



COLLABORATIVE
NETWORK

CLIMATE AND THE COAST MONTEREY



Monterey 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 Monterey County on climate change, the coast,
and marine protected areas (MPAs).*

www.mpacollaborative.org



EXECUTIVE SUMMARY

This report is a summary of 16 survey respondents and 13 focus group attendees in Monterey 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...

- **climate change is negatively impacting MPA effectiveness**, coastal ecosystems, and coastal communities
- **MPAs are helping address climate change** impacts on local coastal ecosystems and communities
- **marine management is a priority** for addressing climate change
- **climate action is a high priority** for their community

Some take-aways **specific to Monterey County** include:

- requests for managed retreat.
- Concerns over the impacts of climate change on eco-tourism, tourism, recreation, commercial fishing, and local economy.
- Concerns over climate change impacts on local infrastructure as seen with flooding.

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)

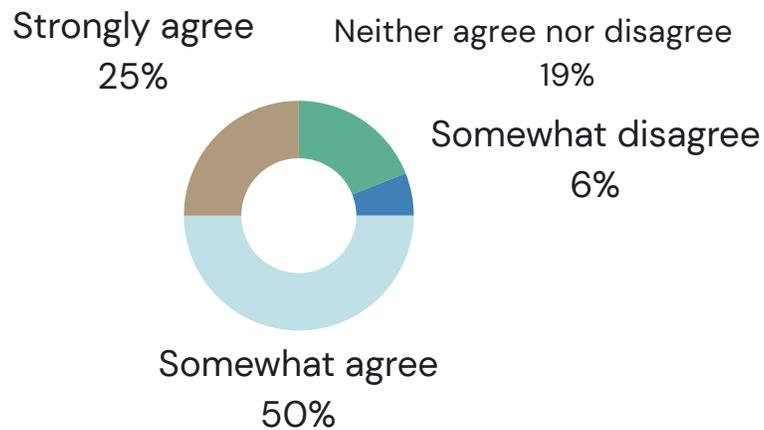


Big Creek State Marine Reserve/
State Marine Conservation Area

TAKEAWAY #1

Respondents believe climate change is 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.



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 Coastal storms
- 4 Sea level rise
- 5 Climate driven shift in human impacts
- 6 Invasive species
- 7 Wildfire runoff
- 8 Other *



"...socioeconomic drivers are tightly connected to environmental issues. Any work done to make the world a more equitable place and attempt [to] bring people up to an economic level where they have the luxury of worrying about the future is a positive action."

- Respondent

*Concern mentioned in the "other" section included: **Deoxygenation**

TAKEAWAY #2

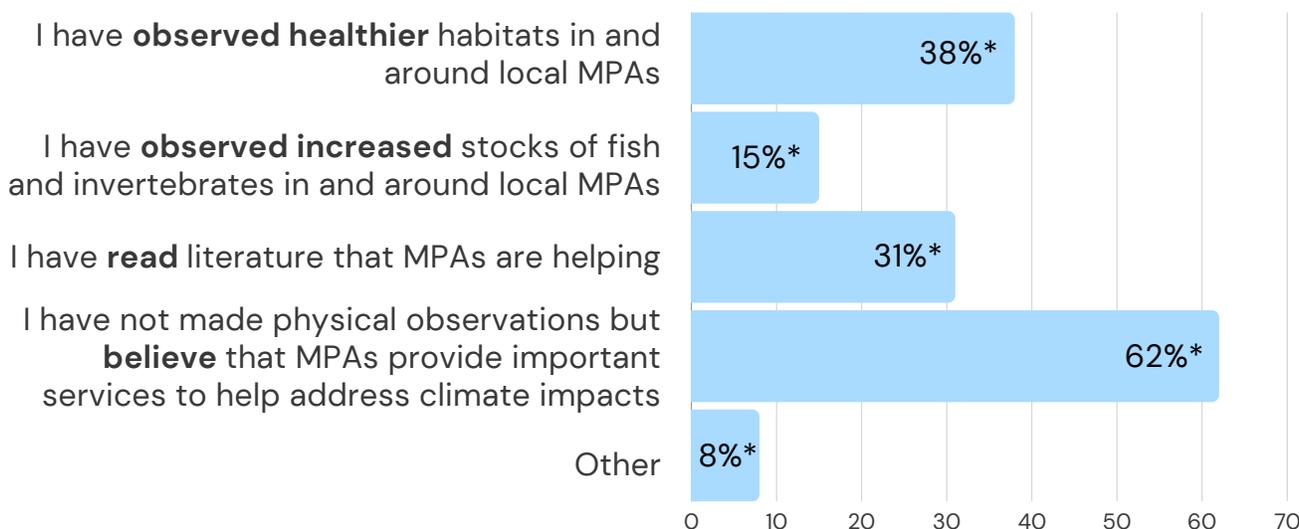
Respondents believe MPAs are helping address climate change impacts on local coastal ecosystems

