Photo: DWR/Ken James

2022 San Francisco Estuary Blueprint
Implementation Committee Meeting
August 16, 2023
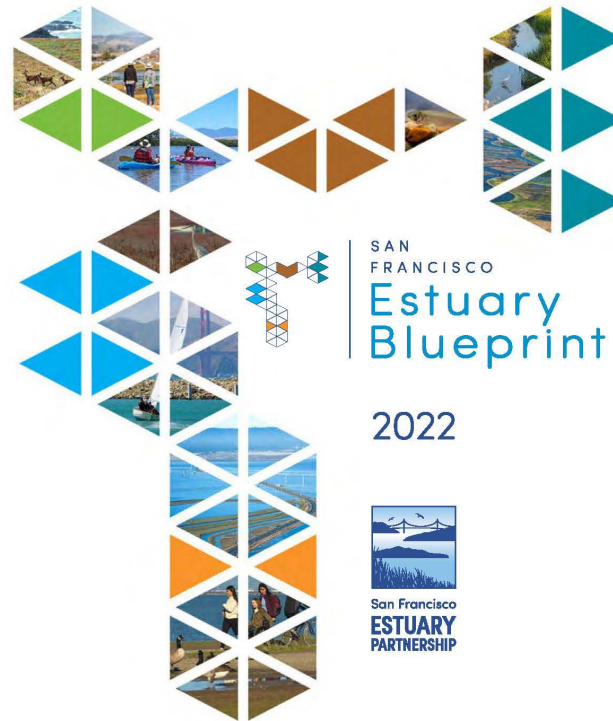
Partnership in Action

San Francisco
ESTUARY PARTNERSHIP

Blueprint Progress Highlights

Percent Complete by Action
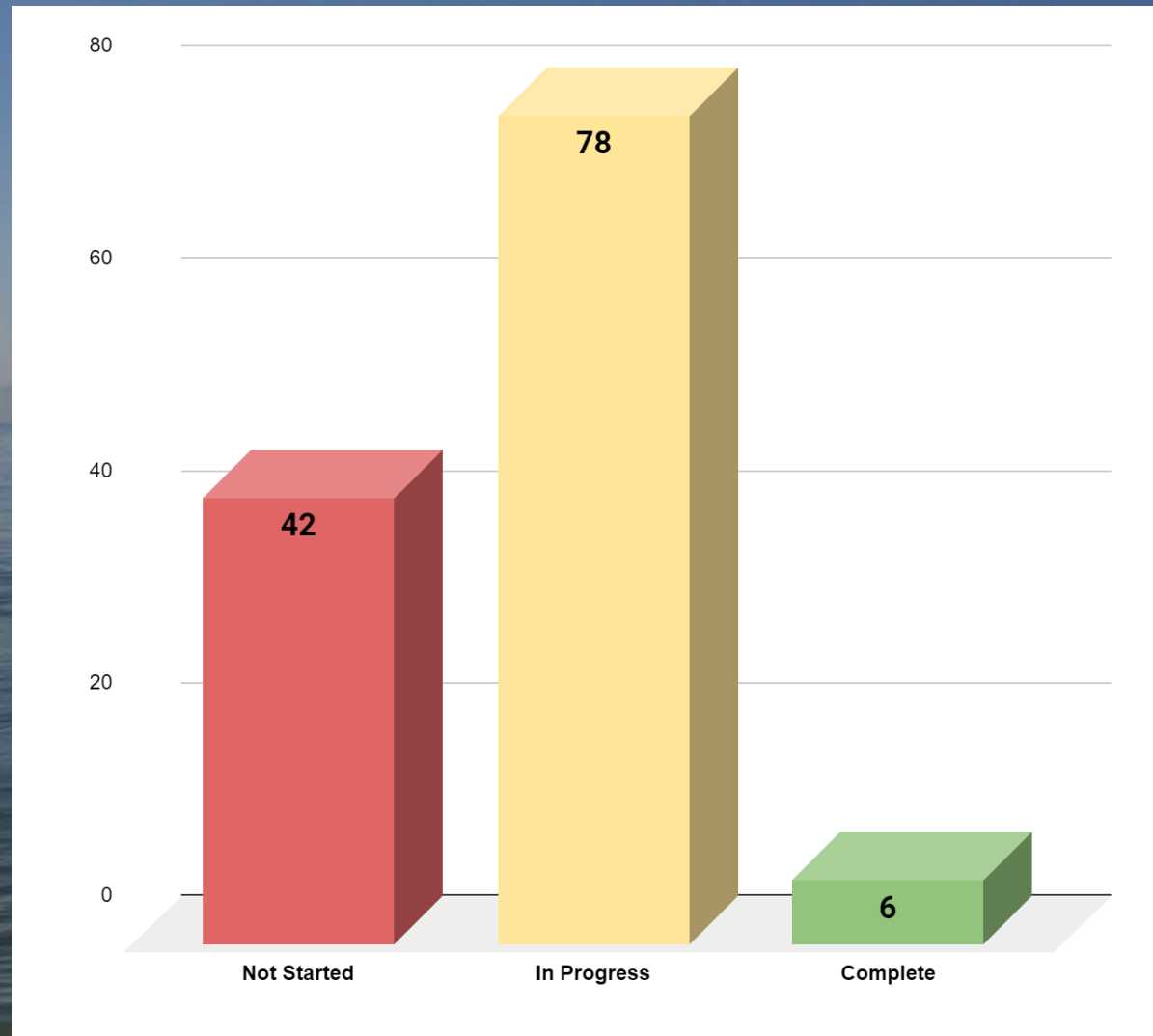
TION 3: Adaptation Planning

K 3-6: 100% COMPLETE!

