West Marin Adaptation Poll Results

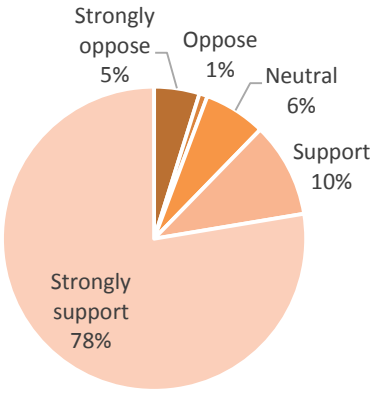
Collaboration: Sea-level Marin Adaptation Response Team (C-SMART)

January 2016 (updated June 2016 to include Muir Beach)

Over 200 people participated in the West Marin Sea Level Rise Adaptation Poll between November 2015 and June 2016, helping Marin County Community Development Agency understand which adaptation strategies might receive the most public support in the future. (Numbers in parentheses after comments indicate the number of respondents who made a particular comment.)

Policy questions for coastal hazard areas

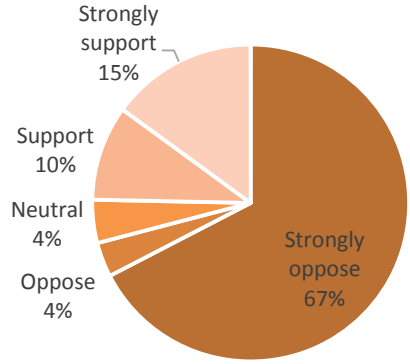
1. **Planning timeframes for construction standards in hazard zones should take into consideration the life expectancy of the structure or development being proposed.** *For example, should construction standards and permits for private residential or commercial use be evaluated on a different timeframe from plans for major public facilities (such as a fire station, Highway 1 or a new bridge)?*



Question 1 Comments:

- Planning timeframes for single family homes should not exceed the existing 50-year standard (5).
- Residential should not be required to last as long as public infrastructure.
- This should be more specific; private residences shouldn't have construction shut down for hazards that may be 50+ years away, even if that might be appropriate for a hospital or fire station.

2. **Require a sea level rise hazards analysis as part of a Coastal Development Permit for new projects on vacant land or for projects that expand the size of existing development.** *Landowners would be required to: 1) Establish the projected sea level rise range for the proposed project's planning horizon; 2) Determine how physical impacts from sea level rise may constrain the project site, including erosion, structural and geologic stability, flooding and inundation; 3) Determine how the project may impact coastal resources, considering the influence of sea level rise upon the landscape and impacts of adaptation strategies that may be used over the lifetime of the project; and 4) Identify alternatives to avoid resource impacts and minimize risks throughout the expected life of the development.*



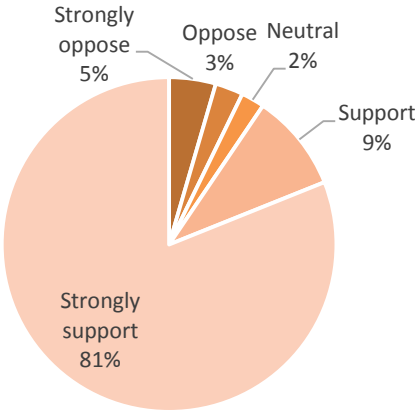
Question 2 Comments:

- New requirements should not make it more difficult to develop in ways that protect our homes from hazards. (5)

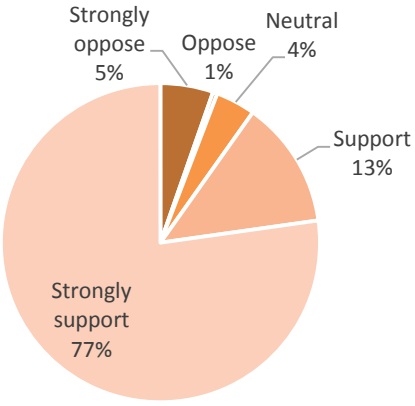
- Reasonable standards should allow for improvement/expansion of existing homes.
- Nobody knows how bad sea level rise will be.
- Given the wide variability in projections for sea level rise, a site-specific hazards analysis would provide little useful information at great expense; effectively prohibiting any development.
- The County should map out these hazards for homeowners as is done for earthquakes in Alquist-Prieto zones. It shouldn't be the burden or responsibility of the homeowner to determine what sea level rise will be in their area in 100 years. (3)
- Enough studies have been done. Requiring every resident to pay for their own study is overly-taxing and an unreasonable burden.
- Support analysis for new projects on vacant land, but oppose it (don't see need for) on expanding existing development.
- Yes, when the expansion is more than 35% of the existing development. (2)
- Generally, support but scope must be controlled. Similar though to the analysis in the city that informs owners of land quality.
- As long as it's a simple analysis, not CEQA scale.