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.**



“[I] have not observed directly but have heard from the fishing community about increased bounty in and around our local MPA.”
 – 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 infrastructure
- 3 Widening of existing social inequalities
- 4 Impacts to species used for sustenance
- 5 Loss of aesthetically, culturally, and/or spiritually important sites
- 6 Impacts to culturally important species
- 7 Loss of economic resources or opportunities
- 8 Reduction of recreational opportunities
- 9 Diversion of resources that could be used for other community programs/priorities

“The Monterey community is built on the existence of a healthy and thriving bay. When we look at the long-term viability of the communities on the Monterey Peninsula, they are directly tied to the health of the bay... primarily tourism, then extractive industries.” – Respondent



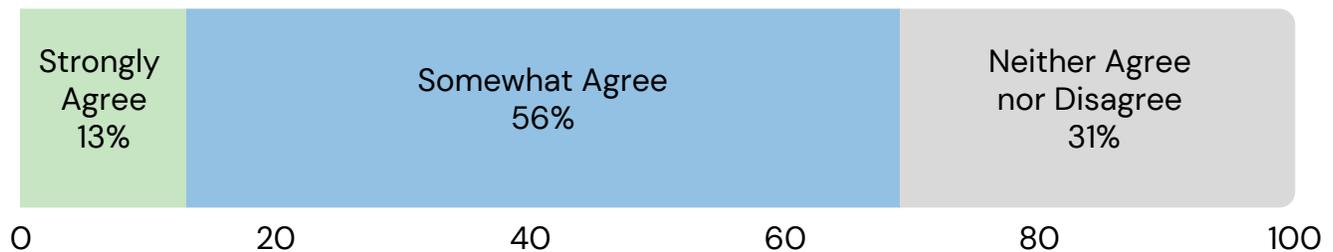
“MPAs positively affect the marine mammals, fish, invertebrates, kelp forests, inner-tidal zones etc, which expands out to the non-MPA areas, so that those who use fish and kelp for food can benefit from the forethought of those who have helped to create MPAs.” – Respondent



TAKEAWAY #4

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:

- MPAs are a source of tourism.
- By protecting areas for recreation and food sustenance.
- By protecting the diversity of habitats and species, MPAs are more resilient.
- General Community Awareness.
- Healthy marine ecosystems sequester carbon.
- MPA's allow ecosystems to thrive without human impacts.
- MPAs are allowing whole ecosystems to function and support each other.
- MPAs have the ability to act as a buffer.
- MPAs protect species that are culturally important, economically important, and used for sustenance.
- Protecting the environment protects ecosystem services.
- Spillover.
- The ocean is healthier near MPAs.

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



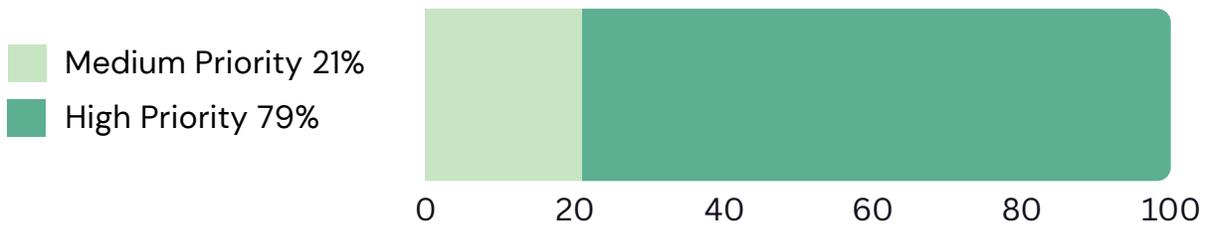
5.2 Rank what you believe are the **most important priorities for adaptively managing MPAs** specifically in the face of climate change.

