



COLLABORATIVE
NETWORK

CLIMATE AND THE COAST

DEL NORTE



Del Norte 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 Del
Norte residents on climate change, the coast, and
marine protected areas (MPAs).*

www.mpacollaborative.org



EXECUTIVE SUMMARY

This report is a summary of 5 survey respondents and 6 focus group attendees in Del Norte County.

Participants discussed climate resiliency and benefits of 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 **unique to Del Norte County** include:

- concerns about limited access to the area. Impacts of climate-driven events have the potential to cut off **access to/from the region**
- emphasis on **Tribal management**: Tribes in the area are active participants/managers in ocean management and are seeking to continue to grow their work and partnerships
- concerns about loss of kelp

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)

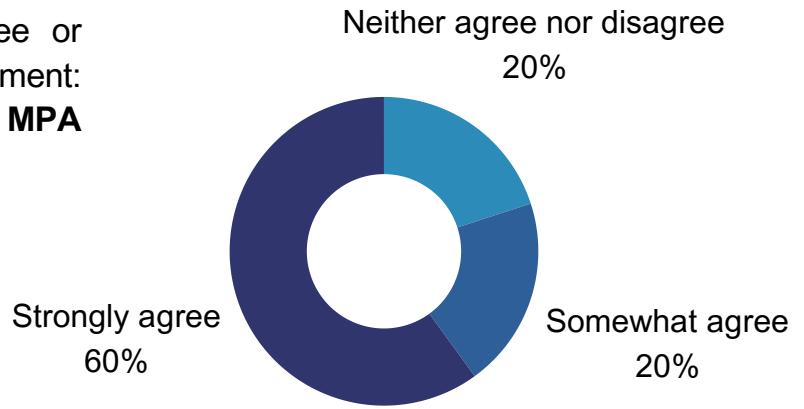


False Klamath Rock
Special Closure

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.



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



“Climate change [is] the significant factor in future biodiversity and environmental adverse effects.” - Respondent