STONE
level rise adaptation funding and
tment framework for the San Francisco
Area.

ATE
nteractive map-based shoreline project
atory and final report were released by
ABAG and BCDC in July.

Sea Level Rise Adaptation Funding and
Investment Framework Final Report

Metropolitan Transportation Commission / Association of Bay Area Governments
and the San Francisco Bay Conservation and Development Commission

July 2023

SAN FRANCISCO
Estuary
Blueprint

San Francisco

TION 16: Freshwater Flows

K 16-3: 100% COMPLETE!

STONE

ast one convening of Tribes and Tribal
nizations to review state data and plans, including
rtunities for Tribe-to-Tribe conversations, in
aration for meeting with state agencies at the
l Water Summit or similar event.

ATE

tatewide Tribal Water Summit, held April 1-3,
ed a workshop on water quality and water
tity in the San Francisco Estuary and discussed
stuary Blueprint.

K 18-2 100% COMPLETE!

STONE

Area Clean Water Agencies Recycled
er Study finalized.

ATE

ne, Bay Area Clean Water Agencies
WA) finalized a report evaluating the
nal potential for nutrient discharge
ction through water recycling.

San Francisco
Estuary
Blueprint
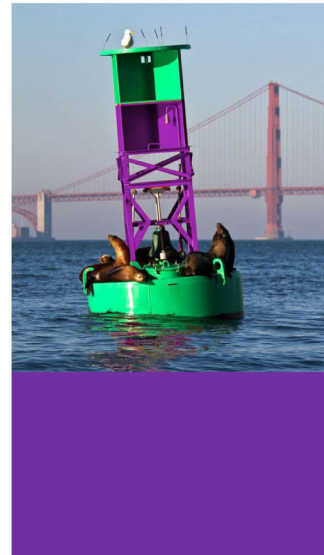
HDR Woodard & Curran

Bay Area Clean Water
Agencies

Regional Evaluation of Potential Nutrient
Discharge Reduction by Water Recycling
FINAL Report
June 28, 2023

BACWA
BAY AREA
CLEAN WATER
AGENCIES

BACWA Recycled Water Committee: Nutrient Watershed Permit Final Report

August 16, 2023

Agenda

Background

Final 2nd Watershed Permit Findings
(Recycled Water Focused;
Nature-based Solutions is Separate)

Next Steps

ttps://bacwa.org/wp-
ontent/uploads/2023/06/BACWA_RW_Final_Report_2023

HDR Woodard & Curran

Bay Area Clean Water
Agencies

Regional Evaluation of Potential Nutrient
Discharge Reduction by Water Recycling

FINAL Report
June 28, 2023

BACWA
BAY AREA
CLEAN WATER
AGENCIES

Nutrient Watershed Permit

![BACWA — Bay Area Clean Water Agencies logo]

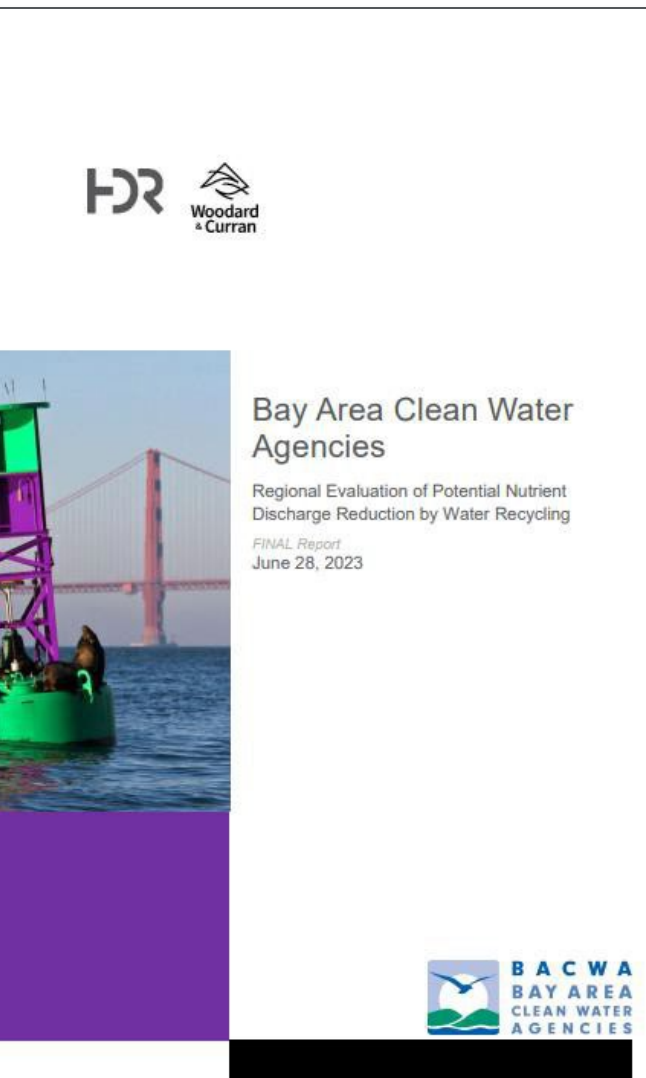**...tershed Permit 2: 2019 – 2024**

Regional management of nutrients

- Influent and Effluent Monitoring
- Analysis of Loading Trends via Group Annual Report
- Increased Support for Scientific Studies
- Load Reduction via Recycled Water and Nature Based Solutions **Studies**

