



COLLABORATIVE
NETWORK

CLIMATE AND THE COAST

SAN LUIS OBISPO



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

www.mpacollaborative.org



EXECUTIVE SUMMARY

This report is a summary of 14 survey respondents and 8 focus group attendees in San Luis Obispo 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 San Luis Obispo County** include:

- Community members would like to see research for marine mammals, fish, birds and bats in the nearshore and off shore areas before they are considered for development for wind/wave energy.
- Including the importance that the entire watershed has in the back bay and Los Osos. They feel that their creeks and runoff are not managed as they could be.

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

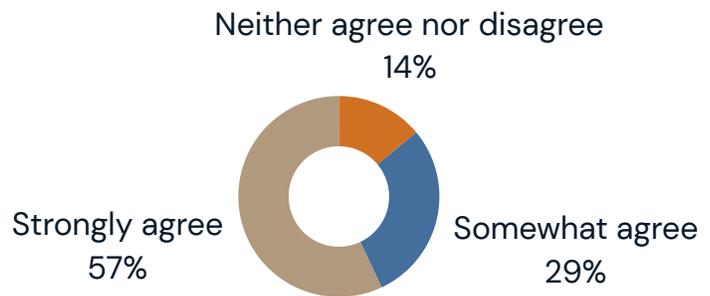
Conduct...

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



TAKEAWAY #2

Credit: Robin Hazard

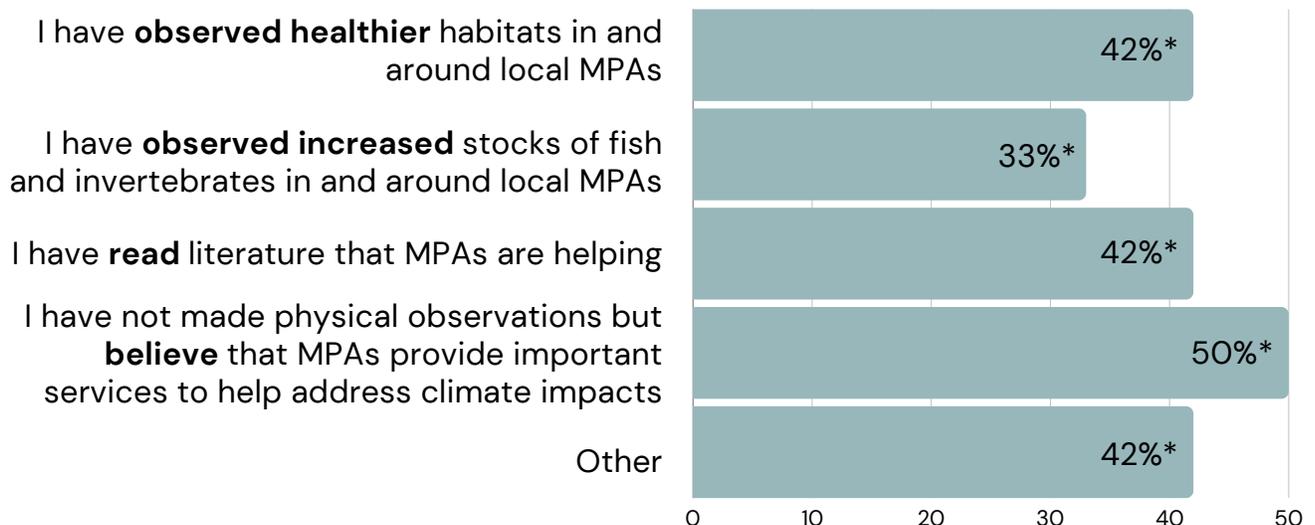
Respondents believe MPAs are helping address climate change impacts on local coastal ecosystems

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 believe the estuary in Los Osos and the protected areas north along the coast have healthy water, fish, mammals, and birds." -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 culturally important species
- 3 Impacts to species used for sustenance
- 4 Loss of aesthetically, culturally, and/or spiritually important sites
- 5 Impacts to infrastructure
- 6 Reduction of recreational opportunities
- 7 Widening of existing social inequalities
- 8 Loss of economic resources or opportunities
- 9 Diversion of resources that could be used for other community programs/priorities

"...Here in Cambria...White Rock MPA & Cambria SMCA...Our oceans are taking a huge hit for us [regarding] climate change—we need to do what we can to take some of the stress [off] them..." -Respondent

