



COLLABORATIVE
NETWORK

CLIMATE AND THE COAST

SAN MATEO



San Mateo Marine Protected Area Collaborative

Perspectives on climate change, the coast, and
California's Marine Protected Area Network

*A summary of the greatest concerns, needs, and
priorities from a survey and focus group of residents
from San Mateo County on climate change, the coast,
and marine protected areas (MPAs).*

www.mpacollaborative.org



EXECUTIVE SUMMARY

This report is a summary of 12 survey respondents and 12 focus group attendees in San Mateo County.

Participants discussed climate resiliency and benefits of marine protected areas (MPAs), climate change-related risks to MPAs, and avenues for ensuring MPAs continue to promote a healthy ocean.

Recommendations for decision makers can be found on page 3.

Key Takeaways

The following key takeaways are highlighted in further detail throughout the report.

Respondents believe...

- **marine management is a priority** for addressing climate change and climate action is a high priority for their community

Respondents somewhat believe...

- **climate change is highly impacting MPA effectiveness & coastal ecosystems**, MPAs are helping address climate change impacts on local coastal ecosystems and communities

Some take-aways specific to **San Mateo County** include:

- A need for education to the general public about climate change and its impacts on vulnerable communities that are socioeconomically disadvantaged, and understanding that this is a political issue as well.
- Requesting managed retreat for impacted local infrastructure. **2**
- Increased funding for implementing projects and assessing them.

Recommendations

The following recommendations represent the perspectives of respondents and do not necessarily represent the perspectives of the MPA Collaborative Network, which represents many diverse viewpoints.

Develop...

- **outreach and education materials** (messaging) that clearly and succinctly communicates the intersections of climate change and MPAs
- **positions** within each organization/agency/department dedicated to climate change
- **co-management agreements** for MPAs between Tribes and state governing agencies
- **funding streams** towards projects focused explicitly on climate change and MPAs
- **learning opportunities** for partners and the public to learn about the intersections of MPAs and climate change
- **clear communication** to partners and the public about how **adaptive management** will address climate change

Prioritize...

- **Traditional Ecological Knowledge (TEK)** in management and research practices
- **Protection of blue carbon ecosystems**
- **Research and monitoring** projects focused on MPAs and climate change to inform management decisions

Assess potential positive climate impacts of...

- **allowing for restoration** activities within MPAs
- **expanding protected areas** and **implementing stronger protections**
- additions of **dynamic MPAs** that address changing conditions

Conduct...

- a **blue carbon inventory** for California's MPAs (either as a whole or individually) that estimates how much blue carbon they sequester, as well as how much greenhouse gases are created through the management program
- A **climate change vulnerability assessment** for California's MPAs (either as a whole or individually)

TAKEAWAY #1

Respondents believe climate change is highly impacting MPA effectiveness and coastal ecosystems.

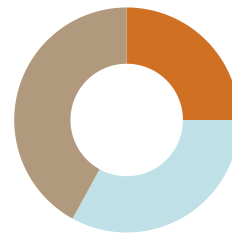
1.1 Indicate how strongly you agree or disagree with the following statement:
Climate change is impacting MPA effectiveness.



"...[the] team at Cal Academy are worried about sunflower sea star (*Pycnopodia helianthoides*). They have not had a great recovery after sea star wasting disease." - Respondent

Strongly agree
42%

Neither agree nor disagree
25%



Somewhat agree
33%

1.2 Rank your **biggest concerns about how climate change impacts** your local coastal ecosystems and marine protected areas (MPAs).

Concerns ranked from highest to lowest

- 1 Increased ocean temperatures and marine heatwaves
- 2 Ocean acidification
- 3 Sea level rise
- 4 Invasive species
- 5 Coastal storms
- 6 Climate driven shift in human impacts
- 7 Wildfire runoff
- 8 Other



"Climate change affects everybody, but affects people in lower socioeconomic positions relatively harder than others. Addressing climate change has spillover effects into political, demographic, and socioeconomic sectors..climate change is a high priority." -Respondent

