item:

Agenda Item 4-A (continued):

1. Receive an “Indirect Potable Reuse Feasibility Study”; and, Adopt Resolution No. 2022-GSA-03 Authorizing a Monterey Sub-basin Sustainable Groundwater Management Grant Program SGMA Implementation Grant Application:

Mr. Patrick Breen, Water Resources Manager, introduced this item noting that due to the time constraints, a more in-depth review of the Indirect Potable Reuse Feasibility Study report can be brought to the Board at a later date. Director Morton stated that she would appreciate an in-depth review when time permits.

Director Morton made a motion to receive an “Indirect Potable Reuse Feasibility Study”; and, adopt Resolution No. 2022-GSA-03 authorizing a Monterey Sub-basin Sustainable Groundwater Management Grant Program SGMA Implementation Grant Application. Director Moore seconded the motion. The motion was passed by the following vote:

Director Moore	-	Yes	Vice President Cortez	-	Yes
Director Morton	-	Yes	President Shriner	-	Yes
Director Zefferman	-	Abstained			

5. Return to Marina Coast Water District Matters:

6. Public Comment on Closed Session Items:

There were no comments made.

The Board entered into closed session at 6:45 p.m. to discuss the following items:

7. Closed Session:

A. Pursuant to Government Code 54956.9

Conference with Legal Counsel – Existing Litigation

- 1) Appeal No. A-3-MRA-19-0034 by California-American Water Company to the California Coastal Commission over Denial by the City of Marina for a Coastal Development Permit for Construction of Slant Intake Wells for the Monterey Peninsula Water Supply Project
- 2) City of Marina vs. RMC Lonestar [CEMEX], California-America Water Company, Marina Coast WD, et al Defendants, Monterey County Superior Court Case No. 20CV001387 (Complaint for Breach of Contract, Declaratory Relief under the Agency Act, and Tortious Interference with Existing Contract)

Agenda Item 7 (continued):

- 3) Application of California-American Water Company to Obtain Approval of the Amended and Restate Water Purchase Agreement for the Pure Water Monterey Groundwater Replenishment Project, Update Supply and Demand Estimates for the Monterey Peninsula Water Supply Project, and Cost Recovery, before the California Public Utilities Commission, Application 21-11-024

- B. Pursuant to Government Code section 54956.9(d)(4)
Conference with Legal Counsel – Initiation of Litigation
One Potential Case

The Board ended the closed session at 9:38 p.m. President Shriner reconvened the meeting to open session at 9:39 p.m.

8. Reportable Actions Taken During Closed Session:

Mr. Roger Masuda, District Counsel, stated that there were no reportable actions taken in Closed Session.

9. Directors Comments:

Director Moore, Director Morton, Director Zefferman, Vice President Cortez, and President Shriner made comments.

10. Adjournment:

The meeting was adjourned at 9:45 p.m.

APPROVED:

Jan Shriner, President

ATTEST:

Paula Riso, Deputy Secretary

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 11-G

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Approve the Draft Minutes of the Special Joint Board/GSA Meeting of November 30, 2022

Staff Recommendation: The Board of Directors approve the draft minutes of the November 30, 2022 special joint Board/GSA meeting.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The draft minutes of November 30, 2022 are provided for the Board to consider approval.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: ____ Yes X No **Funding Source/Recap:** None

Other Considerations: The Board can suggest changes/corrections to the minutes.

Material Included for Information/Consideration: Draft minutes of November 30, 2022.

Action Required: ____ Resolution X Motion ____ Review

Board Action

Motion By _____ Seconded By _____ No Action Taken _____

Ayes _____

Abstained _____

Noes _____

Absent _____



Marina Coast Water District

Special Board Meeting/Groundwater Sustainability Agency Board Meeting
November 30, 2022

Draft Minutes

1. Call to Order:

President Shriner called the meeting to order at 6:43 p.m. on November 30, 2022, via Zoom teleconference in Marina, California.

2. Roll Call:

Board Members Present:

Jan Shriner – President
Herbert Cortez – Vice President
Thomas P. Moore – joined the meeting at 6:49 p.m.
Gail Morton
Matt Zefferman – joined the meeting at 8:00 p.m.

Board Members Absent:

None

Staff Members Present:

Remleh Scherzinger, General Manager
Roger Masuda, District Counsel
Paula Riso, Executive Assistant/Clerk to the Board

Audience Members:

Mike Moeller
Morgan Tschumi

3. Pledge of Allegiance:

President Shriner led everyone present in the pledge of allegiance.

4. Public Comment on Closed Session Items:

Ms. Megan Tschumi, CSUMB Student, commented that she was in favor of the Pure Water Monterey Groundwater Replenishment Project as it is a great project for diversifying water resources and utilizing infrastructure already in the ground.

The Board entered into closed session at 6:47 p.m. to discuss the following items:

5. Closed Session:

A. Pursuant to Government Code 54956.9

Conference with Legal Counsel – Existing Litigation

- 1) Appeal No. A-3-MRA-19-0034 by California-American Water Company to the California Coastal Commission over Denial by the City of Marina for a Coastal Development Permit for Construction of Slant Intake Wells for the Monterey Peninsula Water Supply Project
- 2) City of Marina vs. RMC Lonestar [CEMEX], California-America Water Company, Marina Coast WD, et al Defendants, Monterey County Superior Court Case No. 20CV001387 (Complaint for Breach of Contract, Declaratory Relief under the Agency Act, and Tortious Interference with Existing Contract)
- 3) Application of California-American Water Company to Obtain Approval of the Amended and Restate Water Purchase Agreement for the Pure Water Monterey Groundwater Replenishment Project, Update Supply and Demand Estimates for the Monterey Peninsula Water Supply Project, and Cost Recovery, before the California Public Utilities Commission, Application 21-11-024

B. Pursuant to Government Code section 54956.9(d)(4)

Conference with Legal Counsel – Initiation of Litigation
One Potential Case

The Board ended the closed session at 9:12 p.m. President Shriner reconvened to open session at 9:13 p.m.

6. Reportable Actions Taken During Closed Session:

Mr. Roger Masuda, District Counsel, stated that there were no reportable actions taken in closed session.

7. Directors Comments:

Director Moore, Director Morton, Director Zefferman, Vice President Cortez, and President Shriner made comments.

8. Adjournment:

The meeting was adjourned at 9:18 p.m.

APPROVED:

Jan Shriner, President

ATTEST:

Paula Riso, Deputy Secretary

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 11-H

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Approved By: Remleh Scherzinger

Agenda Title: Approve the Proposed Regular Board/GSA Meeting and Workshop Meeting Schedule for 2023

Staff Recommendation: The Board of Directors is requested to approve the proposed regular Board/GSA meeting and workshop meeting schedule for 2023.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The Board generally holds one meeting per month with the Board meeting held on the third Monday of the month. The first Monday of the month is reserved for special meetings and workshops. Staff is anticipating that in 2023 there will be very few months that would require more than one meeting.

1st Monday of Each Month – Reserved for Workshops/Special Meetings
3rd Monday of Each Month – Board Meetings
6:30 p.m.

January 23, 2023*
February 21, 2023**
March 20, 2023
April 17, 2023
May 15, 2023
June 19, 2023
July 17, 2023
August 21, 2023
September 18, 2023
October 16, 2023
November 13, 2023***
December 18, 2023

*Due to MLK Holiday

**Monday is a holiday, so the meeting is scheduled for Tuesday

***To avoid Thanksgiving Holiday

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: _____ Yes X No **Funding Source/Recap:** None

Other Considerations: The Board can suggest alternate meeting dates.

Material Included for Information/Consideration: None.

Action Required: _____Resolution X Motion _____Review

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____

Abstained_____

Noes_____

Absent_____

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 11-I

Meeting Date: December 13, 2022

Prepared By: Paul Lord

Approved By: Remleh Scherzinger

Reviewed By: Patrick Breen

Agenda Title: Receive the Validated 2021 Water Loss Audit Report and Level 1 Validation Document

Staff Recommendation: The Board of Directors receive the Validated 2021 Water Loss Audit Report and Level 1 Validation Document.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

California Senate Bill 555, passed in October 2015, requires all urban retail water suppliers in the state to submit a completed third party validated water loss audit annually to the California Department of Water Resources.

A water loss audit is an accounting exercise that is conceptually like a financial audit. Whereas a financial audit tracks all sources and uses of funds for an organization, a water loss audit tracks all sources and uses of water within a water system over a specified period to estimate the volume and value of water loss. Water loss audits are a valuable tool used to help identify and prioritize a water purveyor's operations that can be improved to maximize the efficiency of water production and delivery. The water loss audit also helps improve the generation of revenue by estimating the financial value of water losses. Having a water loss audit validated by an independent third party assures that the source of the data is reliable, complete, consistent, and accurate.

Staff's efforts to improve data validity and reduce real and apparent losses for the 2021 audit included:

- Replacement of older propeller-type well production meters with more accurate magnetic-type meters. Water production is now recorded precisely to the gallon.
- Production well meters were tied to SCADA to accurately read and record flow rates and water pressure.
- Staff continued their intensive efforts to replace failing meter registers throughout the district.
- Telemetry was installed for real-time storage tank water level readings and daily reports.
- A Geographic Information System (GIS) system update was completed again in 2021. This allowed for a recalculation of Length of Mains to reflect new mainline installations in 2020-21.
- The district IT department performed a more thorough analysis of the water consumption data during each billing cycle.

There was an improvement in data reliability in 2021, primarily due to the more accurate reading of the new well production meters and the new ability to monitor storage tank storage levels

daily. The new well production meters more accurately measured water pumped into the distribution system and also allow staff to calculate water production by the gallon, previously the measurement of production was to the nearest acre-foot. This had a significant effect on the water loss figures, revealing a larger difference between water production and water deliveries. As expected, the installation of more accurate well production meters and telemetry resulted in a Real Loss (primarily distribution system leakage) increase over previous years, and it is now in-line with expectations for water distribution systems like ours. Apparent Loss (primarily billing inaccuracies) remained the same year to year.

As summarized in the attached 221 Level 1 Validation Review Document, the overall Data Validity Score of 70, falling high inside Band III (51-70) of five bands and a scale to 100, suggests that the next improvement steps for the district should be focused simultaneously on the following:

- Verifying the measurement and recording of water production by calibrating the signal output of the well production meters annually.
- Completing the installation of distribution system pressure monitoring equipment.
- Initiating random accuracy testing of the customer meter population.
- Implementing a meter replacement plan.
- Completing a third-party audit of raw account data to help identify potential data gaps in metering and billing functions.

If found to be cost effective, the following actions should also be considered because they would lead to some additional improvements in data reliability, data validity grades, and the generation of revenue:

- The completion of a Real Loss Component Analysis to develop a leakage profile.
- The completion of an Apparent Loss Component Analysis to develop an apparent loss profile.
- Implement a Cost-benefit analysis & target setting for water loss components.
- Design and implement a water loss control program for cost-effective interventions.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: ____Yes X No **Funding Source/Recap:** None

Other Considerations: None.

Material Included for Information/Consideration: Attachment A - 2021 Validated Water Loss Audit Report; and, Attachment B - 2021 Level 1 Validation Review Document.

Action Required: ____Resolution X Motion ____Review

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____

Abstained_____

Noes_____

Absent_____



AWWA Free Water Audit Software: Reporting Worksheet

WAS v5.0

American Water Works Association.
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Click to access definition
 Click to add a comment

Water Audit Report for: **Marina Coast Water District (27710017)**
Reporting Year: **2021** **1/2021 - 12/2021**

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

Volume from own sources: acre-ft/yr
Water imported: acre-ft/yr
Water exported: acre-ft/yr

Master Meter and Supply Error Adjustments

Pcnt: acre-ft/yr
 acre-ft/yr
 acre-ft/yr

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: acre-ft/yr

AUTHORIZED CONSUMPTION

Billed metered: acre-ft/yr
Billed unmetered: acre-ft/yr
Unbilled metered: acre-ft/yr
Unbilled unmetered: acre-ft/yr

Click here: for help using option buttons below

Pcnt: acre-ft/yr

Use buttons to select percentage of water supplied OR value

AUTHORIZED CONSUMPTION: acre-ft/yr

WATER LOSSES (Water Supplied - Authorized Consumption)

278.770 acre-ft/yr

Apparent Losses

Unauthorized consumption: acre-ft/yr

Customer metering inaccuracies: acre-ft/yr
Systematic data handling errors: acre-ft/yr

Pcnt: acre-ft/yr

1.50% acre-ft/yr

Apparent Losses: acre-ft/yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: acre-ft/yr

WATER LOSSES: acre-ft/yr

NON-REVENUE WATER

NON-REVENUE WATER: acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains: miles
Number of active AND inactive service connections:
Service connection density: conn./mile main

Are customer meters typically located at the curbside or property line?

Average length of customer service line: (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line has been set to zero and a data grading score of 10 has been applied

Average operating pressure: psi

COST DATA

Total annual cost of operating water system: \$/Year
Customer retail unit cost (applied to Apparent Losses): \$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses): \$/acre-ft ☐ Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

***** YOUR SCORE IS: 70 out of 100 *****

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Volume from own sources

2: Customer metering inaccuracies

3: Unbilled metered



AWWA Free Water Audit Software: System Attributes and Performance Indicators

WAS v5.0

American Water Works Association.
Copyright © 2014, All Rights Reserved.Water Audit Report for: **Marina Coast Water District (27710017)**Reporting Year: **2021** **1/2021 - 12/2021******* YOUR WATER AUDIT DATA VALIDITY SCORE IS: 70 out of 100 *****

System Attributes:

Apparent Losses:	64.709	acre-ft/yr	
+	Real Losses:	214.061	acre-ft/yr
=	Water Losses:	278.770	acre-ft/yr

? Unavoidable Annual Real Losses (UARL): 158.25 acre-ft/yr

Annual cost of Apparent Losses: \$152,494

Annual cost of Real Losses: \$56,499

Valued at **Variable Production Cost**

Return to Reporting Worksheet to change this assumption

Performance Indicators:

Financial:

Non-revenue water as percent by volume of Water Supplied: 8.2%

Non-revenue water as percent by cost of operating system: 1.2%

Real Losses valued at Variable Production Cost

Operational Efficiency:

Apparent Losses per service connection per day: 7.90 gallons/connection/day

Real Losses per service connection per day: N/A gallons/connection/day

Real Losses per length of main per day*: 822.29 gallons/mile/day

Real Losses per service connection per day per psi pressure: N/A gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL): 214.06 acre-feet/year

? Infrastructure Leakage Index (ILI) [CARL/UARL]: 1.35

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline



AWWA Free Water Audit Software: Water Balance

WAS v5.0

American Water Works Association.