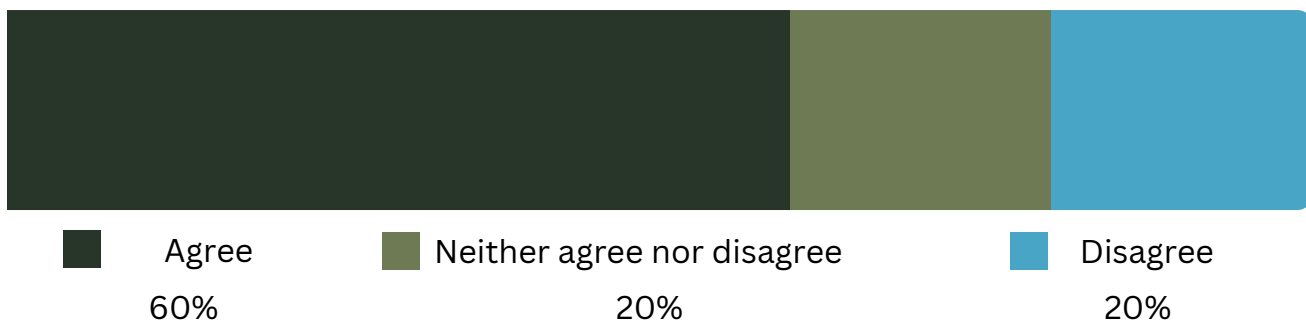
TAKEAWAY #2

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

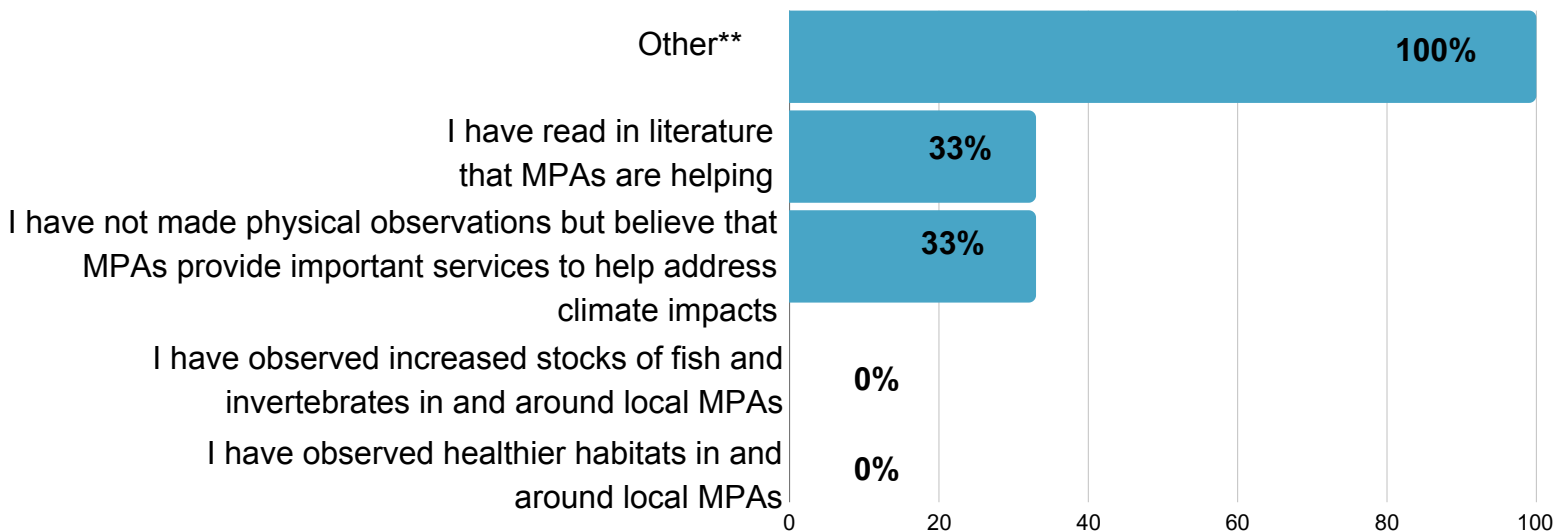
2. Indicate how strongly you agree or disagree with the following statement:

My local MPAs are offsetting/helping address these impacts to my local coastal ecosystems.

A majority of respondents felt that their local MPAs are offsetting/ helping address impacts to local coastal ecosystems. In particular, 60% agreed MPAs are strongly (20%) or somewhat (40%) offsetting climate impacts.



Respondents who **agreed** local MPAs are offsetting/helping address impacts to your local coastal ecosystems were asked why.*



*Respondents were allowed to choose more than one answer

**Respondents who chose “other” were given the chance to explain their answer. Explanations included: “MPA Collaborative Network climate initiative,” “results on MPAs improving ocean health,” and “tribal participation in MPA management.”



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 Widening of existing social inequalities
- 6 Impacts to infrastructure
- 7 Loss of economic resources or opportunities
- 8 Diversion of resources that could be used for other community programs/priorities
- 9 Other *



“Warming water threatens our very survival.” - Respondent

“If we do not find a way to cool the oceans, we will lose everything.” - 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).



Agree
60%



Neither agree nor disagree
20%



Disagree
20%

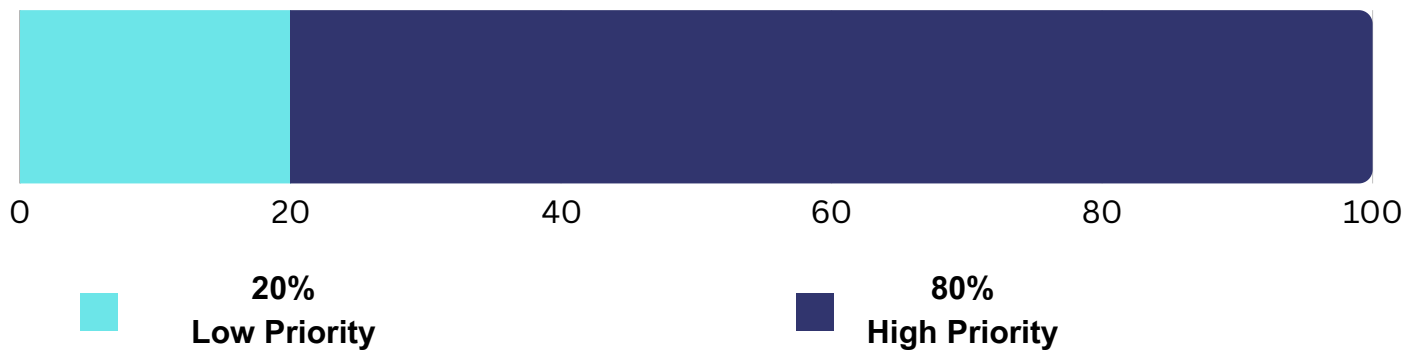


“I live in a fishing community and the fishing boats had consistently great catches.” - Respondent

