

RMP UPDATE



BACWA Representatives Guide the RMP

- Steering Committee

Karin North

Leah Walker

Eric Dunlavey

Robert Wilson (alt)

- Technical Review Committee

Yuyun Shang

Ross Duggan

Mary Lou Esparza

Anne Hansen

Tom Hall

Simret Yigzaw (alt)

Heather Peterson (alt)

Ryan Mayfield (alt)

Samantha Engelage (alt)

- Workgroups – CECs and Microplastics

PROGRAM IMPACT

LONG-TERM MANAGEMENT PLANS

...

Water Board
LTMS
BACWA
BASMAA
USEPA

PRIORITIZED MANAGEMENT QUESTIONS

...

Steering Committee
Technical Review
Committee
Workgroups
Strategy Teams
Scientist

SCIENTIFIC KNOWLEDGE

...

Technical Review
Committee
Workgroups
Scientist

ENLIGHTENED MANAGEMENT ACTIONS

...

Regulators
Dischargers
The Public

A
Cleaner
San Francisco
Bay

Specific regulations addressed by the RMP

NPDES Permits

Nutrient Watershed Permit

Stormwater Municipal Regional Permit

CEC Action Plans

Copper SSO Implementation Plan

Selenium TMDL

Mercury TMDL

PCBs TMDL

Dredged Material Disposal Permits

Management Strategy for Dredged Material

Fish Consumption Advisories

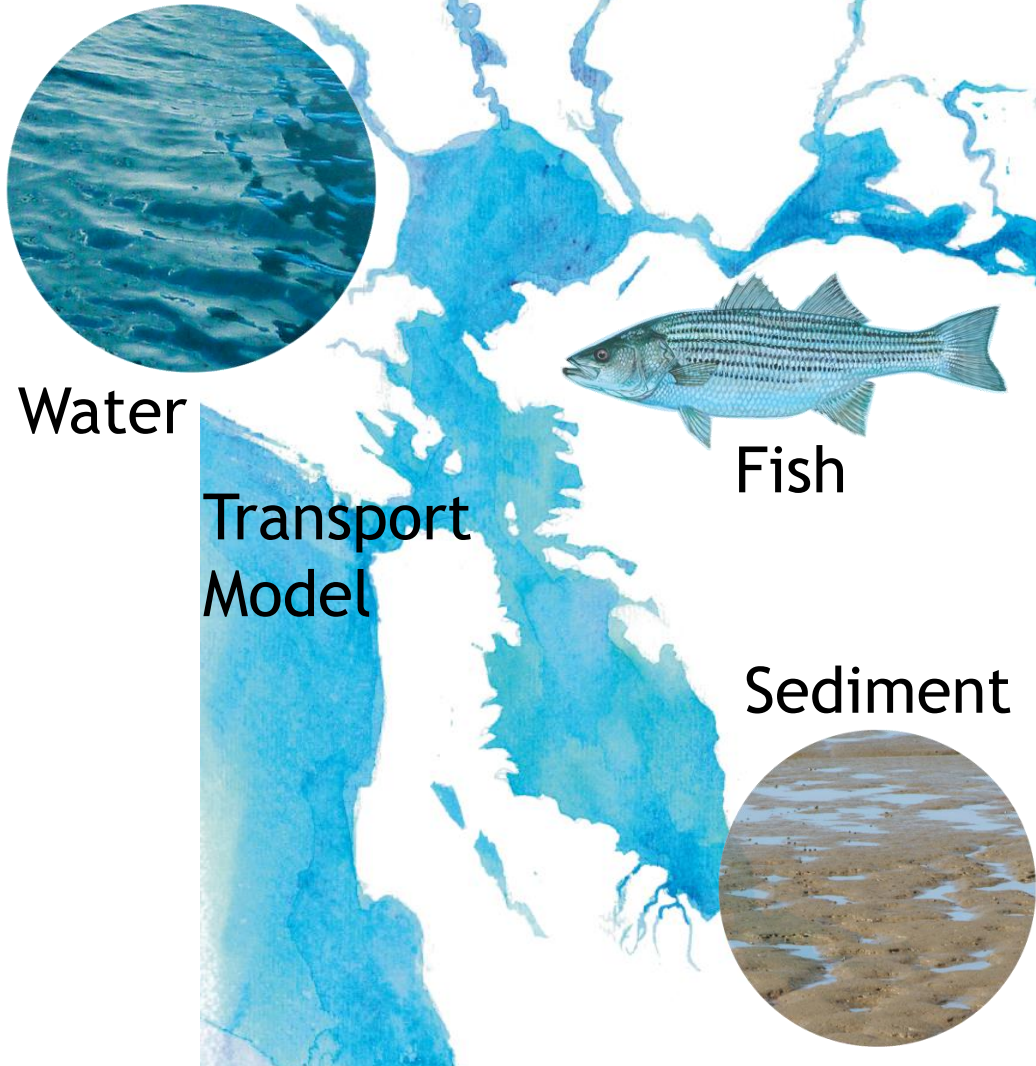




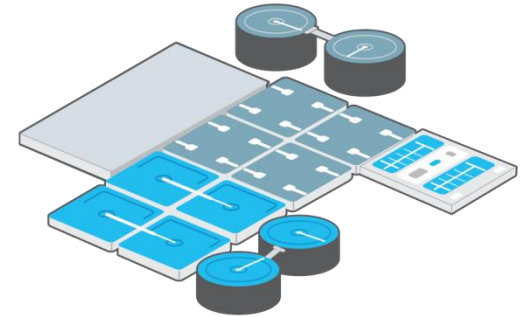
PROGRAM **HIGHLIGHTS**

Microplastics study

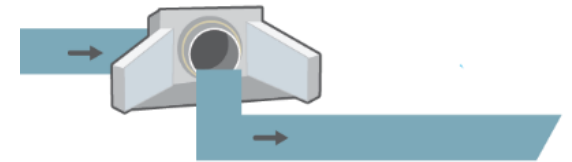
Bay Monitoring



Pollution Pathways



Wastewater
(BACWA)