Water Audit Report for:

Marina Coast Water District (27710017)

Reporting Year:

2021

1/2021 - 12/2021

Data Validity Score:

70

0.000	Water Imported	System Input 3,445.625	Water Supplied 3,445.625	Water Exported 0.000	Authorized Consumption 3,166.855	Water Losses 278.770	Real Losses 214.061	Leakage on Transmission and/or Distribution Mains Not broken down
								Leakage and Overflows at Utility's Storage Tanks Not broken down
								Leakage on Service Connections Not broken down
3,445.625 (Adjusted for known errors)	Own Sources				Unbilled Authorized Consumption 5.155	Apparent Losses 64.709	Unbilled Metered Consumption 2.840	Unbilled Metered Consumption (water exported is removed) 3,161.700
								Billed Metered Consumption
								Billed Authorized Consumption 3,161.700
								Billed Unmetered Consumption 0.000
283.925 (NRW)	Non-Revenue Water				Unbilled Unmetered Consumption 2.315	Unauthorized Consumption 8.614	Customer Metering Inaccuracies 48.191	Systematic Data Handling Errors 7.904
0.000	Revenue Water							Billed Water Exported



AWWA Free Water Audit Software: Dashboard

WAS v5.0

American Water Works Association.

The graphic below is a visual representation of the Water Balance with bar heights proportional to the volume of the audit components

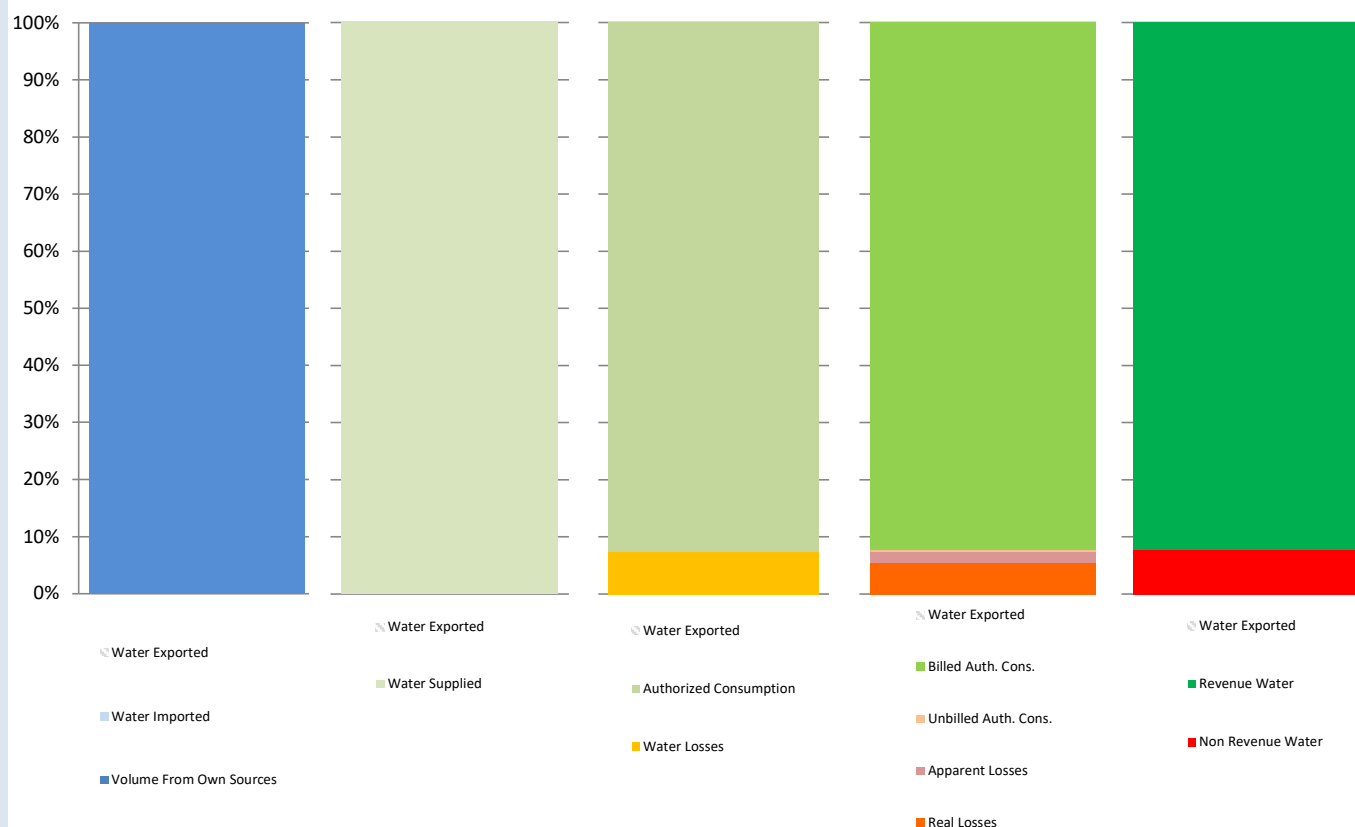
Water Audit Report for: **Marina Coast Water District (27710017)**

Reporting Year: **2021** **1/2021 - 12/2021**

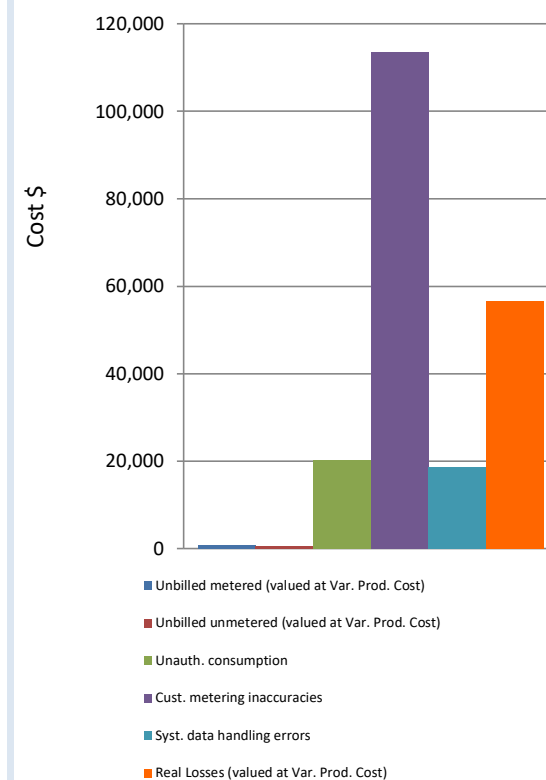
Data Validity Score: **70**

☐ Show me the VOLUME of Non-Revenue Water

☒ Show me the COST of Non-Revenue Water



Total Cost of NRW = \$210,353





AWWA Free Water Audit Software: Grading Matrix

WAS 5.0

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The grading assigned to each audit component and the corresponding recommended improvements and actions are highlighted in yellow. Audit accuracy is likely to be improved by prioritizing those items shown in red