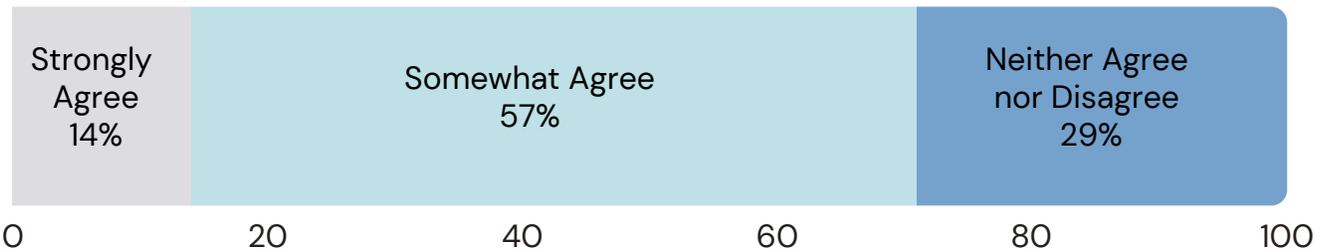
Land-based integrated multi-trophic aquaculture that is co-managed, on land that is returned to Tribal entities. Output from such low-trophic systems would contribute to food security and sovereignty, restoration effectiveness, and reduction in social justice inequities.



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...
 - have the ability to act as a buffer [to climate change].
 - allow ecosystems to thrive without human impacts.
 - provide sanctuary for species.
 - protect species that are culturally important, economically important, and used for sustenance.
 - provide opportunity for connecting with the environment- the first step to increasing awareness about environmental climate impacts.
 - are a source of tourism.
- Humans' mental health and physical health are improved by being out in natural settings.
- Protected ecosystems conserve biodiversity.
- Biodiversity increases resilience.
- Increased biomass...and wildlife...increase the odds of survival.

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 Expansion of protected areas and stronger protections
- 2 Protection of blue carbon ecosystems (kelp, seagrasses)
- 3 Research & monitoring projects to collect more data to inform decisions
- 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 Take necessary management action to allow for landward migration of submerged aquatic habitats
- 8 Co-management of MPAs between tribes and state governing agencies

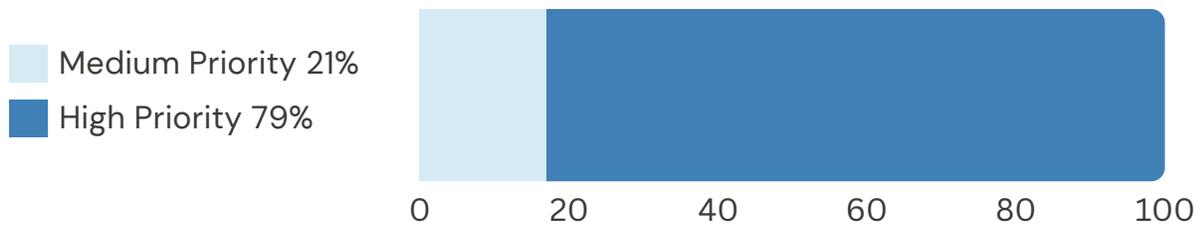


“There is a lack of overall inclusion of the importance that the entire watershed has in the back bay and Los Osos...wetlands are some of the most important habitat [sic] to protect for human and wildlife that lives here, and migratory visitors, too.” –Respondent