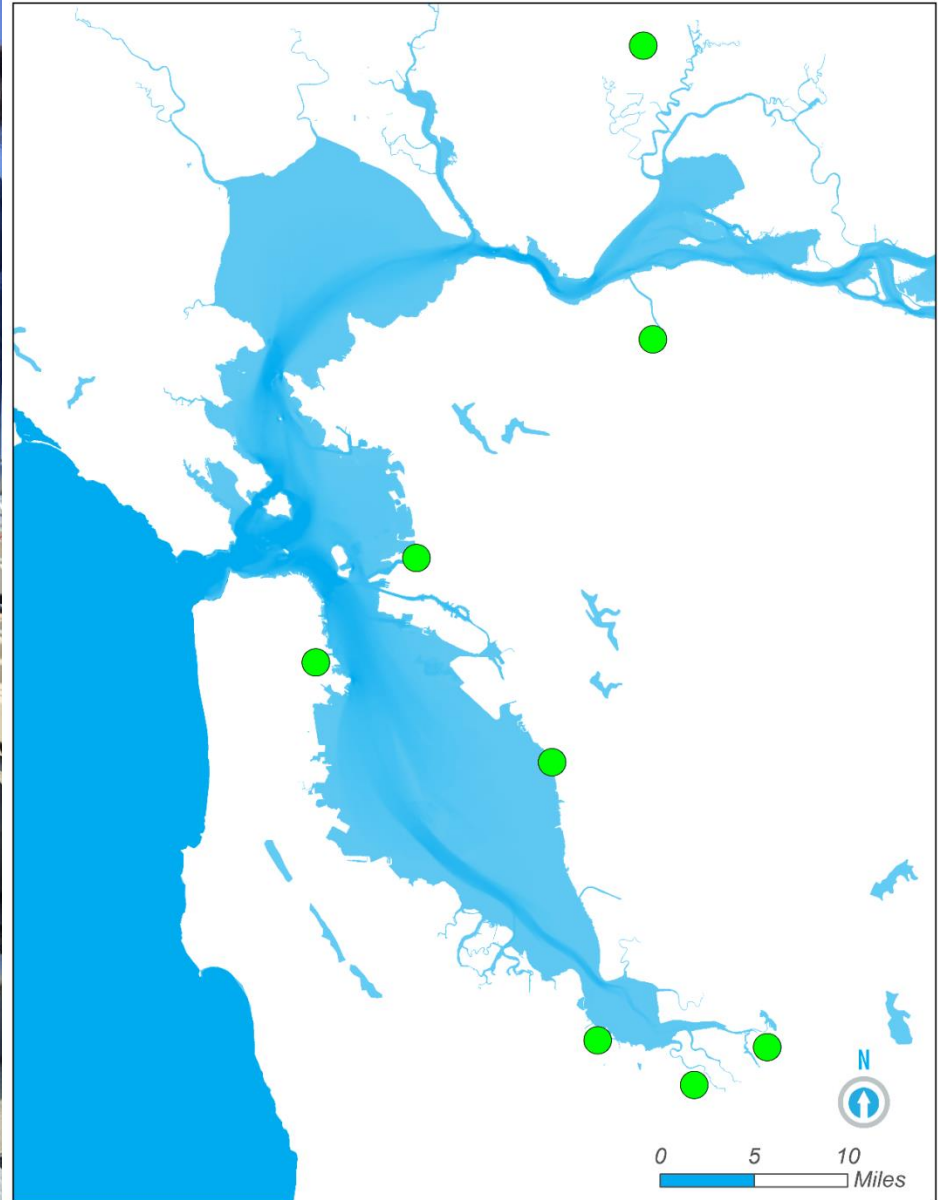
Stormwater
(BASMAA)



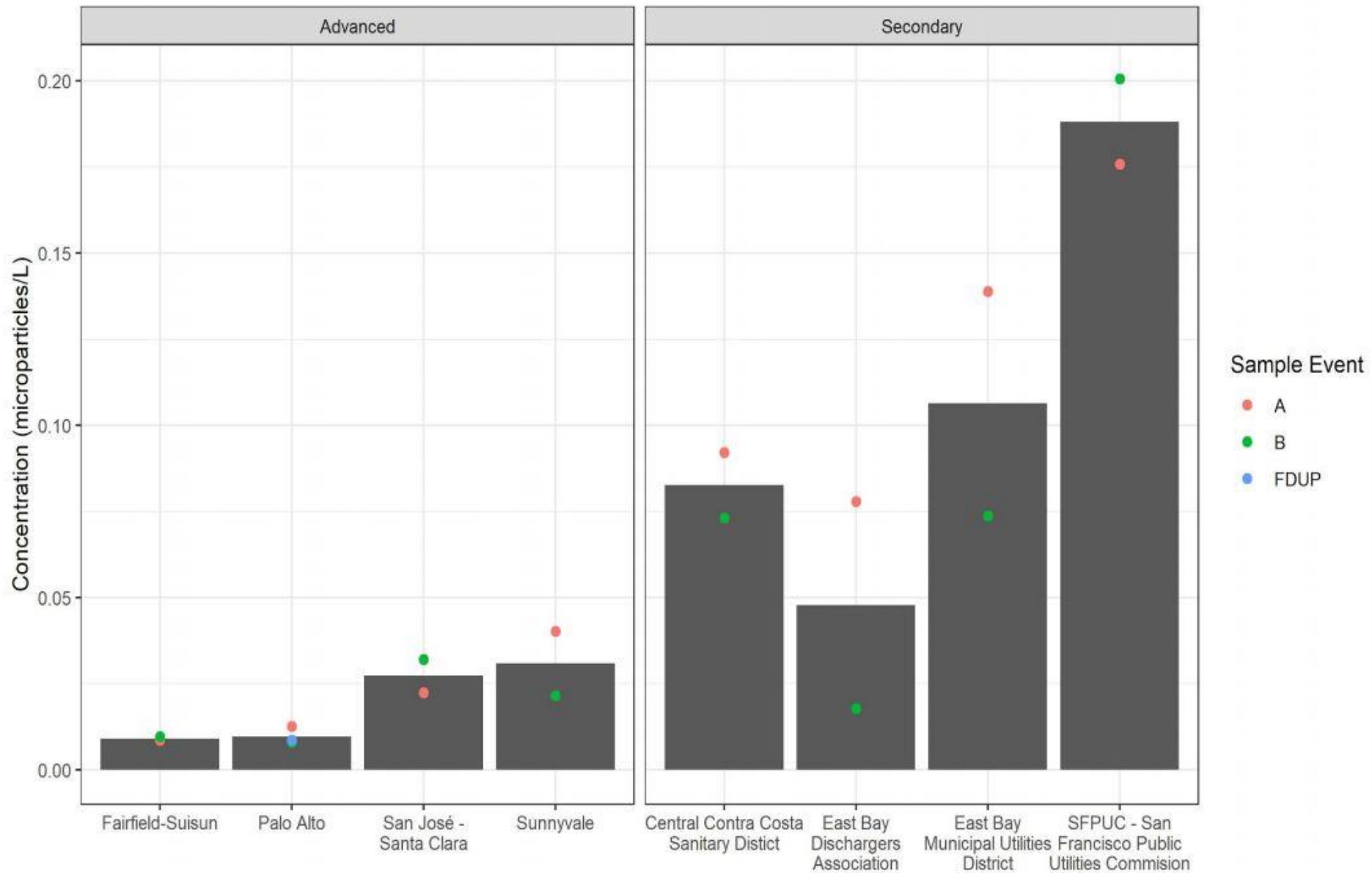
Many thanks to all the WWTTPs!



