Gloucester County, Virginia Working Waterfronts
A Technical Report

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Executive Summary

Gloucester County's working waterfronts are under increasing pressure from a myriad of intersecting and interacting concerns, such as residential development, regulatory rigidity, and climate-driven vulnerabilities. Presently, Gloucester County has been selected by the National Working Waterfront Network for its annual internship program, which supports applied research on working waterfronts, with this year's round focusing on planning and policy. While planning and zoning decisions have been considered in the past and present to maintain, adapt, and expand water-dependent uses, accounting for ecological realities and future economic needs, a lack of capacity has made it a struggle to enact the community engagement necessary to ensure planning and zoning decisions are made with community input at the center.

Thus, this internship project was initiated. The project uses desktop research to explore the historical background of Gloucester County and examines case studies from other communities that have collaborated with the National Working Waterfront Network on similar initiatives. It employs mixed-methods research, including interviews with watermen and other waterfront business owners, regional planners, and academics, along with attitudinal surveys available to anyone within Gloucester County, to assess community perspectives and experiences of the working waterfront, highlighting their concerns and hopes for its resilient future.

Research findings lead to recommendations for a zoning overlay with a hierarchical, tiered land-use framework that prioritizes traditional, historical uses of the waterfront while allowing for flexibility and expansion of activities within the waterfront, integrating sea-level rise data, and implementing more flexible permitting mechanisms. These tools aim to sustain the cultural and economic fabric of Gloucester's waterfront communities while preparing for a more resilient future. Along with the zoning overlay, additional considerations informed by research findings encourage comprehensive plan recommendations, including increasing public access and recreation points along the waterfront, integrating sea-level rise maps within land use maps, and creating a Working Waterfront Committee.

The outline of this report is as follows: background and methodology of data collection, analysis with results, and recommendations.

Methodology

Gloucester County's working waterfronts face increasing pressures from residential development, zoning inflexibility, environmental vulnerabilities, and a narrow definition of what constitutes a working waterfront. This study employs semi-structured interviews (n = 9) and a geographically-based attitudinal survey (n = 99) to analyze stakeholder concerns, identify underutilized opportunities, and propose a policy framework tailored to the county's regulatory environment.

Interviews were conducted using purposive sampling to capture a diverse set of stakeholder voices, including commercial fishermen, local government representatives, conservationists, and tourism operators. Survey responses were analyzed using descriptive statistics and thematic coding to uncover common priorities, conflicts, and values. Purposive sampling began with members of the Planning Division of the county's Department of Planning, Zoning, and Environmental Programs identifying key stakeholders with diverse experiences and involvement with the working waterfront. A semi-structured interview guide was created to investigate each participant's connection to working waterfronts, their conceptualization of possible changes within the working waterfront over their lifetime, their definitions of working waterfronts, and their perspective on the 'problem' within working waterfront uses. Finally, interviews explored participants' perspectives on the most critical considerations for county staff as they move forward with decision-making processes for the working waterfront. The semi-structured interview guide can be found in Appendix A. A semi-structured interview guide was most appropriate for exploring perspectives, as it combines a structured method to ensure consistency with the data with the semi-structured nature that allows for individual follow-up as needed.

An attitudinal survey was developed to explore similar themes from a community perspective. Collaboration with the county's Community Engagement Department ensured outreach was conducted repeatedly over a month, giving participants multiple chances to complete the survey. A QR code was created for easy access to the survey, which was then included in the Beehive, a community magazine for Gloucester County. In addition, posters were displayed inside county buildings, and social media posts, including a podcast episode, were produced. The attitudinal survey is available in Appendix B. While semi-structured interviews helped develop themes and understand community views, attitudinal surveys provide a valuable way to gather data from a larger population, making the results more representative of the community and supporting a more community-centered recommendation process.

Thematic and statistical analyses were undertaken to identify themes and findings from the semi-structured interviews and attitudinal surveys, respectively. These themes and findings inform the ensuing recommendations.

Results & Discussion

Themes from semi-structured interviews include:

1. ***Expanding Definitions of Working Waterfronts***: Many interview participants supported including ecotourism, climate adaptation, and nature-based infrastructure under working waterfront uses. These participants expressed frustrations and shared anecdotal situations where people in their community had creative, water-dependent business ideas, but were ultimately unable to move forward with their ventures because they did not conform to the current zoning regulations. This theme of prioritizing flexibility within definitions of working waterfront uses was often described in the context of recognizing and prioritizing traditional uses while encouraging new water-dependent uses that promote economic development.