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

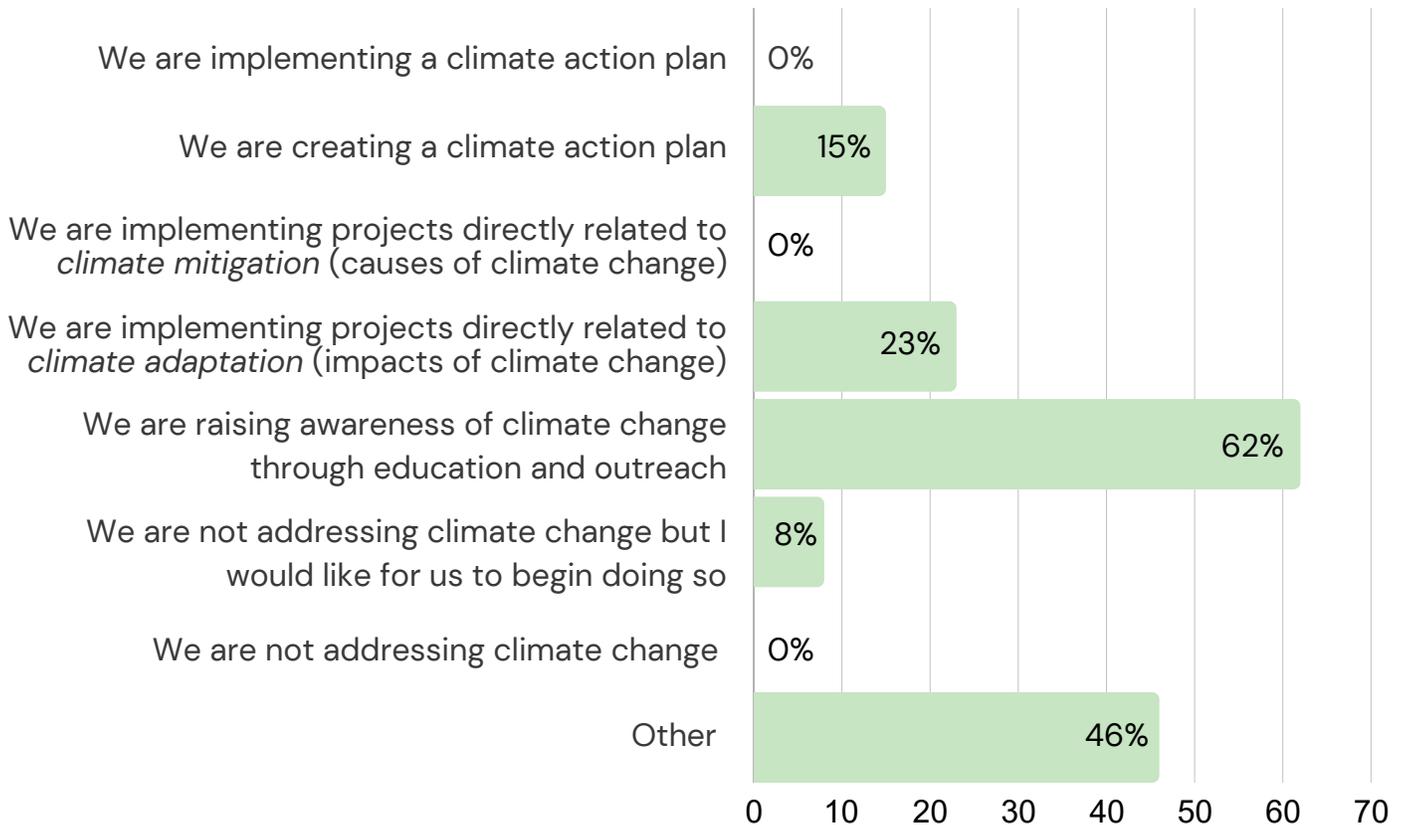
Respondents expressed a need for funding to support their work, specifically:

- Research...
 - between farming practices and ocean health.
 - climate impacts on habitat transition zones.
 - offshore movement of birds, marine mammals, etc.
- Support for...
 - existing programs.
 - solutions to increased visitation.
 - coordinating and synthesizing local people and information.
- Increased funding for...
 - signage and communications.
 - SLO [collaborative] to work on these issues.
 - farmers to reduce inputs, change to no till, cover crops, stacked practices that prioritize soil health.

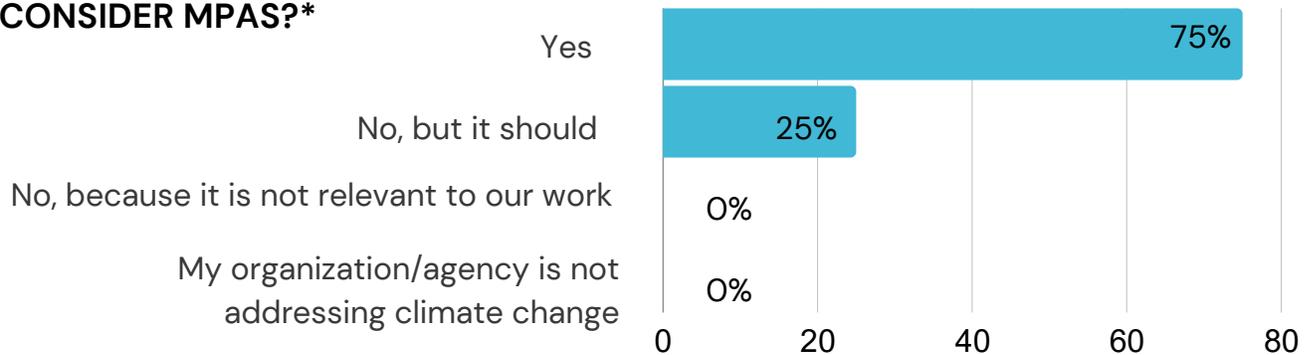
APPENDIX A

COMMUNITY WORK

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



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 Marin and San Francisco Counties, and relevant community resources.