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

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.)?



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:

- **Unrestricted** funding...
 - and training for staff or volunteers to be able to do outreach and help shift public opinion and take action.
 - for adaptations.
 - to reroute trails and plan for climate change impacts.
 - for monitoring programs
 - baseline studies

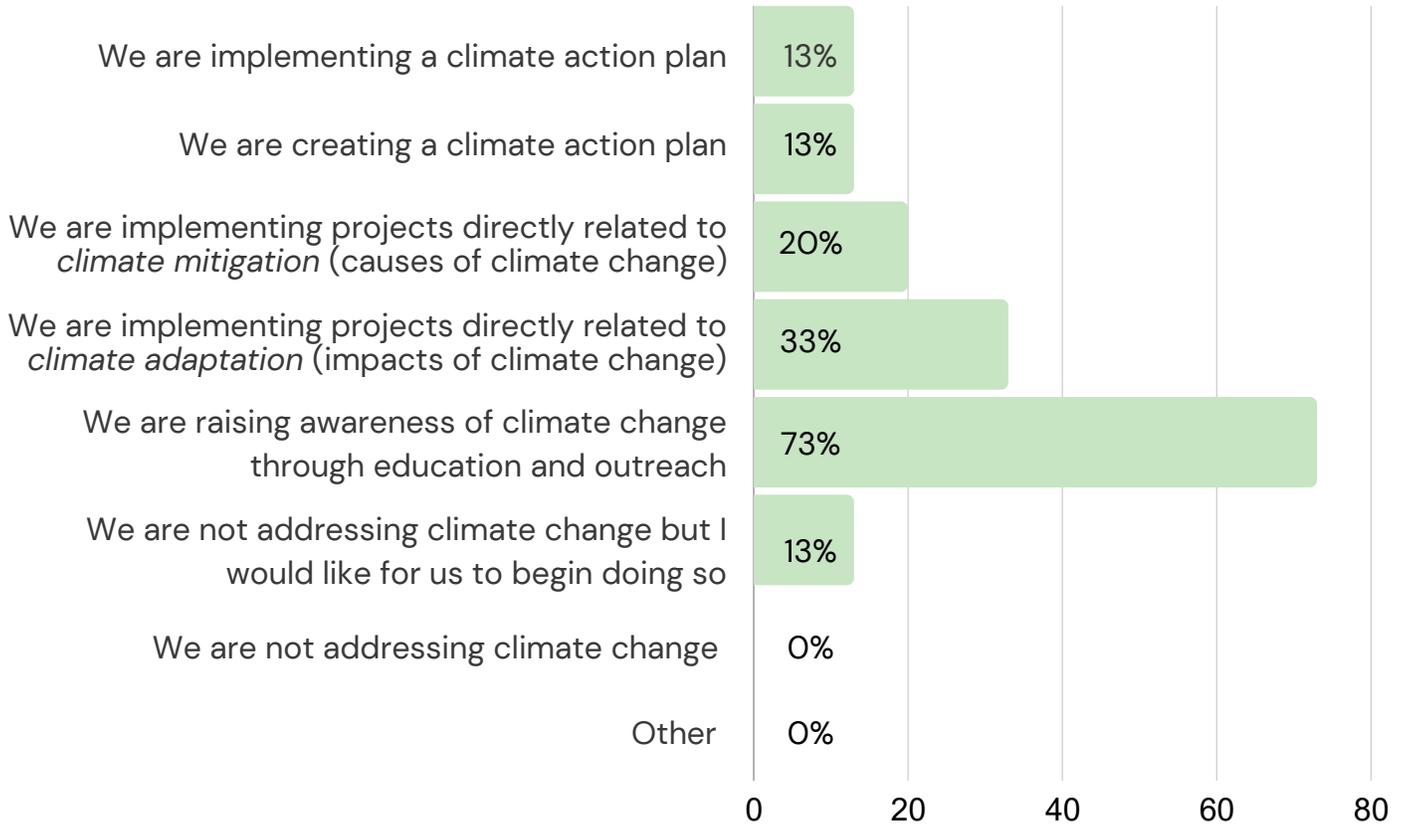
“I’m just so glad to see this focus on MPAs + climate change. Stoked to follow along and learn from these initiatives!” – Respondent