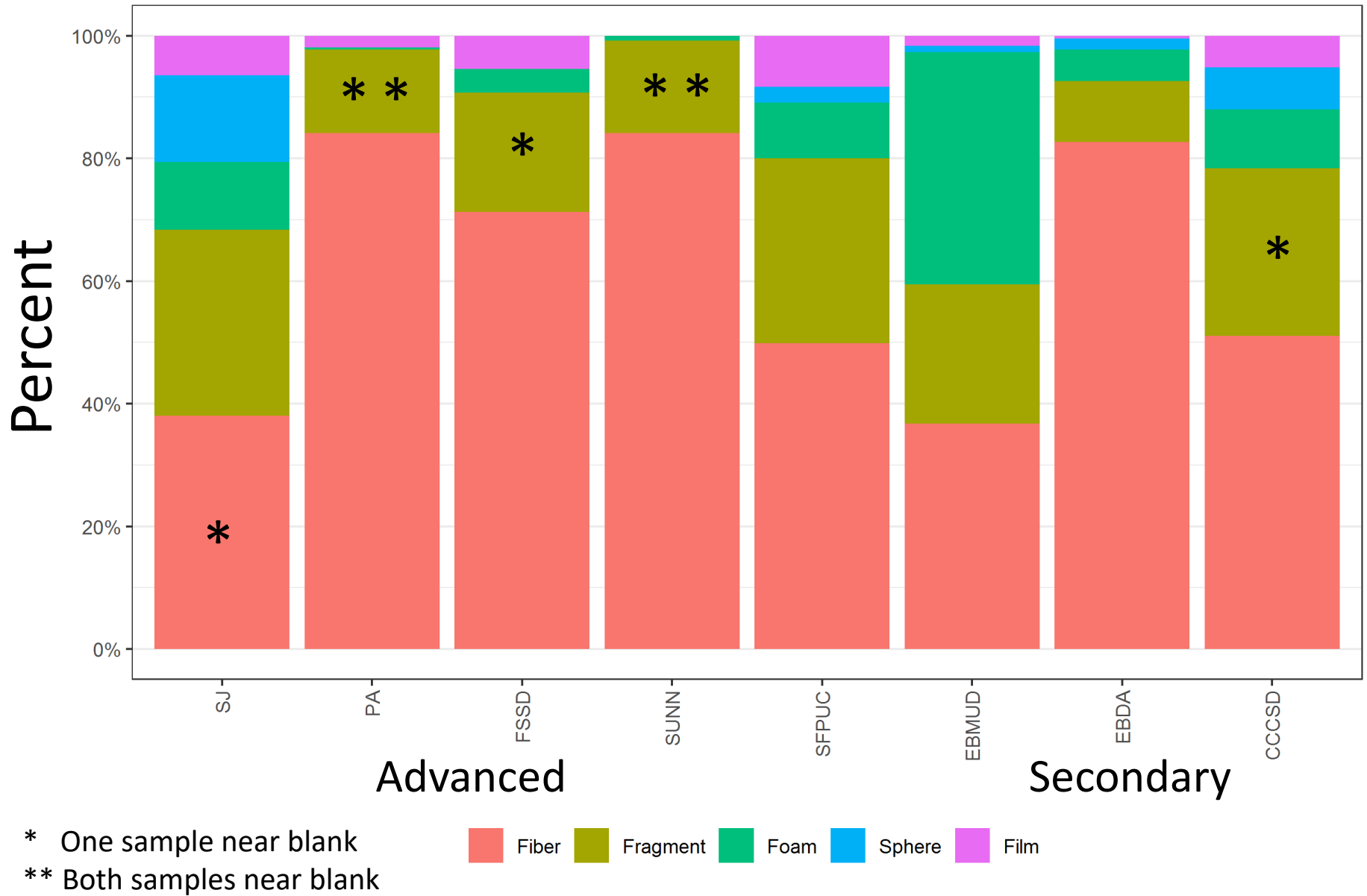
Wastewater sampling sites



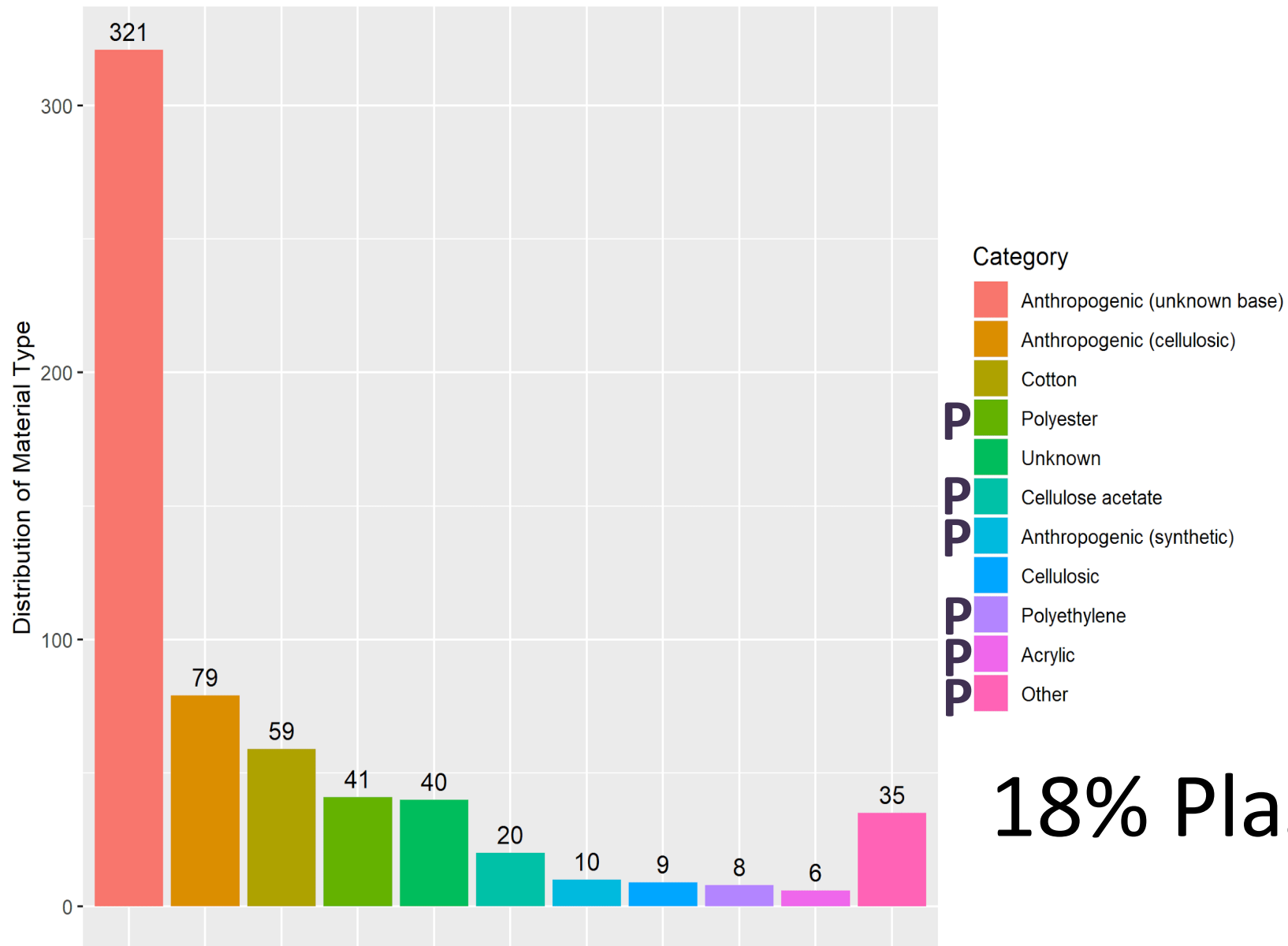
Treatment matters



Fibers dominate

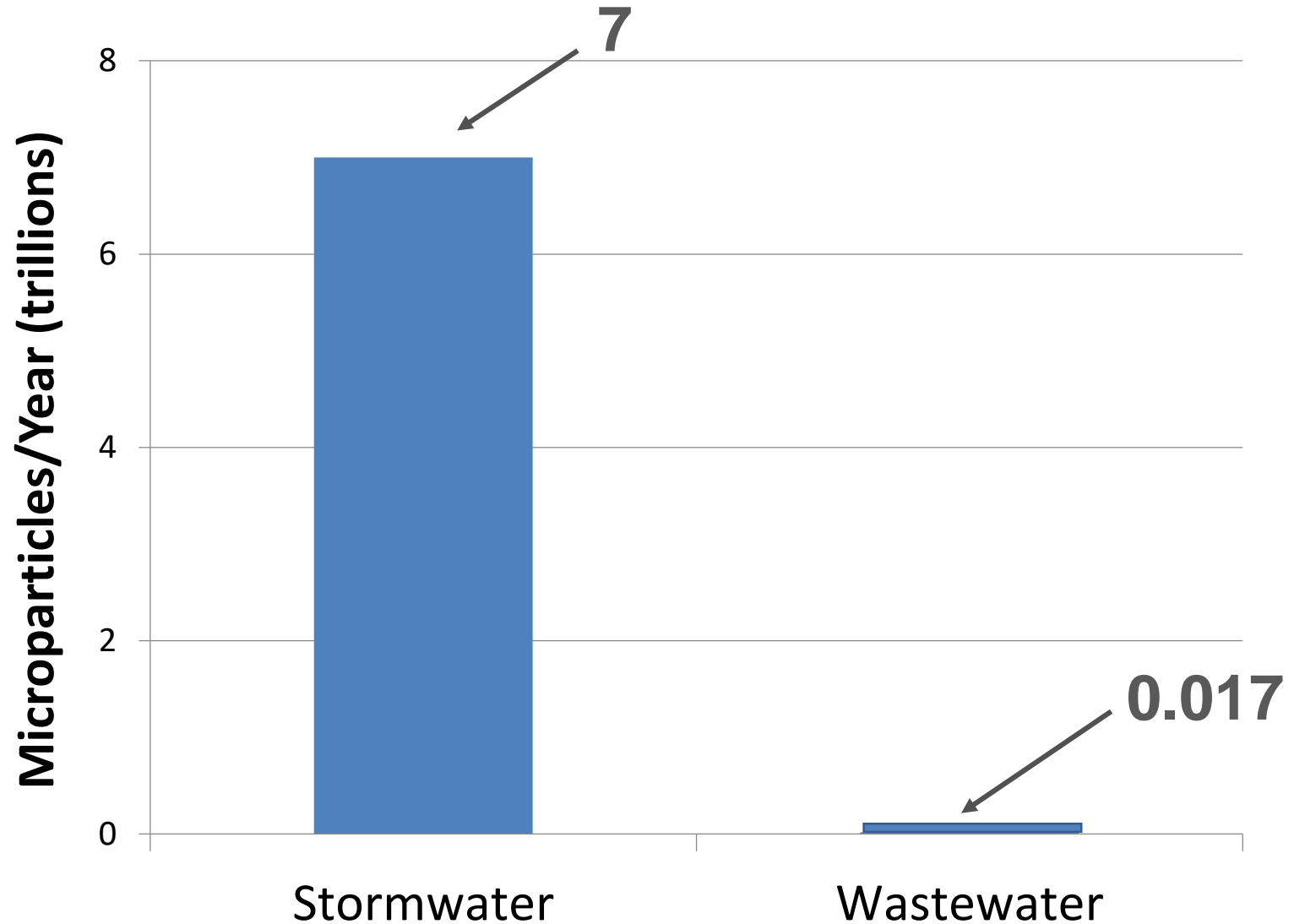


Mostly “anthropogenic” fibers



18% Plastic

Wastewater contribution in context



Many outlets for this research



Science-Supported Solutions and Policy Recommendations



Authors: Carolyn Box (5 Gyres)
Anna Cummins (5 Gyres)