2. ***Use Conflicts are Often Misunderstood:*** Interview participants discussed how the 'problem' of the working waterfront is typically described as one revolving around use conflicts. In many participants' perspectives, these use conflicts stem from land-use practices that allow interactions between commercial, industrial, and residential uses without clear governance. Some describe interactions with property owners as being not-in-my-backyard (NIMBY) behavior, where nuisance uses, such as elements of commercial fishing, are frustrating for waterfront homeowners. However, many participants shared that these specific conflicts may be mitigated through behavioral norms and expectations around waste and hours of operation.

3. ***Disjointed Governance & Lack of Stakeholder Collaboration:*** Many participants described a business development process that required significant capacity, which deters people with limited capacity from developing along the water, thereby decreasing the viability of working waterfront parcels. Participants described instances of interacting with one governmental agency to obtain permits, only to learn that these permits were nullified as a result of a different governmental agency that had overridden them. This disjointed process has led community members to feel that the permitting process, in general, is an inefficient use of their time and resources. Participants expressed concerns that the lack of clarity in the process would reduce the likelihood of new working waterfront businesses entering Gloucester County.

4. ***Land Use Pressures:*** Across most interviews, the unrestricted growth of residential properties along the waterfront was a concern for the viability of a working waterfront in Gloucester County's future. While participants understand the benefits of tax revenue from waterfront homes, many expressed concerns that traditional waterfronts would disappear as a result of these properties. These fears are compounded by the current zoning regulations, which classify working waterfront parcels that have been vacant for more than two years as a non-conforming use status In addition, many of these parcels

were zoned for residential use in the Countywide rezoning in 1998, making residential development a by-right land use, and most commercial uses, including working waterfronts, non-conforming and either not permitted by right or permitted through a special review process. This zoning and these regulations, largely unchanged, may result in many interview participants' fears of traditional uses becoming a reality.

5. ***Lack of Financial and Social Incentives:*** The economic development and viability of working waterfront businesses were frequently discussed in these interviews. Many interview participants expressed worries about an aging waterman workforce with little incentive for young people to enter. While most participants agreed that the lack of incentives complicated the entry of new people into the working waterfront space, interview participants tended to express varying ideas for tackling this issue. Some shared that Gloucester County could learn from neighboring regions on how to leverage tax and other zoning-based incentives to increase the likelihood of viability for new business owners. In contrast, others suggested that integrating an aquaculture curriculum within the school system could attract a new, diverse set of people to work in waterfront businesses.

6. ***Public Use and Recreation Matters Too:*** When discussing the expansion of definitions within working waterfronts, many interviewees expressed that, within some areas, they wanted the waterfront to be a place for everyone. An increase in residential development along the waterfront has been accompanied by a decrease in public access to the waterfront, which further exacerbates conflict along the waterfront. Interviewees expressed concern that prioritizing traditional working waterfront uses might alienate the general public, and that recreational uses of the waterfront must also be considered and prioritized. These recreational uses may provide opportunities for the general public to learn more about the historical identity of the waterfront, thereby creating avenues for connection and reducing conflict.

7. ***Environmental Concerns:*** Interview participants often spent time considering the non-land-use vulnerabilities of the waterfront, which typically involved concerns about the future resilience of the waterfront in the face of sea-level rise, storm surges, and erosion. The majority of interviewees expressed that these considerations should be centered within decision-making processes. In particular, interviewees expressed a desire to see sea-level rise and other environmental vulnerability projections incorporated into land use decision-making, alongside building regulations for businesses and residential properties along the waterfront.

Findings from the attitudinal surveys include:

The respondents of our survey were diverse in terms of age (Figure 1) and their connection to the waterfront. Some own property, work for a business associated with the waterfront, or have no direct connection to the waterfront area other than living in the county.

When asked about the biggest threats to working waterfronts, survey participants identified overdevelopment of residential properties, environmental degradation, sea-level rise, and loss of traditional uses as the most significant threats (Figure 2). Over half of the survey participants believe that at least some zoning actions are necessary to preserve the working waterfront (Figure 3). When compared to prioritizing traditional uses or diversifying uses, people are most interested in balancing traditional uses with diversifying the waterfront simultaneously (Figures 4, 5, and 6 within Appendix C).