3. Allow waivers or seek a Categorical Exclusion for projects in coastal hazard areas, including structures in the 100-year floodplain, that meet the following standards:

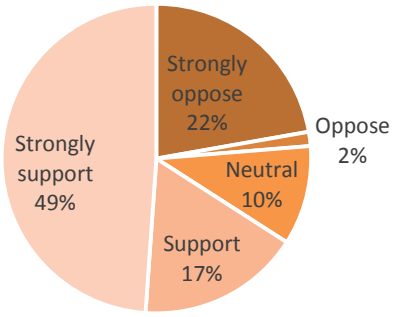
a. Alterations to existing structures that consist of interior or exterior renovations/ remodeling or the replacement of structural components (such wall, floor, and roof framing and cladding or foundation components) that do not alter the existing building footprint or increase the height, bulk or floor area of the structure.



b. Projects that meet safety standards, which may include breakaway walls, flood vents and elevation.



c. *Structures elevated to meet or exceed FEMA standards by up to 3 feet, result in up to 10% additional floor area[1], and do not exceed the current building height limit.*

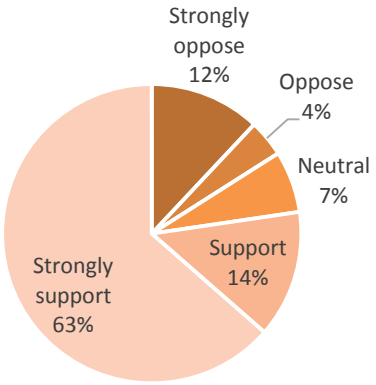


Question 3 Comments:

- Proposal C should be eliminated. Policies that permit safe development and hazard areas should be encouraged. (8)
- Seems like we should want to permit safe development in hazard areas. I do not understand how to vote on "c". Need clarity on whether question applies to remodels or new development. This question is very confusing. (4)
- We need to be able to protect our homes. We live directly on the water. With housing costs rising this is our only choice. We need to protect our homes from rising water.
- For a and c, support WHERE THE INCREASE IS LESS THAN 35%. In c allow 10-15% increase in building height to accommodate elevation of floor level.
- For a and c: allow improvement/ expansion of up to 50% and allow for some greater height to accommodate raised floor levels.
- On c there should also be some exemption or at least streamlined variance process for homes that have to exceed the current height limit if they are being built to meet FEMA standards or otherwise to resist flooding.
- C is too vague. We need to be able to expand/enhance our homes beyond 10% additional floor area. No one wants to pay $100k to raise a 600 sq. ft. shack that is in poor repair or worse, have to build new at the same size for $500k!
- Setting general standards and then providing more streamlined processing based on those standards strikes me as a good idea.
- Support if it's possible to indemnify permitting agencies and neighbors.
- As a property owner of a tiny cottage, determining expansion percentages (10%) without giving considerations to overall TOTAL home size and TOTAL lot size seems like very bizarre and arbitrary planning code. So neighbors that have already expanded to 2100 square feet in 1985 can add another 210 square feet, but I can only add 70 sf, even though my lot is larger?
- I think generally, homeowners in Stinson want to be able to have and let their neighbors have reasonable renovations for existing structures. The questions of new development on a vacant lot is a hot button that would bring different responses.
- We want Malibu exclusions. We will rebuild without FEMA $$. Note that max FEMA allows is $250k, costs 7-8k per year and deductible is $25-100k. Terrible "insurance". Maybe ok in Gulf but not here.

[1] The certified Marin County Local Coastal Program identifies additions resulting in an increase of less than ten percent of the internal floor area of an existing structure as exempt from a Coastal Development Permit. (Sections 22.56.050I and 22.56.055I carry out California Public Resources Code Section 30610).

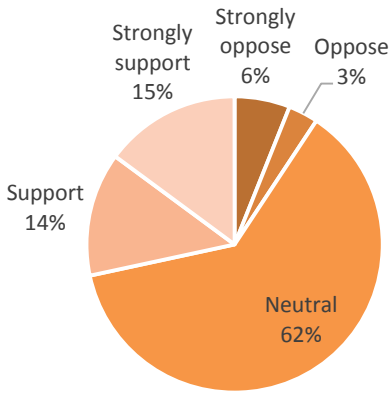
4. **Raise building height limits in coastal hazard areas to allow for adaptation to sea level rise.** *If strict height limits are maintained, some landowners may need to construct flat roofs or seek a variance to exceed the maximum height. Raising building height limits may affect views, but may also allow for greater design flexibility.*



Question 4 Comments:

- Raising height limits would have minimal view impacts from public roads along Stinson Beach. (5)
- Allow 10-15% increase in building height to accommodate elevation of floor level. (2)
- As sea levels rise, so should building height limits.
- This seems likely a reasonable and measured approach to adaptation. It can be implemented relatively rapidly and on a parcel by parcel basis as and when sea level conditions change. It's the very essence of adaptive management.
- This should be done in some combination of raised limits and exemptions (preferable) or variances (less preferable) for building above height limits when it is done for safety reasons in hazard zones.
- Depends on impact to existing buildings and community.

5. **Encourage the creation of local self-funded assessment districts to manage common hazard risks.** *Local assessment districts, such as County Service Areas, Hazard Abatement Districts or similar neighborhood-level entities, could enable communities to pool resources to obtain insurance coverage, conduct a community coastal hazards analysis, and fund local risk reduction and adaptation measures (e.g. raising private roads).*



Question 5 Comments:

- Need more information about how such districts would work to be able to answer this question. (10)
- Seems reasonable to require some level of local participation in managing costs of common hazard risks. Encouraging local districts would also let the local community decide what investments in hazard mitigation it is willing to make rather than having it imposed (or disallowed) by a regional or statewide entity. Local involvement is a big plus.
- Generally supportive but only if these are "voluntary" and follow existing local district organization, for instance in Stinson Beach the SBVA or Seadrift HOA.

- FEMA and the County task force studies are there to be used and should be used. The local community does not have the resources to do better and there is more risk of local political intervention.