Visit www.bacwa.org/nutrients

Overall Report versus Individual Plant Reports

Bay Area Clean Water Agencies

Regional Evaluation of Potential Nutrient Discharge Reduction by Water Recycling

FINAL Report
June 28, 2023

Contents

Individual Plant Reports are presented in Appendix B

https://bacwa.org/wp-content/uploads/2023/06/BACWA_RW_Final_Report_20230628A_withAppendices.pdf

nal 2ⁿᵈ Watershed Permit Findings (Recycled Water Focused)

AFT Recycled Water Flows Diverted from Bay Projected into the Future (Season)

Net Present Value for Confidence Level 1 through Year 2045: $0.8 Bil
Net Present Value for Confidence Level 2 through Year 2045: $0.4 Bil
Net Present Value for Confidence Level 3 through Year 2045: $2.3 Bil
Net Present Value for Confidence Level 4 through Year 2045: $1.6 Bil
Net Present Value for Confidence Levels 1□4 through Year 2045: $5.1 Bil *

Legend:
- Confidence Level 1, Volume
- Confidence Level 2, Volume
- Confidence Level 3, Volume
- Confidence Level 4, Volume
- TIN Load Diverted from the Bay

ence level = level of confidence in the values provided. 1 = includes projects that are already in place and/or currently budgeted; 2 = includes projects that are in master
g stages; 3 = includes projects that are conceptual, and 4 = includes projects that are conceptual in nature and require agreements across multiple jurisdictions/agencies.
tal net present value might vary from the sum of the listed confidence levels due to rounding.

ummary of Planned Projects over Time

Distribution of Recycled Water Projects across the Bay

Year	Confidence Level 1	Confidence Level 2	Confidence Level 3	Confidence Level 4
2020	23	0	0	0
2025	22	2	3	0
2030	22	5	5	0
2035	21	5	8	1
2040	21	5	9	1
2045	21	5	10	2

Year

☐ Confidence Level 1   ☐ Confidence Level 2   ☐ Confidence Level 3   ■ Confidence Level 4

Table 3-20. Distribution of Potential Recycled Water Projects per POTW by Confidence Levels 1 through 4*

| POTW	Year 2020	Year 2025	Year 2030	Year 2035	Year 2040	Year 2045
American Canyon	Confidence Level 1	Confidence Level 1; Confidence Level 2	Confidence Level 1; Confidence Level 2	Confidence Level 1; Confidence Level 2; Confidence Level 3	Confidence Level 1; Confidence Level 2; Confidence Level 3	Confidence Level 1; Confidence Level 2; Confidence Level 3
Benicia	--	--	--	--	--	--
Burlingame	--	--	--	--	--	--
Central San	Confidence Level 1	Confidence Level 1 -- Confidence Level 3	Confidence Level 1 -- Confidence Level 3	Confidence Level 1 -- Confidence Level 3 Confidence Level 4	Confidence Level 1 -- Confidence Level 3 Confidence Level 4	Confidence Level 1 -- Confidence Level 3 Confidence Level 4
CMSA	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
Delta Diablo	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
DSRSD	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
EBMUD	Confidence Level 1	Confidence Level 1	Confidence Level 1	-- -- Confidence Level 3	-- -- Confidence Level 3	-- -- Confidence Level 3
FSSD	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
Hayward	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
Las Gallinas	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
Livermore	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
Millbrae	--	--	--	--	--	--
Mt. View	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
Napa	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1 -- Confidence Level 3
Novato	Confidence Level 1	Confidence Level 1	Confidence Level 1 Confidence Level 2	Confidence Level 1 Confidence Level 2	Confidence Level 1 Confidence Level 2	Confidence Level 1 Confidence Level 2
OLSD	Confidence Level 1	Confidence Level 1	--	--	-- -- Confidence Level 3	-- -- Confidence Level 3
Palo Alto	Confidence Level 1	Confidence Level 1	Confidence Level 1 -- Confidence Level 3	Confidence Level 1 -- Confidence Level 3	Confidence Level 1 -- Confidence Level 3	Confidence Level 1 -- Confidence Level 3
Petaluma	Confidence Level 1	Confidence Level 1	Confidence Level 1 Confidence Level 2	Confidence Level 1 Confidence Level 2	Confidence Level 1 Confidence Level 2	Confidence Level 1 Confidence Level 2
Pinole	--	--	--	--	--	--
Richmond	--	--	--	--	--	--
Rodeo	--	--	--	--	--	--
SFO Airport	--	-- Confidence Level 2	-- Confidence Level 2	-- Confidence Level 2	-- Confidence Level 2	-- Confidence Level 2
SFPUC Southeast	--	--	--	--	--	--
San Jose	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1 -- -- Confidence Level 4
San Mateo	--	--	-- -- Confidence Level 3	-- -- Confidence Level 3	-- -- Confidence Level 3	-- -- Confidence Level 3
SMCSD	--	--	--	--	--	--
San Leandro	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
SASM	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
Sonoma Valley	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
SVCW	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1 -- Confidence Level 3	Confidence Level 1 -- Confidence Level 3	Confidence Level 1 -- Confidence Level 3
South SF	--	-- -- Confidence Level 3	-- Confidence Level 2 Confidence Level 3	-- Confidence Level 2 Confidence Level 3	-- Confidence Level 2 Confidence Level 3	-- Confidence Level 2 Confidence Level 3
Sunnyvale	Confidence Level 1	-- -- Confidence Level 3	-- -- Confidence Level 3	-- -- Confidence Level 3	-- -- Confidence Level 3	-- -- Confidence Level 3
Treasure Island	--	--	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
USD	--	--	--	--	--	--
Vallejo	--	--	--	--	--	--
West County	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1	Confidence Level 1
Total	Confidence Level 1 = 23, Confidence Level 2 = 0,	Confidence Level 1 = 22, Confidence Level 2 = 2,	Confidence Level 1 = 22, Confidence Level 2 = 5,	Confidence Level 1 = 21, Confidence Level 2 = 5,	Confidence Level 1 = 21, Confidence Level 2 = 5,	Confidence Level 1 = 21, Confidence Level 2 = 5,