“Climate change is, as they say, a risk multiplier – it intensifies every other driver of political and social risk, and exacerbates inequities. e.g. in the Monterey region, we saw the devastating impacts of floods in Pajaro Valley.” – Respondent

APPENDIX A

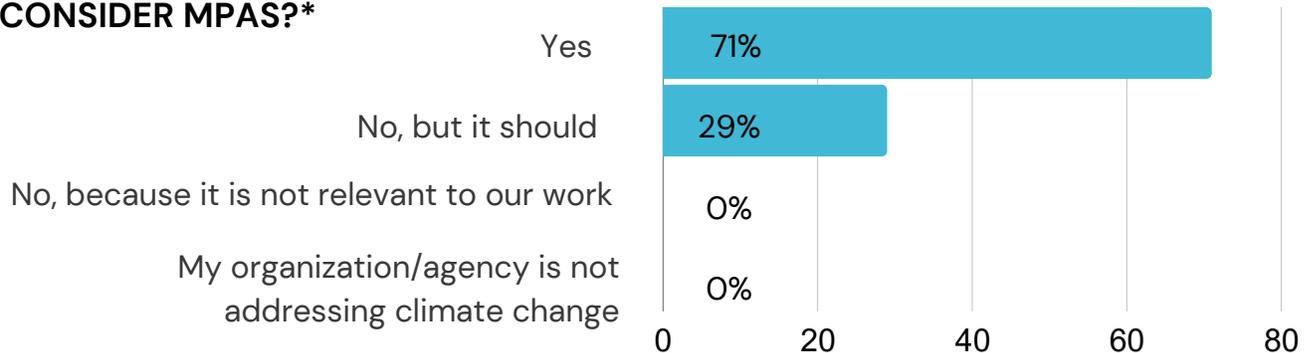
COMMUNITY WORK

HOW IS YOUR ORGANIZATION/AGENCY/TRIBE/BUSINESS/COMMUNITY ADDRESSING CLIMATE CHANGE?*



No responses were submitted for "other."

DO THE CLIMATE ACTIONS OF YOUR ORGANIZATION/AGENCY/TRIBE/BUSINESS/COMMUNITY INCORPORATE OR CONSIDER MPAS?*



**percents do not add up to 100 because 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 Monterey County, and relevant community resources.

- Elkhorn Slough is actively restoring marshland.
- State Parks Asilomar and Point Lobos moving trails inland
 - Sea Lion Point at Point Lobos closed to access due to consistent washout.
 - Dune restoration at Asilomar. Road is right there and can be moved back into dunes that have already been restored
- State Parks education—talking about how climate change is impacting coastline.
- UC Climate Stewards program
 - Being adapted for state parks.
 - From the National Network for Ocean and Climate Change Interpretation (NNOCCI).
- Climate Reality Project
 - educating people about the science behind climate change. Less doom and gloom, more focused on hope and what we can do.
 - Local Monterey Chapter: local chapter: chapter@climaterealitymb.org
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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