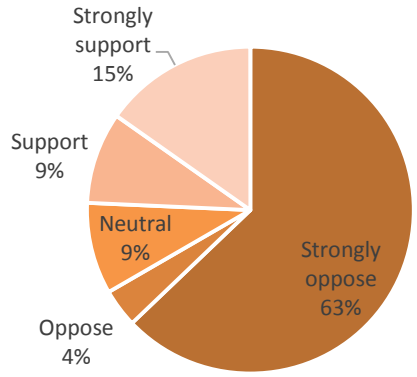
- What is the other option? Is this similar to what parts of Marshall does for its septic and water systems? They seem to work very well.

- I can't envision working class population being able to afford this. I think It discriminates against working people.

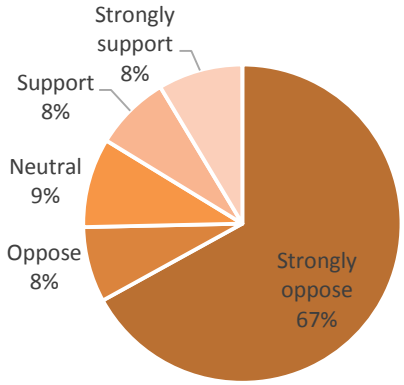
- For information, but they shouldn't control the owners' rights in their building and remodel projects. As long as they meet building requirements, owners should be able to do as they wish. Committee should also not have the power to delay construction whatsoever. Only to inform and recommend but frankly, if owners are meeting code, that's their right. Unless this committee can represent the interests of the community to influence policy that restricts owners unlawfully or unreasonably.

6. **Establish a managed retreat program.** *Purchase properties vulnerable to coastal hazards. Structures are typically demolished or relocated. The property would be restored to a natural state and used for open space or recreation. Lands of lesser habitat value and hazard vulnerability could be rezoned or made available in exchange for properties in hazard areas, along with equitable financing arrangements.*

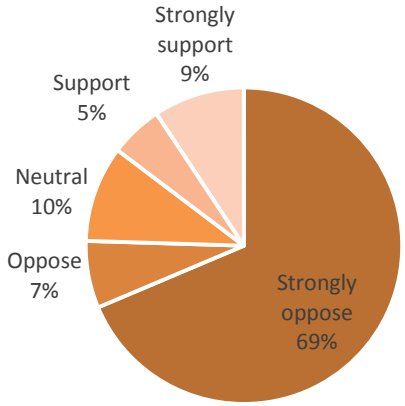
a. Acquire vacant vulnerable properties.



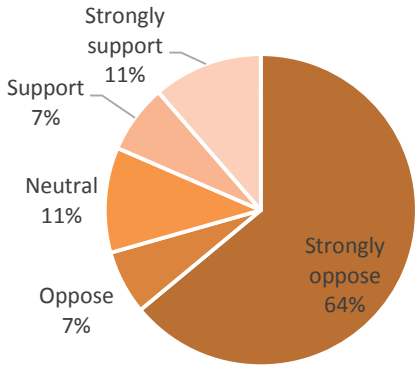
b. Acquire developed vulnerable properties before damage occurs.



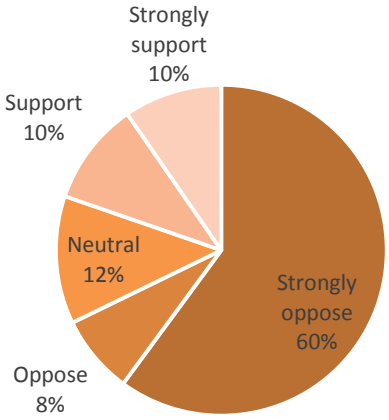
c. Acquire developed vulnerable properties only after significant destruction by storms or high tides.



d. *Explore the feasibility of a public parkland exchange program that encourages landowners to move out of hazardous areas.*



e. *Identify and make available (eg. through rezoning) land outside the hazard areas to allow owners of vulnerable properties to relocate nearby.*



Question 6 Comments:

- No County policies should be created to comply our homes need to be abandoned. (10)
- This is too heady, remote, and overwhelming to think about. I can't imagine how such programs would be implemented. Far-fetched.
- We would appreciate it if the County of Marin would leave us alone. We are old enough and smart enough to deal with the problems.
- Managed retreat is not a realistic nor desirable policy for Stinson in the short to medium term.
- This is a constitutionally questionable effort and likely to be wildly expensive if market prices are paid for taken property.
- Who will be paying to "acquire"? Where's the money coming from? Vulnerable houses won't be worth anything. (6)
- Funding for acquiring property is very unlikely! Deny rebuilding in demolished properties.
- Strongly disagree with managed retreat. It is one thing to restrict new development in sea rise hazard areas, it is quite another to basically move existing and longstanding development out of these areas. Finding a way to protect and adapt should be the first priority.
- Tricky item: Must be done so that is "just-in-time" in case projections on sea level rise that are flawed don't induce unneeded dislocation. Also, purchases should be structured to not reward owners who poured money in to their property with full warning of the dangers.
- I am against because wording is unclear. Would the purchase be mandatory? Or always a homeowner's option? Only with the concurrence and approval of the owner and NOT as an eminent domain activity.
- This seems like an overreach of government to suggest property owners

must be forced to abandon with unclear compensation.

- 6e ("relocate nearby"): "Where? Rezone Open Space land?"

- Not happy about Park lands being used for private houses. I would strongly support if this didn't mean developing public parkland. If it does, I'm not sure.