istribution of Recycled Water Applications

2020
43,200 AF

11%
35%
3%
30%
12%
5%
3%
<1%

2045
140,200 AF

<1%
<1%
5%
23%
2%
26%
10%
22%
1%
5%
6%
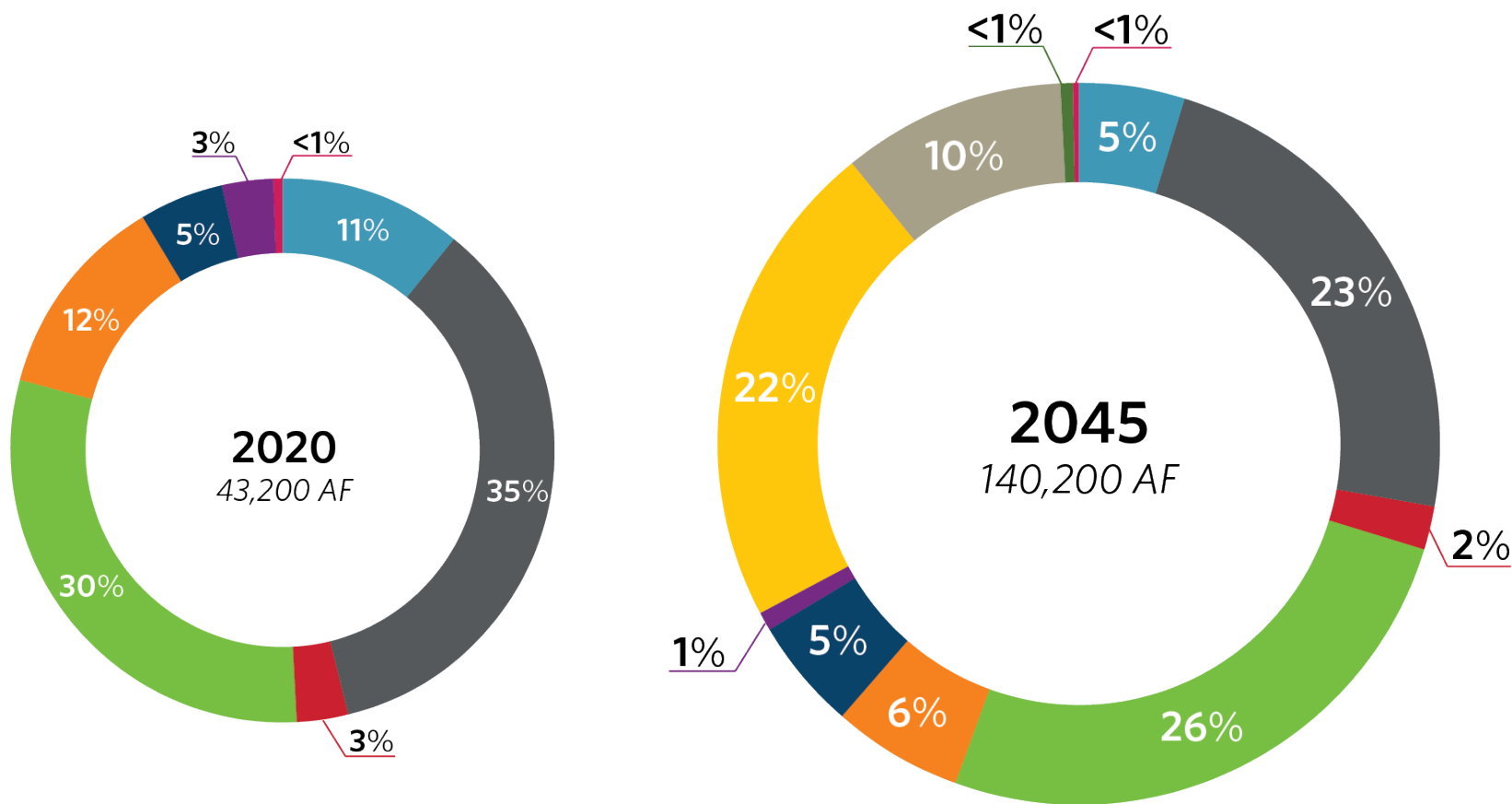
- Golf Course Irrigation
- Industrial
- Internal Use
- Landscape
- Agricultural
- GW Recharge for Indirect Potable Reuse
- Environmental
- Direct Potable Reuse

rivers and Barriers across the Bay

DRIVERS

- Institutional 16%
- her 22%
- Proposed Discharge Regulations 22%
- Water Supply Need 40%