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
WATER SUPPLIED											
Volume from own sources:	Select this grading only if the water utility purchases/imports all of its water resources (i.e. has no sources of its own)	Less than 25% of water production sources are metered, remaining sources are estimated. No regular meter accuracy testing or electronic calibration conducted.	25% - 50% of treated water production sources are metered; other sources estimated. No regular meter accuracy testing or electronic calibration conducted.	Conditions between 2 and 4	50% - 75% of treated water production sources are metered, other sources estimated. Occasional meter accuracy testing or electronic calibration conducted.	Conditions between 4 and 6	At least 75% of treated water production sources are metered, or at least 90% of the source flow is derived from metered sources. Meter accuracy testing and/or electronic calibration of related instrumentation is conducted annually. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of treated water production sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of treated water production sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually, with less than 10% found outside of +/- 3% accuracy. Procedures are reviewed by a third party knowledgeable in the M36 methodology.
Improvements to attain higher data grading for "Volume from own Sources" component:		to qualify for 2: Organize and launch efforts to collect data for determining volume from own sources	to qualify for 4: Locate all water production sources on maps and in the field, launch meter accuracy testing for existing meters, begin to install meters on unmetered water production sources and replace any obsolete/defective meters.		to qualify for 6: Formalize annual meter accuracy testing for all source meters; specify the frequency of testing. Complete installation of meters on unmetered water production sources and complete replacement of all obsolete/defective meters.		to qualify for 8: Conduct annual meter accuracy testing and calibration of related instrumentation on all meter installations on a regular basis. Complete project to install new, or replace defective existing, meters so that entire production meter population is metered. Repair or replace meters outside of +/- 6% accuracy.		to qualify for 10: Maintain annual meter accuracy testing and calibration of related instrumentation for all meter installations. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to further improve meter accuracy.		to maintain 10: Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.
Volume from own sources master meter and supply error adjustment:	Select n/a only if the water utility fails to have meters on its sources of supply	Inventory information on meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined	No automatic datalogging of production volumes; daily readings are scribed on paper records without any accountability controls. Flows are not balanced across the water distribution system; tank/storage elevation changes are not employed in calculating the "Volume from own sources" component and archived flow data is adjusted only when grossly evident data error occurs.	Conditions between 2 and 4	Production meter data is logged automatically in electronic format and reviewed at least on a monthly basis with necessary corrections implemented. "Volume from own sources" tabulations include estimate of daily changes in tanks/storage facilities. Meter data is adjusted when gross data errors occur, or occasional meter testing deems this necessary.	Conditions between 4 and 6	Hourly production meter data logged automatically & reviewed on at least a weekly basis. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and/or error is confirmed by meter accuracy testing. Tank/storage facility elevation changes are automatically used in calculating a balanced "Volume from own sources" component, and data gaps in the archived data are corrected on at least a weekly basis.	Conditions between 6 and 8	Continuous production meter data is logged automatically & reviewed each business day. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and/or results of meter accuracy testing. Tank/storage facility elevation changes are automatically used in "Volume from own sources" tabulations and data gaps in the archived data are corrected on a daily basis.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically balances flows from all sources and storages; results are reviewed each business day. Tight accountability controls ensure that all data gaps that occur in the archived flow data are quickly detected and corrected. Regular calibrations between SCADA and sources meters ensures minimal data transfer error.
Improvements to attain higher data grading for "Master meter and supply error adjustment" component:		to qualify for 2: Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature.	to qualify for 4: Install automatic datalogging equipment on production meters. Complete installation of level instrumentation at all tanks/storage facilities and include tank level data in automatic calculation routine in a computerized system. Construct a computerized listing or spreadsheet to archive input volumes, tank/storage volume changes and import/export flows in order to determine the composite "Water Supplied" volume for the distribution system. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps.		to qualify for 6: Refine computerized data collection and archive to include hourly production meter data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Use daily net storage change to balance flows in calculating "Water Supplied" volume. Necessary corrections to data errors are implemented on a weekly basis.		to qualify for 8: Ensure that all flow data is collected and archived on at least an hourly basis. All data is reviewed and detected errors corrected each business day. Tank/storage levels variations are employed in calculating balanced "Water Supplied" component. Adjust production meter data for gross error and inaccuracy confirmed by testing.		to qualify for 10: Link all production and tank/storage facility elevation change data to a Supervisory Control & Data Acquisition (SCADA) System, or similar computerized monitoring/control system, and establish automatic flow balancing algorithm and regularly calibrate between SCADA and source meters. Data is reviewed and corrected each business day.		to maintain 10: Monitor meter innovations for development of more accurate and less expensive flowmeters. Continue to replace or repair meters as they perform outside of desired accuracy limits. Stay abreast of new and more accurate water level instruments to better record tank/storage levels and archive the variations in storage volume. Keep current with SCADA and data management systems to ensure that archived data is well-managed and error free.
Water Imported:	Select n/a if the water utility's supply is exclusively from its own water resources (no bulk purchased/ imported water)	Less than 25% of imported water sources are metered, remaining sources are estimated. No regular meter accuracy testing.	25% - 50% of imported water sources are metered; other sources estimated. No regular meter accuracy testing.	Conditions between 2 and 4	50% - 75% of imported water sources are metered; other sources estimated. Occasional meter accuracy testing conducted.	Conditions between 4 and 6	At least 75% of imported water sources are metered, meter accuracy testing and/or electronic calibration of related instrumentation is conducted annually for all meter installations. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of imported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of imported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually for all meter installations, with less than 10% of accuracy tests found outside of +/- 3% accuracy.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Improvements to attain higher data grading for "Water Imported Volume" component: (Note: usually the water supplier selling the water - "the Exporter" - to the utility being audited is responsible to maintain the metering installation measuring the imported volume. The utility should coordinate carefully with the Exporter to ensure that adequate meter upkeep takes place and an accurate measure of the Water Imported volume is quantified.)		to qualify for 2: Review bulk water purchase agreements with partner suppliers; confirm requirements for use and maintenance of accurate metering. Identify needs for new or replacement meters with goal to meter all imported water sources.	To qualify for 4: Locate all imported water sources on maps and in the field, launch meter accuracy testing for existing meters, begin to install meters on unmetered imported water interconnections and replace obsolete/defective meters.		to qualify for 6: Formalize annual meter accuracy testing for all imported water meters, planning for both regular meter accuracy testing and calibration of the related instrumentation. Continue installation of meters on unmetered imported water interconnections and replacement of obsolete/defective meters.		to qualify for 8: Complete project to install new, or replace defective, meters on all imported water interconnections. Maintain annual meter accuracy testing for all imported water meters and conduct calibration of related instrumentation at least annually. Repair or replace meters outside of +/- 6% accuracy.		to qualify for 10: Conduct meter accuracy testing for all meters on a semi-annual basis, along with calibration of all related instrumentation. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to improve meter accuracy.		to maintain 10: Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Continue to conduct calibration of related instrumentation on a semi-annual basis. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.
Water imported master meter and supply error adjustment:	Select n/a if the Imported water supply is unmetered, with Imported water quantities estimated on the billing invoices sent by the Exporter to the purchasing Utility.	Inventory information on imported meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined. Written agreement(s) with water Exporter(s) are missing or written in vague language concerning meter management and testing.	No automatic datalogging of imported supply volumes; daily readings are scribed on paper records without any accountability controls to confirm data accuracy and the absence of errors and data gaps in recorded volumes. Written agreement requires meter accuracy testing but is vague on the details of how and who conducts the testing.	Conditions between 2 and 4	Imported supply metered flow data is logged automatically in electronic format and reviewed at least on a monthly basis by the Exporter with necessary corrections implemented. Meter data is adjusted by the Exporter when gross data errors are detected. A coherent data trail exists for this process to protect both the selling and the purchasing Utility. Written agreement exists and clearly states requirements and roles for meter accuracy testing and data management.	Conditions between 4 and 6	Hourly Imported supply metered data is logged automatically & reviewed on at least a weekly basis by the Exporter. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and to correct for error confirmed by meter accuracy testing. Any data gaps in the archived data are detected and corrected during the weekly review. A coherent data trail exists for this process to protect both the selling and the purchasing Utility.	Conditions between 6 and 8	Continuous Imported supply metered flow data is logged automatically & reviewed each business day by the Exporter. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and/or results of meter accuracy testing. Any data errors/gaps are detected and corrected on a daily basis. A data trail exists for the process to protect both the selling and the purchasing Utility.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically records data which is reviewed each business day by the Exporter. Tight accountability controls ensure that all error/data gaps that occur in the archived flow data are quickly detected and corrected. A reliable data trail exists and contract provisions for meter testing and data management are reviewed by the selling and purchasing Utility at least once every five years.
Improvements to attain higher data grading for "Water imported master meter and supply error adjustment" component:		to qualify for 2: Develop a plan to restructure recordkeeping system to capture all flow data; set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature. Review the written agreement between the selling and purchasing Utility.	to qualify for 4: Install automatic datalogging equipment on Imported supply meters. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps. Launch discussions with the Exporters to jointly review terms of the written agreements regarding meter accuracy testing and data management; revise the terms as necessary.		to qualify for 6: Refine computerized data collection and archive to include hourly Imported supply metered flow data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Make necessary corrections to errors/data errors on a weekly basis.		to qualify for 8: Ensure that all Imported supply metered flow data is collected and archived on at least an hourly basis. All data is reviewed and errors/data gaps are corrected each business day.		to qualify for 10: Conduct accountability checks to confirm that all Imported supply metered data is reviewed and corrected each business day by the Exporter. Results of all meter accuracy tests and data corrections should be available for sharing between the Exporter and the purchasing Utility. Establish a schedule for a regular review and updating of the contractual language in the written agreement between the selling and the purchasing Utility, at least every five years.		to maintain 10: Monitor meter innovations for development of more accurate and less expensive flowmeters; work with the Exporter to help identify meter replacement needs. Keep communication lines with Exporters open and maintain productive relations. Keep the written agreement current with clear and explicit language that meets the ongoing needs of all parties.
Water Exported:	Select n/a if the water utility sells no bulk water to neighboring water utilities (no exported water sales)	Less than 25% of exported water sources are metered, remaining sources are estimated. No regular meter accuracy testing.	25% - 50% of exported water sources are metered; other sources estimated. No regular meter accuracy testing.	Conditions between 2 and 4	50% - 75% of exported water sources are metered, other sources estimated. Occasional meter accuracy testing conducted.	Conditions between 4 and 6	At least 75% of exported water sources are metered, meter accuracy testing and/or electronic calibration conducted annually. Less than 25% of tested meters are found outside of +/- 6% accuracy.	Conditions between 6 and 8	100% of exported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted annually, less than 10% of meters are found outside of +/- 6% accuracy	Conditions between 8 and 10	100% of exported water sources are metered, meter accuracy testing and electronic calibration of related instrumentation is conducted semi-annually for all meter installations, with less than 10% of accuracy tests found outside of +/- 3% accuracy.
Improvements to attain higher data grading for "Water Exported Volume" component: (Note: usually, if the water utility being audited sells (Exports) water to a neighboring purchasing Utility, it is the responsibility of the utility exporting the water to maintain the metering installation measuring the Exported volume. The utility exporting the water should ensure that adequate meter upkeep takes place and an accurate measure of the Water Exported volume is quantified.)		to qualify for 2: Review bulk water sales agreements with purchasing utilities; confirm requirements for use & upkeep of accurate metering. Identify needs to install new, or replace defective meters as needed.	To qualify for 4: Locate all exported water sources on maps and in field, launch meter accuracy testing for existing meters, begin to install meters on unmetered exported water interconnections and replace obsolete/defective meters		to qualify for 6: Formalize annual meter accuracy testing for all exported water meters. Continue installation of meters on unmetered exported water interconnections and replacement of obsolete/defective meters.		to qualify for 8: Complete project to install new, or replace defective, meters on all exported water interconnections. Maintain annual meter accuracy testing for all exported water meters. Repair or replace meters outside of +/- 6% accuracy.		to qualify for 10: Maintain annual meter accuracy testing for all meters. Repair or replace meters outside of +/- 3% accuracy. Investigate new meter technology; pilot one or more replacements with innovative meters in attempt to improve meter accuracy.		to maintain 10: Standardize meter accuracy test frequency to semi-annual, or more frequent, for all meters. Repair or replace meters outside of +/- 3% accuracy. Continually investigate/pilot improving metering technology.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Water exported master meter and supply error adjustment:	Select n/a only if the water utility fails to have meters on its exported supply interconnections.	Inventory information on exported meters and paper records of measured volumes exist but are incomplete and/or in a very crude condition; data error cannot be determined. Written agreement(s) with the utility purchasing the water are missing or written in vague language concerning meter management and testing.	No automatic datalogging of exported supply volumes; daily readings are scribed on paper records without any accountability controls to confirm data accuracy and the absence of errors and data gaps in recorded volumes. Written agreement requires meter accuracy testing but is vague on the details of how and who conducts the testing.	Conditions between 2 and 4	Exported metered flow data is logged automatically in electronic format and reviewed at least on a monthly basis, with necessary corrections implemented. Meter data is adjusted by the utility selling (exporting) the water when gross data errors are detected. A coherent data trail exists for this process to protect both the utility exporting the water and the purchasing Utility. Written agreement exists and clearly states requirements and roles for meter accuracy testing and data management.	Conditions between 4 and 6	Hourly exported supply metered data is logged automatically & reviewed on at least a weekly basis by the utility selling the water. Data is adjusted to correct gross error when meter/instrumentation equipment malfunction is detected; and to correct for error found by meter accuracy testing. Any data gaps in the archived data are detected and corrected during the weekly review. A coherent data trail exists for this process to protect both the selling (exporting) utility and the purchasing Utility.	Conditions between 6 and 8	Continuous exported supply metered flow data is logged automatically & reviewed each business day by the utility selling (exporting) the water. Data is adjusted to correct gross error from detected meter/instrumentation equipment malfunction and any error confirmed by meter accuracy testing. Any data errors/gaps are detected and corrected on a daily basis. A data trail exists for the process to protect both the selling (exporting) Utility and the purchasing Utility.	Conditions between 8 and 10	Computerized system (SCADA or similar) automatically records data which is reviewed each business day by the utility selling (exporting) the water. Tight accountability controls ensure that all error/data gaps that occur in the archived flow data are quickly detected and corrected. A reliable data trail exists and contract provisions for meter testing and data management are reviewed by the selling Utility and purchasing Utility at least once every five years.
Improvements to attain higher data grading for "Water exported master meter and supply error adjustment" component:		<u>to qualify for 2:</u> Develop a plan to restructure recordkeeping system to capture all flow data, set a procedure to review flow data on a daily basis to detect input errors. Obtain more reliable information about existing meters by conducting field inspections of meters and related instrumentation, and obtaining manufacturer literature. Review the written agreement between the utility selling (exporting) the water and the purchasing Utility.	<u>to qualify for 4:</u> Install automatic datalogging equipment on exported supply meters. Set a procedure to review this data on a monthly basis to detect gross anomalies and data gaps. Launch discussions with the purchasing utilities to jointly review terms of the written agreements regarding meter accuracy testing and data management; revise the terms as necessary.		<u>to qualify for 6:</u> Refine computerized data collection and archive to include hourly exported supply metered flow data that is reviewed at least on a weekly basis to detect specific data anomalies and gaps. Make necessary corrections to errors/data errors on a weekly basis.		<u>to qualify for 8:</u> Ensure that all exported metered flow data is collected and archived on at least an hourly basis. All data is reviewed and errors/data gaps are corrected each business day.		<u>to qualify for 10:</u> Conduct accountability checks to confirm that all exported metered flow data is reviewed and corrected each business day by the utility selling the water. Results of all meter accuracy tests and data corrections should be available for sharing between the utility and the purchasing Utility. Establish a schedule for a regular review and updating of the contractual language in the written agreements with the purchasing utilities; at least every five years.		<u>to maintain 10:</u> Monitor meter innovations for development of more accurate and less expensive flowmeters; work with the purchasing utilities to help identify meter replacement needs. Keep communication lines with the purchasing utilities open and maintain productive relations. Keep the written agreement current with clear and explicit language that meets the ongoing needs of all parties.
AUTHORIZED CONSUMPTION											
Billed metered:	n/a (not applicable). Select n/a only if the entire customer population is not metered and is billed for water service on a flat or fixed rate basis. In such a case the volume entered must be zero.	Less than 50% of customers with volume-based billings from meter readings; flat or fixed rate billing exists for the majority of the customer population	At least 50% of customers with volume-based billing from meter reads; flat rate billing for others. Manual meter reading is conducted, with less than 50% meter read success rate; remaining accounts consumption is estimated. Limited meter records, no regular meter testing or replacement. Billing data maintained on paper records, with no auditing.	Conditions between 2 and 4	At least 75% of customers with volume-based, billing from meter reads; flat or fixed rate billing for remaining accounts. Manual meter reading is conducted with at least 50% meter read success rate; consumption for accounts with failed reads is estimated. Purchase records verify age of customer meters; only very limited meter accuracy testing is conducted. Customer meters are replaced only upon complete failure. Computerized billing records exist, but only sporadic internal auditing conducted.	Conditions between 4 and 6	At least 90% of customers with volume-based billing from meter reads; consumption for remaining accounts is estimated. Manual customer meter reading gives at least 80% customer meter reading success rate; consumption for accounts with failed reads is estimated. Good customer meter records exist, but only limited meter accuracy testing is conducted. Regular replacement is conducted for the oldest meters. Computerized billing records exist with annual auditing of summary statistics conducted by utility personnel.	Conditions between 6 and 8	At least 97% of customers exist with volume-based billing from meter reads. At least 90% customer meter reading success rate; or at least 80% read success rate with planning and budgeting for trials of Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) in one or more pilot areas. Good customer meter records. Regular meter accuracy testing guides replacement of statistically significant number of meters each year. Routine auditing of computerized billing records for global and detailed statistics occurs annually by utility personnel, and is verified by third party at least once every five years.	Conditions between 8 and 10	At least 99% of customers exist with volume-based billing from meter reads. At least 95% customer meter reading success rate; or minimum 80% meter reading success rate, with Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) trials underway. Statistically significant customer meter testing and replacement program in place on a continuous basis. Computerized billing with routine, detailed auditing, including field investigation of representative sample of accounts undertaken annually by utility personnel. Audit is conducted by third party auditors at least once every three years.
Improvements to attain higher data grading for "Billed Metered Consumption" component:	If n/a is selected because the customer meter population is unmetered, consider establishing a new policy to meter the customer population and employ water rates based upon metered volumes.	<u>to qualify for 2:</u> Conduct investigations or trials of customer meters to select appropriate meter models. Budget funding for meter installations. Investigate volume based water rate structures.	<u>to qualify for 4:</u> Purchase and install meters on unmetered accounts. Implement policies to improve meter reading success. Catalog meter information during meter read visits to identify age/model of existing meters. Test a minimal number of meters for accuracy. Install computerized billing system.		<u>to qualify for 6:</u> Purchase and install meters on unmetered accounts. Eliminate flat fee billing and establish appropriate water rate structure based upon measured consumption. Continue to achieve verifiable success in removing manual meter reading barriers. Expand meter accuracy testing. Launch regular meter replacement program. Launch a program of annual auditing of global billing statistics by utility personnel.		<u>to qualify for 8:</u> Purchase and install meters on unmetered accounts. If customer meter reading success rate is less than 97%, assess cost-effectiveness of Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) system for portion or entire system; or otherwise achieve ongoing improvements in manual meter reading success rate to 97% or higher. Refine meter accuracy testing program. Set meter replacement goals based upon accuracy test results. Implement annual auditing of detailed billing records by utility personnel and implement third party auditing at least once every five years.		<u>to qualify for 10:</u> Purchase and install meters on unmetered accounts. Launch Automatic Meter Reading (AMR) or Advanced Metering Infrastructure (AMI) system trials if manual meter reading success rate of at least 99% is not achieved within a five-year program. Continue meter accuracy testing program. Conduct planning and budgeting for large scale meter replacement based upon meter life cycle analysis using cumulative flow target. Continue annual detailed billing data auditing by utility personnel and conduct third party auditing at least once every three years.		<u>to maintain 10:</u> Continue annual internal billing data auditing, and third party auditing at least every three years. Continue customer meter accuracy testing to ensure that accurate customer meter readings are obtained and entered as the basis for volume based billing. Stay abreast of improvements in Automatic Meter Reading (AMR) and Advanced Metering Infrastructure (AMI) and information management. Plan and budget for justified upgrades in metering, meter reading and billing data management to maintain very high accuracy in customer metering and billing.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Billed unmetered:	Select n/a if it is the policy of the water utility to meter all customer connections and it has been confirmed by detailed auditing that all customers do indeed have a water meter, i.e. no intentionally unmetered accounts exist	Water utility policy does <u>not</u> require customer metering; flat or fixed fee billing is employed. No data is collected on customer consumption. The only estimates of customer population consumption available are derived from data estimation methods using average fixture count multiplied by number of connections, or similar approach.	Water utility policy does <u>not</u> require customer metering; flat or fixed fee billing is employed. Some metered accounts exist in parts of the system (pilot areas or District Metered Areas) with consumption read periodically or recorded on portable dataloggers over one, three, or seven day periods. Data from these sample meters are used to infer consumption for the total customer population. Site specific estimation methods are used for unusual buildings/water uses.	Conditions between 2 and 4	Water utility policy <u>does</u> require metering and volume based billing in general. However, a liberal amount of exemptions and a lack of clearly written and communicated procedures result in up to 20% of billed accounts believed to be unmetered by exemption; or the water utility is in transition to becoming fully metered, and a large number of customers remain unmetered. A rough estimate of the annual consumption for all unmetered accounts is included in the annual water audit, with no inspection of individual unmetered accounts.	Conditions between 4 and 6	Water utility policy <u>does</u> require metering and volume based billing but established exemptions exist for a portion of accounts such as municipal buildings. As many as 15% of billed accounts are unmetered due to this exemption or meter installation difficulties. Only a group estimate of annual consumption for all unmetered accounts is included in the annual water audit, with no inspection of individual unmetered accounts.	Conditions between 6 and 8	Water utility policy <u>does</u> require metering and volume based billing for all customer accounts. However, less than 5% of billed accounts remain unmetered because meter installation is hindered by unusual circumstances. The goal is to minimize the number of unmetered accounts. Reliable estimates of consumption are obtained for these unmetered accounts via site specific estimation methods.	Conditions between 8 and 10	Water utility policy <u>does</u> require metering and volume based billing for all customer accounts. Less than 2% of billed accounts are unmetered and exist because meter installation is hindered by unusual circumstances. The goal exists to minimize the number of unmetered accounts to the extent that is economical. Reliable estimates of consumption are obtained at these accounts via site specific estimation methods.
Improvements to attain higher data grading for "Billed Unmetered Consumption" component:		<u>to qualify for 2:</u> Conduct research and evaluate cost/benefit of a new water utility policy to require metering of the customer population; thereby greatly reducing or eliminating unmetered accounts. Conduct pilot metering project by installing water meters in small sample of customer accounts and periodically reading the meters or datalogging the water consumption over one, three, or seven day periods.	<u>to qualify for 4:</u> Implement a new water utility policy requiring customer metering. Launch or expand pilot metering study to include several different meter types, which will provide data for economic assessment of full scale metering options. Assess sites with access difficulties to devise means to obtain water consumption volumes. Begin customer meter installation.		<u>to qualify for 6:</u> Refine policy and procedures to improve customer metering participation for all but solidly exempt accounts. Assign staff resources to review billing records to identify errant unmetered properties. Specify metering needs and funding requirements to install sufficient meters to significant reduce the number of unmetered accounts		<u>to qualify for 8:</u> Push to install customer meters on a full scale basis. Refine metering policy and procedures to ensure that all accounts, including municipal properties, are designated for meters. Plan special efforts to address "hard-to-access" accounts. Implement procedures to obtain a reliable consumption estimate for the remaining few unmetered accounts awaiting meter installation.		<u>to qualify for 10:</u> Continue customer meter installation throughout the service area, with a goal to minimize unmetered accounts. Sustain the effort to investigate accounts with access difficulties, and devise means to install water meters or otherwise measure water consumption.		<u>to maintain 10:</u> Continue to refine estimation methods for unmetered consumption and explore means to establish metering, for as many billed remaining unmetered accounts as is economically feasible.
Unbilled metered:	select n/a if all billing-exempt consumption is unmetered.	Billing practices exempt certain accounts, such as municipal buildings, but written policies do not exist; and a reliable count of unbilled metered accounts is unavailable. Meter upkeep and meter reading on these accounts is rare and not considered a priority. Due to poor recordkeeping and lack of auditing, water consumption for all such accounts is purely guesstimated.	Billing practices exempt certain accounts, such as municipal buildings, but only scattered, dated written directives exist to justify this practice. A reliable count of unbilled metered accounts is unavailable. Sporadic meter replacement and meter reading occurs on an as-needed basis. The total annual water consumption for all unbilled, metered accounts is estimated based upon approximating the number of accounts and assigning consumption from actively billed accounts of same meter size.	Conditions between 2 and 4	Dated written procedures permit billing exemption for specific accounts, such as municipal properties, but are unclear regarding certain other types of accounts. Meter reading is given low priority and is sporadic. Consumption is quantified from meter readings where available. The total number of unbilled, unmetered accounts must be estimated along with consumption volumes.	Conditions between 4 and 6	Written policies regarding billing exemptions exist but adherence in practice is questionable. Metering and meter reading for municipal buildings is reliable but sporadic for other unbilled metered accounts. Periodic auditing of such accounts is conducted. Water consumption is quantified directly from meter readings where available, but the majority of the consumption is estimated.	Conditions between 6 and 8	Written policy identifies the types of accounts granted a billing exemption. Customer meter management and meter reading are considered secondary priorities, but meter reading is conducted at least annually to obtain consumption volumes for the annual water audit. High level auditing of billing records ensures that a reliable census of such accounts exists.	Conditions between 8 and 10	Clearly written policy identifies the types of accounts given a billing exemption, with emphasis on keeping such accounts to a minimum. Customer meter management and meter reading for these accounts is given proper priority and is reliably conducted. Regular auditing confirms this. Total water consumption for these accounts is taken from reliable readings from accurate meters.
Improvements to attain higher data grading for "Unbilled Metered Consumption" component:		<u>to qualify for 2:</u> Reassess the water utility's policy allowing certain accounts to be granted a billing exemption. Draft an outline of a new written policy for billing exemptions, with clear justification as to why any accounts should be exempt from billing, and with the intention to keep the number of such accounts to a minimum.	<u>to qualify for 4:</u> Review historic written directives and policy documents allowing certain accounts to be billing-exempt. Draft an outline of a written policy for billing exemptions, identify criteria that grants an exemption, with a goal of keeping this number of accounts to a minimum. Consider increasing the priority of reading meters on unbilled accounts at least annually.		<u>to qualify for 6:</u> Draft a new written policy regarding billing exemptions based upon consensus criteria allowing this occurrence. Assign resources to audit meter records and billing records to obtain census of unbilled metered accounts. Gradually include a greater number of these metered accounts to the routes for regular meter reading.		<u>to qualify for 8:</u> Communicate billing exemption policy throughout the organization and implement procedures that ensure proper account management. Conduct inspections of accounts confirmed in unbilled metered status and verify that accurate meters exist and are scheduled for routine meter readings. Gradually increase the number of unbilled metered accounts that are included in regular meter reading routes.		<u>to qualify for 10:</u> Ensure that meter management (meter accuracy testing, meter replacement) and meter reading activities for unbilled accounts are accorded the same priority as billed accounts. Establish ongoing annual auditing process to ensure that water consumption is reliably collected and provided to the annual water audit process.		<u>to maintain 10:</u> Reassess the utility's philosophy in allowing any water uses to go "unbilled". It is possible to meter and bill all accounts, even if the fee charged for water consumption is discounted or waived. Metering and billing all accounts ensures that water consumption is tracked and water waste from plumbing leaks is detected and minimized.
Unbilled unmetered:		Extent of unbilled, unmetered consumption is unknown due to unclear policies and poor recordkeeping. Total consumption is quantified based upon a purely subjective estimate.	Clear extent of unbilled, unmetered consumption is unknown, but a number of events are randomly documented each year, confirming existence of such consumption, but without sufficient documentation to quantify an accurate estimate of the annual volume consumed.	Conditions between 2 and 4	Extent of unbilled, unmetered consumption is partially known, and procedures exist to document certain events such as miscellaneous fire hydrant uses. Formulae is used to quantify the consumption from such events (time running multiplied by typical flowrate, multiplied by number of events).	Default value of 1.25% of system input volume is employed	Coherent policies exist for some forms of unbilled, unmetered consumption but others await closer evaluation. Reasonable recordkeeping for the managed uses exists and allows for annual volumes to be quantified by inference, but unsupervised uses are guesstimated.	Conditions between 6 and 8	Clear policies and good recordkeeping exist for some uses (ex: water used in periodic testing of unmetered fire connections), but other uses (ex: miscellaneous uses of fire hydrants) have limited oversight. Total consumption is a mix of well quantified use such as from formulae (time running multiplied by typical flow, multiplied by number of events) or temporary meters, and relatively subjective estimates of less regulated use.	Conditions between 8 and 10	Clear policies exist to identify permitted use of water in unbilled, unmetered fashion, with the intention of minimizing this type of consumption. Good records document each occurrence and consumption is quantified via formulae (time running multiplied by typical flow, multiplied by number of events) or use of temporary meters.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Improvements to attain higher data grading for "Unbilled Unmetered Consumption" component:		<p><u>to qualify for 5:</u> Utilize the accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of this use.</p> <p><u>to qualify for 2:</u> Establish a policy regarding what water uses should be allowed to remain as unbilled and unmetered. Consider tracking a small sample of one such use (ex: fire hydrant flushings).</p>	<p><u>to qualify for 5:</u> Utilize accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of this use.</p> <p><u>to qualify for 4:</u> Evaluate the documentation of events that have been observed. Meet with user groups (ex: for fire hydrants - fire departments, contractors to ascertain their need and/or volume requirements for water from fire hydrants).</p>		<p><u>to qualify for 5:</u> Utilize accepted default value of 1.25% of the volume of water supplied as an expedient means to gain a reasonable quantification of all such use. This is particularly appropriate for water utilities who are in the early stages of the water auditing process, and should focus on other components since the volume of unbilled, unmetered consumption is usually a relatively small quality component, and other larger-quantity components should take priority.</p>	<p><u>to qualify for 6 or greater:</u> Finalize policy and begin to conduct field checks to better establish and quantify such usage. Proceed if top-down audit exists and/or a great volume of such use is suspected.</p>	<p><u>to qualify for 8:</u> Assess water utility policy and procedures for various unmetered usages. For example, ensure that a policy exists and permits are issued for use of fire hydrants by persons outside of the utility. Create written procedures for use and documentation of fire hydrants by water utility personnel. Use same approach for other types of unbilled, unmetered water usage.</p>		<p><u>to qualify for 10:</u> Refine written procedures to ensure that all uses of unbilled, unmetered water are overseen by a structured permitting process managed by water utility personnel. Reassess policy to determine if some of these uses have value in being converted to billed and/or metered status.</p>	<p><u>to maintain 10:</u> Continue to refine policy and procedures with intention of reducing the number of allowable uses of water in unbilled and unmetered fashion. Any uses that can feasibly become billed and metered should be converted eventually.</p>	
APPARENT LOSSES											
Unauthorized consumption:		<p>Extent of unauthorized consumption is unknown due to unclear policies and poor recordkeeping. Total unauthorized consumption is guesstimated.</p>	<p>Unauthorized consumption is a known occurrence, but its extent is a mystery. There are no requirements to document observed events, but periodic field reports capture some of these occurrences. Total unauthorized consumption is approximated from this limited data.</p>	conditions between 2 and 4	<p>Procedures exist to document some unauthorized consumption such as observed unauthorized fire hydrant openings. Use formulae to quantify this consumption (time running multiplied typical flowrate, multiplied by number of events).</p>	<p>Default value of 0.25% of volume of water supplied is employed</p>	<p>Coherent policies exist for some forms of unauthorized consumption (more than simply fire hydrant misuse) but others await closer evaluation. Reasonable surveillance and recordkeeping exist for occurrences that fall under the policy. Volumes quantified by inference from these records.</p>	Conditions between 6 and 8	<p>Clear policies and good auditable recordkeeping exist for certain events (ex: tampering with water meters, illegal bypasses of customer meters); but other occurrences have limited oversight. Total consumption is a combination of volumes from formulae (time x typical flow) and subjective estimates of unconfirmed consumption.</p>	Conditions between 8 and 10	<p>Clear policies exist to identify all known unauthorized uses of water. Staff and procedures exist to provide enforcement of policies and detect violations. Each occurrence is recorded and quantified via formulae (estimated time running multiplied by typical flow) or similar methods. All records and calculations should exist in a form that can be audited by a third party.</p>
Improvements to attain higher data grading for "Unauthorized Consumption" component:		<p><u>to qualify for 5:</u> Use accepted default of 0.25% of volume of water supplied.</p> <p><u>to qualify for 2:</u> Review utility policy regarding what water uses are considered unauthorized, and consider tracking a small sample of one such occurrence (ex: unauthorized fire hydrant openings)</p>	<p><u>to qualify for 5:</u> Use accepted default of 0.25% of system input volume</p> <p><u>to qualify for 4:</u> Review utility policy regarding what water uses are considered unauthorized, and consider tracking a small sample of one such occurrence (ex: unauthorized fire hydrant openings)</p>		<p><u>to qualify for 5:</u> Utilize accepted default value of 0.25% of volume of water supplied as an expedient means to gain a reasonable quantification of all such use. This is particularly appropriate for water utilities who are in the early stages of the water auditing process.</p>	<p><u>to qualify for 6 or greater:</u> Finalize policy updates to clearly identify the types of water consumption that are authorized from those usages that fall outside of this policy and are, therefore, unauthorized. Begin to conduct regular field checks. Proceed if the top-down audit already exists and/or a great volume of such use is suspected.</p>	<p><u>to qualify for 8:</u> Assess water utility policies to ensure that all known occurrences of unauthorized consumption are outlawed, and that appropriate penalties are prescribed. Create written procedures for detection and documentation of various occurrences of unauthorized consumption as they are uncovered.</p>		<p><u>to qualify for 10:</u> Refine written procedures and assign staff to seek out likely occurrences of unauthorized consumption. Explore new locking devices, monitors and other technologies designed to detect and thwart unauthorized consumption.</p>	<p><u>to maintain 10:</u> Continue to refine policy and procedures to eliminate any loopholes that allow or tacitly encourage unauthorized consumption. Continue to be vigilant in detection, documentation and enforcement efforts.</p>	
Customer metering inaccuracies:	select n/a only if the entire customer population is unmetered. In such a case the volume entered must be zero.	<p>Customer meters exist, but with unorganized paper records on meters; no meter accuracy testing or meter replacement program for any size of retail meter. Metering workflow is driven chaotically with no proactive management. Loss volume due to aggregate meter inaccuracy is guesstimated.</p>	<p>Poor recordkeeping and meter oversight is recognized by water utility management who has allotted staff and funding resources to organize improved recordkeeping and start meter accuracy testing. Existing paper records gathered and organized to provide cursory disposition of meter population. Customer meters are tested for accuracy only upon customer request.</p>	Conditions between 2 and 4	<p>Reliable recordkeeping exists; meter information is improving as meters are replaced. Meter accuracy testing is conducted annually for a small number of meters (more than just customer requests, but less than 1% of inventory). A limited number of the oldest meters are replaced each year. Inaccuracy volume is largely an estimate, but refined based upon limited testing data.</p>	Conditions between 4 and 6	<p>A reliable electronic recordkeeping system for meters exists. The meter population includes a mix of new high performing meters and dated meters with suspect accuracy. Routine, but limited, meter accuracy testing and meter replacement occur. Inaccuracy volume is quantified using a mix of reliable and less certain data.</p>	Conditions between 6 and 8	<p>Ongoing meter replacement and accuracy testing result in highly accurate customer meter population. Testing is conducted on samples of meters of varying age and accumulated volume of throughput to determine optimum replacement time for various types of meters.</p>	<p>Ongoing meter replacement and accuracy testing result in highly accurate customer meter population. Statistically significant number of meters are tested in audit year. This testing is conducted on samples of meters of varying age and accumulated volume of throughput to determine optimum replacement time for these meters.</p>	<p>Good records of all active customer meters exist and include as a minimum: meter number, account number/location, type, size and manufacturer. Ongoing meter replacement occurs according to a targeted and justified basis. Regular meter accuracy testing gives a reliable measure of composite inaccuracy volume for the customer meter population. New metering technology is embraced to keep overall accuracy improving. Procedures are reviewed by a third party knowledgeable in the M36 methodology.</p>

