



Opportunity Matrix for Climate Resilience Strategies



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(Initial Draft - Capturing Participant Input)

ABOUT THE CLIMATE RESILIENCE ROUNDTABLES

In recognition of current and future climate impacts, the Community Environmental Council (CEC) is convening a series of roundtables that address climate resilience and adaptation issues in Santa Barbara County.

The roundtables are organized around the identified threats from the Fourth California Climate Change Assessment: sea level rise, heavy precipitation events, temperature increase, increased wildfire, drought, and decreasing snowpack and water supply. Together with community leaders and partners, we will examine these threats through the lens of public and mental health, social justice, economic impacts, infrastructure vulnerabilities, and natural systems and working landscapes.

The first Climate Resilience Roundtable, held in November 2019, focused on wildfire and smoke. We are now tackling sea level rise and flooding, which will cause beach and bluff erosion while exposing critical infrastructure, neighborhoods and other community assets to severe, frequent flooding.

As we move through the roundtable series a corresponding Resilience Opportunity Matrix will be developed for each topic. It is our hope that this will serve as an incubator for community-generated climate resilience initiatives and projects, and that each Opportunity Matrix will help elevate the big bold ideas and actions we can take now. By the end of the roundtable series, we will have a powerful set of tools to help us work together toward a more resilient Santa Barbara County.

ABOUT THE RESILIENCE OPPORTUNITY MATRIX

This Resilience Opportunity Matrix captures the collective output and ideas generated by 120+ participants from the Community Environmental Council's *Climate Resilience Roundtable: Sea Level Rise & Flooding* facilitated by LegacyWorks Group on March 4, 2020 at Direct Relief. The CEC and LegacyWorks team did its best to capture this information verbatim from the input provided by participants. Input was captured from two different facilitated exercises that focused on gathering:

- **Big Bold Ideas** to boost community resilience to sea level rise and flooding
- **15% Solutions** for actions within our power, authority and resources to increase community resilience.

PROJECT SUPPORTERS



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BIG BOLD IDEAS

The first section or 'worksheet' of the document captures the Big Bold Ideas participants offered up in the last exercise on March 4. These are listed in order of the crowd-sourced score that each idea received during the exercise. The maximum score was 25 with five different participants scoring each idea on a 1-5 scale. In cases where ideas received more than 5 votes we normalized those scores by taking an average of the scores and multiplying by 5. As a result some projects have a score that is not an even number. The number in the first column corresponds to its overall rank based on those scores.

This matrix includes some initial draft "impact areas" that we dropped in as a starting point, drawing from the input and discussions on March 4. One possible next step is to rank top projects for their impact within these impact areas, though that's not necessary given the initial crowd-sourced scoring.

15% SOLUTIONS

The second worksheet includes all the responses to the prompt for 15% Solutions - actions participants can take right now within their power, authority and resources to increase community resilience. We entered this data as it was shared, with multiple ideas that were written by a participant on a single large post it entered here in a single cell. The ideas are sorted by table number 1-14 (second column). Reviewing these shines a light on how participants saw the actions available to them and what topics were prominent at a given table. If valuable, we could duplicate this sheet and break each idea out into a separate cell, thereby making it possible to assess the relative frequency/abundance of different actions.

BIG BOLD IDEAS CATEGORIZED

The second worksheet includes initial draft categorizations (Column E), and the ideas are sorted according to this column in order to CLUSTER ideas that are similar into groups. Reviewing this worksheet provides a sense of which categories were most important to participants. We used our judgment to put each idea in a category that seemed appropriate, though we recognize that projects could be categorized many different ways and that other people might categorize things differently. Typically, in a process like this we expect categorizations to evolve and change if we or a subset of participants elect to advance the categorization and prioritization of projects using this tool. Note that many ideas are actually composites of multiple ideas, so those ideas could fall in more than one category. Below is a chart showing the categories and number of ideas and average score for those ideas, with the most ideas for Education/Outreach and the highest scores for Nature Based Solutions, Climate Mitigation and Managed Retreat/Adaptation.