BARRIERS

- Institutional 7%
- Other 24%
- Lack of Need 13%
- Jurisdictional 19%
- Funding 37%
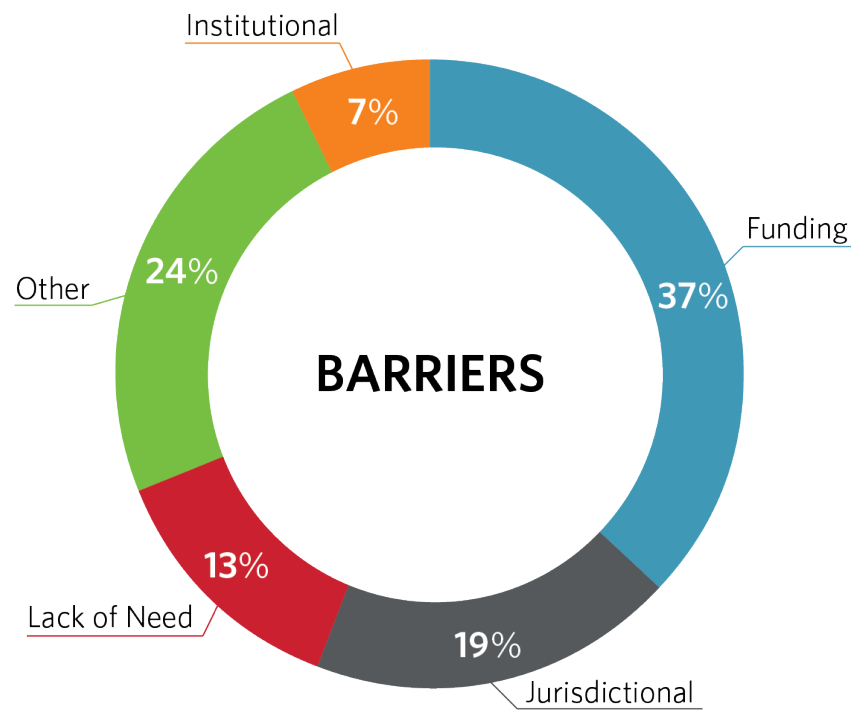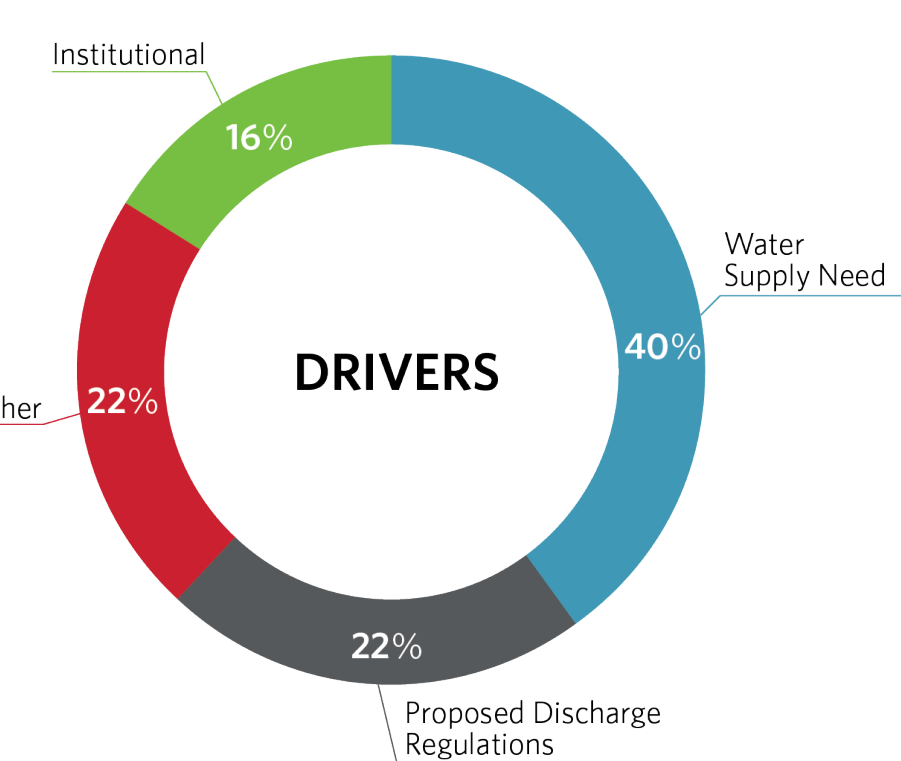
xt Steps

ance the "menu of nutrient management options"

t Watershed Permit: optimization, sidestream, upgrades
onventional nutrient removal and enhanced nutrient
moval)