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Improvements to attain higher data grading for "Customer meter inaccuracy volume" component:	If n/a is selected because the customer meter population is unmetered, consider establishing a new policy to meter the customer population and employ water rates based upon metered volumes.	<u>to qualify for 2:</u> Gather available meter purchase records. Conduct testing on a small number of meters believed to be the most inaccurate. Review staffing needs of the metering group and budget for necessary resources to better organize meter management.	<u>to qualify for 4:</u> Implement a reliable record keeping system for customer meter histories, preferably using electronic methods typically linked to, or part of, the Customer Billing System or Customer Information System. Expand meter accuracy testing to a larger group of meters.		<u>to qualify for 6:</u> Standardize the procedures for meter recordkeeping within an electronic information system. Accelerate meter accuracy testing and meter replacements guided by testing results.		<u>to qualify for 8:</u> Expand annual meter accuracy testing to evaluate a statistically significant number of meter makes/models. Expand meter replacement program to replace statistically significant number of poor performing meters each year.		<u>to qualify for 9:</u> Continue efforts to manage meter population with reliable recordkeeping. Test a statistically significant number of meters each year and analyze test results in an ongoing manner to serve as a basis for a target meter replacement strategy based upon accumulated volume throughput.	<u>to qualify for 10:</u> Continue efforts to manage meter population with reliable recordkeeping, meter testing and replacement. Evaluate new meter types and install one or more types in 5-10 customer accounts each year in order to pilot-improving metering technology.	<u>to maintain 10:</u> Increase the number of meters tested and replaced as justified by meter accuracy test data. Continually monitor development of new metering technology and Advanced Metering Infrastructure (AMI) to grasp opportunities for greater accuracy in metering of water flow and management of customer consumption data.
Systematic Data Handling Errors:	Note: all water utilities incur some amount of this error. Even in water utilities with unmetered customer populations and fixed rate billing, errors occur in annual billing tabulations. Enter a positive value for the volume and select a grading.	Policies and procedures for activation of new customer water billing accounts are vague and lack accountability. Billing data is maintained on paper records which are not well organized. No auditing is conducted to confirm billing data handling efficiency. An unknown number of customers escape routine billing due to lack of billing process oversight.	Policy and procedures for activation of new customer accounts and oversight of billing records exist but need refinement. Billing data is maintained on paper records or insufficiently capable electronic database. Only periodic unstructured auditing work is conducted to confirm billing data handling efficiency. The volume of unbilled water due to billing lapses is a guess.	Conditions between 2 and 4	Policy and procedures for new account activation and oversight of billing operations exist but needs refinement. Computerized billing system exists, but is dated or lacks needed functionality. Periodic, limited internal audits conducted and confirm with approximate accuracy the consumption volumes lost to billing lapses.	Conditions between 4 and 6	Policy and procedures for new account activation and oversight of billing operations is adequate and reviewed periodically. Computerized billing system is in use with basic reporting available. Any effect of billing adjustments on measured consumption volumes is well understood. Internal checks of billing data error conducted annually. Reasonably accurate quantification of consumption volume lost to billing lapses is obtained.	Conditions between 6 and 8	New account activation and billing operations policy and procedures are reviewed at least biannually. Computerized billing system includes an array of reports to confirm billing data and system functionality. Checks are conducted routinely to flag and explain zero consumption accounts. Annual internal checks conducted with third party audit conducted at least once every five years. Accountability checks flag billing lapses. Consumption lost to billing lapses is well quantified and reducing year-by-year.	Conditions between 8 and 10	Sound written policy and procedures exist for new account activation and oversight of customer billing operations. Robust computerized billing system gives high functionality and reporting capabilities which are utilized, analyzed and the results reported each billing cycle. Assessment of policy and data handling errors are conducted internally and audited by third party at least once every three years, ensuring consumption lost to billing lapses is minimized and detected as it occurs.
Improvements to attain higher data grading for "Systematic Data Handling Error volume" component:		<u>to qualify for 2:</u> Draft written policy and procedures for activating new water billing accounts and oversight of billing operations. Investigate and budget for computerized customer billing system. Conduct initial audit of billing records by flow-charting the basic business processes of the customer account/billing function.	<u>to qualify for 4:</u> Finalize written policy and procedures for activation of new billing accounts and overall billing operations management. Implement a computerized customer billing system. Conduct initial audit of billing records as part of this process.		<u>to qualify for 6:</u> Refine new account activation and billing operations procedures and ensure consistency with the utility policy regarding billing, and minimize opportunity for missed billings. Upgrade or replace customer billing system for needed functionality - ensure that billing adjustments don't corrupt the value of consumption volumes. Procedurize internal annual audit process.		<u>to qualify for 8:</u> Formalize regular review of new account activation process and general billing practices. Enhance reporting capability of computerized billing system. Formalize regular auditing process to reveal scope of data handling error. Plan for periodic third party audit to occur at least once every five years.		<u>to qualify for 10:</u> Close policy/procedure loopholes that allow some customer accounts to go unbilled, or data handling errors to exist. Ensure that billing system reports are utilized, analyzed and reported every billing cycle. Ensure that internal and third party audits are conducted at least once every three years.		<u>to maintain 10:</u> Stay abreast of customer information management developments and innovations. Monitor developments of Advanced Metering Infrastructure (AMI) and integrate technology to ensure that customer endpoint information is well-monitored and errors/lapses are at an economic minimum.
SYSTEM DATA											
Length of mains:		Poorly assembled and maintained paper as-built records of existing water main installations makes accurate determination of system pipe length impossible. Length of mains is guesstimated.	Paper records in poor or uncertain condition (no annual tracking of installations & abandonments). Poor procedures to ensure that new water mains installed by developers are accurately documented.	Conditions between 2 and 4	Sound written policy and procedures exist for documenting new water main installations, but gaps in management result in a uncertain degree of error in tabulation of mains length.	Conditions between 4 and 6	Sound written policy and procedures exist for permitting and commissioning new water mains. Highly accurate paper records with regular field validation; or electronic records and asset management system in good condition. Includes system backup.	Conditions between 6 and 8	Sound written policy and procedures exist for permitting and commissioning new water mains. Electronic recordkeeping such as a Geographical Information System (GIS) and asset management system are used to store and manage data.	Conditions between 8 and 10	Sound written policy exists for managing water mains extensions and replacements. Geographic Information System (GIS) data and asset management database agree and random field validation proves truth of databases. Records of annual field validation should be available for review.
Improvements to attain higher data grading for "Length of Water Mains" component:		<u>to qualify for 2:</u> Assign personnel to inventory current as-built records and compare with customer billing system records and highway plans in order to verify poorly documented pipelines. Assemble policy documents regarding permitting and documentation of water main installations by the utility and building developers; identify gaps in procedures that result in poor documentation of new water main installations.	<u>to qualify for 4:</u> Complete inventory of paper records of water main installations for several years prior to audit year. Review policy and procedures for commissioning and documenting new water main installation.		<u>to qualify for 6:</u> Finalize updates/improvements to written policy and procedures for permitting/commissioning new main installations. Confirm inventory of records for five years prior to audit year; correct any errors or omissions.		<u>to qualify for 8:</u> Launch random field checks of limited number of locations. Convert to electronic database such as a Geographic Information System (GIS) with backup as justified. Develop written policy and procedures.		<u>to qualify for 10:</u> Link Geographic Information System (GIS) and asset management databases, conduct field verification of data. Record field verification information at least annually.		<u>to maintain 10:</u> Continue with standardization and random field validation to improve the completeness and accuracy of the system.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Number of active AND inactive service connections:		Vague permitting (of new service connections) policy and poor paper recordkeeping of customer connections result in suspect determination of the number of service connections, which may be 10-15% in error from actual count.	General permitting policy exists but paper records, procedural gaps, and weak oversight result in questionable total for number of connections, which may vary 5-10% of actual count.	Conditions between 2 and 4	Written account activation policy and procedures exist, but with some gaps in performance and oversight. Computerized information management system is being brought online to replace dated paper recordkeeping system. Reasonably accurate tracking of service connection installations & abandonments; but count can be up to 5% in error from actual total.	Conditions between 4 and 6	Written new account activation and overall billing policies and procedures are adequate and reviewed periodically. Computerized information management system is in use with annual installations & abandonments totaled. Very limited field verifications and audits. Error in count of number of service connections is believed to be no more than 3%.	Conditions between 6 and 8	Policies and procedures for new account activation and overall billing operations are written, well-structured and reviewed at least biannually. Well-managed computerized information management system exists and routine, periodic field checks and internal system audits are conducted. Counts of connections are no more than 2% in error.	Conditions between 8 and 10	Sound written policy and well managed and audited procedures ensure reliable management of service connection population. Computerized information management system, Customer Billing System, and Geographic Information System (GIS) information agree; field validation proves truth of databases. Count of connections recorded as being in error is less than 1% of the entire population.
Improvements to attain higher data grading for "Number of Active and Inactive Service Connections" component:	Note: The number of Service Connections does not include fire hydrant leads/lines connecting the hydrant to the water main	to qualify for 2: Draft new policy and procedures for new account activation and overall billing operations. Research and collect paper records of installations & abandonments for several years prior to audit year.	to qualify for 4: Refine policy and procedures for new account activation and overall billing operations. Research computerized recordkeeping system (Customer Information System or Customer Billing System) to improve documentation format for service connections.		to qualify for 6: Refine procedures to ensure consistency with new account activation and overall billing policy to establish new service connections or decommission existing connections. Improve process to include all totals for at least five years prior to audit year.		to qualify for 8: Formalize regular review of new account activation and overall billing operations policies and procedures. Launch random field checks of limited number of locations. Develop reports and auditing mechanisms for computerized information management system.		to qualify for 10: Close any procedural loopholes that allow installations to go undocumented. Link computerized information management system with Geographic Information System (GIS) and formalize field inspection and information system auditing processes. Documentation of new or decommissioned service connections encounters several levels of checks and balances.		to maintain 10: Continue with standardization and random field validation to improve knowledge of system.
Average length of customer service line:	Note: if customer water meters are located outside of the customer building next to the curb stop or boundary separating utility/customer responsibility, then the auditor should answer "Yes" to the question on the Reporting Worksheet asking about this. If the answer is Yes, the grading description listed under the Grading of 10(a) will be followed, with a value of zero automatically entered at a Grading of 10. See the Service Connection Diagram worksheet for a visual presentation of this distance.	Grading 1-9 apply if customer properties are unmetered, if customer meters exist and are located inside the customer building premises, or if the water utility owns and is responsible for the entire service connection piping from the water main to the customer building. In any of these cases the average distance between the curb stop or boundary separating utility/customer responsibility for service connection piping, and the typical first point of use (ex: faucet) or the customer meter must be quantified. Grading of 1-9 are used to grade the validity of the means to quantify this value. (See the "Service Connection Diagram" worksheet)									Either of two conditions can be met for a grading of 10: a) Customer water meters exist outside of customer buildings next to the curb stop or boundary separating utility/customer responsibility for service connection piping. If so, answer "Yes" to the question on the Reporting Working asking about this condition. A value of zero and a Grading of 10 are automatically entered in the Reporting Worksheet. b) Meters exist inside customer buildings, or properties are unmetered. In either case, answer "No" to the Reporting Worksheet question on meter location, and enter a distance determined by the auditor. For a Grading of 10 this value must be a very reliable number from a Geographic Information System (GIS) and confirmed by a statistically valid number of field checks.
Improvements to attain higher data grading for "Average Length of Customer Service Line" component:		to qualify for 2: Research and collect paper records of service line installations. Inspect several sites in the field using pipe locators to locate curb stops. Obtain the length of this small sample of connections in this manner.	to qualify for 4: Formalize and communicate policy delineating utility/customer responsibilities for service connection piping. Assess accuracy of paper records by field inspection of a small sample of service connections using pipe locators as needed. Research the potential migration to a computerized information management system to store service connection data.		to qualify for 6: Establish coherent procedures to ensure that policy for curb stop, meter installation and documentation is followed. Gain consensus within the water utility for the establishment of a computerized information management system.		to qualify for 8: Implement an electronic means of recordkeeping, typically via a customer information system, customer billing system, or Geographic Information System (GIS). Standardize the process to conduct field checks of a limited number of locations.		to qualify for 10: Link customer information management system and Geographic Information System (GIS), standardize process for field verification of data.		to maintain 10: Continue with standardization and random field validation to improve knowledge of service connection configurations and customer meter locations.
Average operating pressure:		Available records are poorly assembled and maintained paper records of supply pump characteristics and water distribution system operating conditions. Average pressure is guesstimated based upon this information and ground elevations from crude topographical maps. Widely varying distribution system pressures due to undulating terrain, high system head loss and weak/erratic pressure controls further compromise the validity of the average pressure calculation.	Limited telemetry monitoring of scattered pumping station and water storage tank sites provides some static pressure data, which is recorded in handwritten logbooks. Pressure data is gathered at individual sites only when low pressure complaints arise. Average pressure is determined by averaging relatively crude data, and is affected by significant variation in ground elevations, system head loss and gaps in pressure controls in the distribution system.	Conditions between 2 and 4	Effective pressure controls separate different pressure zones; moderate pressure variation across the system, occasional open boundary valves are discovered that breach pressure zones. Basic telemetry monitoring of the distribution system logs pressure data electronically. Pressure data gathered by gauges or dataloggers at fire hydrants or buildings when low pressure complaints arise, and during fire flow tests and system flushing. Reliable topographical data exists. Average pressure is calculated using this mix of data.	Conditions between 4 and 6	Reliable pressure controls separate distinct pressure zones; only very occasional open boundary valves are encountered that breach pressure zones. Well-covered telemetry monitoring of the distribution system (not just pumping at source treatment plants or wells) logs extensive pressure data electronically. Pressure gathered by gauges/dataloggers at fire hydrants and buildings when low pressure complaints arise, and during fire flow tests and system flushing. Average pressure is determined by using this mix of reliable data.	Conditions between 6 and 8	Well-managed, discrete pressure zones exist with generally predictable pressure fluctuations. A current full-scale SCADA System or similar realtime monitoring system exists to monitor the water distribution system and collect data, including real time pressure readings at representative sites across the system. The average system pressure is determined from reliable monitoring system data.	Conditions between 8 and 10	Well-managed pressure districts/zones, SCADA System and hydraulic model exist to give very precise pressure data across the water distribution system. Average system pressure is reliably calculated from extensive, reliable, and cross-checked data. Calculations are reported on an annual basis as a minimum.