TAKEAWAY #2

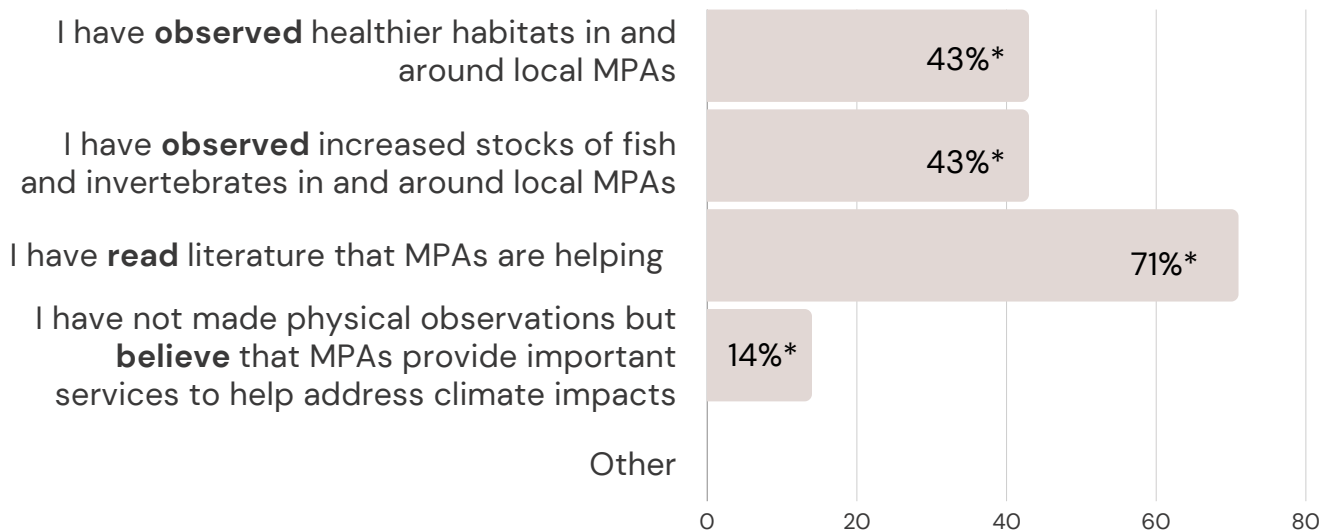
Respondents believe MPAs are helping address climate change impacts on local coastal ecosystems

2. Indicate how strongly you agree or disagree with the following statement: My local MPAs are offsetting/helping address these impacts to my local coastal ecosystems.



“MPA is offering a protective zone for vital ocean ecosystems to thrive thus producing more beneficial outcomes to the ocean.”
- Respondent

Respondents who **somewhat agreed**, that local MPAs are offsetting/helping address impacts to [their] local coastal ecosystems, were asked why:



*Respondents were allowed to choose more than one answer

TAKEAWAY #3

Respondents are concerned about the impacts of climate change on coastal communities

3. Rank your biggest concerns about how the following climate impacts affect the health (ability to function and thrive) of your community or your community's resilience (ability to bounce back).

Concerns ranked from biggest to smallest:

- 1 Warming and changing oceans further accelerating and exacerbating climate change on a larger scale
- 2 Impacts to species used for sustenance
- 3 Impacts to culturally important species
- 4 Impacts to infrastructure
- 5 Loss of aesthetically, culturally, and/or spiritually important sites
- 6 Widening of existing social inequalities
- 7 Loss of economic resources or opportunities
- 8 Diversion of resources that could be used for other community programs/priorities
- 9 Other *

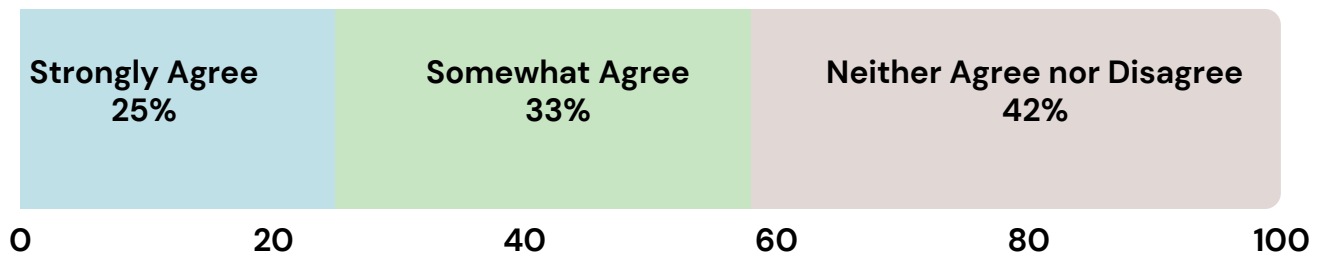
"... providing a preserve for kelp and seagrass species to grow and store the excess carbon in the atmosphere... [would help with]...mitigating the effects of human-driven climate change." - Respondent

