

Biomonitoring California Program Update and Priorities

Robin Christensen, Sc.M.

California Department of Public Health

Presentation to the Scientific Guidance Panel Meeting

July 25, 2019 – Oakland, CA

Announcements



- CDPH leadership
- Recent staff changes
- U.S. Centers for Disease Control and Prevention cooperative agreement

CARE
Study
LA



CALIFORNIA REGIONAL EXPOSURE (CARE) STUDY

CARE Study

- Eight regions, based on geography and population
- Conduct sampling in approximately one region/year, with 300-500 participants per region
- Biomonitoring for metals and perfluoroalkyl and polyfluoroalkyl substances (PFASs) and collection of exposure data
- Potential to include additional panels, such as 1-nitropyrene or environmental phenols



CARE-LA: Timeline

- **Jan 2019:** returned results for metals, PFASs, and 1-nitropyrene
- **Mar 2019:** returned results for phenols
- **Sep 2019:** data available to public
www.biomonitoring.ca.gov

CARE-LA: Public Meeting

- Findings will be available to the public at the South Coast Air Quality Management District's 5th Annual Environmental Justice Conference
 - September 12, 8:30 am-1:00 pm
 - **Center at Cathedral Plaza**
555 West Temple Street
Los Angeles, CA 90012
 - Free to the public

How representative is CARE-LA?

Race/Ethnicity	% CARE-LA Participants	% LA County (2017)
Asian	16	14
Black	12	8
Hispanic	37	48
White	33	26
Other	2	1

Education (% of Total)	% CARE-LA Participants	LA County (2017)
Some or no college	35	78
College degree or higher	65	31

CARE-LA: Data Analysis

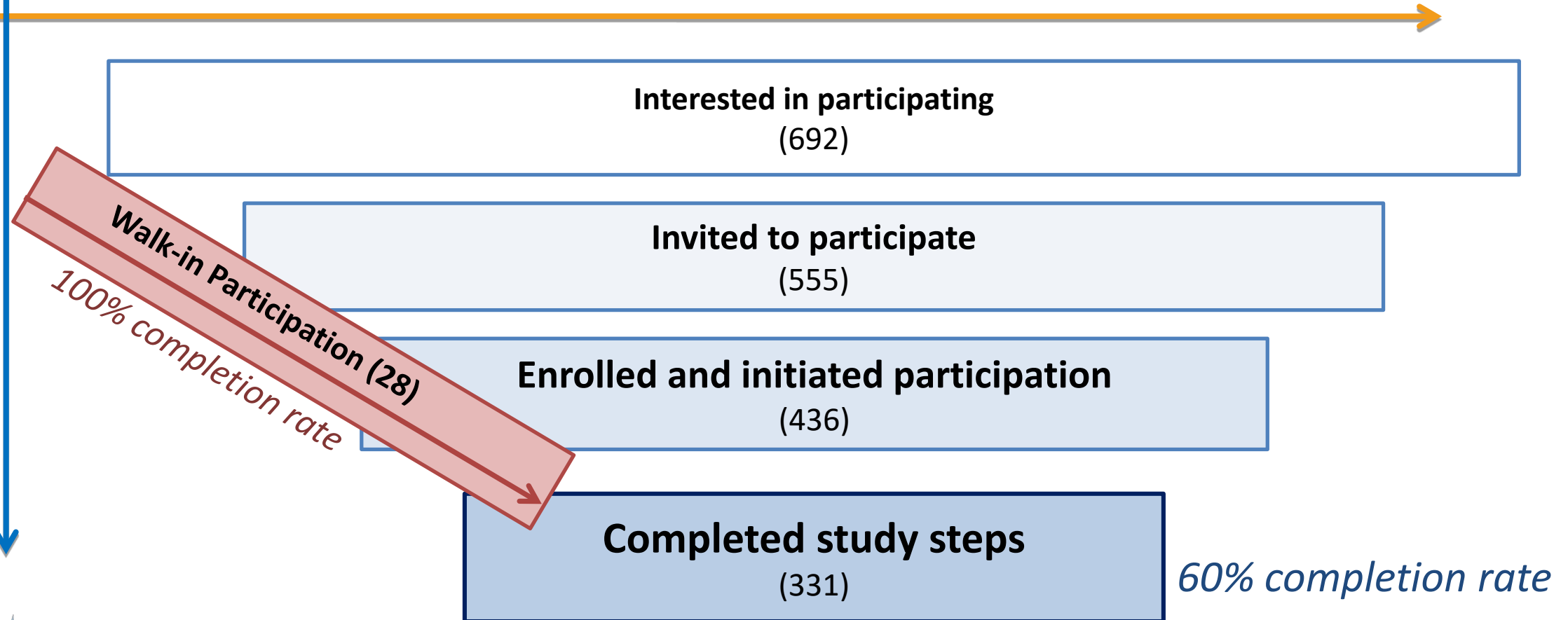
- Surveillance
 - Distribution across demographics
 - Comparison between regions
 - Comparison with NHANES
- Exposure Assessment
 - Based on exposure survey data
 - Identification of important sources of exposure (e.g diet, occupation)