TAKEAWAY #5

Respondents believe marine management is a 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

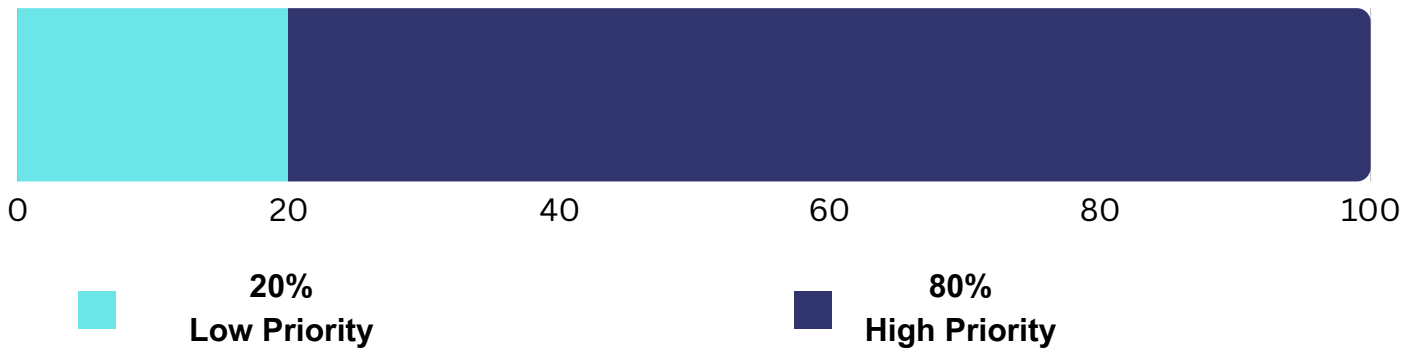
- 1 Protection of blue carbon ecosystems (kelp, seagrasses)
- 2 Expansion of protected areas and stronger protections
- 3 Integration of Traditional Ecological Knowledge (TEK) into MPA management and research
- 4 Co-management of MPAs between tribes and state governing agencies
- 5 Research and monitoring projects to collect more data to inform decisions
- 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 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.)?

Blue Carbon



TAKEAWAY #7

Highest needs of respondents

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

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

- Research and monitoring
 - Buoys to collect oceanographic conditions
- Outreach materials explaining links between humans, climate change, and MPAs (with a focus on clear, understandable language)
- Ferry from Crescent city to Eureka or other transportation methods in case of road closures due to climate-driven events such as landslides and fires
- Town-hall type meetings for community members to be involved in climate planning

Those who selected other were asked for more information. Responses included:

- “True consultation with Tribes before decisions are made”



“We need to talk about climate change using experiences that everyone can relate to.” - Respondent