"There are so many different land managers in San Mateo County with a lot of different management plans and approaches to climate changes mitigation...It's so tough to navigate. How can collaboration happen between all these agencies from the government?" - Respondent

TAKEAWAY #4

Majority of respondents believe MPAs are helping address climate impacts on communities

4. Indicate how strongly you agree or disagree with the following statement:
My local MPAs are offsetting/helping address climate impacts that affect the health (ability to function and thrive) of my community or my community's resilience (ability to bounce back)



Respondents that **agreed** were asked to explain their answer. A thematic analysis of responses revealed the most frequently mentioned topics:

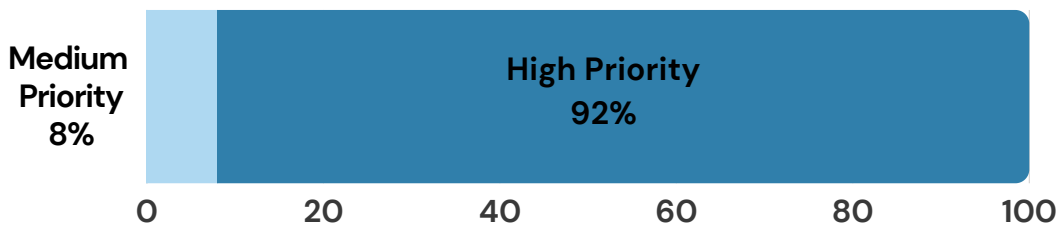
- The ocean is healthier near MPAs
- Need increased protection of marine and coastal resources to buffer climate change...spillover.
- Biodiversity increases resilience.
- MPA's...
 - encourage people to be outside, learn about nature and strengthen social bonds...the first step to increasing awareness about environmental climate impacts.
 - [provide] experimental "ground zero" to find solutions to mitigate climate change impacts on a larger scale.
 - have the ability to act as a buffer.
 - allow ecosystems to thrive without human impacts.
 - serve as a space for ocean ecosystems to heal following extreme climate events.
 - [restore] fish/wildlife populations.

Respondents that neither agreed nor disagreed were also given a chance to explain their answer. No responses were submitted.

TAKEAWAY #5

Respondents believe marine management is a high priority for addressing climate change

5.1 How would you **prioritize marine management alongside other climate change solutions** (such as renewable energy and carbon sequestration)?



5.2 Rank what you believe are the **most important priorities for adaptively managing MPAs** specifically in the face of climate change.

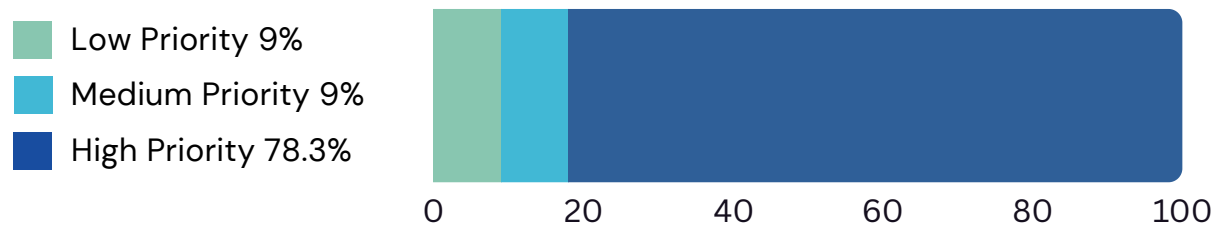
Priorities ranked from most to least important

- 1 Protection of blue carbon ecosystems (kelp, seagrasses)
- 2 Research & monitoring projects to collect more data to inform decisions
- 3 Expansion of protected areas and stronger protections
- 4 Allow for restoration activities within MPAs
- 5 Integration of Traditional Ecological Knowledge (TEK) into MPA management and research
- 6 Consider addition of dynamic MPAs that address conditions impacting California currents
- 7 Co-management of MPAs between tribes and state governing agencies
- 8 Take necessary management action to allow for landward migration of submerged aquatic habitats

TAKEAWAY #6

Respondents overwhelmingly believe climate action is a high priority for their community

6. How would you prioritize climate change alongside other drivers of political, demographic, and/or socioeconomic change impacting your community?