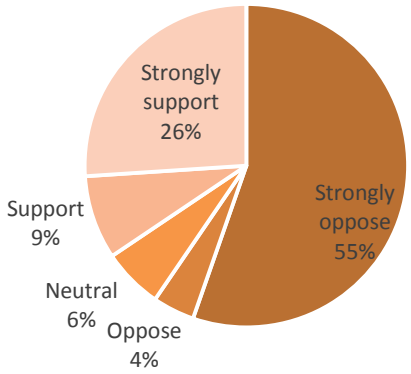
- Work with community Land Trusts to acquire multi-family and generational buildings.

- This seems draconian, extraordinarily expensive and premature. County policies should allow for an "adaptive" incremental approach as the actual effects of climate change and sea level rise become apparent.

- Revisit plans after 10 years so more history can be developed.

- I strongly support creative use of resources with an eye to preventing or addressing problems of expected sea rise and flooding for properties that are going to be affected or which have been affected. Allowing land in higher elevation to relocate for those who are facing loss may be a workable option I would support but a lot of work would need to be done to make that happen. What is not clear is who pays for the damaged or high risk land and would it be market value or how would reimbursement be determined. This is a community that wouldn't vote Measure A, remember? But for the feds it may be a cheaper thing than the FEMA insurance reimbursements over time. It may make for good long-term policy to clear the lots away that are most at risk.

7. Prioritize adaptation options that protect, enhance, and maximize protection of coastal resources and public access. *Give full consideration to innovative nature-based approaches such as living shoreline techniques.*



Question 7 Comments:

- Text does not acknowledge property owner rights provided for by the Coastal Act. (6)

- This appears reasonable, but what about property owner rights? (2)

- "Nature-based" and "Living shoreline" sound reasonable but are a bit nebulous. I think this could be done in conjunction with graduated building adaptations.

- This is the only solution. Work with Nature, not against.

- Yes, more cost effective and durable (2).

- Increase dunes and/or beach area by augmenting or adding plants/sand – Protect new sewer/water/utility lines with new building or BIG renovations.

- Wait until the "living shoreline" experiments on the east coast have survived a few storms.

- In a vacuum? How does this interface with the fact that homes and businesses exist in these areas?

- Currently developed property is more important to protect.

- The problem with Policy 7 is that it fails to take into account the comparative costs and benefits of other options.

8. Please provide any other suggestions for policy initiatives to address sea level rise in Marin County.

- We support reasonable policies that allow property owners to develop in ways that protect against sea level rise. (75)

- Please try to help property owners without making it harder to develop or taking steps which violate their rights. Government should help - not create a burden. Give property owners options that they can elect to implement to protect their property and assets against a rise in sea level. (2)

- Any mandates on property must adhere to the laws of land ownership, and rights of land ownership.

- Existing residents should be allowed to structurally upgrade and do interior renovation – empty land may need to be treated differently.

- I think we should allow people to expand/enhance if they tick a box that says they will not seek funds for repairs/rebuilding from FEMA. In other words- "I am willing to take on the financial risk of destruction, but I want a second bathroom in exchange for that risk."

- Continued community meetings to raise awareness of possible or probable damage to currently owned parcels. Frequent neighborhood meetings that inform, collaborate, and plan. Have information and community dialogue at Countywide libraries.

- Study how to alert us of tsunamis.

- I am not into the 3-30' rise in ocean levels in the next 10 to 85 years.

- Do not move sand. It is temporary, expensive, useless.

- I would like to see a focus on green infrastructure, barrier wetland restoration and other ways to adapt through ecological enhancement.

- Prioritize planning for alternative public infrastructure (roads, power, water) to continue service to residents whose properties are near but not directly affected by sea level rise.

- County and State should prioritize raising low sections of roads over 10 and 20 years to reduce traffic stops due to high tides.

- I support a wait & see attitude. I see information that supports a much smaller change than some are proposing.

- Sea level rise is real and policies should provide for sensible management of property in areas most likely to be affected.

- Please try to avoid causing decline in property values. Be sensitive to the need for balance – preparation is prudent, but let's not impose too much expense too quickly. Also, please try to explain the connection between the work you are doing, and what is required to get and keep flood insurance. If there could be coordination with flood insurance requirements, that would be good.

- Require realtors to give written opinions on ocean rise (and varied papers reference – I am aware not all think same issues about timeline etc.

- There is a balance to be maintained, Local, state and federal governments should allow development on a reasonable basis, but remove the subsidies to those who build in risk areas – no federal insurance for example or subsidies to rebuild.

- FEMA should be consulted on all policy making creation. Although states make policy, they make it to fit FEMA regulations. This without them saying what policy should be, of course.

- Short term goals make sense 0-20 years. Long term is too uncertain, range of 25cm-100cm, 75 years, to make firm long term rules.

- The County and the Coastal Commission should develop objective criteria to identify public and private properties that are seriously threatened by sea level rise, king tides, and storm risks. For such properties, their significant environmental impacts already exist. Therefore, specific remedies (such as elevating structures) that do not in themselves have additional serious environmental impacts should be determined, widely publicized, and allowed. Those specific remedies should be permitted without requiring extensive bureaucratic regulation -- e.g., property owners should be required to do no more than give notice to the agency and permit a summary subsequent inspection.

- County loan programs to raise buildings above the floodplain and pay back on property taxes or on sale of property. (Revolving fund.)

- One size fits all policies that don't allow property owners to have a say in what happens to them can create unintended problems.

- The lenders involved in financing the houses threatened by sea level rise will develop initiatives to protect themselves as will homeowners. The citizens don't need the County's best efforts at telling them how to protect their real estate investments. For most of us it is our single biggest investment so we are paying attention.