Importantly, findings from the interviews and surveys reflect each other. Survey participants expressed concerns about public access, the decline in traditional waterfront uses, and an interest in diversifying the waterfront. Out of the decisions being considered in the survey, participants were most likely to choose the County's creation of a Working Waterfront Overlay District to protect traditional uses and encourage new uses.
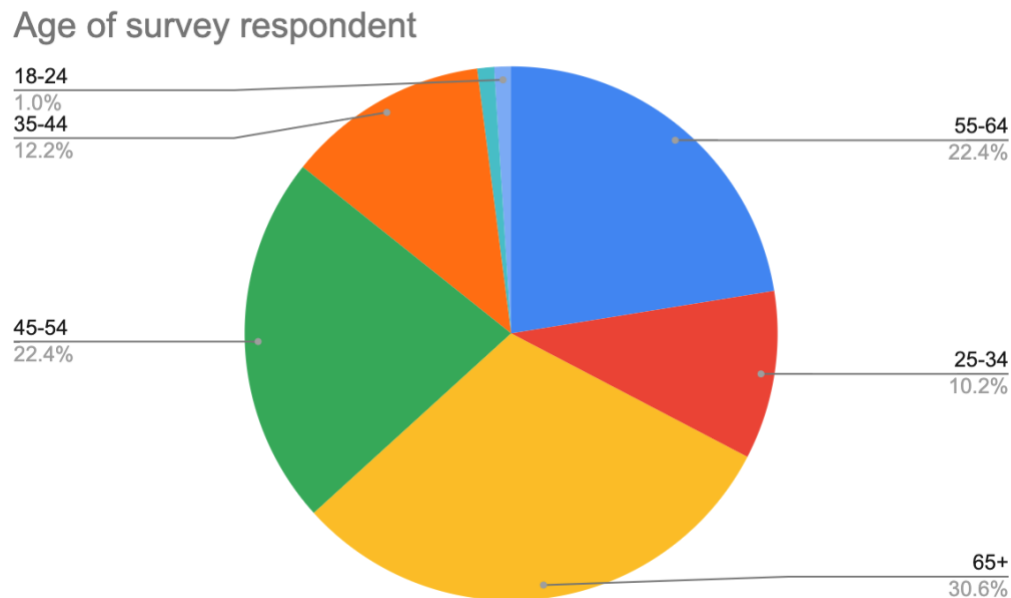

Figure 1: Age of survey respondent
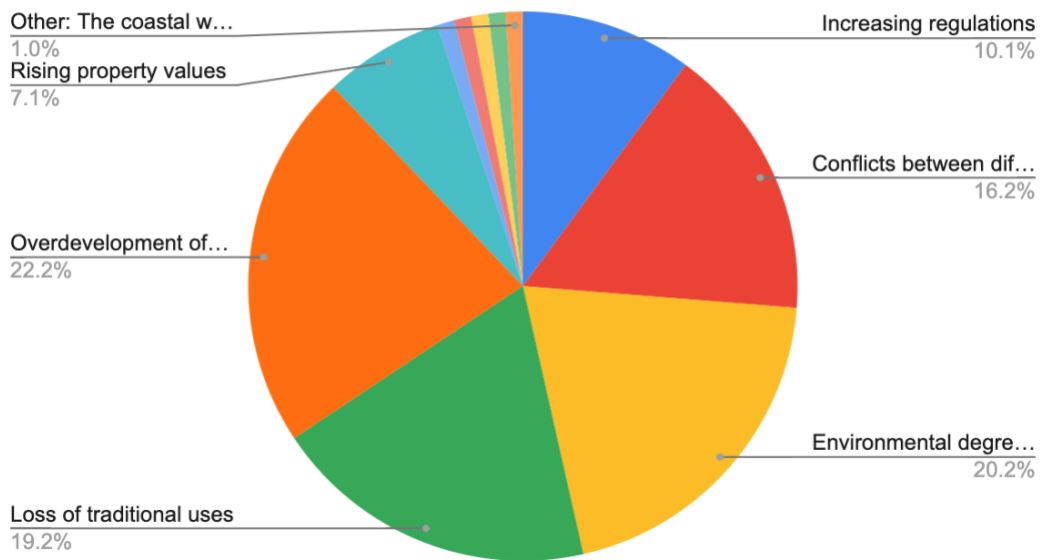
Biggest threat to the working waterfront

Other: The coastal w…
1.0%

Rising property values
7.1%

Overdevelopment of…
22.2%

Loss of traditional uses
19.2%

Increasing regulations
10.1%

Conflicts between dif…
16.2%

Environmental degre…
20.2%

Figure 2: The Biggest threat to the working waterfront

Are zoning changes necessary?