Respondents had the option to mention the **most important general climate change solution along the coast** (i.e. offshore wind, managed retreat, return of coastal land to tribal management, etc.)?

Tribal Management

Education

Traditional Ecological Knowledge

Managed Retreat

Enforcement

Ecosystem Preservation

Manage Human Behavior

Renewable Energy

Restoration

Limit Human Use

Changed Attitudes

Nature-Based Solutions

Education of government officials

Training Guides

Local Agency Engagement

Societal Transformation

Management

TAKEAWAY #7

Respondents' Highest Needs

7. What are the **needs of your organization/agency/tribe/business/community** in relation to MPAs and climate change?



*Respondents were allowed to choose more than one answer

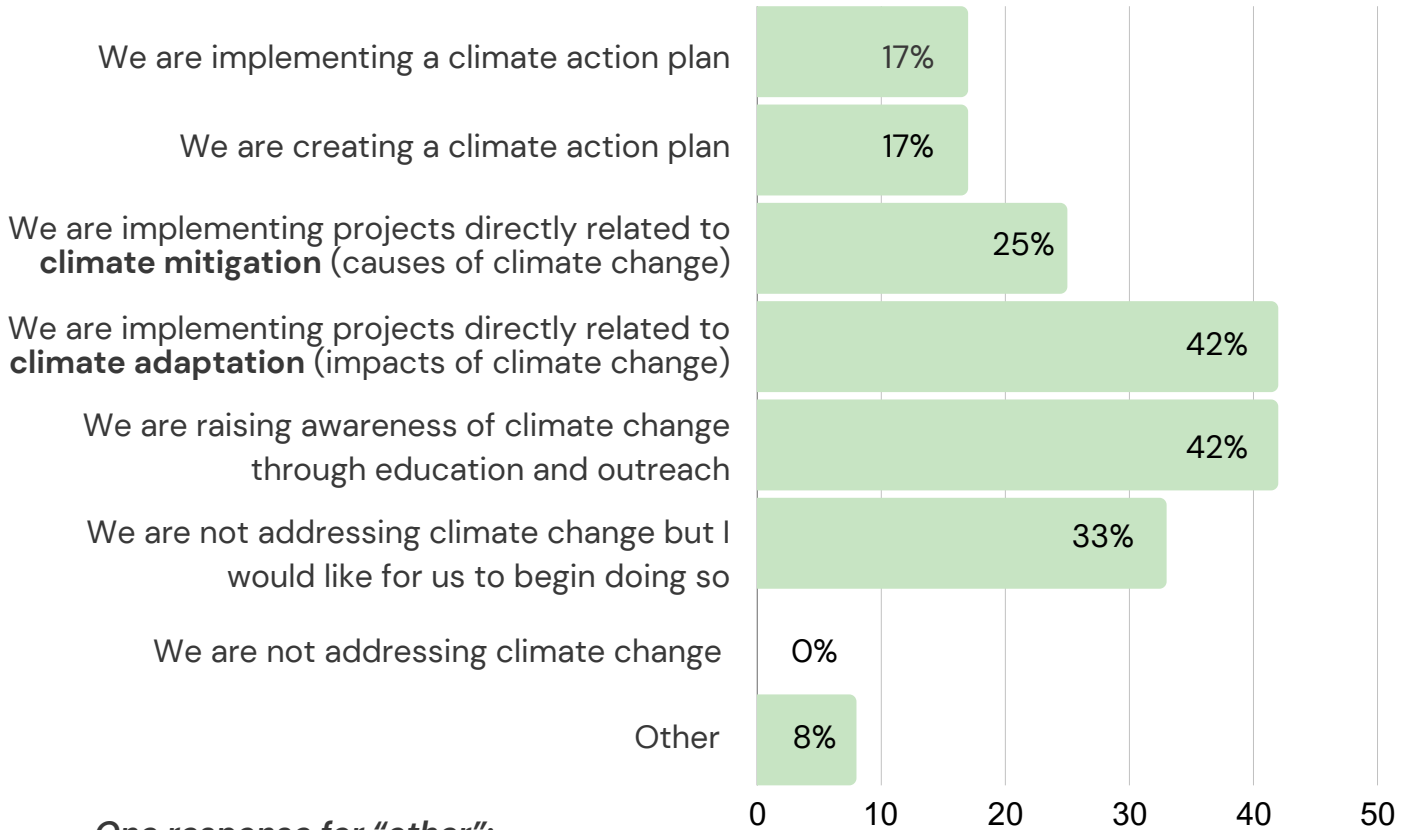
Respondents expressed a need for funding to support their work, specifically:

- Funding to implement existing plans.
- Grantors to support implementation of plans AND grantees assessing the effectiveness management actions, i.e., monitoring.
- More MPA law enforcement staff.
- Land-use related enforcement, i.e., beach trash, off-leash dogs, discarded fishing equipment, etc.
- Mitigate runoff from river and streams.