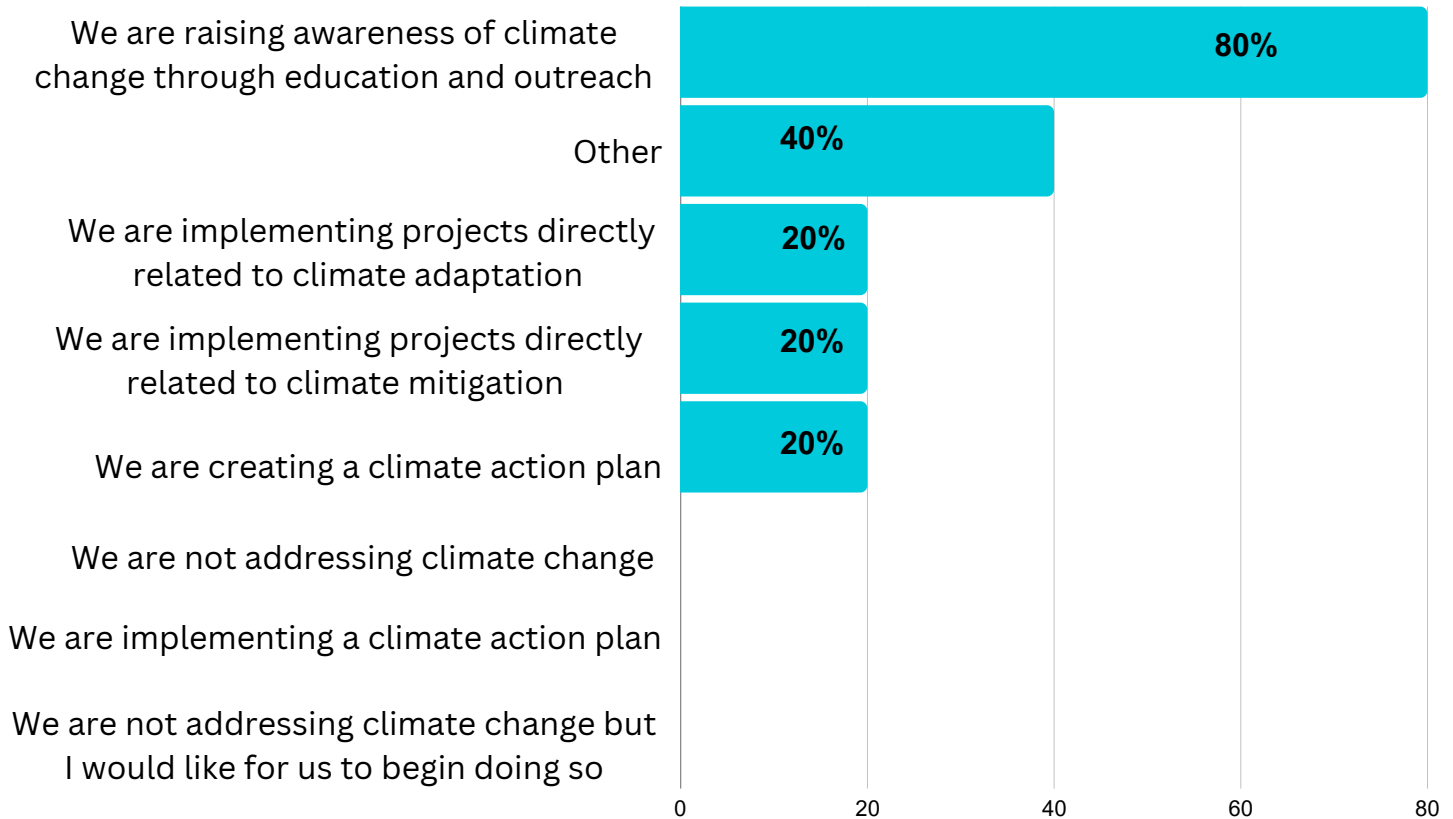
“[We need] Tribal management of marine resources and ecosystems” - Respondent



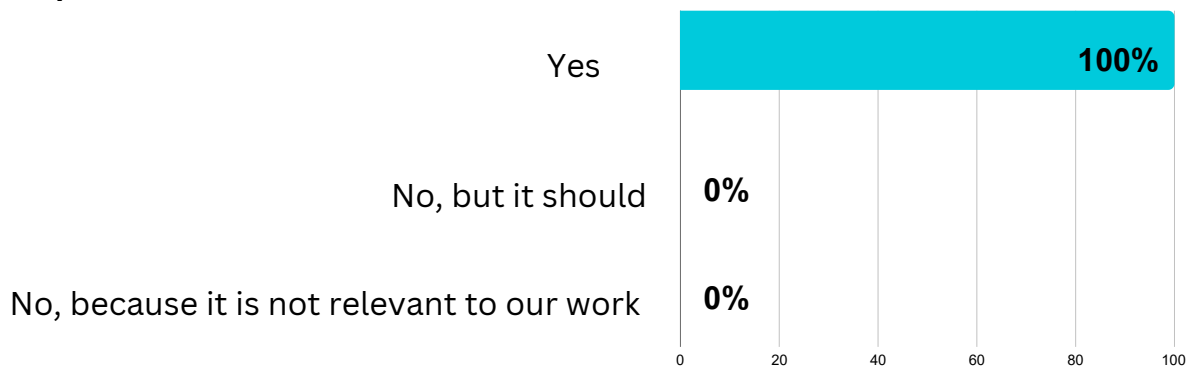
APPENDIX A

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 Del Norte and relevant community resources.