| Category | # of Ideas | Average Score | Total Score |
|--|------------|---------------|-------------|
| <i>Analysis/ Prioritization</i> | 11 | 18.27 | 201 |
| <i>Climate Mitigation</i> | 7 | 19.86 | 139 |
| <i>Education/ Outreach</i> | 21 | 17 | 363 |
| <i>Managed Retreat/ Adaptation</i> | 15 | 19 | 278 |
| <i>Nature Based Solutions</i> | 9 | 20.67 | 186 |
| <i>Personal Actions</i> | 5 | 17.8 | 89 |
| <i>Policy</i> | 11 | 15.82 | 174 |
| <i>Sediment Management</i> | 5 | 17.8 | 89 |

GIVE FEEDBACK ON THE OPPORTUNITY MATRIX

If you'd like to add comments, questions or suggestions to the Resilience Opportunity Matrix, we invite you to go to:

<https://bit.ly/slr-opp-matrix> and provide your thoughts. Your input will help guide us in refining and organizing this solutions-focused document for our community to use and reference.

More information about the Opportunity Matrix is available at the end of this document or by contacting LegacyWorks at:

inquire@legacyworksgroup.com or www.legacyworksgroup.com

About the COMMUNITY ENVIRONMENTAL COUNCIL (CEC)

Since 1970, CEC has incubated and innovated real life solutions that directly impact climate change. Our programs lead to clean vehicles, solar energy, resilient food systems and reduction of single-use plastic. We educate and activate the community by producing events like the annual Santa Barbara Earth Day Festival.

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THIS WORKSHEET IS SORTED BY DRAFT CATEGORIES IN COLUMN E (SELECT ROWS 5 - 107) > DATA MENU > SORT BY DATA RANGE > SELECT COL E)

| # | Project Name | Crowd Score (Out of 25) | Categorization (1st Draft) | Secondary Category | Next Steps > | Existing Santa Barbara County Programs in This Arena | Core Needs in This Arena |
|----|--|-------------------------|----------------------------|--|---|--|--------------------------|
| 7 | Map socially vulnerable neighborhoods with overlays of projected climate impacts to drive priority projects | 22 | analysis/prioritization | social vulnerability | These columns come into play in future steps of the prioritization process. | | |
| 17 | Prioritization based on community values (open space, coastal resources, roads, access, infrastructure) | 21 | analysis/prioritization | community values based | | | |
| 24 | Determine how/where shorelines can retreat | 20 | analysis/prioritization | managed adaptation/retreat | | | |
| 25 | Create multidisciplinary team to do needs/strength assessment on community resilience based on ecological/infrastructure/human needs; map redundancy and diversity of resources for each level | 20 | analysis/prioritization | community resilience needs/strength assessment | | | |
| 32 | Build consensus on which assets and infrastructure to protect | 19 | analysis/prioritization | consensus building | | | |
| 42 | Regional Caltrans adaptation study with multiple resilience goals - for transportation/coastal habitat and community equity | 18 | analysis/prioritization | regional planning/multi-benefit | | | |
| 52 | Regional monitoring of SLR, sand movement and economic resources | 17 | analysis/prioritization | | | | |
| 53 | Collaborate on solutions and modeling of strategies to assess/compare impact (i.e., sea wall impact down coast) to select best solutions | 17 | analysis/prioritization | | | | |
| 54 | Leverage local/regional scientific resources and funding for plan for resilience | 17 | analysis/prioritization | regional funding/resource sharing | | | |
| 58 | Identify infrastructure and resources to prioritize to protect and/or relocate | 16 | analysis/prioritization | managed adaptation/retreat | | | |
| 72 | Identify alternative places/land and when/how to move (structures/infrastructure) | 14 | analysis/prioritization | managed adaptation/retreat | | | |
| 3 | Make sustainable practices more feasible, i.e. renewable energy projects | 23 | climate mitigation | rapid permitting | | | |
| 8 | Community microgrid starting with community facilities to drive resilience for the region | 22 | climate mitigation | | | | |
| 18 | Stop oil industry and put resources into renewable energy | 21 | climate mitigation | | | | |
| 26 | Rapid fossil fuel reduction | 20 | climate mitigation | | | | |
| 33 | Legalize composting toilets in city/county to reduce demand on desalination and wastewater treatment | 19 | climate mitigation | water demand reduction | | | |