APPENDIX A

COMMUNITY WORK

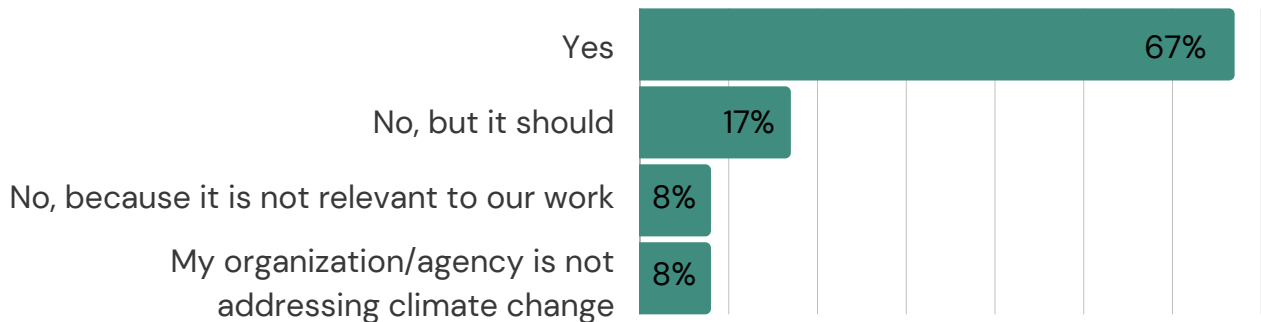
How is your organization/agency/tribe/business/community addressing climate change?



One response for "other":

"Sierra Club has a 3 chapter Bay Alive program to promote the use of Nature Based Solutions to SLR around the SF Bay. 30x30 supports this campaign."

Do the climate actions of your organization/agency/tribe/business/community incorporate or consider MPAs?*



*Respondents were allowed to choose more than one answer

APPENDIX A

COMMUNITY WORK AND RESOURCES

The following information/resources were provided by participants in regards to the work that is already occurring within San Mateo County, and relevant community resources.

What is currently being done to address climate change:

- Monitoring species coming in after the fire ([Big Basin](#))
- Bringing back cultural burning- Indigenous land stewardship ([Amah Mutsen](#))
- The [Resource Conservation District \(RCD\)](#) has been working really hard about the SMC contaminated status.
- ACCESS program collaboration sea surveys (oceanographic and biological) and analyzing seasonal variations in temp, biology, etc.
- California Ocean Observing Systems Data Portals here, which includes a new MPA dashboard - <https://data.caloos.org/>
- LiMPETS is Long Term Monitoring and Experiential Training for Students, it is a community science program that empowers students to collect sandy beach and rocky intertidal data. We have sites from Los Angeles to Sonoma Coast.
- No climate change curriculum for LiMPETS but they can bring it into programing informally.
- Farallones Climate Programs:
 - <https://farallones.org/climate/>
 - Ocean Climate Program:
- NOAA Sanctuaries:
 - <https://sanctuaries.noaa.gov/education/teachers/>
- Ocean Conservancy Global Ghost Gear INitiative
- The GGGI is working with the greater OC trash free seas department and government relations department to establish a baseline for including abandoned lost and discarded fishing gear in the Internationally Legally Binding Agreement (ILBI) being forged at the Intergovernmental Negotiating Committee's upcoming third meeting to discuss global plastics pollution (INC3 in Nairobi).
- GGGI is working with international corporate partners to establish a playbook/best practice framework for managing fishing gear from the beginning of life, to end of life solutions for recycling gear.

Resources

For resources on Climate Change and MPAs, as well as resources specific to your region, [visit our resources document \(click on this link or scan QR code\)](#).