- Cambria is formulating a Climate Change policy; actively installing electric car charging stations.
- Resources and infrastructure committee in Cambria due to weathered and dated infrastructure.
- Nature based solutions
 - Surfers Point Managed retreat project in Ventura--moved the bike path and parking lot back and implementing dunes to provide protection.
- Coastal Armoring
- Utilizing Interpretation and Education, and implementing climate change messaging into programming within State Parks.
 - State Parks has a watershed/rainfall simulator model where they share with students how different soils are permeable (or not) and how that effects surface runoff and ground water.
 - Junior Guards: attempting to expand education for climate change.
- Central Coast State Parks Association assists State Parks and wants to amplify events and information on this topic!

Resources

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

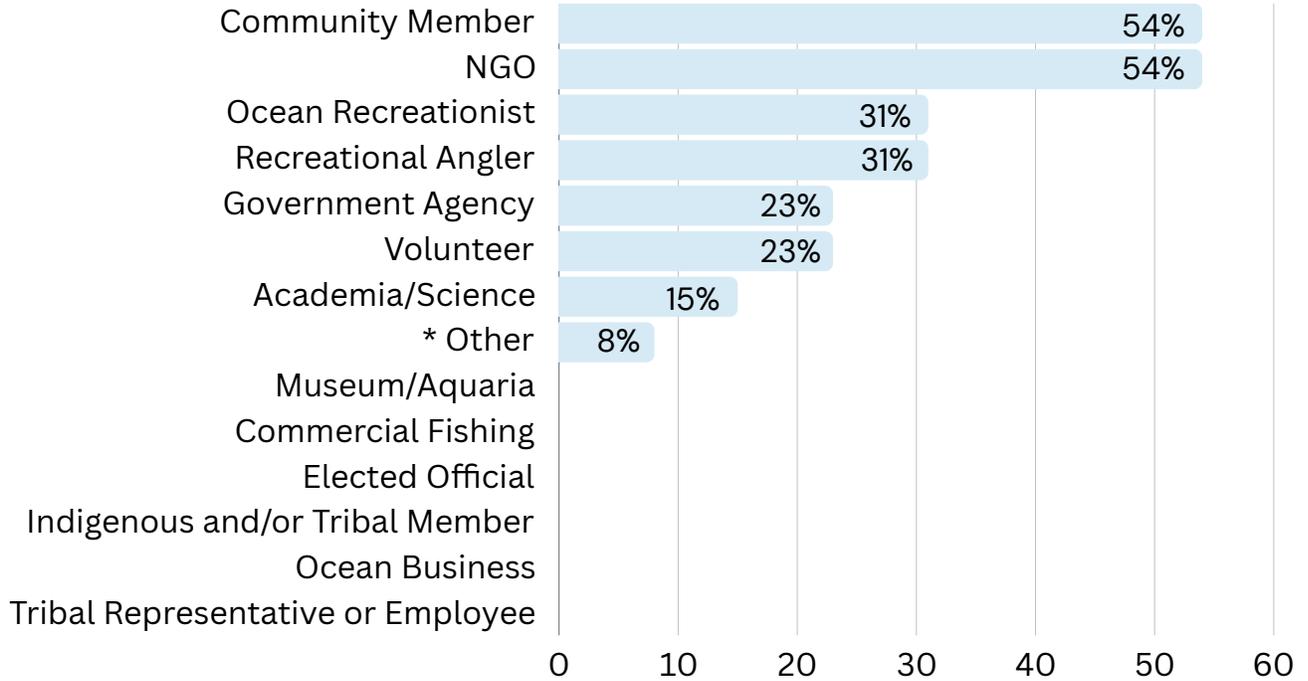


Resources

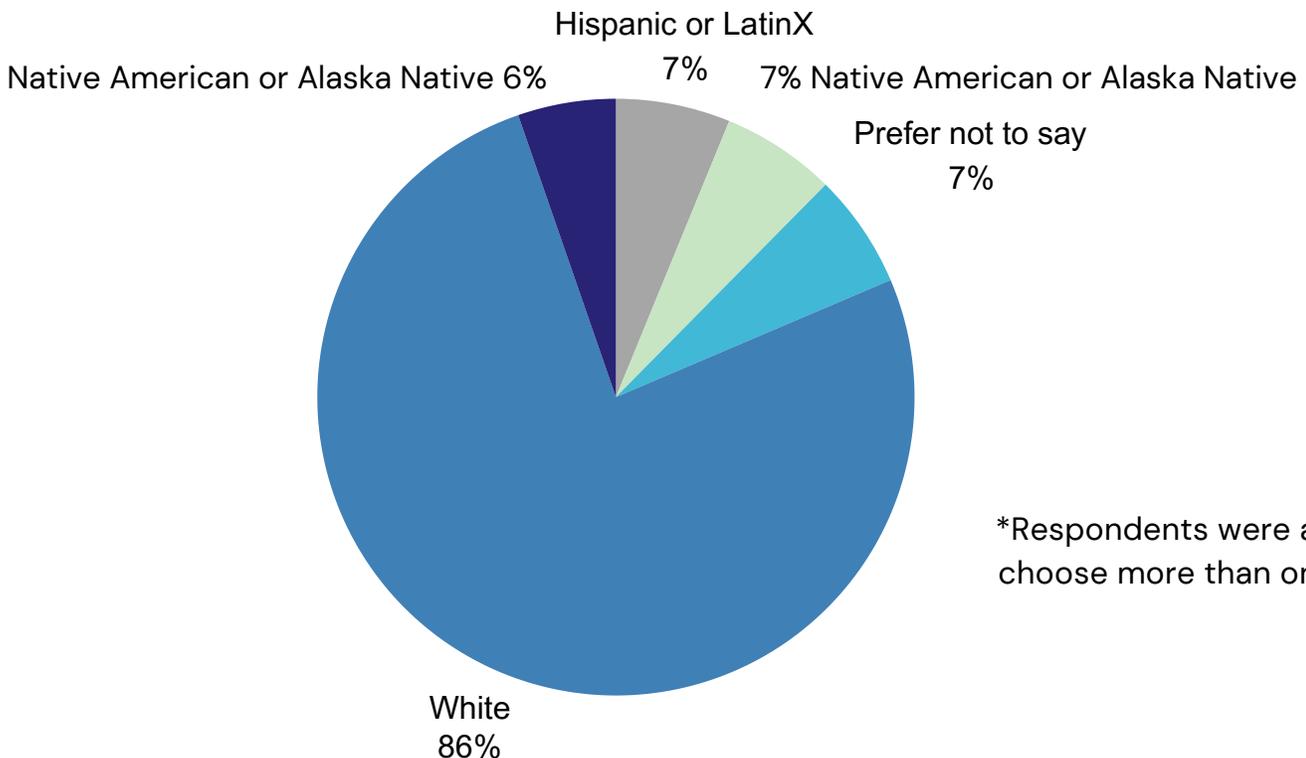
APPENDIX B

DEMOGRAPHICS OF SURVEY RESPONDENTS

SECTOR AFFILIATION



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

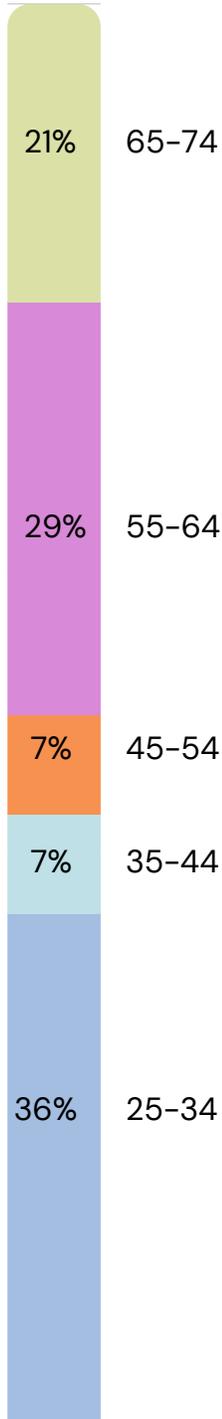


*Respondents were allowed to choose more than one answer

APPENDIX B

DEMOGRAPHICS OF SURVEY RESPONDENTS

AGE GROUPS



0% of respondents selected any of the following age groups: "Under 18," "18-24," "75-84", and "over 85".

