

## Shoreline Structure/Property Owners

### City of Arcata

*See page 23. - Environmental Services*

*See page 24. - Building and Engineering*

### City of Eureka

*See page 32. - Public Works*

### Friends of the Dunes

#### *Roles & Responsibilities*

Private Property Owner



Nonprofit Organization



Friends of the Dunes (FOD) is a regional land trust and non-profit community organization involved in conserving coastal environments. FOD focuses on coastal ecosystem restoration, education programs,

and guided walks. In its role as a land trust, FOD owns and maintains the Humboldt Coastal Nature Center (HCNC) and recently became interim owner (a long-term conservation owner will be identified in the future) of 357 acres of coastal dune and bayfront property on the north spit of Humboldt Bay, referred to as the Samoa Dunes and Wetlands. This acquisition was accomplished in partnership with Security National, the Harbor District, the Wildlife Conservation Board, the California Natural Resources Agency, and the California State Coastal Conservancy for the purposes of conservation and public access. FOD manages the Samoa Dunes and Wetlands in partnership with the Harbor District, BLM, Humboldt County, the State Coastal Conservancy, and the Wiyot Tribe. The addition of this property to existing north spit conservation lands creates a 1600-acre continuous area of native dunes managed for habitat conservation and public access. FOD's main goals as an organization include:

- Provide community education that fosters understanding and appreciation and inspires conservation
- Build community-based restoration programs that serve to maintain and enhance the natural diversity of coastal environments
- Conserve strategically located coastal properties through conservation easements and land acquisition to ensure that land use is consistent with the ecological values of native coastal dune systems
- Develop an effective and efficient organization capable of conserving coastal environments in perpetuity

*Specific Hydrological Unit Assets and Concerns*

- **Samoa Dunes and Wetlands**

- FOD does not intend to be the long-term landowner for the Samoa Dunes and Wetlands. They also do not intend develop trails, parking areas, or implement restoration activities while they act as the interim land manager. They plan to cooperate with county, state, federal, and Tribal partners to determine what long-term ownership or management would look like and what the best long-term options are for this land and community.



- **Humboldt Coastal Nature Center (HCNC)**

- The HCNC is 118 acres of coastal dune property with a nature learning facility that acts as a public gateway to surrounding coastal lands. The facility’s exhibits, trails, and programs combine experiential education with conservation-minded recreational access and hands-on restoration activities. The goal of this programming is to increase public understanding and awareness of local coastal environments as well as inspire community-driven stewardship.

*General Concerns*

	Shoreline Management		Sea Level Rise Impacts:
	Property Ownership and Adaptation Responsibility		Erosion
	Regulatory Authorization and Compliance		Tidal Inundation
	Feasible Adaptation Strategies		Backwater and/or Emerging Groundwater Flooding
	Funding		Saltwater Intrusion

*Planning Efforts*

Beginning in 2015, the State Coastal Conservancy awarded Friends of the Dunes \$249,000 for the first two years of the Dunes Climate Ready Study. Friends of the Dunes is the fiscal sponsor of the grant, and the US Fish & Wildlife Service has taken the lead in this collaborative project involving multiple partners. The goal of this study, originally scheduled for five years, is to improve understanding of sediment movement along the entire Eureka littoral cell, a 32-mile unit of coastline and to identify potential vulnerabilities to climate change and potential response to future sea level rise.

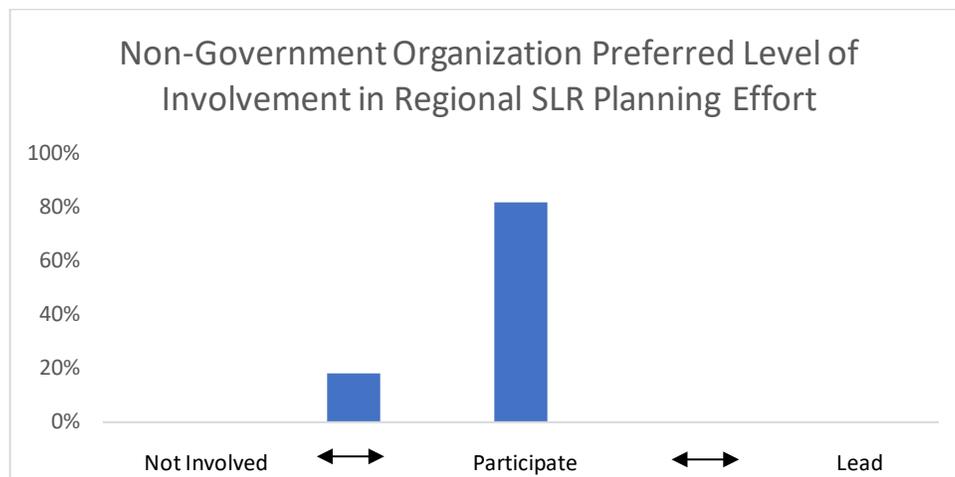
Renamed the Humboldt Coastal Resilience Project (HCRP), the project has been extended for another three years with grant funding from the Ocean Protection Council and the California State Coastal Conservancy. A combined total of \$430,750 has been awarded to FOD, who is the fiscal receiver of project grant funds and is overseeing the outreach component of the project. The project aims to document historic and seasonal changes in shoreline position, beach-dune morphology, and vegetation along the Eureka littoral cell in order to develop decision support tools and adaptation measures for sea-level rise and extreme events. The project team, including partners from the State Coastal Conservancy and USFWS,

are developing an empirical model of dune response to SLR, conducting a SLR vulnerability analysis, testing adaptation strategies at demonstration sites, and developing recommendations for adaptation strategies.