- I'm very appreciative of this effort to engage citizens and residents.

- Dredge Easkoot Creek regularly to make homes less vulnerable. (2)

- Sea Level rise is one issue but there are continuing flooding issues that are not from sea level rise alone. The issue with the Creek flooding continues and Measure A should be brought back again I believe with continued effort. The water wants to flow out to the ocean across the parking lot the feds now control rather than only out to the lagoon. I believe there should be a way added so that in winter the water from the hills can get out to the ocean without having to travel through Stinson Beach lowlands and putting at risk so many homes and streets for flooding. A big pipe bypass that could be turned on and off could take some of the water in heavy winter flows out to the ocean while being turned off in summer months so water will flow through the usual route to the lagoon for the wildlife and riparian benefits. Community information meetings and distribution of sea rise and flood maps are excellent actions I applaud. Mailings to inform property owners and residents are helpful.

MUIR BEACH

The numbers in **red** indicate how many poll respondents expressed support for the strategy. Responses from 26 people were received via Open Marin in June 2016.

	Near-term	*Medium-term*	*Long-term*
Protect	1) Maintain existing seawalls and other existing hard protection. **19/ 73%** 2) Improve bluff stability by following best practices for drainage. **24/ 92%** 3) Improve bluff stability with native landscaping. **24/ 92%**	4) Research the feasibility of dune/beach maintenance as a protective measure. **16/ 62%**	5) *n/a*
Accommodate	6) Convene a working group of County/local stakeholders to brainstorm a resolution to the Pacific Way bridge vulnerability. **22/ 85%** 7) Continue public outreach and education around sea level rise and coastal hazards. **19/ 73%**	8) Identify triggers for elevation of vulnerable sections of Pacific Way and Shoreline Highway (eg. daily high tide or extreme high tides). **24/ 92%** 9) Support efforts to monitor Redwood Creek restoration project as a nature-based adaptation to sea level rise. **18/ 69%** 10) Explore the feasibility of constructing a new Pacific Way bridge appropriate to the community character and to accommodate Redwood Creek floodplain. **24/ 92%** 11) Continue to monitor water quality and require onsite wastewater systems to meet code and adapt to saltwater intrusion as needed. **22/ 85%**	12) Monitor water quality and move wells upland if needed. **22/ 85%** 13) Elevate or floodproof buildings in the floodplain to meet FEMA safety requirements plus any additional height needed for sea level rise. **16/ 62%**
Retreat	14) Require new blufftop development to be safe from hazards and easily movable in response to bluff erosion. **15/ 58%** • See options in the "Policy Questions for Coastal Hazard Areas" section.	15) Remove seawall to maintain sediment supply to beach. **5/ 19%** 16) Research feasibility of a managed retreat program to provide property owners with options for moving out of hazardous areas, especially after damaging storms. **16/ 62%** 17) Implement a rolling conservation easement program to prevent new shoreline armoring, while enabling property owners to remain while it is safe to do so. **12/ 46%**	
Other	• Raise Route 1 on the flat stretch by the Pelican to provide continuing access in flood situations. Only a couple feet will do. • What impact on property owners would removing the seawall have, and how much would it impact sediment on the beach? Most of these are very good ideas. • Careful monitoring of pump house & wells so water does not become contaminated since they are located in flood plain. Strong coordination between our CSD, Disaster Committees and our Volunteer Fire Dept. Is there any budget anywhere which could help pay for these groups to create a well-developed plan? • This is not an additional idea, but more a need for education. In the near-term strategy, one possibility is maintaining the seawall. In the long-term strategy, one possibility is removing it. It's hard to know at this point, without more information, which solution is better for our community. Is there a reason to keep it now, or would it be better to just remove it outright? Which of the short- or medium-term range strategies compromise our ability to maintain long-term safety? I am open to whatever the best solutions are at every level, but again, it's hard to know which compromise later efforts. • To notice the CSD of any changes so they can bring it to the attention of residents most effected in a timely manner - to work collaboratively with the CSD in this regard. • Install a desalinization plant to counteract the sea level rise. • Add rip rap to prevent erosion of bluffs so as to protect existing houses. Also, please understand that those choices I did NOT choose means that I may strongly disagree with them. • Consider connecting to the MMWD via piping to Muir Woods. Any federal funds for this? • Ascertain what areas of Hwy 1 to Hwy 101 are vulnerable to SLR and develop plan to implement necessary repairs for access. • Define better actual risk for homes affected. Please don't generalize and require people to vote on issues they are not directly affected by.		

STINSON BEACH

The first set of numbers refer to locations on maps, and the numbers in **red** indicate how many poll respondents expressed support for the strategy. *Entities in blue italics represent POTENTIAL implementing agents or funding sources.*