d Watershed Permit: NbS and Recycled Water

tinue working on the 3rd Watershed Permit (slated

24)
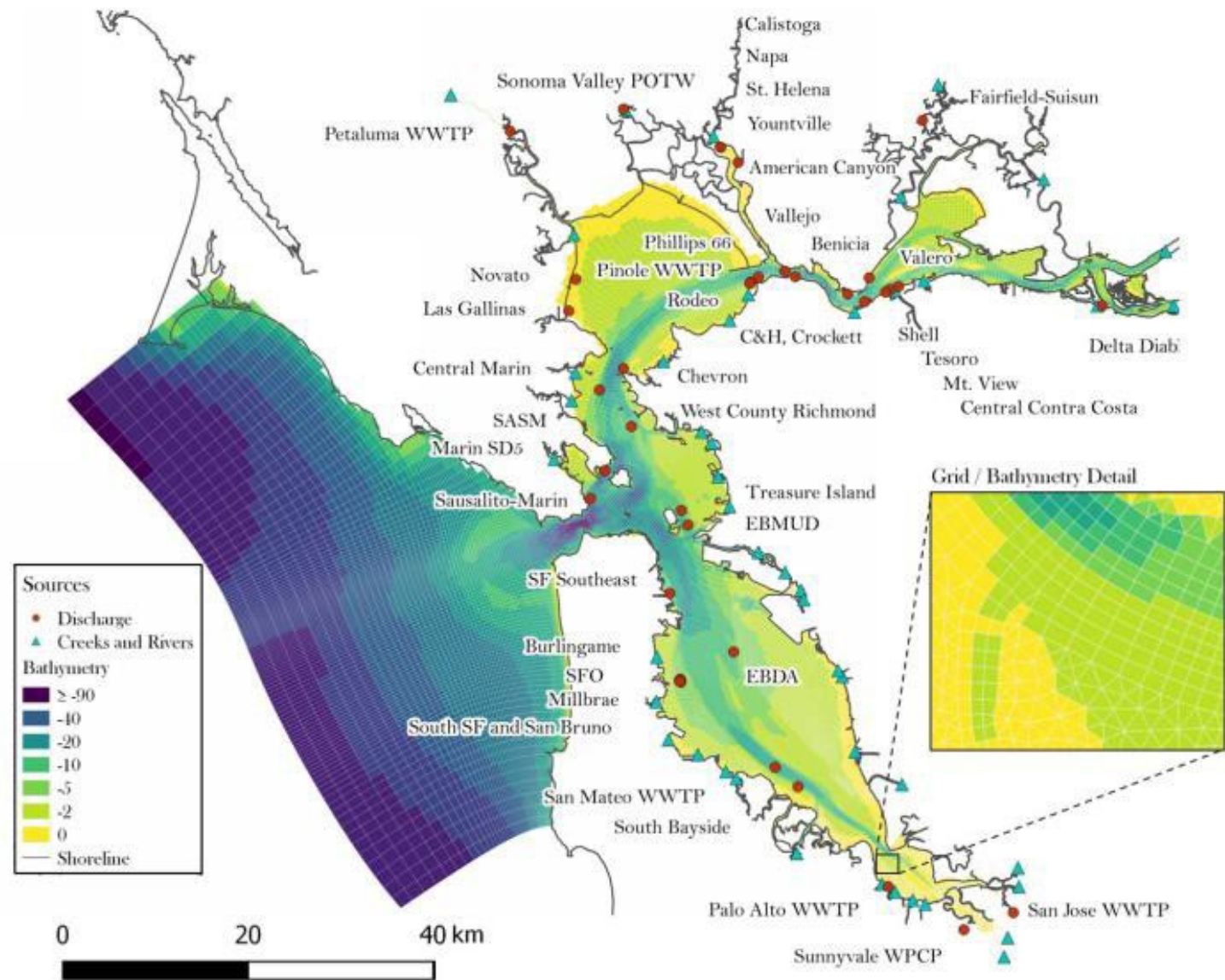
ct Info:

alk

alk@hdrinc.co

.517.9012

Baywide Model Developed by SFEI for Advancing the Science

BACWA Recycled Water Committee: Nutrient Watershed Permit Final Report

July 18, 2023

ACTION 15 (INVASIVE SPECIES): Tasks 15-1 and 15-2

Significant products include a horizon scan for the Pacific Southwest conducted by USFWS and a pilot project to create a Rapid Response Fund for aquatic invasive species

ACTION 17 (WATER CONSERVATION) Task 17-1

The Bay Area Water Supply and Conservation Agency (BAWSCA) has completed a study on Advanced Metering Infrastructure (AMI)

Photo: Darcie Luce

San Francisco

BAWSCA's AMI Survey

y Area Water Supply and Conservation Agency (BAWSCA) is a Special District formed 2003 to represent the interests of 24 cities and water districts, and two private lities, in Alameda, Santa Clara and San Mateo counties that purchase water on a holesale basis from the San Francisco Regional Water System (SF RWS).

ur member agencies provide water service to 1.8 million residents and over 40,000 mmercial, industrial, and institutional accounts.

FY 22-23, BAWSCA completed a comprehensive survey (using SurveyMonkey) nsisting of 23 questions related to AMI. The purpose was to:
- better understand the status of AMI implementation throughout the service area
- learn what assistance, if any, member agencies desire of BAWSCA on this topic