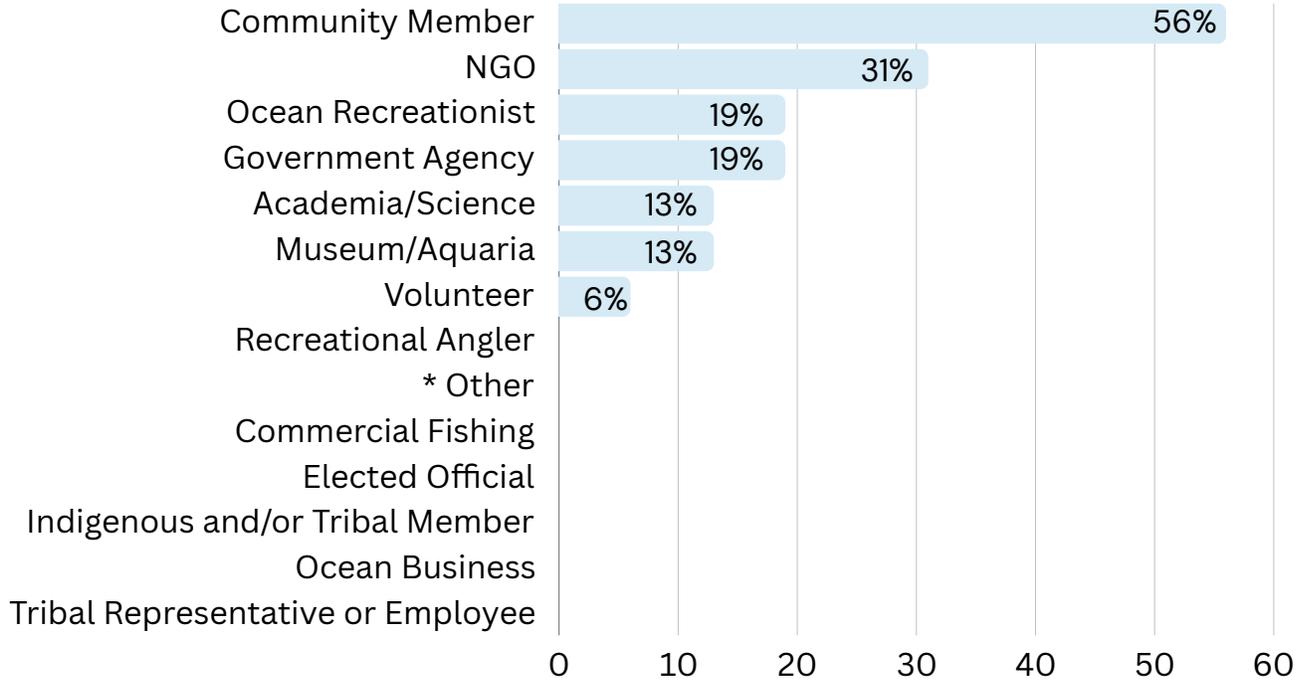


 Elkhorn Slough SMR/SMCA

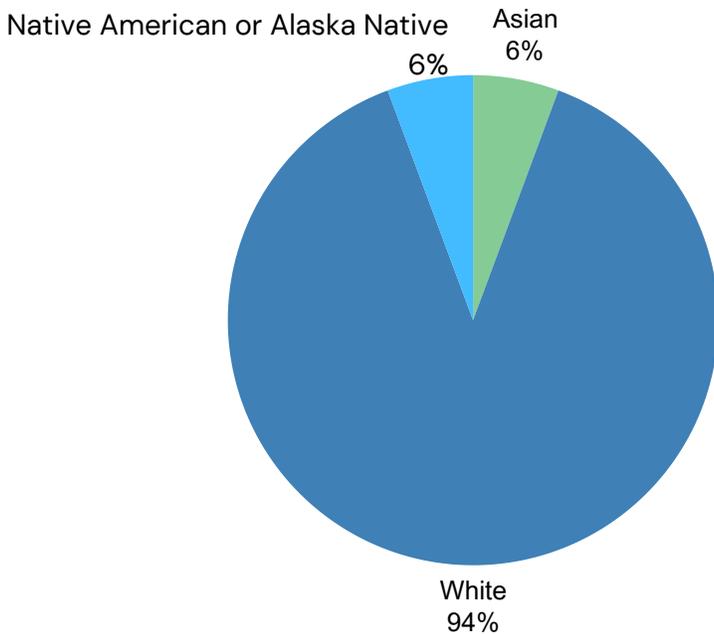
APPENDIX B

DEMOGRAPHICS OF SURVEY RESPONDENTS

SECTOR AFFILIATION



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

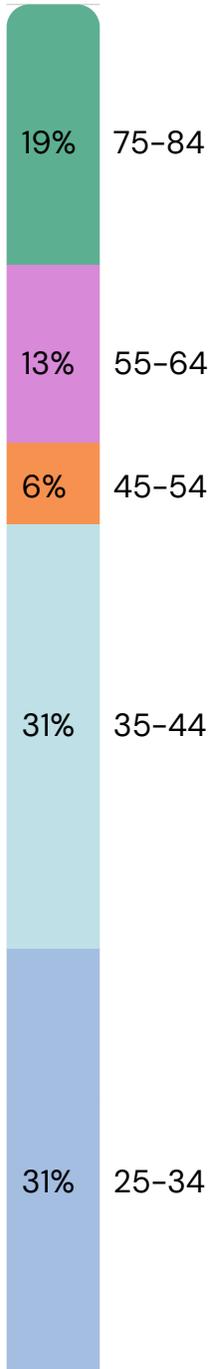


*Respondents were allowed to choose more than one answer

APPENDIX B

DEMOGRAPHICS OF SURVEY RESPONDENTS

AGE GROUPS



0% of respondents selected any of the following age groups: "Under 18," "18-24," "65-74," and "over 85".