Other: zoning is imp…
1.0%

Overpopulation
1.0%

No
20.6%

Unfamiliar
2.1%

Unsure
3.1%

Not sure
2.1%
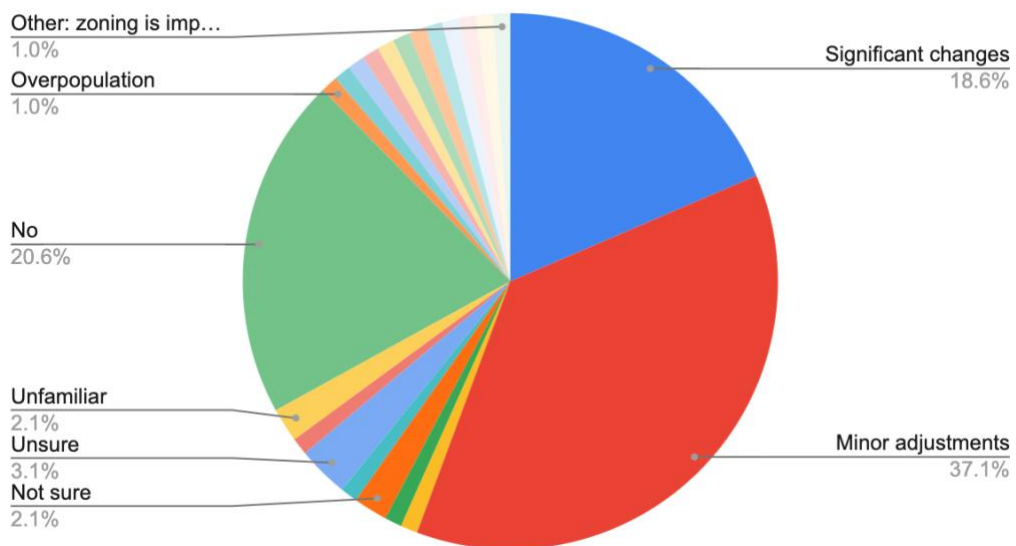
Significant changes
18.6%

Minor adjustments
37.1%

Figure 3: Whether zoning changes are necessary

Recommendations

Based on the findings of the interviews and surveys, the following recommendations are made:

1. Creation of a Waterfront Zoning Overlay District
   a. Purpose of the Zoning Overlay District
      i. Non-water-dependent uses (e.g., residential) do not displace existing water-dependent uses
      ii. Public access and recreational uses of the waterfront are integrated into the water-dependent use definition
      iii. Development along the waterfront is aligned with sea-level rise and storm surge projections to promote resilience in the future
   b. Recommendations and considerations for the Zoning Overlay
      i. Sea-level rise, storm surge, and flood maps should be integrated into the permitting process to allow for more appropriate and future-proofed siting
      ii. A place-based, historically informed prioritization of development using a use-based tier system. Considerations for methods of the tier system, including a potential sliding scale tier based on spatial specifics, along with the strengths and weaknesses of three potential spatial scopes for the overlay (parcel-specific, waterway-specific, and county-wide), are presented in Table 1. Below that, Table 2 provides the activities associated with each of the following tiers.
         1. Tier 1 (by-right, priority): These businesses and activities are dependent on waterfront access. They should have guaranteed zoning protection and receive permitting preference, allowed by right. Adjacent parcels in single ownership that are along the water would be considered Tier 1 use. If the associated parcel (or parcels) is not located along the water but is in single ownership with a parcel that is, they may be supported for Tier 1 and Tier 2 uses on a case-by-case basis.
         2. Tier 2 (supportive and conditional): These activities or businesses support Tier 1 or are compatible with and accessory to the waterfront. Tier 2 should include the creation of a Water-Accessory Use Conditional Use Permit (CUP) Track, where each application in the CUP process requires applicants to demonstrate benefit to Tier 1 uses. Applicants could consider a statement such as: "XXX will

demonstrate economic or social benefit to Tier 1 uses by…"

   3. Tier 3 (incompatible and nonconforming): These activities and types of development are not aligned with what the overlay district's intentions are and directly threaten the long-term viability of a working waterfront. If existing uses in the overlay are Tier 3, limit their expansion. Important, no new nonwatery-dependent use or extension of an existing nonwatery-dependent use on the waterfront shall displace or significantly disrupt an existing water-dependent use, unreasonably diminish the capacity of the site to accommodate future water-dependent uses, or impede or infringe upon existing public access. This includes any residential development.

iii. While identifying an appropriate spatial scope for the zoning overlay, a sliding scale option is recommended. That is, in some areas of the county, the Planning Commission can choose a parcel-specific framework. In contrast, in other parts of the county, a waterway-specific paradigm may be more appropriate. Decision-makers with local socioecological knowledge are best suited to make these recommendations after considering the strengths and weaknesses highlighted in Table 1.