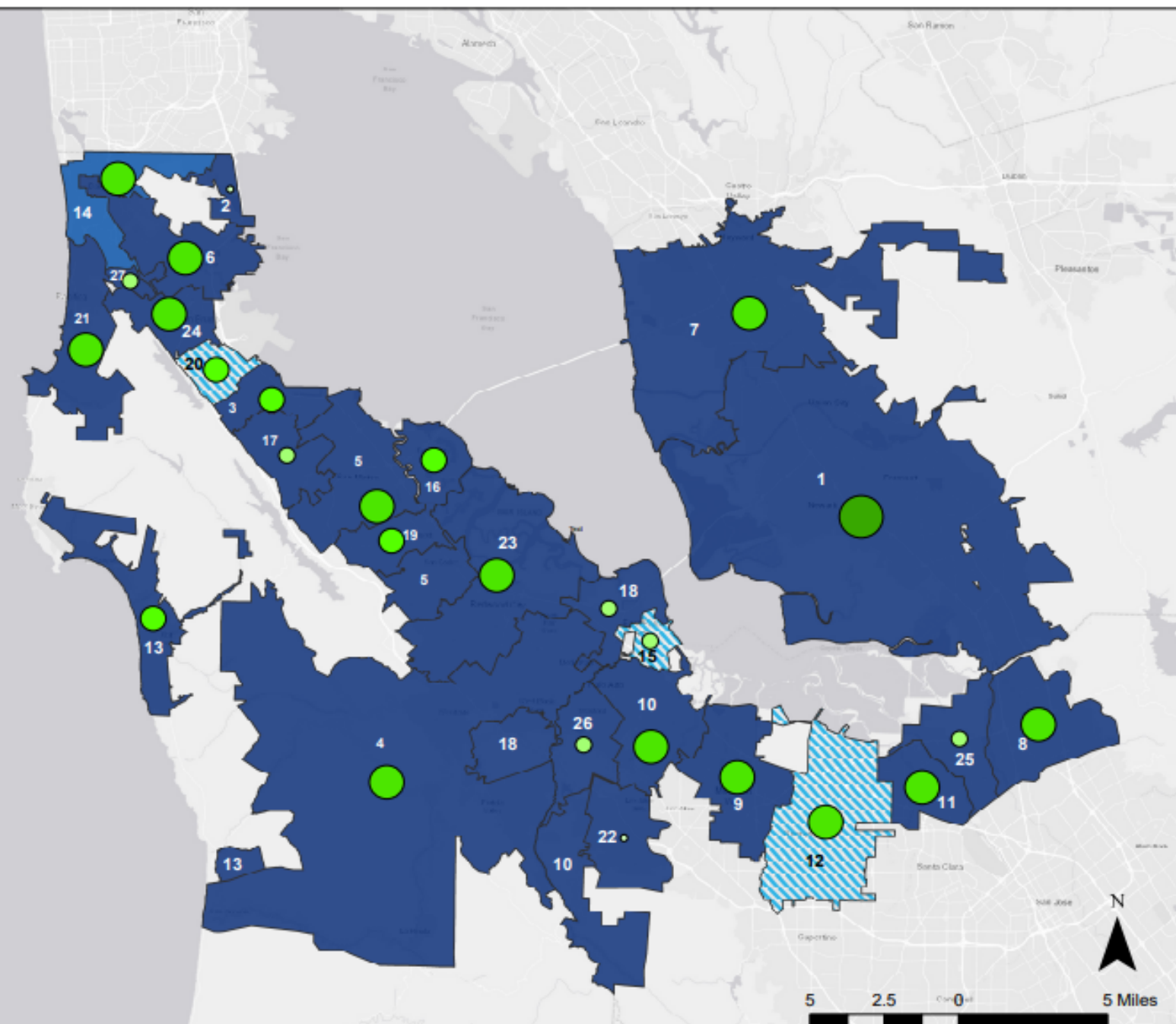26 BAWSCA agencies completed the survey.
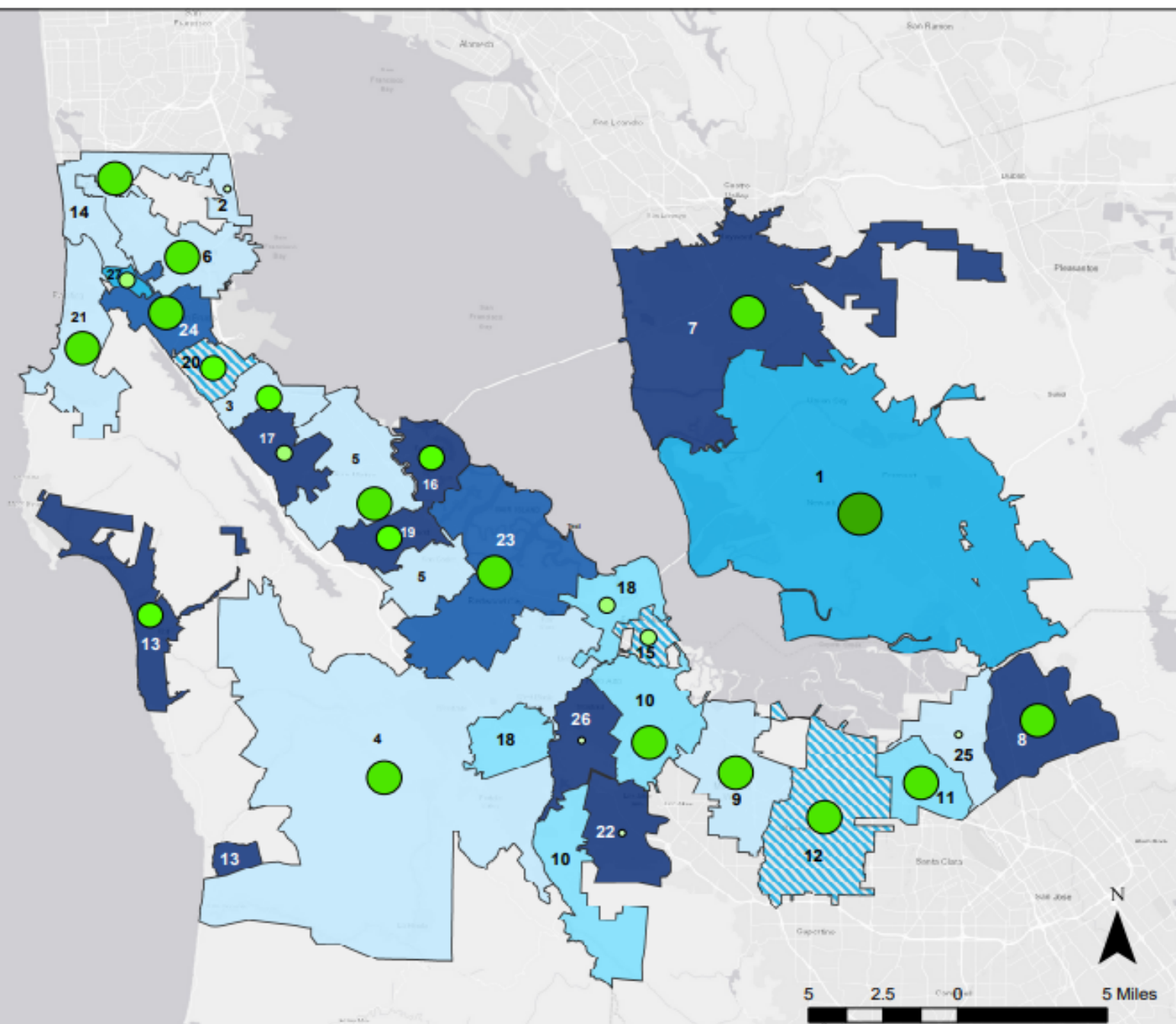
Legend