| | | | | |
|----|--|----|--------------------|---|
| 43 | Rapidly & heavy investment in solar (rooftop, car parks, etc.) to move away from fossil fuels | 18 | climate mitigation | |
| 59 | Renewable energy use to reduce GHG | 16 | climate mitigation | |
| 1 | Make VR simulations of iconic SB County waterfront areas; make available at public events, points of interest (Earth Day, Fairs, Concerts) | 25 | education/outreach | VR |
| 2 | Develop sensitive community outreach to help people understand the impacts (VR, artwork, film, community forums) - beyond science | 24 | education/outreach | art |
| 9 | Joint education campaign in partnership with all coast cities/communities | 22 | education/outreach | |
| 10 | Series of art installations along projected SLR line - support message of hope, grief, community, support of nature | 22 | education/outreach | art |
| 34 | Build community coalition to develop local leadership for SLR outreach and learning + identify solutions and preferences | 19 | education/outreach | leadership development |
| 35 | Create a VR campaign for SB County to be use in public ventures that educate children (MOXI, SM Children's museum) | 19 | education/outreach | VR |
| 36 | Actively recruit an army of environmental 'warriors' who will fight to help the environment | 19 | education/outreach | |
| 37 | Create a film to communicate the reality of SLR and strategies for resilience that empowers/motivates and calls to action | 19 | education/outreach | multimedia |
| 44 | Create a day of SLR action - include government, nonprofits, students, industry, commercial; agree on 3 goals | 18 | education/outreach | |
| 45 | Change definition of climate resilience (from bouncing back to bouncing forward); eradicate inequity and root causes of climate crisis | 18 | education/outreach | equity |
| 55 | Create resource hub for the community to help education/disseminate ideas | 17 | education/outreach | resource hub/education |
| 56 | Education, messaging using new tools (i.e., VR) | 17 | education/outreach | VR |
| 60 | Central hub for data (GIS, demographics, contacts, SLR rates, vulnerabilities) | 16 | education/outreach | central hub |
| 61 | Educate visitors to institutions about SLR and climate resilience; staff capacity to do this | 16 | education/outreach | |
| 62 | "Put Climate First" campaign with private/public employers, associations & schools to incorporate climate planning into their work | 16 | education/outreach | Put Climate First campaign |
| 66 | Educate religious organizations to become climate justice leaders and inspire action/solutions | 15 | education/outreach | education/religion/climate justice/advocacy |
| 73 | Fully value Calif. public beach resources | 14 | education/outreach | |
| 74 | Collaborative and interactive education campaign | 14 | education/outreach | |
| 80 | Connect and education through a one platform forum | 12 | education/outreach | hub |
| 81 | Citywide SLR art line to illustrate SLR impacts | 11 | education/outreach | art |
| 82 | Create fictional news documentary of SLR/storm events | 10 | education/outreach | |