CARE-2: Timeline

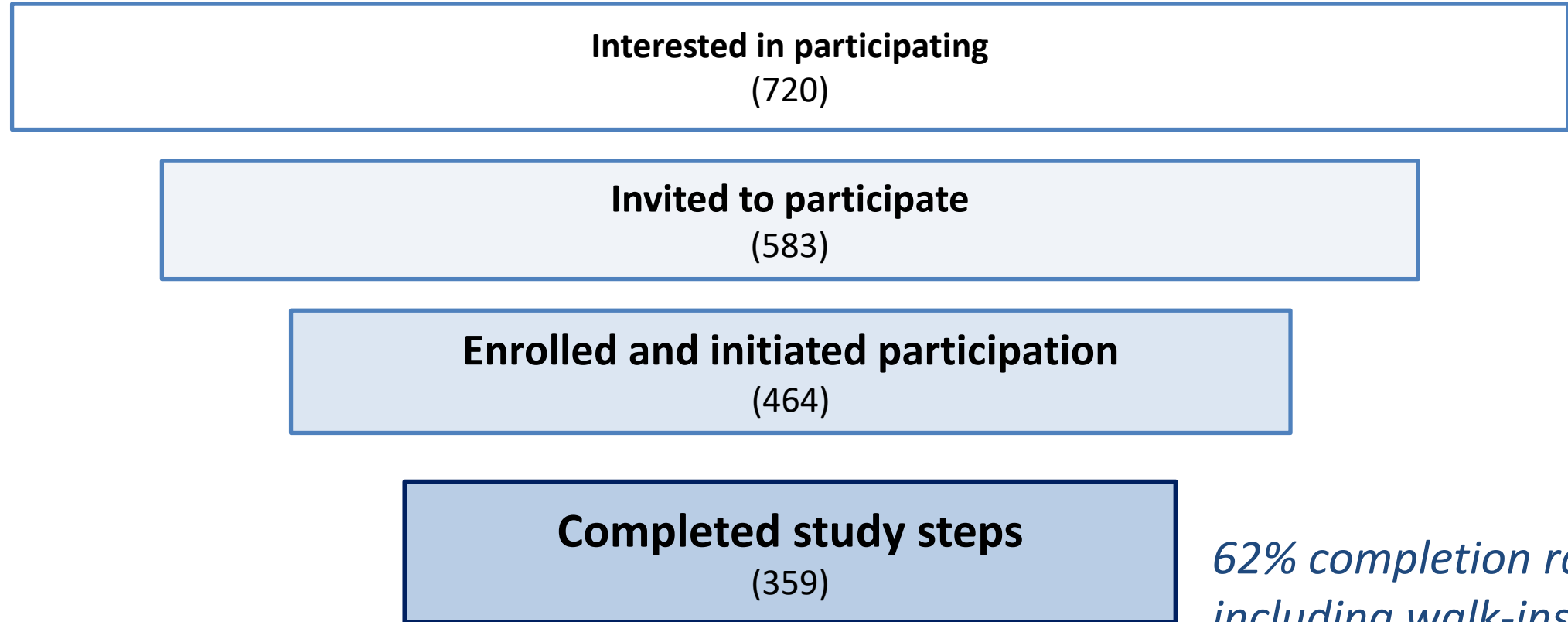
Riverside, San Bernardino, Imperial, Mono, & Inyo counties