September 2019



ACS Publications
www.acs.org



Elevating the status of CECs

High Concern moderate or high impact	None currently
Moderate Concern low impact	PFOS, PFOA, Long-Chain Carboxylates Alkylphenols, Alkylphenol Ethoxylates Fipronil, Imidacloprid, Bisphenols Organophosphate Esters,
Low Concern limited impact	Microplastics PBDEs and HBCD Pharmaceuticals, Pyrethroids* Personal Care & Cleaning PBDDs / PBDFs
Possible Concern uncertainty as to impact	Alternative Flame Retardants Other PFAS (Fluorinated Chemicals) Pesticides, Plastic Additives Siloxanes, SDPAs, UV-BZTs, others



CECs monitoring studies

2019 Special Study

- Ethoxylated surfactants in wastewater effluent (and Bay water and sediment)
- Stormwater CECs (PFAS, ethox, OPEs, bisphenols, and road suite)

2020 Special Study

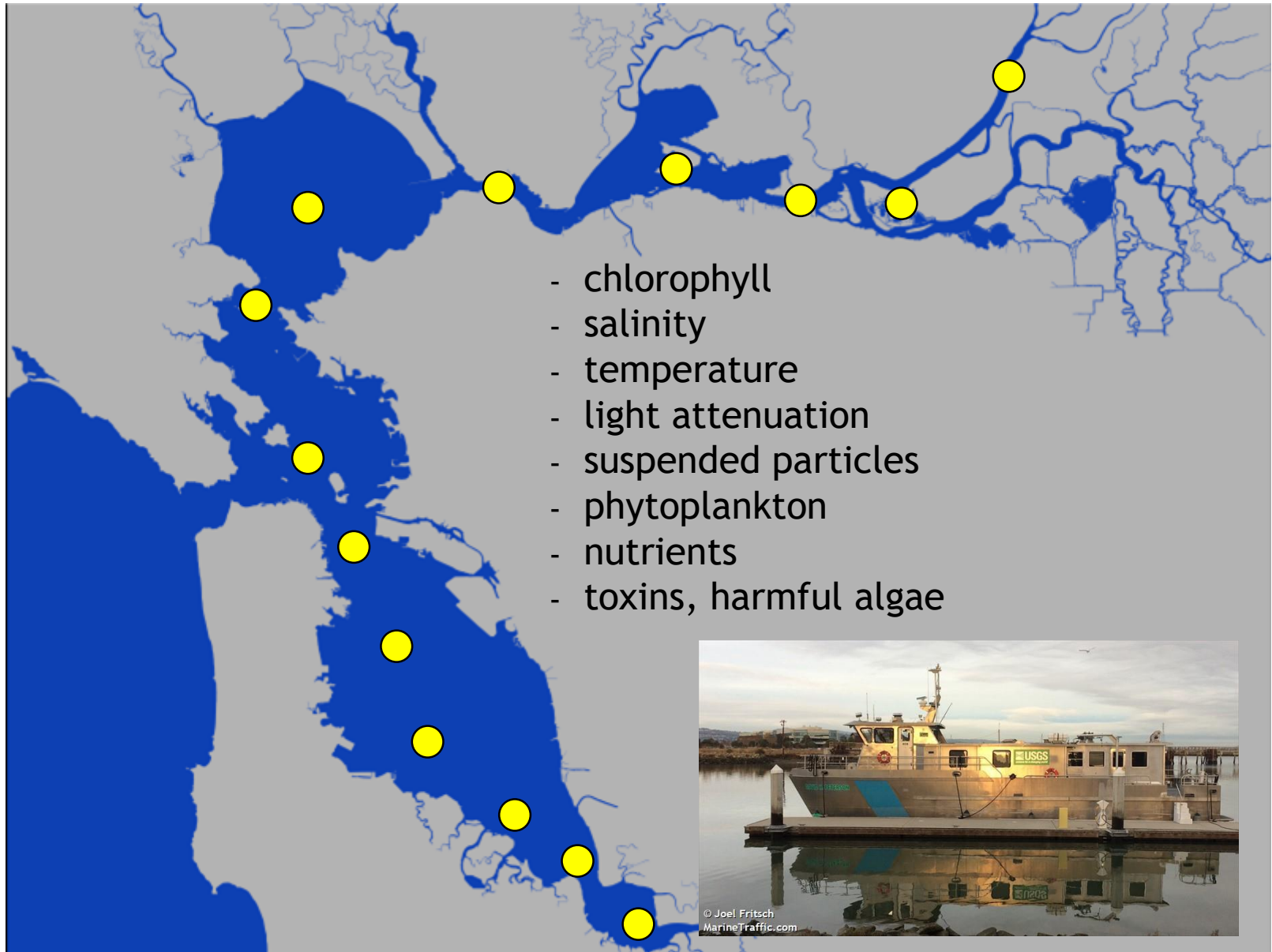
- Bisphenols in wastewater effluent (and sediment)