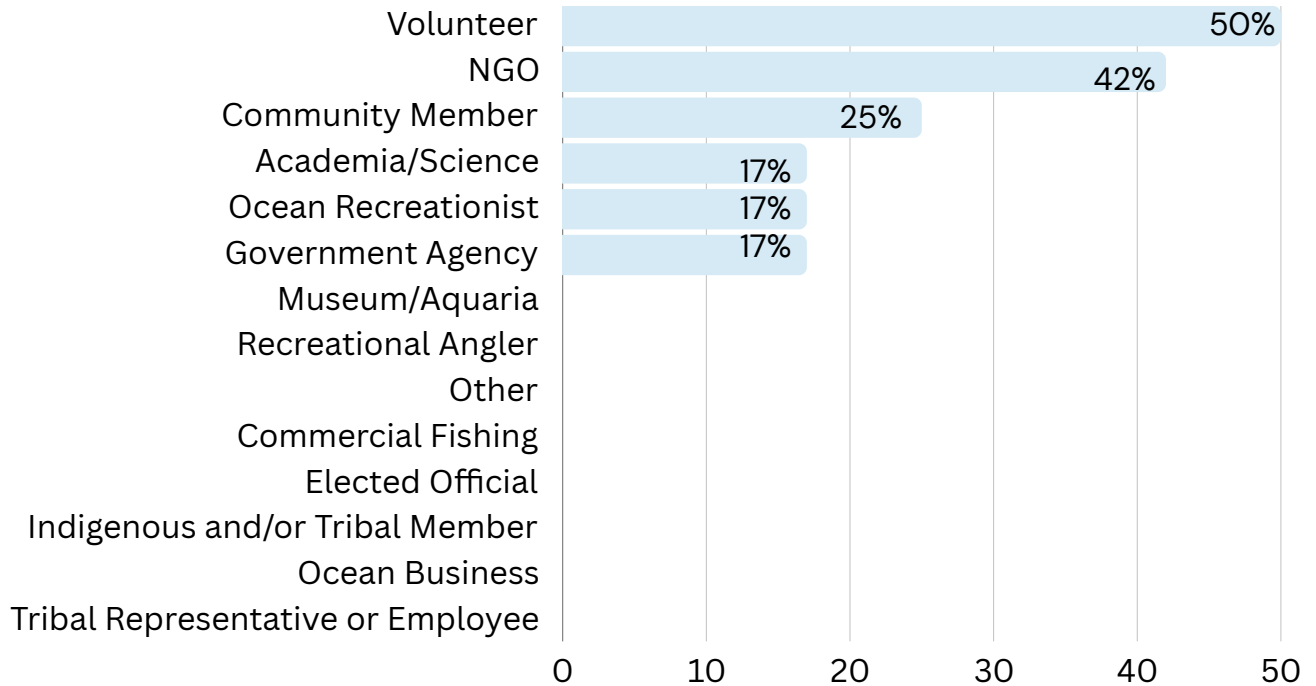
Resources



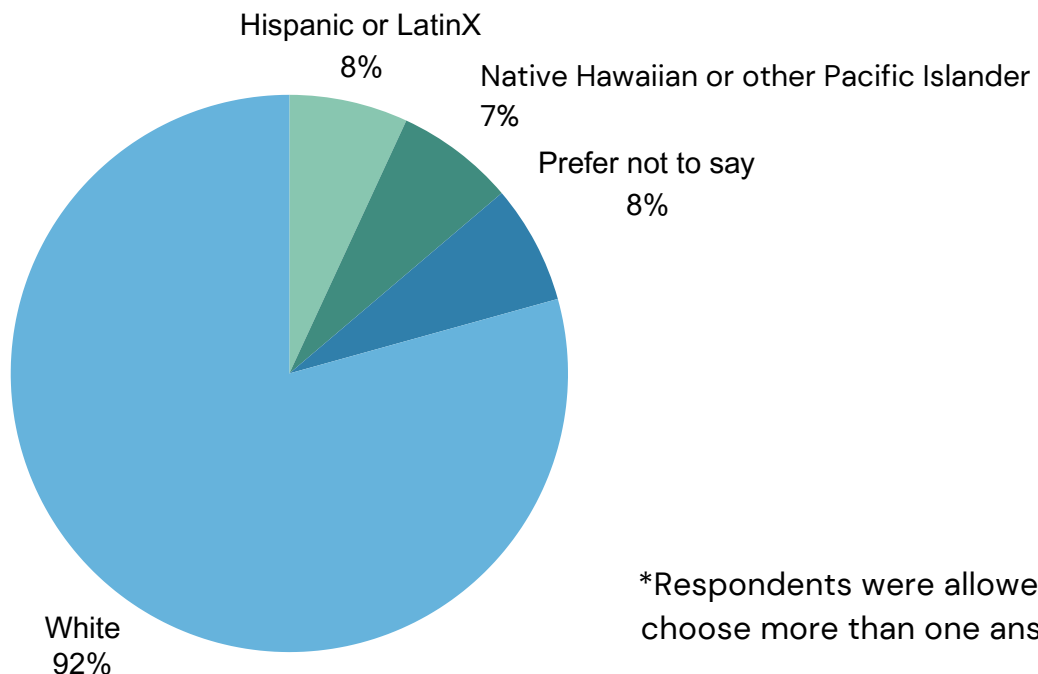
APPENDIX B

DEMOGRAPHICS OF SURVEY RESPONDENTS

SECTOR AFFILIATION*



WHICH RACE, ETHNICITY AND/OR ORIGIN CATEGORIES DESCRIBE YOU?*