What is currently being done to address climate change:


- **Tribal stewardship:** The Tolowa Dee-Ni' Nation is beginning kelp surveys. Three Tribal nations recently declared the first [Indigenous Marine Stewardship Area](#)

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

 Castle Rock Special Closure

APPENDIX B

Demographics of survey respondents

Sector Affiliation

Of the five survey respondents....*

*Respondents were allowed to choose more than one affiliation



1 identified as Indigenous and/or Tribal Member



1 identified as Tribal Representative and/or Employee



1 identified as Science/Academia



1 identified as Ocean Business



1 identified as Ocean Recreationist



1 identified as Community Member



1 identified as "other"

Which race, ethnicity and/or origin categories describe you?

Of the five survey respondents....*



1 identified as Asian

*Respondents were allowed to choose more than one affiliation



1 identified as Hispanic/LatinX

** For "Some other race/ethnicity" the following was provided, "German, Polish, Filipino", "Mixed," and "Aztec and Lakota"



1 identified as Multiracial/Multiethnic



2 identified as Native American or Alaska Native



2 identified as White



2 identified as "some other race/ethnicity"***

APPENDIX B

Age Groups



0% of respondents selected any of the following age groups: "Under 18" and "over 85".

Gender Identity



40% of respondents selected "male" as their gender identity.

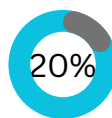


60% of respondents selected "female" as their gender identity.



0% of respondents selected any of the following gender identities: "Non-binary", "Transgender", "Not listed/Option to specify", or "Prefer not to say."

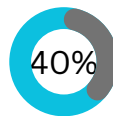
Highest level of education



High School Graduate or GED



Bachelor's degree

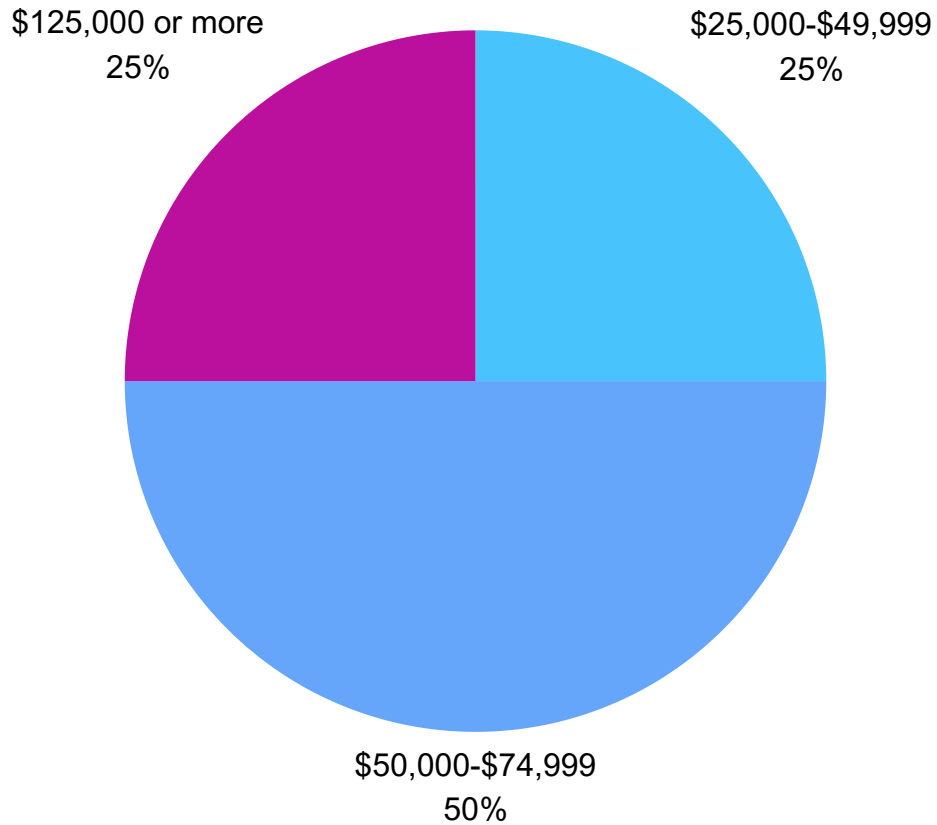


Graduate or professional degree

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

APPENDIX B

Annual household income (before taxes) in 2022



Credit: Angie Edmunds



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