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
Improvements to attain higher data grading for "Average Operating Pressure" component:		<p><u>to qualify for 2:</u> Employ pressure gauging and/or datalogging equipment to obtain pressure measurements from fire hydrants. Locate accurate topographical maps of service area in order to confirm ground elevations. Research pump data sheets to find pump pressure/flow characteristics</p>	<p><u>to qualify for 4:</u> Formalize a procedure to use pressure gauging/datalogging equipment to gather pressure data during various system events such as low pressure complaints, or operational testing. Gather pump pressure and flow data at different flow regimes. Identify faulty pressure controls (pressure reducing valves, altitude valves, partially open boundary valves) and plan to properly configure pressure zones. Make all pressure data from these efforts available to generate system-wide average pressure.</p>		<p><u>to qualify for 6:</u> Expand the use of pressure gauging/datalogging equipment to gather scattered pressure data at a representative set of sites, based upon pressure zones or areas. Utilize pump pressure and flow data to determine supply head entering each pressure zone or district. Correct any faulty pressure controls (pressure reducing valves, altitude valves, partially open boundary valves) to ensure properly configured pressure zones. Use expanded pressure dataset from these activities to generate system-wide average pressure.</p>		<p><u>to qualify for 8:</u> Install a Supervisory Control and Data Acquisition (SCADA) System, or similar realtime monitoring system, to monitor system parameters and control operations. Set regular calibration schedule for instrumentation to insure data accuracy. Obtain accurate topographical data and utilize pressure data gathered from field surveys to provide extensive, reliable data for pressure averaging.</p>		<p><u>to qualify for 10:</u> Annually, obtain a system-wide average pressure value from the hydraulic model of the distribution system that has been calibrated via field measurements in the water distribution system and confirmed in comparisons with SCADA System data.</p>		<p><u>to maintain 10:</u> Continue to refine the hydraulic model of the distribution system and consider linking it with SCADA System for real-time pressure data calibration, and averaging.</p>