	Near-term	Medium-term	Long-term
Protect	18) Restore and enhance dunes. *Local assessment district.* **28/ 33%** 19) Place sand on beaches. *Local assessment district.* **23/ 27%** 20) Enhance living shoreline on lagoon side for temporary flood protection. *Local assessment district, Government grants.* **28/ 33%** 21) Maintain existing seawalls and revetments throughout community. *Landowners.* **86/ 100%**	22) Construct low-profile sand-covered seawall from end of existing Seadrift revetment toward southeast end of beach. *Local assessment district.* **32/ 37%** 23) Continue to place sand on beaches. *Local assessment district*. **18/ 21%** 24) Construct artificial reef or other offshore structure to minimize wave and erosion damage. *Local assessment district.* **11/ 13%**	25) Continue to place sand on beaches. *Local assessment district*. **17/ 20%**
Accommodate	26) Elevate red buildings impacted in the near-term. *Landowners.* **10/ 12%** 27) Flood proof red buildings. *Landowners.* **9/ 10%** 28) Update substandard septic systems to meet code. *Landowners.* **29/ 34%** 29) Continue to retrofit water meter connections. *Landowners.* **24/ 28%** 30) Elevate Calle del Arroyo. *County, local assessment district.* **81/ 94%** 31) Elevate private roads in Calles and Patios. *Local assessment district.* **20/ 23%**	32) Elevate orange buildings and utilities (impacted in the medium-term). *Landowners.* **7** 33) As needed, abandon leach fields and convert septic tanks to holding vessels. *Landowners.* **13** 34) Elevate Shoreline Hwy. along Bolinas lagoon. *State*. **70** 35) Realign Shoreline Hwy. along Bolinas lagoon. *State.* **19** 36) Develop boardwalk access to elevated buildings in the Calles and Patios. *Local assessment district.* **4**	37) Elevate roads that are subject to flooding. *Local assessment district.* **17/ 20%** 38) Develop community wastewater system. *Local service providers, Local assessment district.* **8/ 9%**
Retreat	39) Relocate critical facilities such as fire station and/or emergency generator. *Local service providers, County.* **29/ 34%** • See options in the "Policy Questions for Coastal Hazard Areas" section.	40) Relocate red buildings. *Landowners.* **8/ 9%** 41) Remove shoreline protective devices that limit inland migration of beach. *Landowners.* **2/ 2%** 42) Remove development that limits inland migration of beach. *Landowners.* **2/ 2%**	43) Relocate orange buildings. *Landowners.* **1/ 1%**
Other	• I support landowner Accommodation options that are non-mandatory and encouraged by permit waivers. (30) • #13.: Needed now"; #21.: "This is a good idea regardless of sea level rise." #s23 & 26: "Where?" • Continue to execute on and prioritize the Bolinas Lagoon Restoration Project! • Can the shoreline be enhanced or adapted to collect large amounts of seawater on a more permanent basis? • 16. & 21.: "Tier/separate disposal/dispersal systems for black water and gray water to reduce costs."; 7.: "?" • Allow for the development of small scale desalination plants. Dredge Easkoot Creek and the bypass uptown. • 6. & 8.: "Waste of money! Sand gone almost every winter."; 21.: "Wildly expensive / very unlikely again…"; 22.: [Changes "Relocate" to:] "Elevate"; 24.: "No, bad idea!"; 25.: "Funding!" • I cannot afford local assessment or homeowner stuff. • 5.-7.: "every time we mess with nature on beaches --i.e., east coast–nothing good comes of it"; 15.: "too expensive"; 16.: Have "holding vessels" ever been tried on a beach town? Where, when, & did it work? 18.: "way too expensive if you do this how about an elevated wooden boardwalk for bikers over edge of lagoon"; 23.-25. "none of these"; 26.: "no". • I like the natural approach. • I don't support the government doing any of these.		

BOLINAS

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	Near-term	Medium-term	Long-term
Protect	1) Maintain existing revetments, seawalls, and levees. *Landowners, local assessment district.* **2/ 40%** 2) Protect bluffs with armoring. *Local assessment district.* **2/ 40%** 3) Place sand on beaches. *Local assessment district.* **2/ 40%**	4) Continue to place sand on beaches. *Local assessment district.* **3/ 60%** 5) Create oyster reef in Bolinas Lagoon. *Government grants.* **3/ 60%**	6) Install wall around sewage lift station entrance. *Local service provider.* **5/ 100%**
Accommodate	7) Elevate red buildings and utilities impacted in the near-term. *Landowners.* **1/ 20%** 8) Flood proof red buildings. *Landowners.* **1/ 20%** 9) Elevate bridge over Pine Gulch Creek. *County.* **2/ 40%** 10) Elevate Wharf Rd. *County.* **3/ 60%** 11) Acquire agricultural land for wetland restoration. *County, land trust.* **2/ 40%**	12) Elevate orange buildings and utilities impacted in the medium-term. *Landowners.* **2/ 40%** 13) Flood proof orange buildings. *Landowners.* **0** 14) Elevate Olema-Bolinas Road. *County.* **1/ 20%** 15) Increase height of opening enclosures and pedestals for above ground equipment. *Local service provider*. **2/40%** 16) Realign Bob Stewart Trail at exposed segments. *County, State.* **2/40%**	17) Elevate yellow buildings impacted in the long-term. *Landowners.* **0** 18) Flood proof yellow buildings. *Landowners.* **0** 19) Acquire land to develop alternative route from Big Mesa to Horseshoe Hill Road. *County.* **1/20%**
Retreat	• See options in the "Policy Questions for Entire Coastal Zone" section.	20) Relocate red buildings. *Landowners.* **2/40%** 21) Remove shoreline protective devices that limit inland migration of beach. *Landowners.* **2/40%** 22) Remove development that limits inland migration of beaches. *Landowners.* **3/60%** 23) Relocate coastal access points. *County, State*. **2/40%** 24) Relocate sewage lift station to upland location. *Local service provider.* **2 /40%** 25) Realign section of Shoreline Hwy. along lagoon (would require cutting into bluffs and stabilizing them). *State.* **2/40%**	26) Relocate orange buildings. *Landowners.* **1 /20%** 27) Remove structures that inhibit sediment supply to marshes and beaches. *Landowners.* **1/20%**
Other	• Section of PRS to Olema. Relocate Hwy 1 eastward into the nearby hills. We would also gain valuable tons of earth used in elevating other sections of Highway. • Replace and enhance seawall & groins to protect beach cliffs. Allow coastal permits to protect beach property. Lower costs permits & speed process like you did for Surfer's Overlook. Remove sediment from the lagoon & clear trees from Kent Island and debris from lagoon.		