| | | | | | |
|----|--|----|----------------------------|---|--|
| 4 | Requirement for hardening utility locations and standards for new development and redevelopment | 23 | managed adaptation/retreat | infrastructure hardening | |
| 27 | Federally funded public works projects (support jobs and other resources) - i.e. New Green Deal | 20 | managed adaptation/retreat | New Green Deal | |
| 28 | Focus on critical infrastructure (harden, protect, move) as biggest impact on largest numbers of people | 20 | managed adaptation/retreat | hardening | |
| 29 | Identify funding sources for infrastructure adaptation (i.e. bed tax, oil tax, etc.) | 20 | managed adaptation/retreat | funding | |
| 38 | Board of Supervisors require County Depts. to consider climate adaptation needs for county facilities in annual dept. budget & capital plans | 19 | managed adaptation/retreat | | |
| 39 | Move the waste water treatment plant away from the coast | 19 | managed adaptation/retreat | | |
| 46 | Bond for coastal property acquisition | 18 | managed adaptation/retreat | land acquisition | |
| 67 | City/County collaboration on SLR plans for open space, infrastructure, retreat | 15 | managed adaptation/retreat | cross jurisdictional | |
| 68 | Change structure/framework of 'managed retreat' and make people first (focus on most vulnerable and close gaps in safety net) | 15 | managed adaptation/retreat | vulnerable populations | |
| 78 | Find a fiscal 'angel' (Bloomberg, Bezos, etc.) to make SB ground zero for creative & impactful approaches to SLR | 13 | managed adaptation/retreat | funding | |
| 84 | Infrastructure monorail | 8 | managed adaptation/retreat | | |
| 5 | Comprehensive regional plan for managed retreat, seawall and other adaptation strategies - implement or rebuild as hazards arise | 23 | managed retreat/adaptation | | |
| 11 | Managed relocation of coastal infrastructure and development | 22 | managed retreat/adaptation | | |
| 12 | Defensive coastal adaptive management | 22 | managed retreat/adaptation | | |
| 19 | Plan and fund rebuilding differently after disaster - don't rebuild in the same way; get out of the 'stupid zone' | 21 | managed retreat/adaptation | planning/post-disaster rebuilding | |
| 13 | Green infrastructure master plan that recognizes the function and value of ecosystems + enhancement | 22 | nature based solutions | green infrastructure master plan | |
| 20 | Fund/implement nature-based solutions (best/lowest cost ways to begin adaptation) | 21 | nature based solutions | | |
| 21 | Ecosystem restoration | 21 | nature based solutions | | |
| 22 | Facilitate/plan/implement collaborative green infrastructure initiatives (create wetlands, dunes, green buffers, beach retreat zones) | 21 | nature based solutions | facilitated planning and implementation | |
| 23 | Create/support living shorelines | 21 | nature based solutions | | |
| 30 | Coastal retreat | 20 | nature based solutions | | |
| 40 | Re-establish kelp forests to reduce GHG; reduced gov. restrictions on sediment particle size in surf zone | 19 | nature based solutions | | |
| 47 | Foster new industries connected to the sea (i.e., aquaculture) | 18 | nature based solutions | social enterprise | |
| 6 | Sediment management program & coastal habitat restoration that creates multi-benefits for nature, community and climate mitigation | 23 | nature based-solutions | sediment mgmt/multi-benefit | |
| 14 | Identify personal actions people can take | 22 | personal actions | behavior change | |
| 48 | Adopt lifestyle that lowers individual carbon footprint; support industries that align with values | 18 | personal actions | | |
| 49 | Encourage SLR preparedness plans for children, families, individuals for 2030; think of personal impacts | 18 | personal actions | | |
| 63 | Get actively involved | 16 | personal actions | | |
| 69 | Be willing to compromise | 15 | personal actions | | |
| 15 | Use of Mutual Aid Response model (i.e., fires, public works, disaster) to support minimum wage workers displaced during disruption | 22 | policy | collaboration | |

| | | | | |
|----|--|----|---------------------|-------------------------------------|
| 31 | Join a regional climate change collaboration to advocate for solutions | 20 | policy | |
| 41 | Review building codes/policies and make changes to reflect SLR | 19 | policy | regional planning/funding |
| 57 | Immediately develop law(s) requiring incremental change | 17 | policy | network, self-governance |
| 64 | A regional planning and funding agency | 16 | policy | |
| 70 | Create community governance network to produce an integrated process for self-governance focused on county values | 15 | policy | |
| 75 | Ideas and funding for regional and state leadership | 14 | policy | |
| 76 | Consistent policy direction (from Calif. Coastal Commission) | 14 | policy | |
| 77 | Command and control -- planning and development and human resources | 14 | policy | |
| 79 | Develop new regional agency (similar to SBCAG) to coordinate/implement/fund priority adaptation strategies | 13 | policy | disaster relief funding for workers |
| 83 | adopt consistent SLR guidance and hazard assessments | 10 | policy | building codes |
| 16 | Enhanced regional sediment management and coordination between agencies for sources, funding, permitting | 22 | sediment management | agency coord. |
| 50 | Create a regional sediment management program and reconnect 'sand-sheds'; create partnerships w/gov., local agencies; lobby for funding | 18 | sediment management | agency coord./advocacy |
| 51 | Sand-shed management and education | 18 | sediment management | |
| 65 | Regional sediment program using railroads to distribute sediments along coast; inventory sediment stockpiles and sorting facilities to maximize and clean sediment | 16 | sediment management | |
| 71 | Use dredged sand to fill-in lowland areas in Santa Barbara | 15 | sediment management | |