Grading >>>	n/a	1	2	3	4	5	6	7	8	9	10
COST DATA											
Total annual cost of operating water system:		Incomplete paper records and lack of financial accounting documentation on many operating functions makes calculation of water system operating costs a pure guesstimate	Reasonably maintained, but incomplete, paper or electronic accounting provides data to estimate the major portion of water system operating costs.	Conditions between 2 and 4	Electronic, industry-standard cost accounting system in place. However, gaps in data are known to exist; periodic internal reviews are conducted but not a structured financial audit.	Conditions between 4 and 6	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited periodically by utility personnel, but not a Certified Public Accountant (CPA).	Conditions between 6 and 8	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited at least annually by utility personnel, and at least once every three years by third-party CPA.	Conditions between 8 and 10	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Data audited annually by utility personnel and annually also by third-party CPA.
Improvements to attain higher data grading for "Total Annual Cost of Operating the Water System" component:		<u>to qualify for 2:</u> Gather available records, institute new financial accounting procedures to regularly collect and audit basic cost data of most important operations functions.	<u>to qualify for 4:</u> Implement an electronic cost accounting system, structured according to accounting standards for water utilities		<u>to qualify for 6:</u> Establish process for periodic internal audit of water system operating costs; identify cost data gaps and institute procedures for tracking these outstanding costs.		<u>to qualify for 8:</u> Standardize the process to conduct routine financial audit on an annual basis. Arrange for CPA audit of financial records at least once every three years.		<u>to qualify for 10:</u> Standardize the process to conduct a third-party financial audit by a CPA on an annual basis.		<u>to maintain 10:</u> Maintain program, stay abreast of expenses subject to erratic cost changes and long-term cost trend, and budget/track costs proactively
Customer retail unit cost (applied to Apparent Losses):	Customer population unmetered, and/or only a fixed fee is charged for consumption.	Antiquated, cumbersome water rate structure is used, with periodic historic amendments that were poorly documented and implemented; resulting in classes of customers being billed inconsistent charges. The actual composite billing rate likely differs significantly from the published water rate structure, but a lack of auditing leaves the degree of error indeterminate.	Dated, cumbersome water rate structure, not always employed consistently in actual billing operations. The actual composite billing rate is known to differ from the published water rate structure, and a reasonably accurate estimate of the degree of error is determined, allowing a composite billing rate to be quantified.	Conditions between 2 and 4	Straight-forward water rate structure in use, but not updated in several years. Billing operations reliably employ the rate structure. The composite billing rate is derived from a single customer class such as residential customer accounts, neglecting the effect of different rates from varying customer classes.	Conditions between 4 and 6	Clearly written, up-to-date water rate structure is in force and is applied reliably in billing operations. Composite customer rate is determined using a weighted average residential rate using volumes of water in each rate block.	Conditions between 6 and 8	Effective water rate structure is in force and is applied reliably in billing operations. Composite customer rate is determined using a weighted average composite consumption rate, which includes residential, commercial, industrial, institutional (CII), and any other distinct customer classes within the water rate structure.	Conditions between 8 and 10	Current, effective water rate structure is in force and applied reliably in billing operations. The rate structure and calculations of composite rate - which includes residential, commercial, industrial, institutional (CII), and other distinct customer classes - are reviewed by a third party knowledgeable in the M36 methodology at least once every five years.
Improvements to attain higher data grading for "Customer Retail Unit Cost" component:		<u>to qualify for 2:</u> Formalize the process to implement water rates, including a secure documentation procedure. Create a current, formal water rate document and gain approval from all stakeholders.	<u>to qualify for 4:</u> Review the water rate structure and update/formalize as needed. Assess billing operations to ensure that actual billing operations incorporate the established water rate structure.		<u>to qualify for 6:</u> Evaluate volume of water used in each usage block by residential users. Multiply volumes by full rate structure.	<u>Launch effort to fully meter the customer population and charge rates based upon water volumes</u>	<u>to qualify for 8:</u> Evaluate volume of water used in each usage block by all classifications of users. Multiply volumes by full rate structure.		<u>to qualify for 10:</u> Conduct a periodic third-party audit of water used in each usage block by all classifications of users. Multiply volumes by full rate structure.		<u>to maintain 10:</u> Keep water rate structure current in addressing the water utility's revenue needs. Update the calculation of the customer unit rate as new rate components, customer classes, or other components are modified.
Variable production cost (applied to Real Losses):	Note: if the water utility purchases/imports its entire water supply, then enter the unit purchase cost of the bulk water supply in the Reporting Worksheet with a grading of 10	Incomplete paper records and lack of documentation on primary operating functions (electric power and treatment costs most importantly) makes calculation of variable production costs a pure guesstimate	Reasonably maintained, but incomplete, paper or electronic accounting provides data to roughly estimate the basic operations costs (pumping power costs and treatment costs) and calculate a unit variable production cost.	Conditions between 2 and 4	Electronic, industry-standard cost accounting system in place. Electric power and treatment costs are reliably tracked and allow accurate weighted calculation of unit variable production costs based on these two inputs and water imported purchase costs (if applicable). All costs are audited internally on a periodic basis.	Conditions between 4 and 6	Reliable electronic, industry-standard cost accounting system in place, with all pertinent water system operating costs tracked. Pertinent additional costs beyond power, treatment and water imported purchase costs (if applicable) such as liability, residuals management, wear and tear on equipment, impending expansion of supply, are included in the unit variable production cost, as applicable. The data is audited at least annually by utility personnel.	Conditions between 6 and 8	Reliable electronic, industry-standard cost accounting system in place, with all pertinent primary and secondary variable production and water imported purchase (if applicable) costs tracked. The data is audited at least annually by utility personnel, and at least once every three years by a third-party knowledgeable in the M36 methodology.	Conditions between 8 and 10	Either of two conditions can be met to obtain a grading of 10: 1) Third party CPA audit of all pertinent primary and secondary variable production and water imported purchase (if applicable) costs on an annual basis. or: 2) Water supply is entirely purchased as bulk water imported, and the unit purchase cost - including all applicable marginal supply costs - serves as the variable production cost. If all applicable marginal supply costs are not included in this figure, a grade of 10 should not be selected.
Improvements to attain higher data grading for "Variable Production Cost" component:		<u>to qualify for 2:</u> Gather available records, institute new procedures to regularly collect and audit basic cost data and most important operations functions.	<u>to qualify for 4:</u> Implement an electronic cost accounting system, structured according to accounting standards for water utilities		<u>to qualify for 6:</u> Formalize process for regular internal audits of production costs. Assess whether additional costs (liability, residuals management, equipment wear, impending infrastructure expansion) should be included to calculate a more representative variable production cost.		<u>to qualify for 8:</u> Formalize the accounting process to include direct cost components (power, treatment) as well as indirect cost components (liability, residuals management, etc.) Arrange to conduct audits by a knowledgeable third-party at least once every three years.		<u>to qualify for 10:</u> Standardize the process to conduct a third-party financial audit by a CPA on an annual basis.		<u>to maintain 10:</u> Maintain program, stay abreast of expenses subject to erratic cost changes and budget/track costs proactively



AWWA Free Water Audit Software: Determining Water Loss Standing

WAS v5.0

American Water Works Association.
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Water Audit Report for: **Marina Coast Water District (27710017)**

Reporting Year: **2021** **1/2021 - 12/2021**

Data Validity Score: **70**

Water Loss Control Planning Guide

Functional Focus Area	Water Audit Data Validity Level / Score				
	Level I (0-25)	Level II (26-50)	Level III (51-70)	Level IV (71-90)	Level V (91-100)
Audit Data Collection	Launch auditing and loss control team; address production metering deficiencies	Analyze business process for customer metering and billing functions and water supply operations. Identify data gaps.	Establish/revise policies and procedures for data collection	Refine data collection practices and establish as routine business process	Annual water audit is a reliable gauge of year-to-year water efficiency standing
Short-term loss control	Research information on leak detection programs. Begin flowcharting analysis of customer billing system	Conduct loss assessment investigations on a sample portion of the system: customer meter testing, leak survey, unauthorized consumption, etc.	Establish ongoing mechanisms for customer meter accuracy testing, active leakage control and infrastructure monitoring	Refine, enhance or expand ongoing programs based upon economic justification	Stay abreast of improvements in metering, meter reading, billing, leakage management and infrastructure rehabilitation
Long-term loss control		Begin to assess long-term needs requiring large expenditure: customer meter replacement, water main replacement program, new customer billing system or Automatic Meter Reading (AMR) system.	Begin to assemble economic business case for long-term needs based upon improved data becoming available through the water audit process.	Conduct detailed planning, budgeting and launch of comprehensive improvements for metering, billing or infrastructure management	Continue incremental improvements in short-term and long-term loss control interventions
Target-setting			Establish long-term apparent and real loss reduction goals (+10 year horizon)	Establish mid-range (5 year horizon) apparent and real loss reduction goals	Evaluate and refine loss control goals on a yearly basis
Benchmarking			Preliminary Comparisons - can begin to rely upon the Infrastructure Leakage Index (ILI) for performance comparisons for real losses (see below table)	Performance Benchmarking - ILI is meaningful in comparing real loss standing	Identify Best Practices/ Best in class - the ILI is very reliable as a real loss performance indicator for best in class service

For validity scores of 50 or below, the shaded blocks should not be focus areas until better data validity is achieved.

Once data have been entered into the Reporting Worksheet, the performance indicators are automatically calculated. How does a water utility operator know how well his or her system is performing? The AWWA Water Loss Control Committee provided the following table to assist water utilities in gauging an approximate Infrastructure Leakage Index (ILI) that is appropriate for their water system and local conditions. The lower the amount of leakage and real losses that exist in the system, then the lower the ILI value will be.

Note: this table offers an approximate guideline for leakage reduction target-setting. The best means of setting such targets include performing an economic assessment of various loss control methods. However, this table is useful if such an assessment is not possible.

**General Guidelines for Setting a Target ILI
(without doing a full economic analysis of leakage control options)**

Target ILI Range	Financial Considerations	Operational Considerations	Water Resources Considerations
1.0 - 3.0	Water resources are costly to develop or purchase; ability to increase revenues via water rates is greatly limited because of regulation or low ratepayer affordability.	Operating with system leakage above this level would require expansion of existing infrastructure and/or additional water resources to meet the demand.	Available resources are greatly limited and are very difficult and/or environmentally unsound to develop.
>3.0 -5.0	Water resources can be developed or purchased at reasonable expense; periodic water rate increases can be feasibly imposed and are tolerated by the customer population.	Existing water supply infrastructure capability is sufficient to meet long-term demand as long as reasonable leakage management controls are in place.	Water resources are believed to be sufficient to meet long-term needs, but demand management interventions (leakage management, water conservation) are included in the long-term planning.
>5.0 - 8.0	Cost to purchase or obtain/treat water is low, as are rates charged to customers.	Superior reliability, capacity and integrity of the water supply infrastructure make it relatively immune to supply shortages.	Water resources are plentiful, reliable, and easily extracted.
Greater than 8.0	Although operational and financial considerations may allow a long-term ILI greater than 8.0, such a level of leakage is not an effective utilization of water as a resource. Setting a target level greater than 8.0 - other than as an incremental goal to a smaller long-term target - is discouraged.		
Less than 1.0	If the calculated Infrastructure Leakage Index (ILI) value for your system is 1.0 or less, two possibilities exist. a) you are maintaining your leakage at low levels in a class with the top worldwide performers in leakage control. b) A portion of your data may be flawed, causing your losses to be greatly understated. This is likely if you calculate a low ILI value but do not employ extensive leakage control practices in your operations. In such cases it is beneficial to validate the data by performing field measurements to confirm the accuracy of production and customer meters, or to identify any other potential sources of error in the data.		