*Respondents were allowed to choose more than one answer

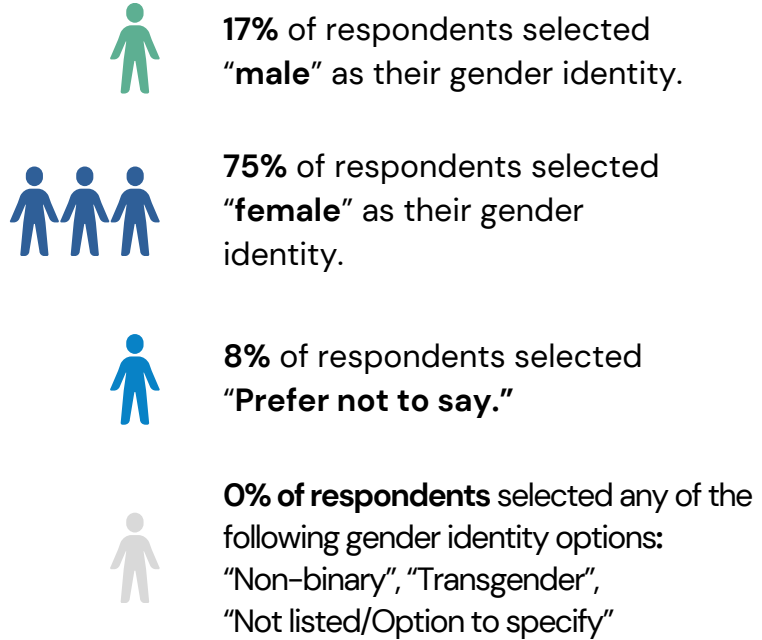
APPENDIX B

AGE GROUPS

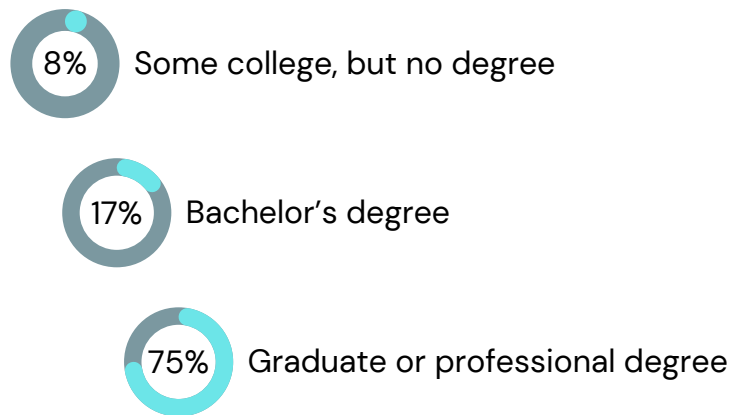


0% of respondents selected any of the following age groups: "Under 18," "18-24," "35-44," and "over 85".