INVERNESS

The first set of numbers refer to locations on maps, and the numbers in **red** indicate how many poll respondents expressed support for the strategy. *Entities in blue italics represent POTENTIAL implementing agents or funding sources.*

	Near-term	***Medium-term***	***Long-term***
Protect	1) Restore/ enhance wetlands along Tomales Bay. *Local assessment district, State, Government grants.* **6/100%** 2) Create oyster reef in Tomales Bay. *Local assessment district, State, Government grant.* **2/33%**	3) Construct horizontal levee along Tomales Bay. *Local assessment district, State, Government grant.* **0** 4) Convert affected segments of Sir Francis Drake Blvd. to levee (also protects water pipeline in Inverness Park and downtown. *County, local service providers.* **4/67%**	5) Armor/ convert additional segments of Shoreline Hwy. or Sir Francis Drake Blvd. to levee. *County, local service providers.* **3/50%**
Accommodate	6) Elevate red buildings and utilities impacted in the near-term. *Landowners.* **4/67%** 7) Flood proof red buildings. *Landowners.* **3/50%** 8) Permit houseboats. *County, State.* **0** 9) Update old septic systems. *Landowners.* **5/83%**	10) Elevate orange buildings and utilities impacted in the medium-term. *Landowners.* **3/50%** 11) Flood proof orange buildings. *Landowners.* **2/33%** 12) Elevate Shoreline Hwy. *State.* **4/67%** 13) Develop community wastewater system. *Local service provider, local assessment district.* **3/50%**	14) Elevate yellow buildings impacted in the long-term. *Landowners.* **3/50%** 15) Flood proof yellow buildings. *Landowners.* **2/33%** 16) Create moorings for boats when marinas are inundated. *State, County* **3/50%**
Retreat	• See options in the "Policy Questions for Entire Coastal Zone" section.	17) Relocate red buildings. *Landowners.* **3/50%** 18) Relocate coastal access points. *County, State.* **4/67%** 19) Remove shoreline protective devices that limit inland migration of beaches and wetlands. *Landowners.* **4/67%** 20) Remove development that limits inland migration of beaches and marshes. *Landowners.* **1/17%** 21) Realign affected segments of Sir Francis Drake Blvd. along Tomales Bay. *State.* **3/50%**	22) Relocate orange buildings. *Landowners.* **3/50%** 23) Remove structures that inhibit sediment supply to marshes and beaches. *Landowners.* **4/67%**
Other	• 10: "only with financial assistance" • 6: "maybe …" • Project: "Bring back ferry from Pt. Reyes to Inverness"		

POINT REYES STATION

The first set of numbers refer to locations on maps, and the numbers in **red** indicate how many poll respondents expressed support for the strategy. *Entities in blue italics represent POTENTIAL implementing agents or funding sources.*

	Near-term	***Medium-term***	***Long-term***
Protect	1) Restore/ enhance wetlands along Tomales Bay. *Government grants.* **13/100%** 2) Armor segments of Shoreline Hwy prone to flooding in near-term. *County, State.* **7/54%**	3) Horizontal levee along Tomales Bay *Local assessment district, Government grant.* **2/15%** 4) Armor segments of Shoreline Hwy prone to flooding in medium-term. *County, State.* **7/54%**	5) Armor road segments of Shoreline Hwy. or Sir Francis Drake Blvd. prone to flooding in long-term. *County, State.* **5/38%**
Accommodate	6) Elevate Green Bridge on Shoreline Hwy. *State.* **11/85%**	7) Elevate affected segments of Shoreline Hwy. *State.* **9/69%** 8) Elevate Sir Francis Drake Blvd. with pipeline below. *County, NMWD.* **8/62%**	9) Elevate yellow buildings. *Landowners.* **7/54%** 10) Flood proof yellow buildings *Landowners.* **2/15%**
Retreat	• See options in the "Policy Questions for Entire Coastal Zone" section.	11) Relocate red buildings. *Landowners.* **3/23%** 12) Relocate coastal access points *County, State.* **6/46%** 13) Realign affected segments of Shoreline Hwy. *State.* **5/38%**	14) Relocate orange buildings *Landowners.* **2/15%** 15) Relocate Gallagher well upstream *Local service provider.* **8/62%** 16) Remove shoreline protective devices that limit inland migration of beaches and wetlands. *Landowners.* **6/46%** 17) Remove development that limits inland migration of beaches and marshes. *Landowners.* **8/62%**
Other	• Close Levee Road when necessary.		