2021 Status & Trends (potential)

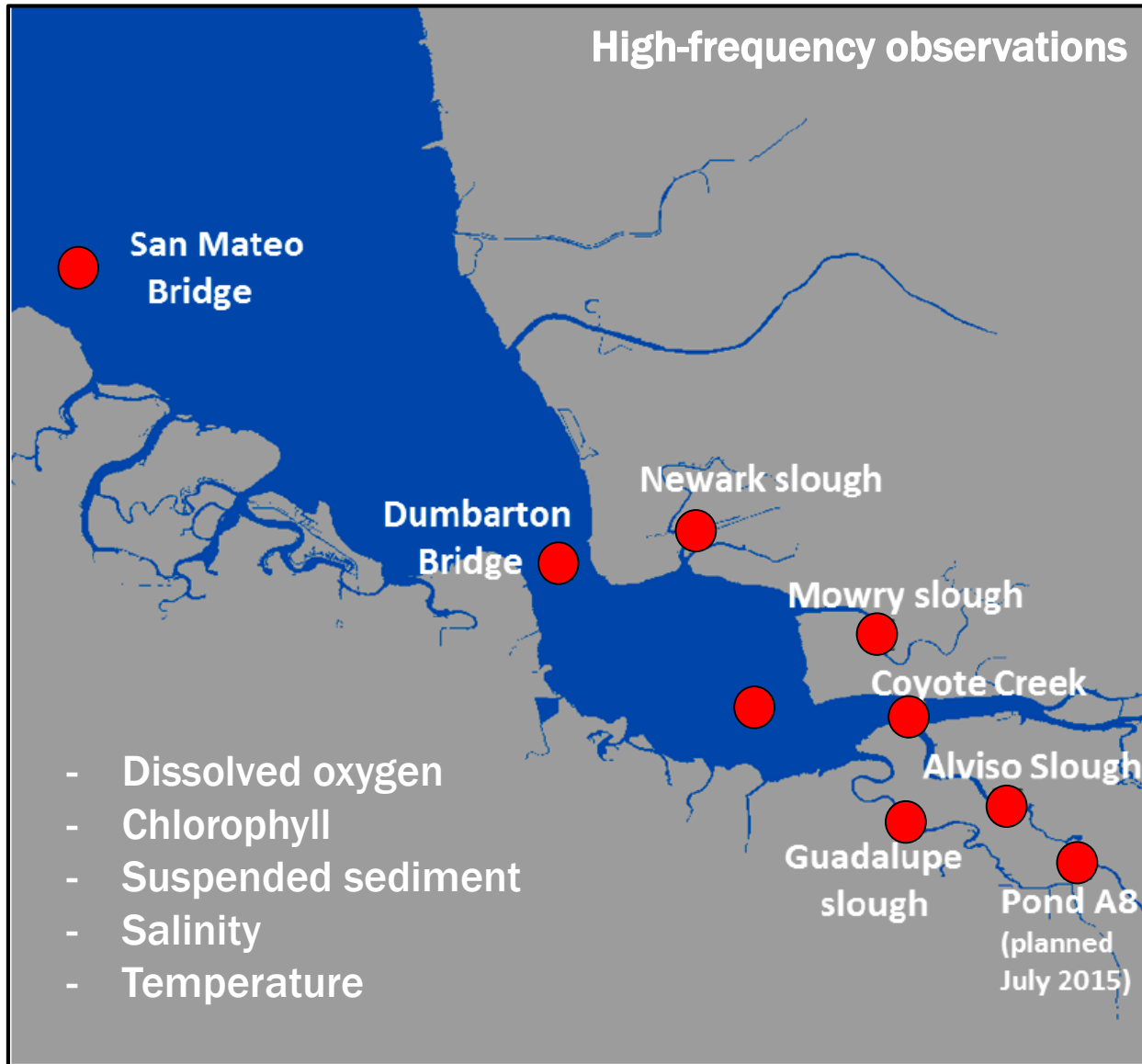
- Bisphenols and OPEs in surface water



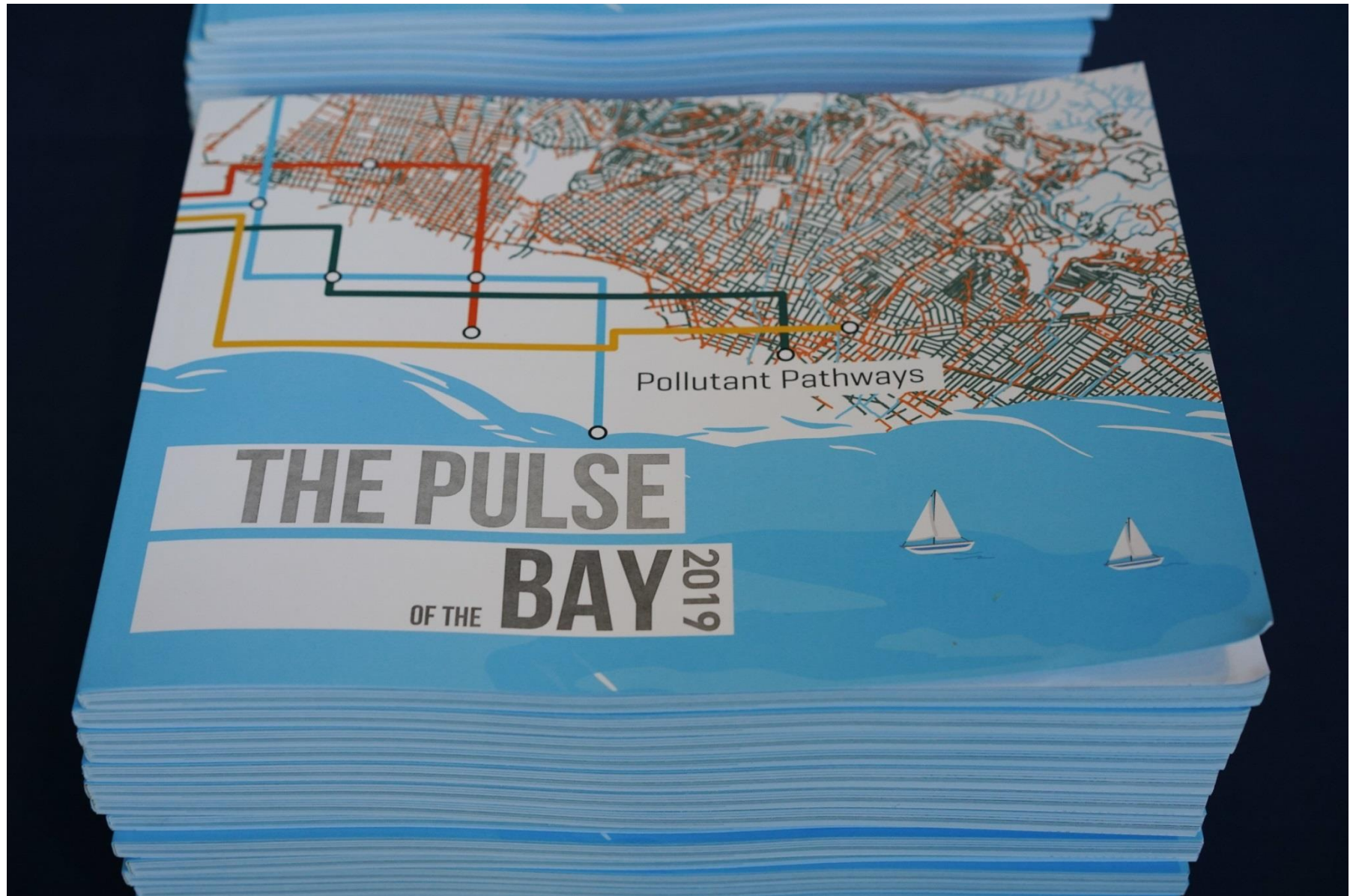
Nutrients monitoring continues



Continuous data in South Bay



Other highlights



Annual Meeting



SAN FRANCISCO
BAY

DATA
EXPLORATION
CHALLENGE

Sponsored By:



RMP

REGIONAL MONITORING
PROGRAM FOR WATER QUALITY
IN SAN FRANCISCO BAY

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PROGRAM FOR WATER QUALITY
IN SAN FRANCISCO BAY

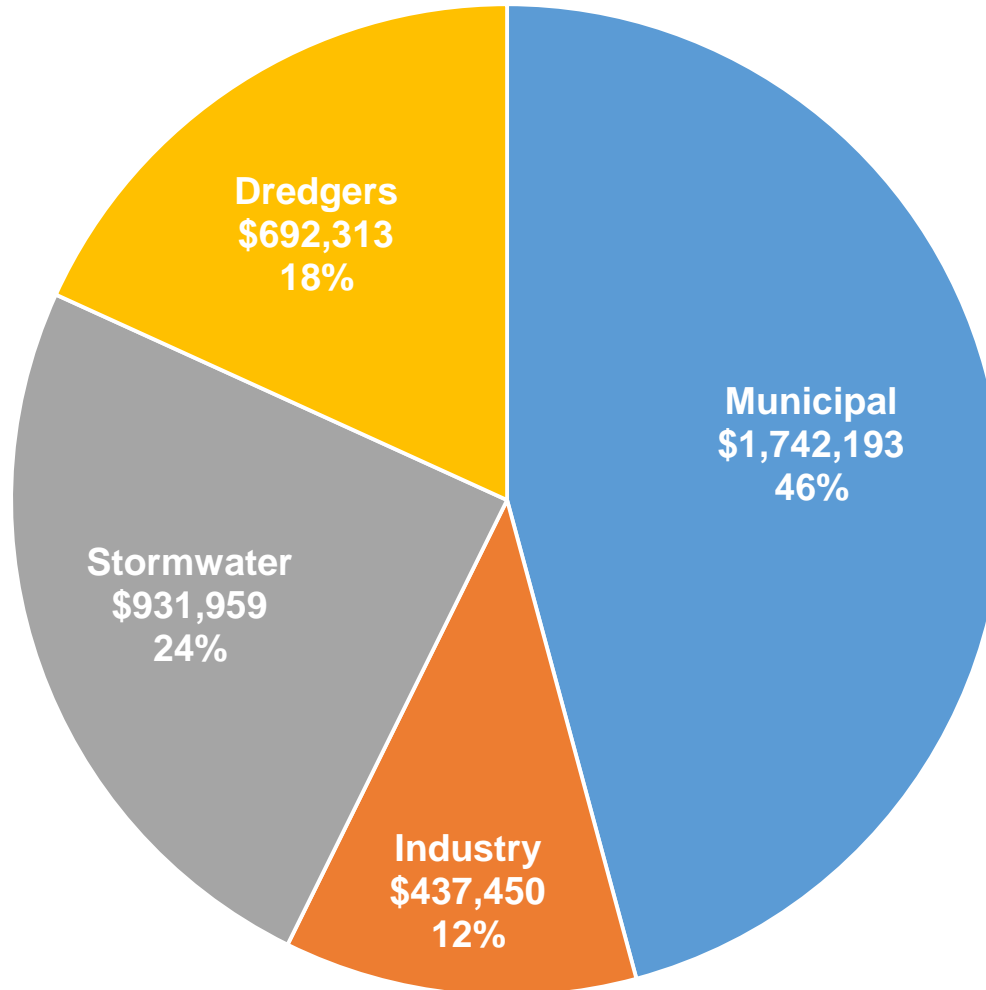
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A photograph of the Golden Gate Bridge in San Francisco, taken from a boat. The bridge is silhouetted against a bright sunset sky. The sun is a large, glowing orb in the upper right, casting a shimmering path of light across the water's surface. In the foreground, the dark, churning water and white spray of the boat's wake are visible. The bridge's steel truss structure and multiple support pillars are clearly defined.