GENDER IDENTITY



HIGHEST LEVEL OF EDUCATION

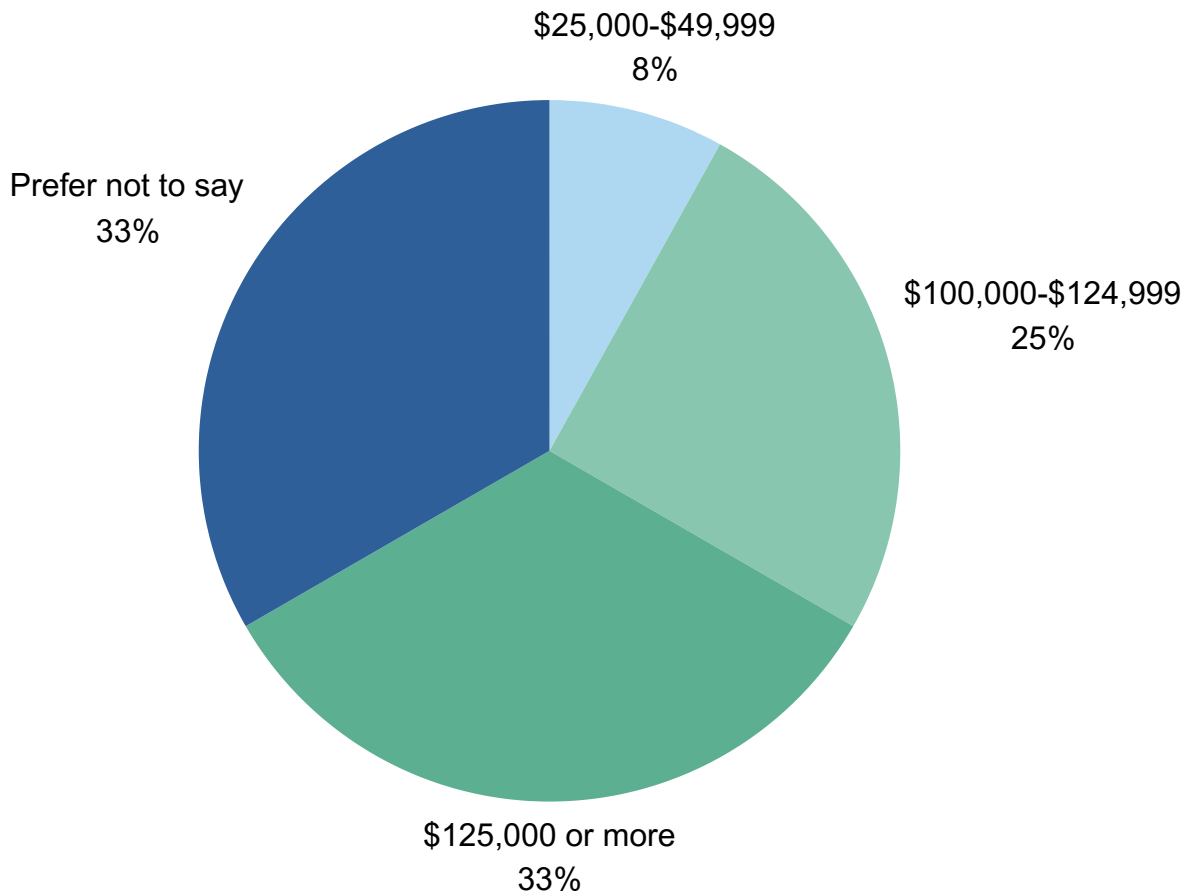


0% of respondents selected any of the following: "some high school or less"; "high school graduate or GED," or "Associates or technical degree."

APPENDIX B

DEMOGRAPHICS OF SURVEY RESPONDENTS

ANNUAL HOUSEHOLD INCOME (BEFORE TAXES) IN 2022



Egg (Devil's Slide) Rock to Devil's Slide Special Closure



ABOUT THE MPA COLLABORATIVE NETWORK

The MPA Collaborative Network (CN) ensures that MPAs are effective by providing a robust structure for civic engagement in MPA management. The CN's 14 county-based volunteer groups (collaboratives) bring together over 1,700 members representing hundreds of distinct and diverse Californian organizations, agencies, Tribes, individuals, interests, and backgrounds for a more comprehensive and localized approach to resource management.

Learn more as well as join your collaborative:

www.mpacollaborative.org

For more information on MPAs, visit

<https://wildlife.ca.gov/Conservation/Marine/MPAs>

Abbreviations used throughout the reports.

SMR= State Marine Reserve. **SMCA** = State Marine Conservation Area.

SMRMA= State Marine Recreational Management Area. **SMP** = State Marine Park

Photo Credit (Unless otherwise stated): Calla Allison,
Founder and Director, MPA Collaborative Network