Table 1: Spatial Scope of Waterfront Zoning Overlay Considerations

Spatial scope	Strengths	Weaknesses
Parcel-specific	- Highly tailored - May be more politically viable - May have ability to have high administrative organization	- May miss larger land use patterns, most restrictive - May not be efficient use of time and resources - May make it more difficult to collaborate - May overlook emerging businesses and additional parcels
Waterway-specific	- May align best with ability to align with environmental vulnerabilities - May be able to preserve character of specific waterfronts - May facilitate coordinated infrastructure upgrades and environmental protection	- May exclude smaller viable parcels - May have enforcement complexity - Viable parcel conditions may vary due to being tied to the waterway

County-wide	• Least restrictive, most inclusive • May lead to equitable processes • Can be comprehensively integrated	• May be politically challenging • May overreach • Risk of applying the same standards to diverse places

Table 2: Activities associated with each Tier

Tier 1	Tier 2	Tier 3
Aquaculture	Bait and tackle shops	Residential subdivisions
Seaweed and kelp farming	Seafood markets	Hotels
Commercial fishing	Waterfront restaurants	Single-family residential development
Fish processing & packing	Marine education and historical centers	Condominiums
Boat building & repair	Retail stores	Any other residential development
Ice houses	Single family and multifamily residential development when in association with Tier 1 use	
Marine fuel depot	Temporary and/or seasonal commercial activities (e.g., food trucks, outdoor vendors)	
Ecotourism activities		
Kayak and other rentals		
Waterfront parks and trails		
Public beach access points		
Public boat launch access points		
Marinas		
Charters		
Marine science activities (e.g., fishery science)		

2. Considerations should be made when updating the Comprehensive Plan to incorporate the needs of the working waterfront and resilience to sea-level rise.

a. Greening the waterfront: Actions should be taken to increase public access and enjoyment of the waterfront's natural spaces. This may include increasing the number of walking and biking trails, as well as installing benches and other seating areas along the water. This will also encourage increasing public access points to the waterfront.
   b. Integrate ADAPTVA sea-level rise maps into the Comprehensive Plan maps.
3. Consider creating a Working Waterfront Committee that brings together diverse stakeholders, including governmental, nongovernmental, and academic entities, who have ideas and a role to play in waterfront development.
      i. Purpose of the committee
         1. To decrease duplication of work across stakeholders
         2. Promote the collaboration of ideas
         3. Create community outreach literature (e.g., pamphlets and one-page informational guides) that can eliminate institutional confusion for those who seek to develop along the waterfront.
   b. Consider methods of incentivization for those seeking to develop businesses along the waterfront, with a focus on adaptation and mitigation actions related to sea-level rise.

Conclusion and Next Steps

This report's recommendations are based on applied, participatory research aimed at understanding community desires for a resilient working waterfront. The proposal for a tier-based zoning overlay, flexible Conditional Use Permits (CUPs), and the integration of environmental planning into land use decisions to support Gloucester County's working waterfronts is directly shaped by the community's dreams and aspirations for their future. It is crucial to recognize that not everyone will benefit from these types of planning decisions, and those who feel especially burdened by such choices must be heard and understood in the months and years following the implementation of a decision like this one. Importantly, the recommendations within this report reflect the needs highlighted in the data collected for this project. Balancing historical cultural identity with a changing world is a delicate task, and Gloucester County has a unique opportunity to move forward in a way that genuinely reconciles history, identity, economic development, and environmental realities. The ensuing public process will support this delicate act and ensure that the participatory process initiated by this internship project continues throughout the decision-making process.

Moving forward, the county should assemble a team comprising members who can utilize mapping resources to create tiered overlays, while evaluating the benefits and costs of each spatial scope of the overlay to determine the most appropriate option for progression. It is essential to consider stakeholder engagement within each part of the decision-making process.

Appendix A: Semi-structured interview guide

Thank you for taking the time to meet with me. This interview will be a series of 10 questions to discuss working waterfronts in Gloucester County, your connection to the working waterfront, and how we can plan to preserve and support the various activities along the waterfront. I will be taking notes during our meeting (and recording if Zoom), and these will be used to help us/Gloucester County staff determine recommendations for moving forward with potential future ordinances to protect working waterfront land-use.