Planning for the Future

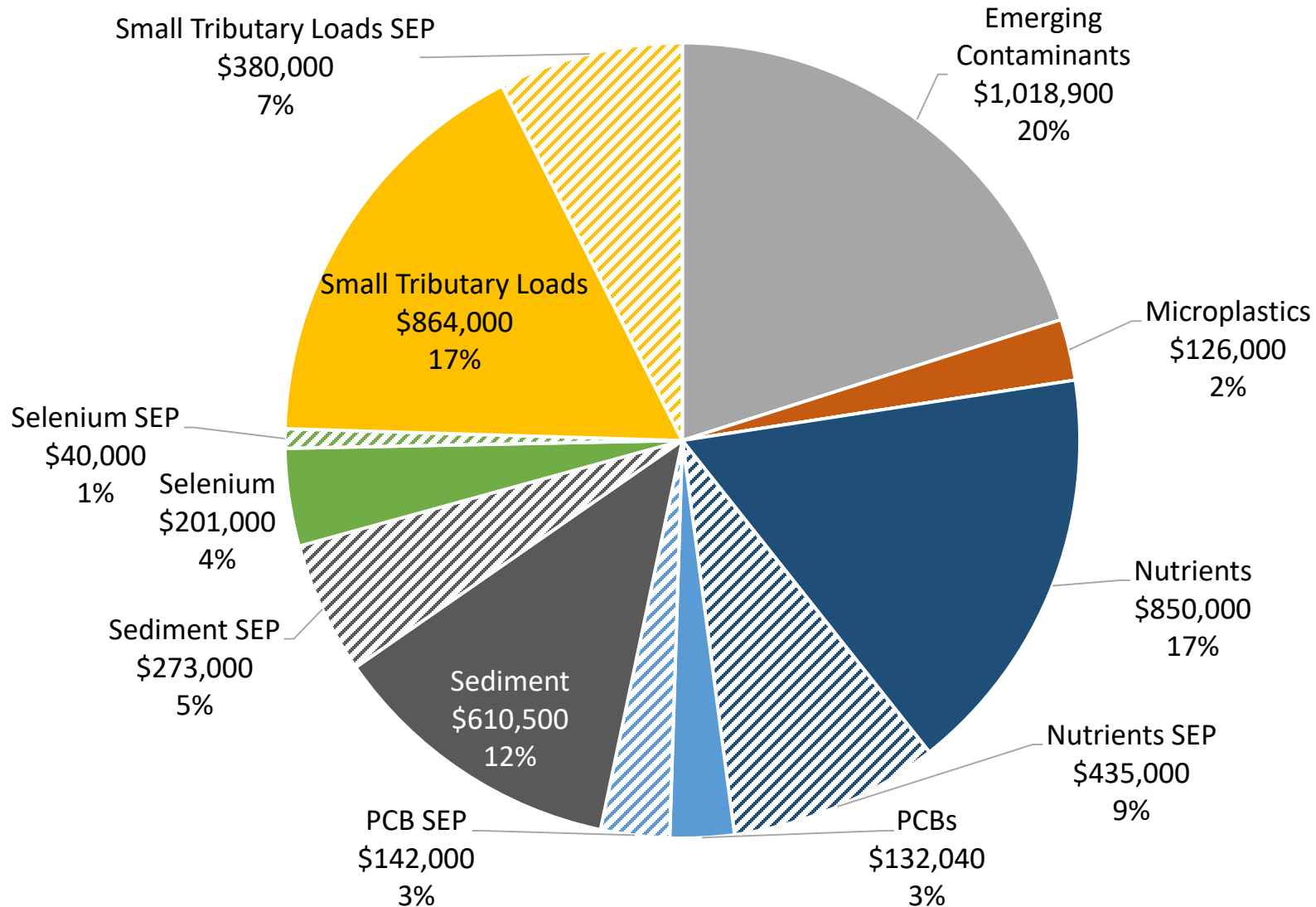
RMP contributions

RMP Fees By Sector: 2020



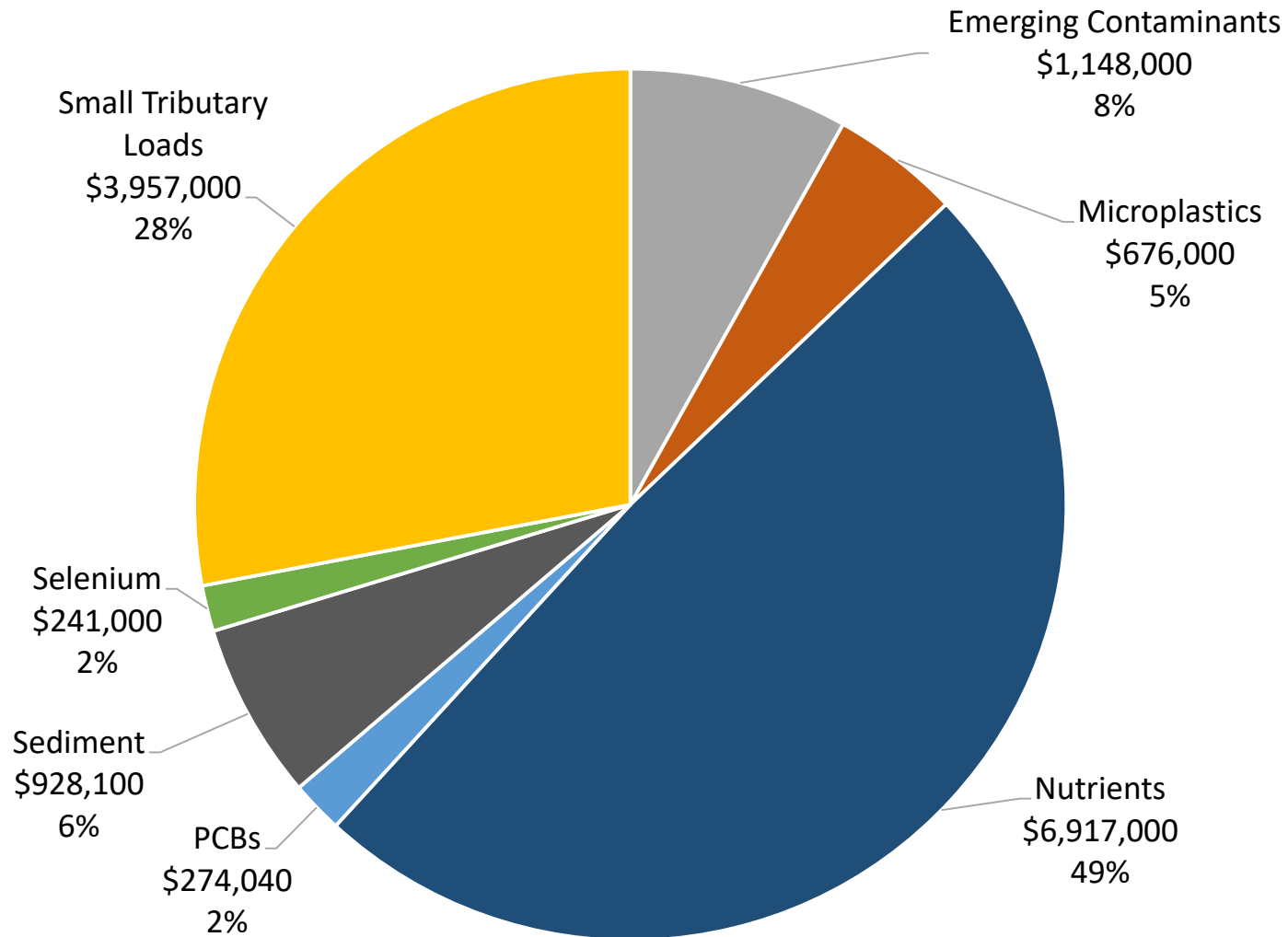
Special Studies funding

RMP Special Studies & SEP Funding in 2018-2020



Total funding w/ external sources

Total Funding from 2018 to 2020



Multiyear Planning Workshop - 23 October

MULTI-YEAR PLAN FOR EMERGING CONTAMINANTS

2021 Priorities:

- Stormwater CECs (year 3)
- Bay water sampling – OPEs, PFAS, Bisphenols
- Toxicology

2022 potential studies:

- Toxicology
- Trash
- Bisphenols (sport fish & bivalves)
- PFAS (harbor seals & air deposition)

Multiyear Planning Workshop - 23 October

MULTI-YEAR PLAN FOR MICROPLASTICS

2021 Priorities:

- Ecological impacts
- Stormwater conceptual model

2022 potential studies:

- Follow-up monitoring in surface and stormwater
- Monitor air deposition
- Characterize microplastic additives

For More Information

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