GENDER IDENTITY



29% of respondents selected "male" as their gender identity.



64% of respondents selected "female" as their gender identity.



7% 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



Some college, but no degree



Bachelor's degree



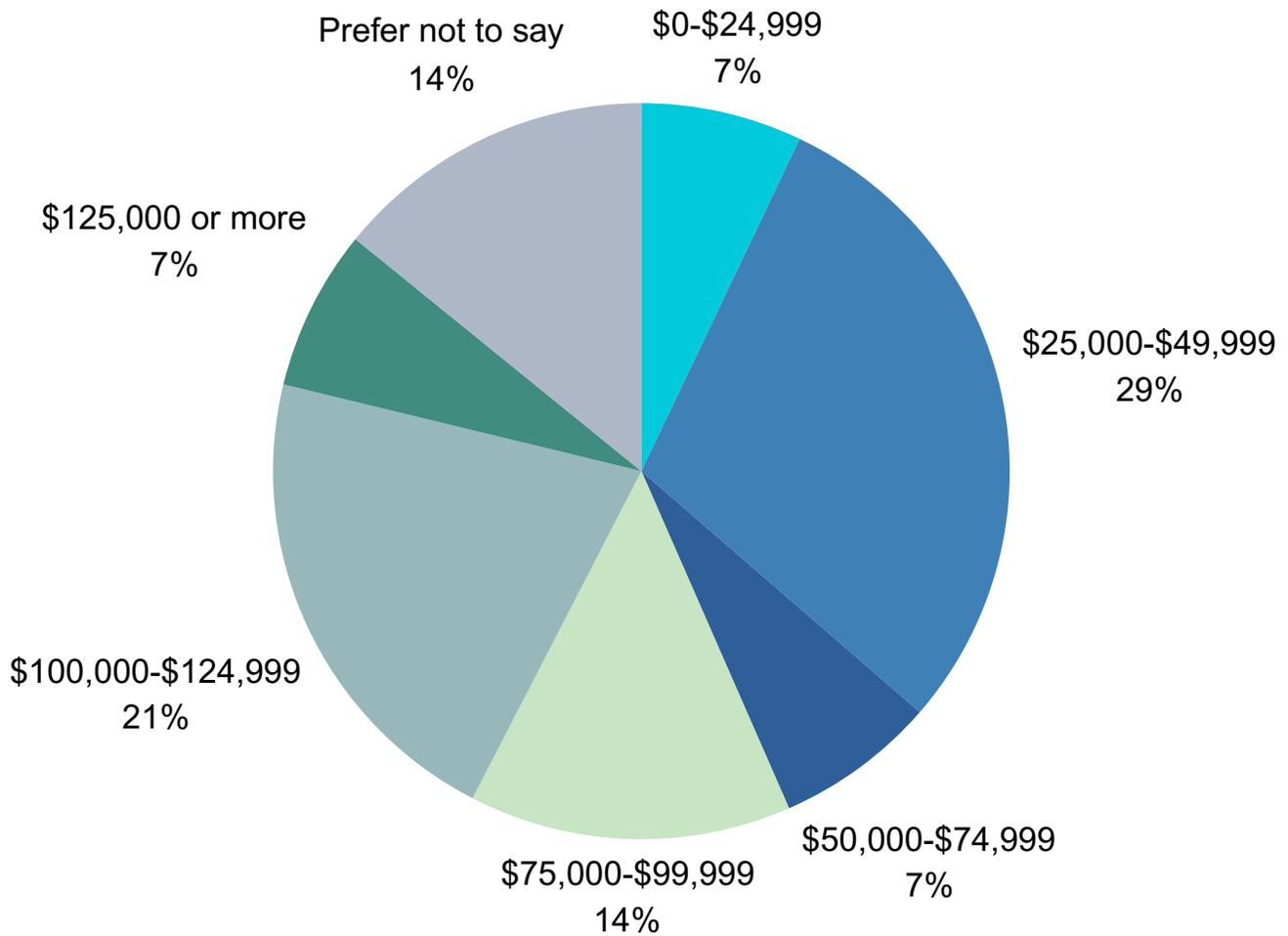
Graduate or professional degree

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

APPENDIX B

DEMOGRAPHICS OF SURVEY RESPONDENTS

ANNUAL HOUSEHOLD INCOME (BEFORE TAXES) IN 2022



 Morro Bay SMRMA



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