1. Can you tell me a little about yourself? Where are you from, what do you do? (Etc., prompting if necessary)

2. [Paraphrase] I'm going to be asking you about your perspective on the working waterfront in Gloucester County. But before I get into that, I'm curious about what you think of when I say 'working waterfront.' So, how would you define a working waterfront?

    1. Do you have a particular working waterfront in mind when you describe it? If so, which one?

    2. Are there particular parts of the county that come to mind when thinking about working waterfronts?

3. Can you tell me about your personal/family/civic/business connection with the working waterfront?

    1. How did you become connected with the waterfront?

    2. How has your connection or relationship to the waterfront changed, if at all, over time?

        1. [If applicable], How, if at all, has this change impacted you?

    3. How are you dealing with these impacts?
    4. Who, if anyone, have you discussed these impacts with?

4. Where do you see your connection to the waterfront in the next 5 and 10 years?
    1. [If applicable] Where would you like to see your connection to the waterfront be in the next 5 and 10 years?

5. Outside of the context of your personal connection to the waterfront, can you describe how the waterfront has changed, both in good and/or negative ways?
    1. What do you believe is causing these changes?

    2. How, if at all, have these changes impacted your perception of the waterfront?

    3. Are there certain types of people or entities that have benefitted from these changes?

    4. Are there certain types of people or entities that these changes have particularly burdened?

6. Describe the present-day waterfront in your own words.
    1. Who is using the waterfront?
    2. What kinds of activities are taking place?
    3. Are there activities currently taking place that feel out of place in the working waterfront?
    4. Are there activities that used to be common but are no longer happening? What are those activities, and what do you think has caused this change?
    5. Are there activities that aren't taking place that you would welcome on the waterfront?

7. Describe, if you can, a possible future waterfront that you believe would benefit the community.
    1. What ideas, if any, do you have to change the present-day waterfront so that the potential future waterfront you describe is possible?
    2. What barriers do you foresee standing in the way of this potential future waterfront?
    3. What recommendations do you have for decision and policy-makers who could influence and possibly overcome these barriers?

8. What, if anything, isn't working about how the working waterfront is managed?
    1. What, if any, are the most pressing improvements to better manage the waterfront?
    2. [If respondents only discuss issues related to on-the-water elements of the working waterfront] Are there any land-use elements of the working waterfront that aren't working? In other words, things that aren't happening on the water?

9. What, if anything, is working well about how the working waterfront is managed?
    1. What lessons can be taken from things that are working well?

10. Is there anyone else you know that I should speak with about these issues?

11. Is there anything that I didn't ask you about that you think would support us and other stakeholders in making decisions about the working waterfront?

Appendix B: Attitudinal survey instrument

Thank you for taking the time to complete this survey! The survey should take between 3 and 5 minutes to complete. We want to understand community perspectives about working waterfronts in Gloucester County, Virginia. If there are questions you feel don't pertain to you or to which you don't have an answer, feel free to skip them. Anything you share will support us in developing policy recommendations for moving forward with future zoning ordinances to protect working waterfront land uses.

1. How do you define 'working waterfront'? Please check all that apply.
   Check boxes – people can check multiple
   A place primarily for water-dependent businesses (e.g., marinas, fishing, boatbuilding, seafood harvesting or processing)
   -A mixed-use area with both commercial and recreational activities
   -A public space for waterfront access and enjoyment
   -Other – **text box**

2. When you think of working waterfronts, is there one particular type you have in mind? If so, which one? What makes you think of this one in particular?
   Open-ended – text box

3. What activities do you associate with working waterfronts? Please check all that apply.
   Check boxes (a box for each option under the headers below) – people can check multiple
   Commercial fishing and seafood industry, including:
   -Fishing
   -Aquaculture
   -Seaweed and kelp farming
   -Seafood processing
   -Seafood market & distribution
   -Bait and tackle shops
   -Docks and wharves for fishing boats
   -Fishery research and/or stock assessment facilities

   Maritime and boating
   -Shipbuilding and repair yards
   -Dredging operations and services
   -Marine fuel stations
   -Port management offices

   -Boat docking (short-term)
   -Boat storage (long-term)

<u>Recreation and ecotourism</u>
-Marinas and boat slips
-Charter fishing operations
-Eco-tourism cruises
-Kayak and paddleboard rentals
-Beach and waterfront access points
-Waterfront restaurant and bars
-Retail stores
-Historic sites and markers
-Marine education centers

<u>Residential and mixed-use development</u>
-Houseboats
-Waterfront homes
-Mixed-used buildings (e.g., housing on top, retail and restaurants on bottom)
-Condominiums