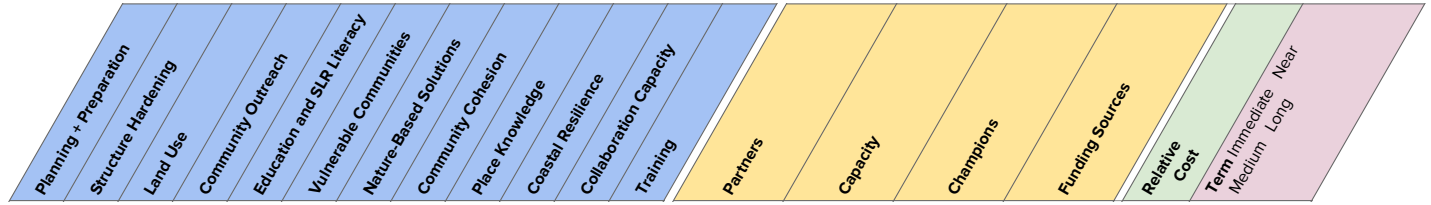
- Indicates High Impact
- Indicates Impact

Community Driven Impact Areas

Readiness Factors

Table

15% Solutions (Readily Accessible Actions)



| # | Table | Description | Community Driven Impact Areas | Readiness Factors |
|----|-------|---|---|--|
| 0 | 0 | Example: Create a new park along the creek | ● | TRLT, FTR, Land Trust ED, County govt has a fund, \$\$\$\$ |
| 1 | 1 | More public engagement (community meetings, Earth Day outreach, living shoreline education) | These columns come into play in future steps of the prioritization process. | |
| 2 | 1 | Join the SB Regional Climate Collaborative Steering Committee | | |
| 3 | 1 | Help bring small businesses to the table that are focused on mitigation of climate change | | |
| 4 | 1 | Sustainability technologies - marine desal, solar solutions, ocean energy | | |
| 5 | 1 | Collaboration, education, outreach | | |
| 6 | 1 | Educate about SLR through the library systems, especially those use by most vulnerable populations | | |
| 7 | 1 | Get involved in union re: preparing for fiscal impacts from disasters | | |
| 8 | 1 | Join SLR RCC subcommittee | | |
| 9 | 1 | Share info from roundtable with co-workers | | |
| 10 | 1 | Add sediment supply management policy to airport and Goleta Slough LCP | | |
| 11 | 1 | Update airport business continuity plan to include recovery strategies post-flood | | |
| 12 | 1 | Share info with others working on solutions and listen/engage with community to hear specific concerns and what actions/solutions to prioritize | | |
| 13 | 1 | Participate in collaborative subcommittee | | |
| 14 | 1 | Better understand groundwater implications (agriculture) | | |
| 15 | 1 | Continue to push for natural systems & green infrastructure | | |
| 16 | 2 | Communication and education integration | | |
| 17 | 2 | Providing persuasive information and optimistic solutions | | |
| 18 | 2 | Promote more consideration of climate/environmental justice in work on collaborative solutions | | |
| 19 | 2 | 15% : time + relationships +access to decision-makers | | |
| 20 | 2 | Request City Council to make a video simulation (virtual reality) | | |
| 21 | 2 | Share story of North Campus Open Space restoration and link it to climate change | | |