AWWA 2021 Water Audit Level 1 Validation – Review Document

Validator Provided

Audit Information:

Utility: Marina Coast Water District **PWS ID:** 2710017
System Type: Potable **Audit Period:** Calendar 2021
Utility Representation: Paul Lord, Patrick Breen, Derek Cray
Validation Date: 8/25/2022 **Call Time:** 9:30am **Sufficient Supporting Documents Provided:** Yes

Validation Findings & Confirmation Statement:

Key Audit Metrics:

Data Validity Score: 70 **Data Validity Band (Level):** Band III (51-70)
ILI: 1.35 **Real Loss:** 822.29 (gal/mile-main/day) **Apparent Loss:** 7.90 (gal/conn/day)
Non-revenue water as percent of cost of operating system: 1.2%

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: Larry Lewison, Will Jernigan **Validator Qualifications:** Certified Water Audit Validator (CA)

#	AWWA Water Audit Input	Code	Final DVG	Basis on Input Derivation	Basis on Data Validity Grade
1	Volume from Own Sources	VOS	7	<p>Supply meter profile: 8 wells, 7 active in CY21 with wells located centrally in the system (2 in Marina, 5 in Ord). Magnetic-type meters for Wells 10, 11, 34 and WG are tied to SCADA to read flowrate and pressure. Data is visible to operators.</p> <p>VOS input derived from: SCADA reads from production meters as archived.</p> <p>Comments: Input derivation from supporting documents confirmed. Exclusion of non-potable volumes confirmed.</p>	<p>Percent of own supply metered: 100%</p> <p>Signal calibration frequency: Annual.</p> <p>Volumetric testing frequency: Annual.</p> <p>Volumetric testing method: Clamp on meter with pump efficiency testing</p> <p>Percent of own supply volumetrically tested: 100%.</p> <p>Comments: Limiting criteria is signal calibration results not available for review.</p>
2	VOS Master Meter & Supply Error Adjustment	VOS MMSEA	10	<p>Input derivation: Volumetric accuracy results included and weighted appropriately.</p> <p>Net storage change included in MMSEA input: Yes.</p> <p>Comments: Daily net storage changes adjustment to VOS.</p>	<p>Supply meter read frequency: Continuous.</p> <p>Supply meter read method: Manual and automatic logging.</p> <p>Frequency of data review for trends & anomalies: Weekly.</p> <p>Storage levels monitored in real-time: Yes.</p> <p>Comments: No additional comments.</p>
3	Water Imported	WI	n/a	<p>Import meter profile: One emergency connection with Cal American Water, not used during audit period.</p>	
4	WI Master Meter & Supply Error Adjustment	WI MMSEA	n/a		
5	Water Exported	WE	n/a	<p>MCWD does not export any water. All water is produced and distributed within the Marina Coast Water District service area.</p>	
6	WE Master Meter & Supply Error Adjustment	WE MMSEA	n/a		
7	Billed metered	BMAC	9	<p>Customer meter profile:</p> <p>Age profile: Many of small meters are less than 10-15 years old. Almost all small meters were upgraded to AMR in 2014-2015</p> <p>Reading system: AMR.</p> <p>Read frequency: Monthly.</p> <p>Comments: Lag-time correction is employed in input derivation. Input derivation from supporting documents confirmed. BMAC volumes were</p>	<p>Percent of customers metered: 100%</p> <p>Small meter testing policy: Reactive - complaint based or flagged-consumption testing only.</p> <p>Number of small meters tested/year: 0</p> <p>Large meter testing policy: Targeted testing is conducted annually for large meters.</p> <p>Number of large meters tested/year: 19</p>

#	AWWA Water Audit Input	Code	Final DVG	Basis on Input Derivation	Basis on Data Validity Grade
				3178.67 AF plus the lag time adjustment (-16.97 AF). Exclusion of non-potable volumes confirmed. Third party (IT) analysis of consumption data each billing cycle. Appears to be a more thorough analysis than normal but not equivalent to an export of the raw database and review at the account level.	Meter replacement policy: Upon failure only or upon testing results. Number of replacements/year: uncertain Billing data auditing: Standard billing QC, plus review of volumes by use type each billing cycle. Comments: Limiting criteria is third party raw data account level review.
8	Billed unmetered	BUAC	n/a	Comments: Fully Metered in 2020. In 2021, there were no unmetered housing units, so the billed unmetered consumption is zero.	Policy for metering exemptions: Migration to fully metered status is complete.
9	Unbilled metered	UMAC	4	Profile: Own facilities, vactor/valve/jetter truck, lift stations Input derivation: Direct from meter readings read every month. Comments: Input derivation from supporting documents confirmed. Confirmed potable water usage only.	Policy for billing exemptions: Limited to own facilities. Comments: Limiting criteria is water utility policy does not articulate any specific accounts exempt from billing, however a collective understanding exists.
10	Unbilled unmetered	UUAC	10	Profile: Maintenance department usage and flushing after repairs. Make sure Well discharges (after meter) are included. Comments: The District records operation and maintenance events for the ORD and Marina service areas. O&M events = 2.315 AF in 2021.	Comments: Good recordkeeping and estimation practices
11	Unauthorized consumption	UC	5	Comments: Default input applied.	Comments: Default grade applied.
12	Customer metering inaccuracies	CMI	2	See BMAC comments regarding meter testing & replacement activities. Input derivation: Rudimentary estimate. Comments: The average age of customer meter population is approximately 13 years. Used CMI of 1.5% as an estimate based on meter age.	Characterization of meter testing: Routine (proactive), but not fully representative. Characterization of meter replacement: Limited (upon mechanical failure as well as testing failure). Comments: No additional comments.
13	Systematic data handling errors	SDHE	5	Comments: Default input applied.	Comments: Default grade applied.
14	Length of mains	Lm	6	Input derivation: Totaled from GIS based map. Hydrant leads included: Yes. Comments: The 2021 audit input of 232.4 miles was less than previous year by 5 mi. In 2019 performed thorough true-up in GIS and adding backlog of as-built maps.	Mapping format: Digital. Asset management database: In place and integrated with GIS system. Map updates & field validation: Accomplished through normal work order processes.

#	AWWA Water Audit Input	Code	Final DVG	Basis on Input Derivation	Basis on Data Validity Grade
					Comments: Limiting criteria is less than annual frequency of updating GIS.
15	Number of service connections	Ns	8	<p>Input derivation: Standard report run from billing system to generate total metered connections. It is estimated that 70% of all 3,928 marina water service points share a connection to the main line = 2750 water services share a connection. There are 2 services per connection so there are 1375 shared connections to the mains in Marina. Then there are the additional 1178 water services that do not share a connection to the main. All together in Marina there are 2573 water service connections to the main. Of the total 5,117 water services in the Ord Community, all 1872 military housing units share a connection to the mains. Therefore, there are 936 shared connections for these homes. The other 3,245 water services have a single connection. Combined, less fire connections, in the Ord community there are 4,453 service connections to the mains. In addition, throughout both Marina and Ord communities there are 130 fire connections. All combined, in both service areas, the number of total connections to the mains is 7,316 (2,663 + 4,653).</p> <p>Basis for database query: Meter ID - non-premise based.</p> <p>Comments: The 2021 audit input of 7,316 was a decrease of 3% from previous year. Development within the service area is increasing</p>	<p>CIS updates & field validation: No proactive visits to meters</p> <p>Estimated error of total count within: Believed to be less than 1%.</p> <p>Comments: No additional comments.</p>
16	Ave length of cust. service line	Lp	10	Comments: Default input and grade applied, as customer meters are typically located at the property boundary given California climate.	
17	Average operating pressure	AOP	6	<p>Number of zones, general profile: 5 pressure zones (Ord) & 2 in Marina controlled by approximately 20 PRVs</p> <p>Typical pressure range: 30 to 90 psi</p> <p>Input derivation: Calculated as simple average from analysis of all zones.</p> <p>Comments: Planning to install pressure monitoring devices over next couple years to increase monitoring presence in the distribution system.</p>	<p>Extent of static pressure data collection: Hydrant pressures taken during routine system flushing and/or hydrant testing.</p> <p>Characterization of real-time pressure data collection: Basic - telemetry or pressure logging at boundary points (supply locations, tanks, PRVs, boosters).</p> <p>Hydraulic model: In place and calibrated within the last 5 years.</p> <p>Comments: Limiting criteria is basic coverage telemetry monitoring of continuous pressure.</p>
18	Total annual operating cost	TAOC	10	<p>Input derivation: From official financial reports.</p> <p>Comments: Confirmed costs limited to water only, and water debt service included.</p>	<p>Frequency of internal auditing: Annually.</p> <p>Frequency of third-party CPA auditing: Annually.</p> <p>Comments: No additional comments.</p>

#	AWWA Water Audit Input	Code	Final DVG	Basis on Input Derivation	Basis on Data Validity Grade
19	Customer retail unit cost	CRUC	10	<p>Input derivation: Total consumptive revenue divided by Billed Metered Authorized Consumption. Sewer charges are not based on water meter readings. Sewer revenues are not applicable.</p> <p>Comments: Rate structures are different for Marina & Ord systems, but were combined in the calculation.</p>	<p>Characterization of calculation: Weighted average composite of all rates. Input calculations have not been reviewed by an M36 water loss expert.</p> <p>Comments: No additional comments.</p>
20	Variable production cost	VPC	8	<p>Supply profile: Own sources only.</p> <p>Primary costs included: Treatment chemicals and supply & distribution power.</p> <p>Secondary costs included: Costs evaluated but none included.</p> <p>Comments: Calculation conducted for Marina and Ord separately and then weighted by volume produced for each system. Initial input was for Ord system at \$270.04. Sum of electrical and chemical costs for each system divided by separate water supplied volumes then weighted by percentage of supply for a revised VPC = \$263.94. Original input 268.58.</p>	<p>Characterization of calculation: Primary costs only. Input calculations have not been reviewed by an M36 water loss expert.</p> <p>Comments: Excellent method of calculation. Check again to see if any secondary (long run marginal) costs apply.</p>

Key Audit Metrics

(~)	VALIDITY	Data Validity Score: 70	Data Validity Band (Level): Band III (51-70)	
(#)	VOLUME	ILI: 1.35	Real Loss: 822.29 (gal/mile-main/day)	Apparent Loss: 7.90 (gal/conn/day)
(\$)	VALUE	Annual Cost of Real Losses: \$56,499		Annual Cost of Apparent Losses: \$152,494

Infrastructure & Water Loss Management Practices:

Infrastructure age profile: Ord system was inherited from federal gov't. **Infrastructure replacement policy (current, historic):** Any rehab areas are being fully replaced.

Estimated main failures/year: Not discussed

Estimated service failures/year: Not discussed

Extent of proactive leakage management: Have purchased leak equipment and are planning to implement a pilot program.

Other water loss management comments: Have isolated unused areas of the system and seen reduction in leaks.

Comments on Audit Metrics & Validity Improvements

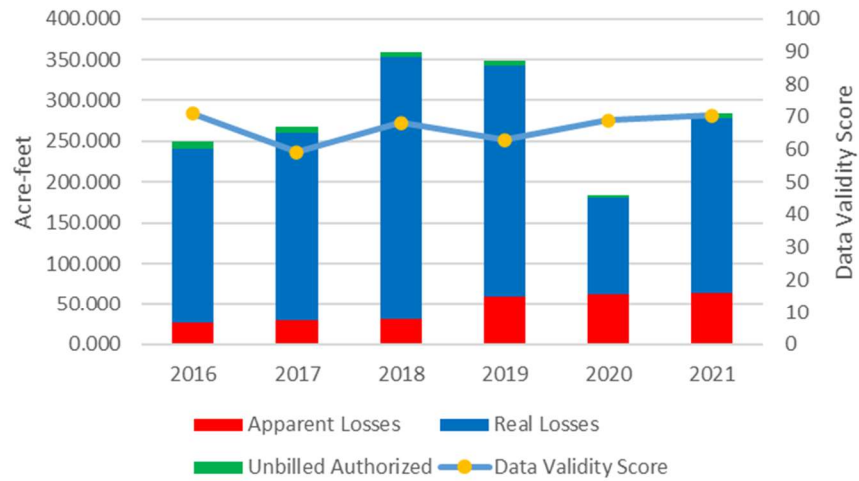
The Infrastructure Leakage Index (ILI) of 1.35 describes a system that experiences leakage at 1.35 times the modeled technical minimum for its system characteristics.

The Data Validity Score falling within Band III (51-70) suggests that next steps may be focused simultaneously on improving data reliability and evaluating cost-effective interventions for water & revenue loss recovery. Opportunities to improve the reliability of audit inputs and outputs include:

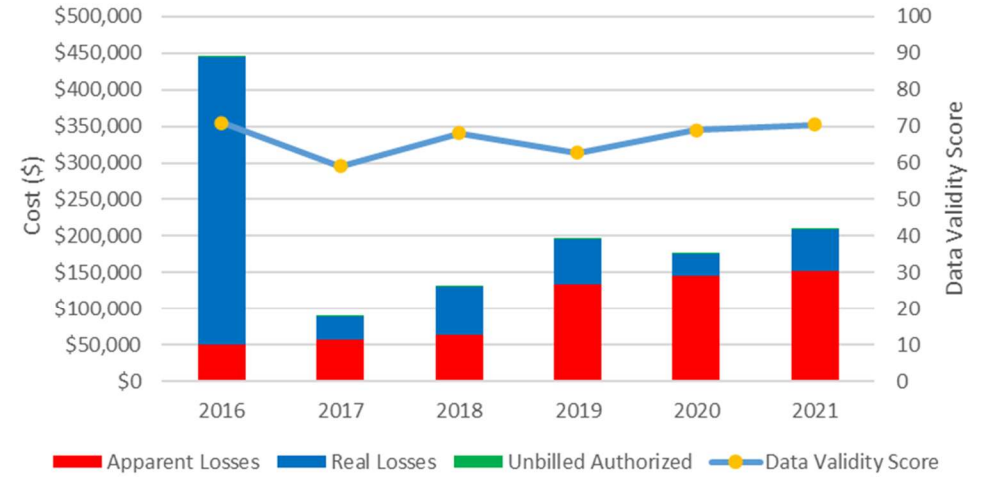
- Improved understanding of Supply Meter (Own) Master Meter Error: consider adopting or increasing the rigor of a source meter volumetric testing and calibration program, informed by the guidance provided in AWWA Manual M36 – Appendix A.
 - Great work getting all the meters tested in 2021 and calculating total volumetric meter error. Continue exploring other methods of electronic calibration of Well mag meters even with the different output signal.
 - Continue progress on replacing well meters with newer technologies and communication capabilities integrated with SCADA improvements.
- Improved estimation of CMI: consider a customer meter testing program which tests a sample of random meters whose stratification (by size, age, or other characteristics) represents the entire customer meter stock.