- **Feb 2019:** Start of collections
- **Apr 2019:** Fieldwork complete
- **May 2019:** Final shipment of samples arrived at laboratory
- Analyses in progress


CARE-2: Progress Update



CARE-2: Progress Update



How did people find out about the study?



Source	% of Prescreen Population	% of Completed Participants
Postcard	54%	56%
Friend/Family	16%	17%
Craigslist	14%	13%
Local group, health fair, or meeting	12%	10%
Media	4%	5%

How representative is CARE-2?

Race/Ethnicity	% CARE-2 participants	% Region 2 age 18+
Asian	7	7
Black	5	8
Hispanic	46	52
White	38	32
Other	4	6

Education (% of Total)	% CARE-2 participants	% Region 2 age 18+
Some or no college	55	82
College degree or higher	45	18

CARE-3: Timeline

San Diego County and Orange County

- **Summer 2019:** Outreach, site visits, and planning
- **Fall 2019:** IRB amendments and prepare for fieldwork
- **Jan 2020:** Set up in field, invite participants, and train staff
- **Feb 2020:** Sample collection begins



EAST BAY DIESEL EXPOSURE PROJECT (EBDEP)

East Bay Diesel Exposure Project (EBDEP) Update

Assessing exposures to diesel exhaust in child/parent pairs living in the SF East Bay

- UW laboratory analyses of 1-nitropyrene and metabolites completed
- Data processing and statistical analysis underway
- Biomonitoring results return packet approved by State Institutional Review Board
- Community meetings tentatively scheduled for October
- Summary results presentation planned for November SGP

BIOMONITORING
CALIFORNIA

cerch
Center for Environmental
Research & Children's Health

W UNIVERSITY of
WASHINGTON



Center for Healthy Communities
Biomonitoring California



PRIORITIES FOR BIOMONITORING CALIFORNIA

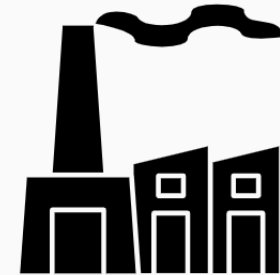
Draft Priorities

1. Improve the California Regional Exposure (CARE) Study, the Program's statewide surveillance project
 - Study cycle timeline
 - Representation by language, race/ethnicity, and socioeconomic status

Region	Year
CARE-LA	2018
CARE-2	2019
CARE-3	2020
CARE-4	TBD...
CARE-5	
CARE-6	
CARE-7	
CARE-8	

Draft Priorities

2. Conduct biomonitoring studies that seek to better understand and mitigate environmental health inequities
 - Environmental exposures vary according to social determinants, such as housing, neighborhoods, education, and industries.