<u>Other</u>
Text box

4. Have you noticed changes in the types of activities happening on the working waterfront over the past 5 to 10 years?
   Options – people would select one
   -Yes, there are more water-dependent businesses/industries now
   -Yes, there are fewer water-dependent businesses/industries now
   <mark>-There are as many water-dependent businesses/industries now, but the types are different</mark>
   -I have not noticed a change
   -Unsure
   -Other – **text box**

5. <mark>SKIP LOGIC QUESTION – IF THEY ANSWERED THE HIGHLIGHTED ABOVE</mark>
   You answered that there are as many water-dependent businesses/industries now but that the types are different. In your opinion, how have the water-dependent businesses/industry types changed?
   Open ended – text box

6. How much do you agree with this statement?: The working waterfront should prioritize traditional water-dependent businesses (e.g., fishing, aquaculture, etc.) over other uses (e.g., residential, retail, restaurants, recreational, tourism).
   Options – people would select one

-Strongly agree
-Somewhat agree
-Neutral
-Somewhat disagree
-Strongly disagree

7. How much do you agree with this statement?: The working waterfront should encourage diverse uses, including water-dependent business, but also mixed-used residential, recreation, and eco-tourism.
Options – people would select one
-Strongly agree
-Somewhat agree
-Neutral
-Somewhat disagree
-Strongly disagree

8. Do you feel affected by the way the working waterfront is used currently? If so, how? Please check all that apply.
Check boxes, people could check more than one
-I do not feel affected by the working waterfront
-Yes, I feel affected by land-use changes at the working waterfront
-Yes, I feel affected by the noises associated with the working waterfront
-Yes, I have environmental concerns about the use of the working waterfront
-Yes, I find the working waterfront crowded and overwhelming
-Yes, I fear the working waterfront will impact my property in some way
-Yes, I feel affected in some other way (explain below) **– text box**

9. What do you think is the biggest threat to the long-term future of the working waterfront?
Options - people would select one
-Loss of traditional industries (e.g., fishing, aquaculture, seafood processing)
-Increasing regulations
-Overdevelopment of residential properties
-Rising property values
-Conflicts between different waterfront users
-Environmental degradation and sea-level rise
-Other – **text box**

10. Do you believe zoning changes are needed to better support the working waterfront?
Options - people would select one
-Yes, significant changes are needed
-Yes, but only minor adjustments are necessary

-No, the current zoning is sufficient

-Other – **text box**

11. What zoning changes or policies would you support to protect the working waterfront? (Select all that apply).
Check boxes, people could check more than one
-Creating a working waterfront overlay district to protect traditional uses and allow new uses
-Allowing more mixed-use zoning along the waterfront (businesses and residential areas coexisting)
-Allowing more working waterfront uses (primarily recreational and commercial) in zoning districts along the water (including residential districts)
-Increasing public access while maintaining space for businesses
-Providing financial incentives or tax breaks for water-dependent businesses
-Other – **text box**

12. I understand that a survey does not always capture every perspective someone may have about a place or a problem. Do you have any additional comments or concerns about the working waterfront and how it is changing?
Open-ended question – text box

DEMOGRAPHICS

13. Do you own or rent a property or operate a business on or near the waterfront? Select all that apply.
Check boxes, people could check more than one
-Own property
-Rent property
-Operate a business
-Work for a business and/or industry
-None of the above
-Other – **text box**