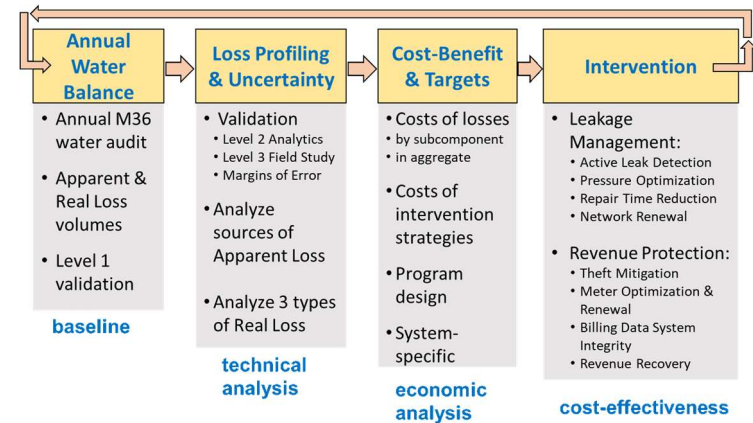
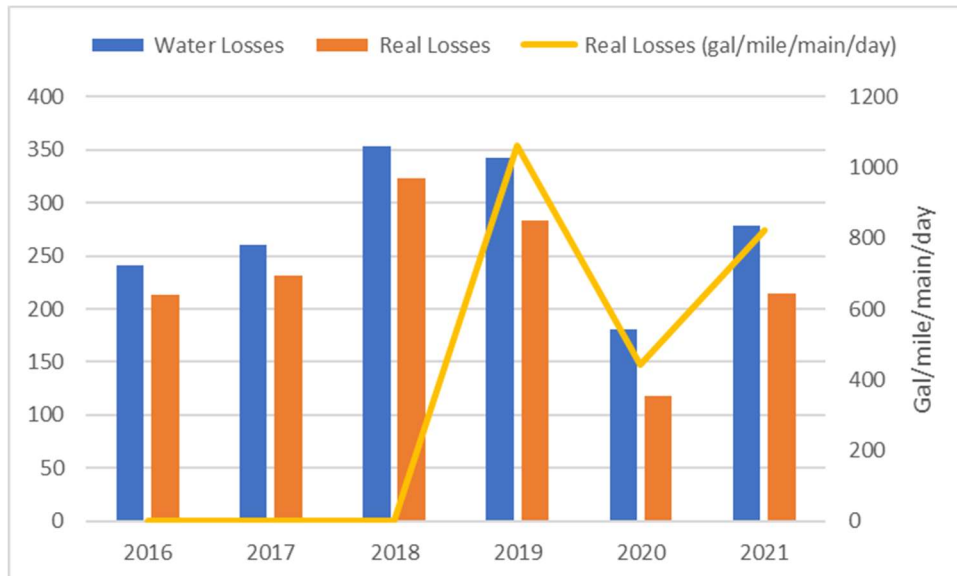
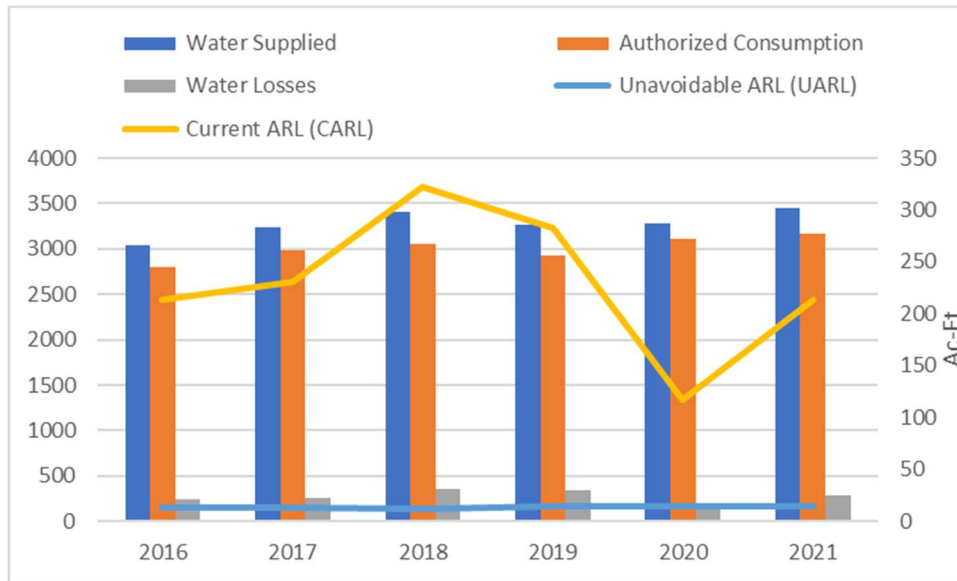
As noted above the Data Validity Score falls within Band III (51-70) which suggests that next steps may be focused primarily on establishing long-term apparent and real loss reduction goals, establish mechanisms for customer meter accuracy testing and identify any potential data gaps in the metering and billing functions. Generally, the largest component of non-revenue water by volume, are real losses. However, when the apparent and real losses are valued according to CRUC and VPC unit cost rates the greater cost is associated with apparent loss. Since a baseline of water audit data has been established with a moderate reliability in the supporting data, a reasonable next step to consider would be to **develop a real loss profile** through leakage component analysis as well as an **apparent loss profile** with an associated **economic analysis** to establish NRW recovery targets.

Non-Revenue Water by Volume



Non-Revenue Water by Cost





**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 12-A

Meeting Date: December 13, 2022

Prepared By: Roger Masuda, Legal Counsel

Approved By: Remleh Scherzinger

Agenda Title: Authorize Returning to Traditional Brown Act Requirements for Teleconference Attendance by Board Members

Staff Recommendation: The Board of Directors authorize returning to traditional Brown Act requirements for teleconference attendance by Board members, to begin March 1, 2023.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

On March 4, 2020, Governor Newsom issued a Proclamation of State of Emergency in response to the COVID-19 pandemic. Executive Order N-29-20 allowed bodies subject to the Brown Act to meet without a physical meeting location so long as various requirements were met, including providing the public the opportunity to observe and participate in the meeting telephonically or electronically. Executive Order No. N-08-21 extended the suspension of the Brown Act's normal teleconferencing rules through September 30, 2021.

On September 16, 2021, Governor Newsom signed AB 361 amending Brown Act Government Code Section 54953, which took effect immediately. This legislation amended the Brown Act to allow Board members to participate in public board meeting via teleconference during a proclaimed state of emergency. The Board has been complying with the AB 361 requirements instead of the Brown Act's traditionally more restrictive teleconferencing requirements.

Discussion/Analysis: On September 13, 2022, California Governor Gavin Newsom signed into law Assembly Bill 2449 marking the latest development of the Brown Act in a post-pandemic world. AB 2449 amends Government Code Section 54953 and takes effect January 1, 2023. What AB 2449 did was to incorporate the traditional Brown Act teleconferencing requirements into Government Code Section 54953(b), incorporate AB 361 into Section 54953(e), and enact a new teleconferencing option as Section 54953(f).

Because the Governor has stated that he will repeal his state of COVID emergency effective February 28, 2023, Section 54953(e)(the incorporated AB 361 provisions) will no longer be in effect unless and until another a similar state of emergency is declared. Consequently, the Board may continue to use the "AB 361" remote meeting procedures until February 28, 2023. Before March 1, 2023, the Board needs to choose whether to follow the traditional Brown Act teleconferencing requirements (AB 2449 Section 54953(b)) or the new AB 2449 Section 54953(f) requirements starting March 1, 2023. The Board appears to have the option of switching between the two different requirements during the year.

AB 2449 Remote Participation:

1. At least a quorum of the Board members must participate in person from a singular physical location clearly identified on the agenda, which location shall be open to the public and situated

within the District's jurisdictional boundaries. The Board shall also provide remote public participation through either a two-way audiovisual platform or a two-way telephonic service and a live webcasting of the meeting.

Note that traditional Brown Act teleconferencing requirements allow for a quorum of the members to participate in person from multiple locations within the District's jurisdictional boundaries.

2. Section 54953(f)(1) of AB 2449 eliminates the traditional Brown Act's public notice and agenda posting and public access requirements at the Board member's remote location. However, AB 2449 limits a Board member's remote participation for only just cause or due to emergency circumstances as defined.

3. "Just cause"

Defined, Section (j)(2): Just cause means any of the following: (A) A childcare or caregiving need of a child, parent, grandparent, grandchild, sibling, spouse, or domestic partner that requires member to participate remotely; (B) A contagious illness that prevents a member from attending in person; (C) A need related to a physical or mental disability; and (D) Travel while on official business of the legislative body or another state or local agency.

Where just cause is claimed, the Board member must notify the Board at the earliest opportunity as possible, including the start of a regular Board meeting. The notice must include a general description of the circumstances relating to their need to appear remotely at the given meeting.

4. "Emergency circumstances"

Defined, Section (j)(1): Emergency circumstances means a physical or family medical emergency that prevents a member from attending in person.

In the case of an emergency circumstances request, the Board member must provide a written general description of the circumstances relating to their need to appear remotely. The description generally need not exceed 20 words. The member shall not be required to disclose any medical diagnosis or disability or any legally exempt medical information.

5. Member's Notice to Board

Both types of remote participation requests should be made at the earliest opportunity so that it can be included on the posted agenda. If the request is too late to be included on the posted agenda, then the Board may take action at the beginning of the meeting by the President publicly identifying the item and upon a two-thirds vote of the members in accordance with Government Code Section 54954.2(b)(2).

6. New Public Disclosure Requirement by Member (Subsection (f)(2)(B))

A Board member participating remotely must publicly disclose at the Board meeting before any action is taken, whether any other individuals 18 years of age or older are present in the room at the remote location with the member, and the general nature of the member's relationship with any such individuals.

7. Use Limitations

Under Section 54953(f)(2)(i) of AB 2449, a Board member is limited to using a just cause request for not more than two meetings per calendar year. The “Omnibus” use limitation in Subsection (f)(3) limits the use of just cause or emergency circumstances for not more than 3 consecutive months or 20% of Board regular meetings within a calendar year. Subsection (f)(2)(i) does not specify whether the two meetings limitations apply to both regular and special Board meetings; however, Subsection (f)(3) only applies to regular meetings so unless Subsection (f)(2)(i) is clarified, the District will assume it only applies to regular meetings.

The traditional Brown Act teleconferencing requirement has no such use limitations.

Environmental Review Compliance: None required.

Legal Counsel Review: Legal Counsel advises that the Board has until February 28, 2023, to follow the AB 361 requirements, which becomes Section 54953(e) of AB 2449. After February 28, 2023, the Board has the option of either following the traditional Brown Act teleconferencing requirements (Section 54953(b) of AB 2449) or the new “Just cause/Emergency circumstances” requirements (Section 54953(f) of AB 2449).

Climate Adaptation: Not applicable.

Financial Impact: ___ Yes ___ X No **Funding Source/Recap:** None

Other Considerations: None.

Material Included for Information/Consideration: None.

Action Required: ___ Resolution ___ X Motion ___ Review

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

**Marina Coast Water District
Agenda Transmittal**

Agenda Item: 12-B

Meeting Date: December 13, 2022

Prepared By: Paula Riso

Presented By: Remleh Scherzinger

Agenda Title: Discuss Reconfiguring the Standing Committees of the Board and Director Participation on the Standing Committees

Staff Recommendation: The Board of Directors discuss the standing committees of the Board.

Background: *Strategic Plan, Mission Statement – We provide our customers with high quality potable and recycled water, wastewater collection and conservation services that are safe, affordable, reliable and sustainable, through planning, management and the development of water resources in an environmentally sensitive manner.*

The Board Manual, when it was first adopted in 2002, superseded Resolution No. 1993-3 and Resolution No. 1998-1 and memorialized the Standing Committees of the Board where they currently reside, in Section 34 of the Manual. Through the years, the District has had many different committees of the Board, and each has had different configurations of members. Currently, the District has the following standing committees: Water Conservation Commission, Executive, Budget and Personnel, Community Outreach; and Joint City/District Committees. Two Board members are assigned to each committee, along with an alternate. The Water Conservation Commission was created for the Water Shortage Contingency Plan and should reside within that plan as it has specific duties that pertain to mandatory drought actions once the Board declares a drought and Stage 2 action, but specific actions are required in Stage 3.

Discussion/Analysis: The Board can discuss the committee's and how they can best support the Board. Staff recommends:

1. Delay formation of the Water Conservation Commission until Stage 3 of the Water Shortage Contingency Plan is determined by the Board.
2. Modification of Section 34 of the Board Manual to restructure the District's Standing Committees to be Executive, Budget and Engineering, and Outreach and Personnel.

Environmental Review Compliance: None required.

Legal Counsel Review: None required.

Climate Adaptation: Not applicable.

Financial Impact: _____Yes X No **Funding Source/Recap:** None

Other Considerations: Leave the standing committees as they currently are.

Material Included for Information/Consideration: None.

Action Required: _____Resolution X Motion _____Review

Board Action

Motion By_____Seconded By_____No Action Taken_____

Ayes_____

Abstained_____

Noes_____

Absent_____