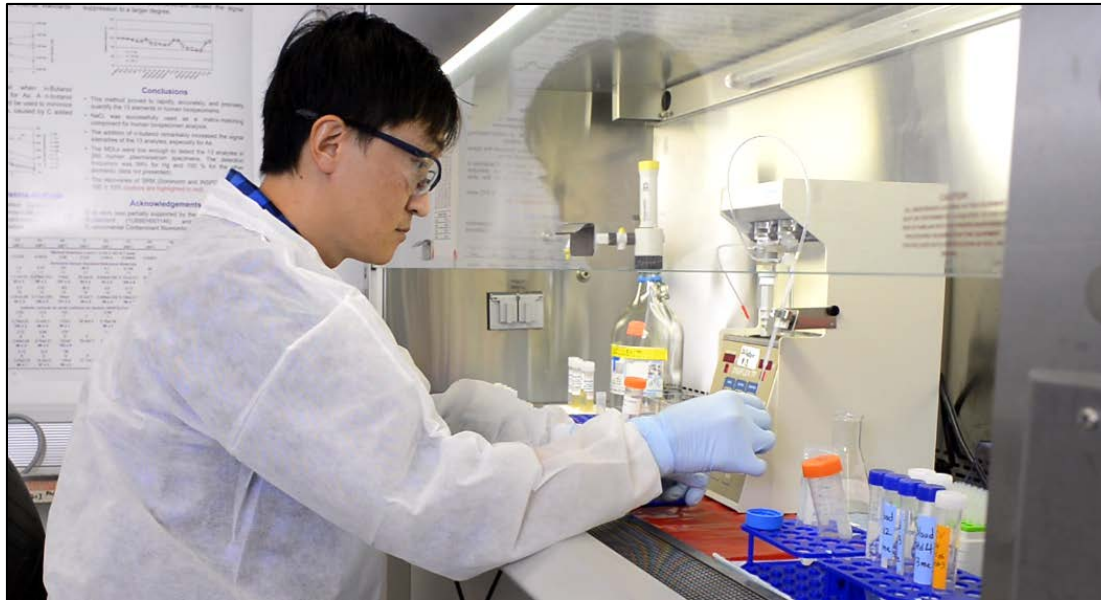
Draft Priorities

3. Work with stakeholders to assist local environmental and public health responses

- Exposures from wildfire
- Heavy metal exposure



Draft Priorities



4. Maintain core laboratory capabilities and develop innovative and efficient laboratory methods to protect the public's health

Draft Priorities

5. Increase public access to biomonitoring findings, data, and reports to inform evidence-based decision making for better health

[Home](#) | [Resources](#) | [Biomonitoring California Reports](#)

Biomonitoring California Reports

The California Environmental Contaminant Biomonitoring Program (CECBP, or Biomonitoring California) was established in 2006 by [Senate Bill 1379](#) (Perata and Ortiz, Chapter 599, Statutes of 2006; codified at Health & Safety Code Sections 105440 et seq.).

Reports to the Legislature

Senate Bill (SB) 1379 requires the Program to submit a report to the Legislature every two years.

- [Third Report to the Legislature](#) (Covers 2012-2013)
- [Second Report to the Legislature](#) (Covers 2010-2011)
- [First Report to the Legislature](#) (Covers 2007-2009)

Data Summary Reports

The legislation also requires that environmental exposure data be made available to the general public "by July 1, 2010, and at least every two years thereafter."

This requirement is currently being met through the [Biomonitoring California results database](#), which includes all data released to the public so far. The database is updated whenever new results become available. Prior to the existence of the online database, data summary reports were prepared to meet this requirement.

- 2014 and ongoing - Refer to [results database](#)
- [2012 Data Summary Reports](#)
- [2010 Data Summary Report](#)

Biomonitoring California Publications

Biomonitoring California scientists publish articles on a variety of topics, including laboratory methods development and findings from our projects and collaborations.