GENDER IDENTITY



31% of respondents selected "male" as their gender identity.



63% of respondents selected "female" as their gender identity.



6% of respondents selected "Prefer not to say."



0% of respondents selected any of the following gender identity options: "Non-binary", "Transgender", "Not listed/Option to specify"

HIGHEST LEVEL OF EDUCATION



Bachelor's degree



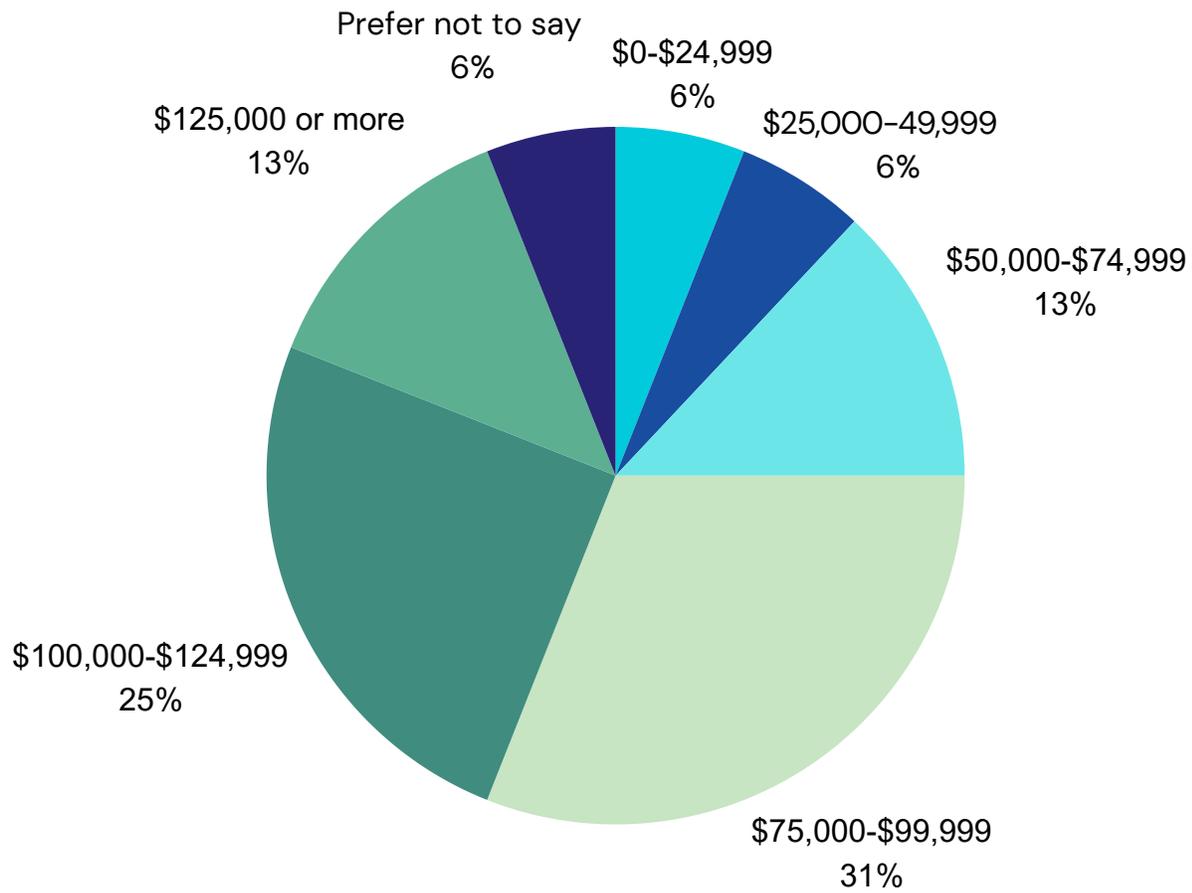
Graduate or professional degree

0% of respondents selected any of the following: "some high school or less"; "high school graduate or GED," "some college, but no degree," or "Associates or technical degree."

APPENDIX B

DEMOGRAPHICS OF SURVEY RESPONDENTS

ANNUAL HOUSEHOLD INCOME (BEFORE TAXES) IN 2022





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