EAST SHORE

The first set of numbers refer to locations on maps, and the numbers in **red** indicate how many poll respondents expressed support for the strategy. *Entities in blue italics represent POTENTIAL implementing agents or funding sources.*

	Near-term	***Medium-term***	***Long-term***
Protect	1) Restore/ enhance wetlands along Tomales Bay. *Government grants.* **5/100%** 2) Create oyster reef along Tomales Bay. *Government grant.* **3/60%**	3) Construct horizontal levee along Tomales Bay. *Local assessment district, Government grant*. **2/40%** 4) Armor segments of Shoreline Hwy prone to flooding in the medium-term. *State.* **5/100%**	5) Armor segments of Shoreline Hwy prone to flooding in the long-term. *State.* **5/100%**
Accommodate	6) Elevate red buildings and utilities impacted in the near-term. *Landowners.* **4/80%** 7) Flood proof red buildings. *Landowners.* **3/60%** 8) Permit houseboats. *County, State.* **1/20%** 9) Update old septic systems. *Landowners.* **0**	10) Elevate orange buildings and utilities impacted in the medium-term. *Landowners.* **2/40%** 11) Flood proof orange buildings. *Landowners.* **2/40%** 12) Elevate affected roads, including Shoreline Highway at Walker Creek. *State.* **5/100%** 13) Improve coastal access facility or trail to account for sea level rise. *County, State.* **5/100%**	14) Elevate yellow buildings. *Landowners.* **2/40%** 15) Flood proof yellow buildings. *Landowners.* **2/40%** 16) Create moorings for boats when marinas are inundated. *State, County.* **3/60%**
Retreat	17) Relocate shoreline wells and septic leach fields to the east of Shoreline Hwy. *Landowners, County (ongoing).* **5/100%** • See options in the "Policy Questions for Entire Coastal Zone" section.	18) Relocate red buildings. *Landowners.* **2/40%** 19) Relocate coastal access points. *County, State.* **3/60%** 20) Realign affected segments of Shoreline Hwy. *State.* **3/60%** 21) Relocate critical facilities. *Local service providers, County.* **5/100%**	22) Relocate orange buildings. *Landowners.* **2/40%**
Other			

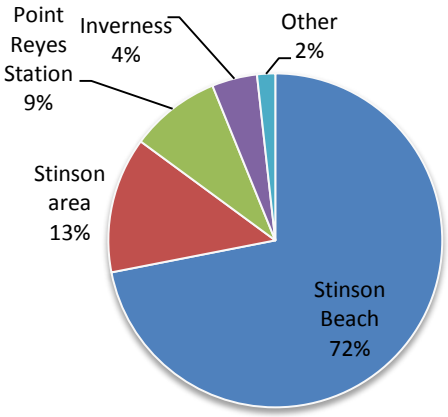
DILLON BEACH

The first set of numbers refer to locations on maps, and the numbers in **red** indicate how many poll respondents expressed support for the strategy. *Entities in blue italics represent POTENTIAL implementing agents or funding sources.*

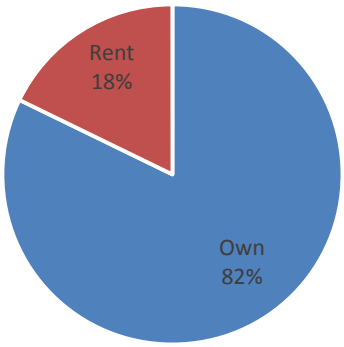
	Near-term	***Medium-term***	***Long-term***
Protect	N/A	D2) Maintain sand dunes with sand placement and revegetation*Landowner, government grants.* **2/100%**	D7) Continue to maintain sand dunes with sand placement and revegetation *Landowner, government grants.* **2/100%**
Accommodate	N/A	D3) Elevate orange buildings and utilities impacted in the medium-term. *Landowners.* **1/50%** D4) Flood proof orange buildings. *Landowners.* **1/50%**	N/A
Retreat	D1) Relocate well along Dillon Creek at Bay Dr. inland. *Local service providers.* **2/100%** • See options in the "Policy Questions for Entire Coastal Zone" section.	D5) Relocate red buildings. *Landowners.* **0** D6) Relocate sewage pump inland. *Local service providers.* **1/50%**	D8) Relocate orange buildings. *Landowners.* **1/50%** D9) Relocate parking lot. *Landowners.* **2/100%**
Other	As the owner of the home in the village's northwestern-most corner, it's been my joy to see that the Klines have allowed the natural dunes to return horizontal to the surf at the north end of the beach. This must be continued. Formerly, the Lawsons had scraped the entire area flat for parking. Those natural, vegetated dunes are our most important erosion control for our homes on the bluff above.		

Evaluation and Participant Information

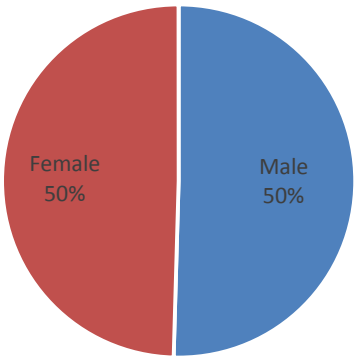
1. Where do you live?



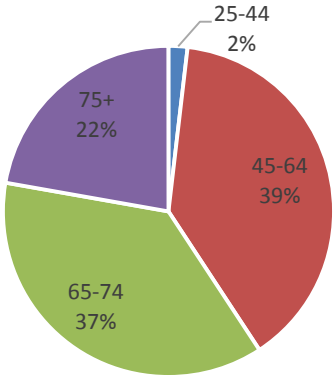
2. Do you own or rent your home?



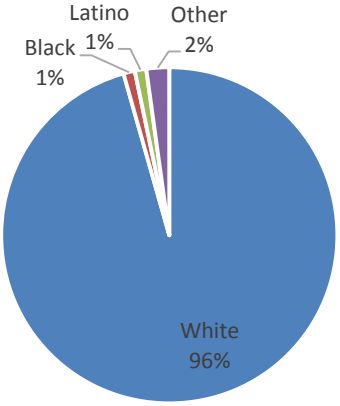
3. What is your gender?



4. What is your age bracket?



5. What is your race/ethnicity?



6. What is your household income?