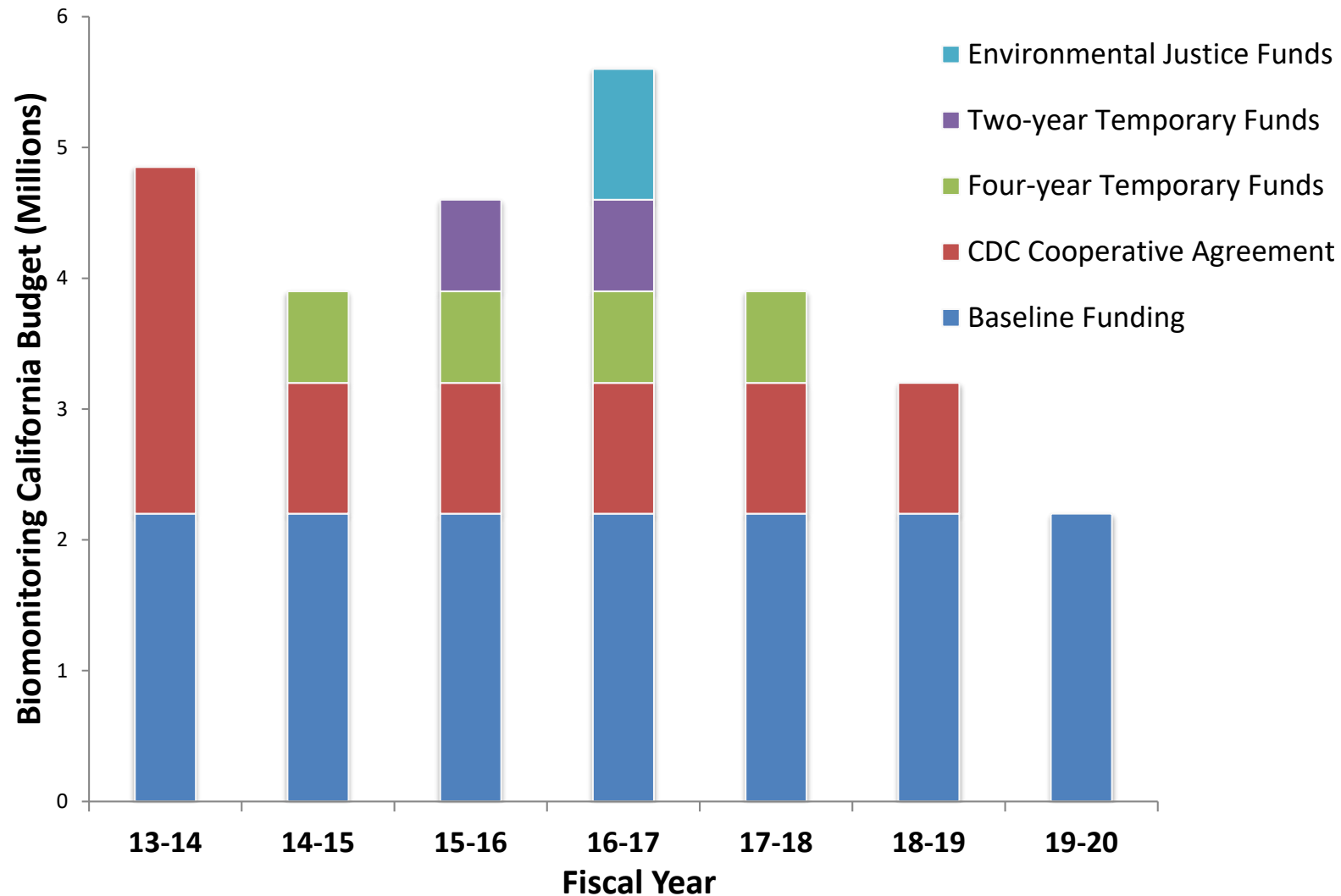


Draft Priorities

6. Expand and improve health education for individual participants, health-care providers, community organizations, and the public
 - Newsletter
 - Web content
 - Fact sheets



Program Budget



*Program budget was supplemented through the Budget Change Proposal (BCP) process as a temporary measure following the 2014 reduction in CDC funding.

Biomonitoring California Staff



Kathleen Attfield
Judy Balmin
Lauren Baehner
Hyoung Gee Baek
Russ Bartlett
Paramjit Behniwal
Reber Brown
Tiffany Chan
Key-Young Choe
Robin Christensen

Sabrina Crispo Smith
Adam D'Amico
Josephine DeGuzman
Joginder Dhaliwal
Jeff Fowles
Qi Gavin
Songmei Gao
Sara Hoover
Shoba Iyer

Lissah Johnson
Duyen Kauffman
Weixin Kuang
Jennifer Mann
June-Soo Park
Julian Perez
Myrto Petreas
Martha Sandy
Jianwen She

Dan Sultana
Jed Waldman
Miaomiao Wang
Shizhong Wang
Yunzhu Wang
Suzanne Wittwer
Nerissa Wu
Greg Yeh
Marley Zalay