14. What is your age group?
Options - people would select one
-18 to 24
-25 to 34
-35 to 44
-45 to 54
-55 to 64
-65+

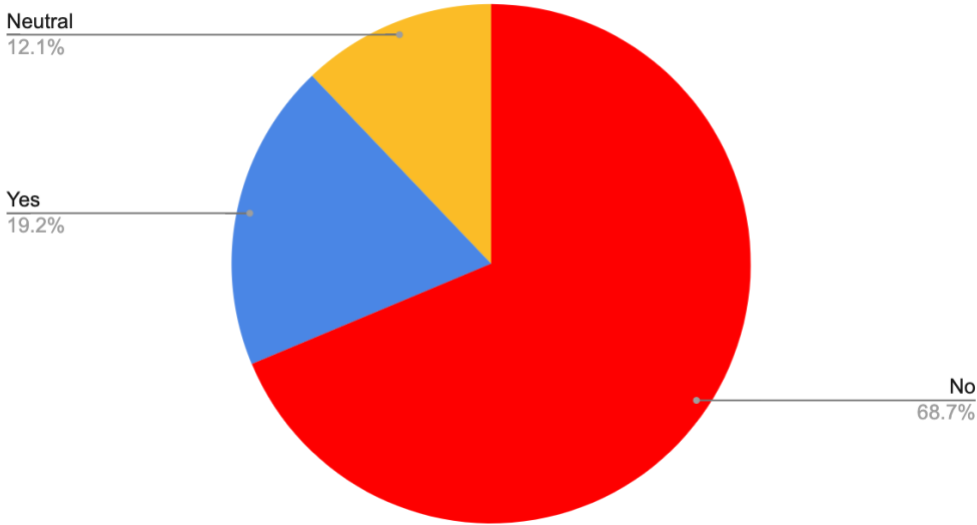# Appendix C: Figures 4, 5, and 6

We should only diversify uses

Neutral
12.1%

Yes
19.2%

No
68.7%

Figure 4: We should prioritize diversifying waterfront uses

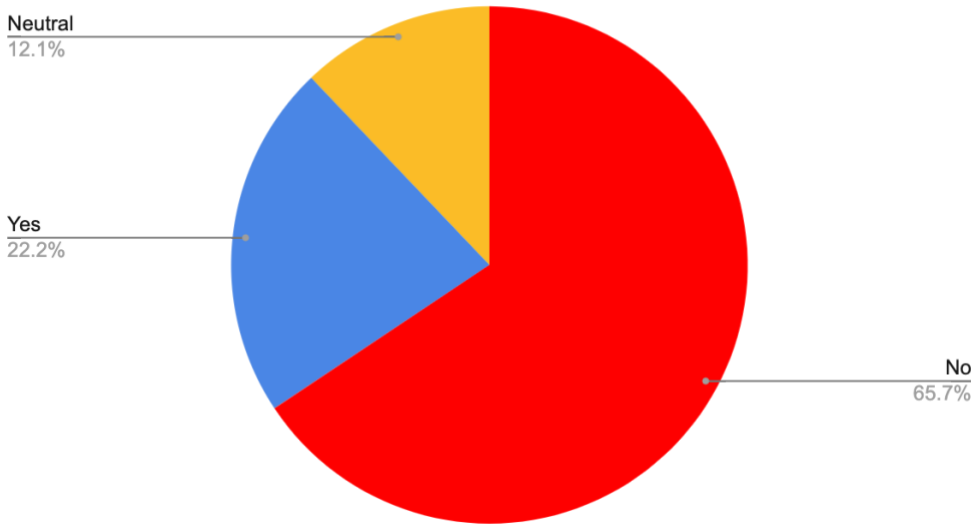## We should only prioritize traditional uses

Neutral
12.1%

Yes
22.2%

No
65.7%

Figure 5: We should only prioritize traditional working waterfront uses

We should prioritize traditional AND diversify uses
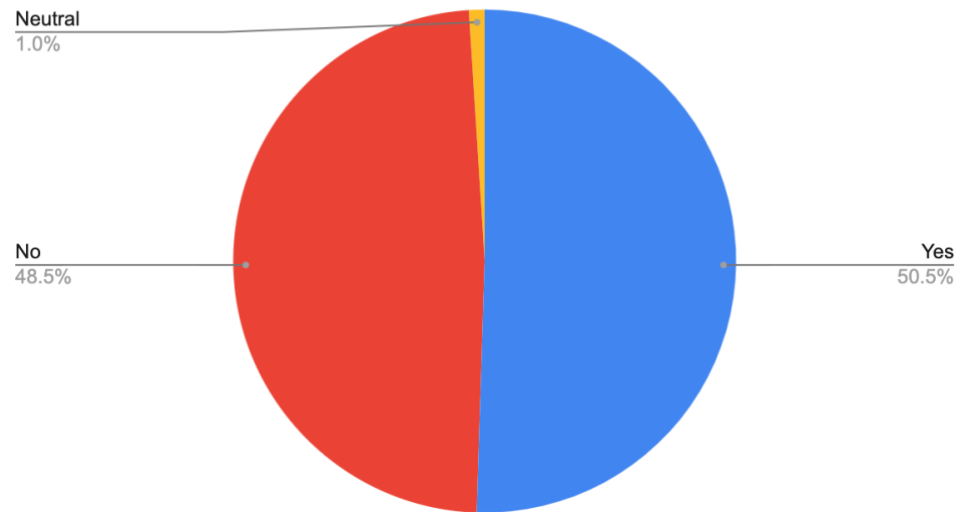
Neutral
1.0%

No
48.5%

Yes
50.5%

Figure 6: We should prioritize both traditional uses and diversifying uses