AMI Implementation % Complete

- Unknown
- 0%
- 1-10%
- 11-49%
- 50-99%
- 100%

Number of Customer Accounts in 2023

- 0 - 2500
- 2501 - 5000
- 5001 - 10000
- 10001 - 50000
- 50001 - 100000

1   Alameda County Water District
2   City of Brisbane/GVMID
3   City of Burlingame
4   CWS - Bear Gulch
5   CWS - Mid-Peninsula
6   CWS - South San Francisco
7   City of Hayward
8   City of Milpitas
9   City of Mountain View
10   City of Palo Alto
11   City of Santa Clara
12   City of Sunnyvale
13   Coastside County Water District
14   City of Daly City
15   East Palo Alto Municipal Water District
16   Estero Municipal Water District
17   Town of Hillsborough
18   City of Menlo Park
19   Mid-Peninsula Water District
20   City of Millbrae
21   North Coast County Water District
22   Purissima Hills Water District
23   City of Redwood City
24   City of San Bruno
25   San Jose Municipal Water System

Legend

AMI Implementation % Complete

- Unknown
- 0%
- 1-10%
- 11-49%
- 50-99%
- 100%

Number of Customer Accounts in 2035

- 0 - 2500
- 2501 - 5000
- 5001 - 10000
- 10001 - 50000
- 50001 - 100000

1. Alameda County Water District
2. City of Brisbane/GVMID
3. City of Burlingame
4. CWS - Bear Gulch
5. CWS - Mid-Peninsula
6. CWS - South San Francisco
7. City of Hayward
8. City of Milpitas
9. City of Mountain View
10. City of Palo Alto
11. City of Santa Clara
12. City of Sunnyvale
13. Coastside County Water District
14. City of Daly City
15. East Palo Alto Municipal Water District
16. Estero Municipal Water District
17. Town of Hillsborough
18. City of Menlo Park
19. Mid-Peninsula Water District
20. City of Millbrae
21. North Coast County Water District
22. Purissima Hills Water District
23. City of Redwood City
24. City of San Bruno
25. San Jose Municipal Water System

Key Findings from the AMI Survey

ding 1 - AMI is currently the predominant meter-reading method for BAWSCA agencies.

ding 2 - By 2035, 85% of BAWSCA agencies are projected to fully implement AMI.

ding 3 - Notification of leaks and high usage is the most important benefit of AMI to BAWSCA agencies.

ding 4 - Greatest challenge with AMI implementation is obtaining funding.

ding 5 - Majority of AMI meter management is done in-house.

ding 6 - Meter reading systems are mainly electronically integrated with billing and customer information systems.

ding 7 - Various vendors and network communication systems are utilized to enable the seamless flow of data
tween smart meters and the central data management system.

ding 8 - BAWSCA agencies receive most of their AMI information from vendors and colleagues.

ding 9 - BAWSCA agencies express interest in learning more about routine water consumption reports and
esentations on AMI management.

Suggested Steps BAWSCA Should Consider to Support AMI Efforts

onitor any potential and unique funding sources.

ovide information regarding AMI features and functions.

ost discussions regarding how to use AMI data to analyze end uses for targeting ograms and ensuring compliance with water use restrictions.

mpile cost-benefit assessments for AMI projects.

sistance with navigating the AMI RFP process.

| Task 2-1 | Task 2-2 | Task 2-3 | Task 2-4 |

Task Description

Develop a living network of Bay Area community-based organizations to foster collaboration and increase equity in planning and permitting decisions.

Task Lead(s)

San Francisco Bay Conservation & Development Commission in coordination with Bay Area-based organizations, San Francisco Bay Conservation & Development Commission's Environmental Justice (EJ) Advisors, and regional partners

Task Collaborating Partner(s)

Bay Area Climate Adaptation Network, community-based organizations, interested Bay Area counties, Bay Area Regional Health Inequities Initiative, Delta Stewardship Council, San Francisco Bay Regional Water Quality Control Board
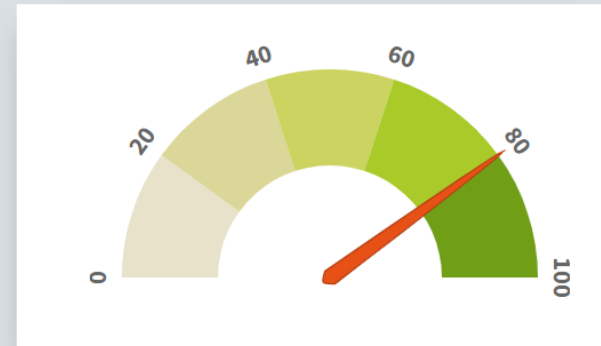
Completion Level: 80%

Cost Estimate

$

Milestone(s)

A pilot Community-Based Organization Directory Map launched with a requisite training module.

San Francisco

023 Schedule

ugust 16 IC Meeting:

Blueprint Progress Report

ovember 14 IC Meeting

Blueprint agenda items informed by Steering Committee

Thank You!

Partnership in Action

San Francisco