### *Relevant SLR Coastal Professionals Survey Findings*

Results presented in this section for the SLR Coastal Professionals Survey 2021 do not necessarily represent an official view of the agency/organization or categories with which respondents identified, as explained in the introduction. Results presented below are intended only to provide general guidance in future planning and collaboration efforts. For more information on sampling methods and data collection, refer to the section on Community Input within the Introduction on page 2 and Appendix ii - SLR Regional Coordination: Coastal Professional Survey Results within the Appendices beginning on page 229.

During the SLR Coastal Professionals Survey 2021, Friends of the Dunes was sent a survey categorized as a Non-Governmental Organization since it is a non-profit in addition to being a land trust. There was a total of 12 respondents for this category though participation for individual questions varied. Participants included the Coalition for Responsible Transportation Priorities, Friends of the Arcata Marsh, Friends of the Dunes, Friends of Elk River, Humboldt Baykeeper, Redwood Community Action Agency, Redwood Region Audubon, Surfrider Foundation, and Timber Heritage Association. These Coastal Professionals were asked a variety of questions including what the preferred level of involvement in SLR planning was for the entity they represented. Respondents were given a sliding scale to rate their role ranging from “not involved” to “participate” and “lead”. The results for Non-Governmental Organization ranged from a mix of “not involved” and “participate” to just “participate”. A vast majority (82%) preferred participation as shown in the graph below.



*Figure 61. Non-Government Organization respondents' preferred level of involvement in SLR planning effort from the SLR Coastal Professionals Survey 2021 (n=11)*

These Coastal Professionals were also asked about their preferred spatial scale for SLR planning. Respondents were given a sliding scale ranging from planning on a “project by project” basis to planning on a larger scale of “Watershed/HU” and “Humboldt Bay”. The results for the Non-Government Organization category ranged from a Watershed/HU to a Humboldt Bay spatial scale with a 55% preference for a Humboldt Bay approach as shown in the graph on the next page.

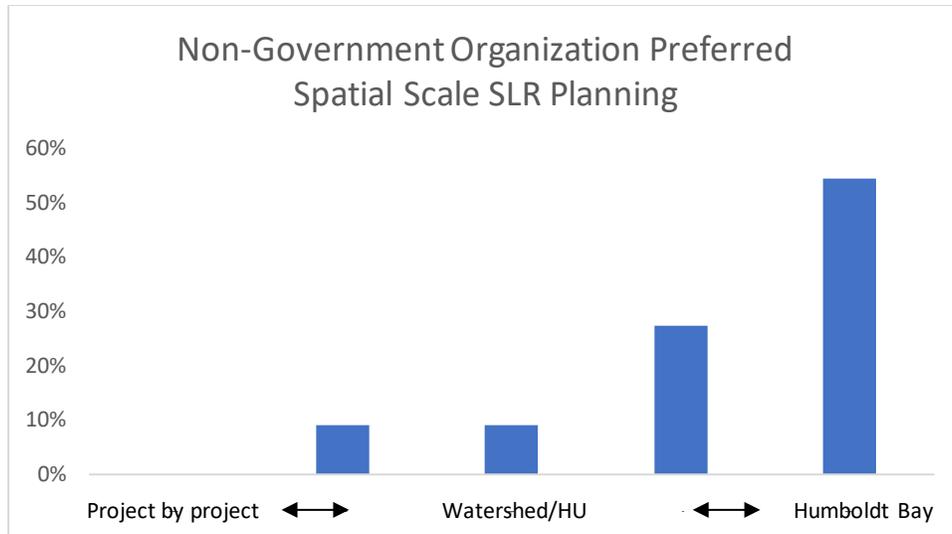


Figure 62. Non-Government Organization respondents' preferred spatial scale to focus regional SLR coordination efforts in the SLR Coastal Professionals Survey 2021 (n=11)

To better understand the preferred style of future regional SLR coordination, Coastal Professionals were asked their level of support for several potential regional SLR planning options on a five-point Likert scale ranging from "strongly oppose" to "strongly favor". The results for the Non-Government Organization category favored creating a formal collaborative partnership with 91% of respondents rating this option somewhat favorable or higher. Similarly, 91% of respondents answered they somewhat or strongly oppose having no regional planning as shown in the graph below.

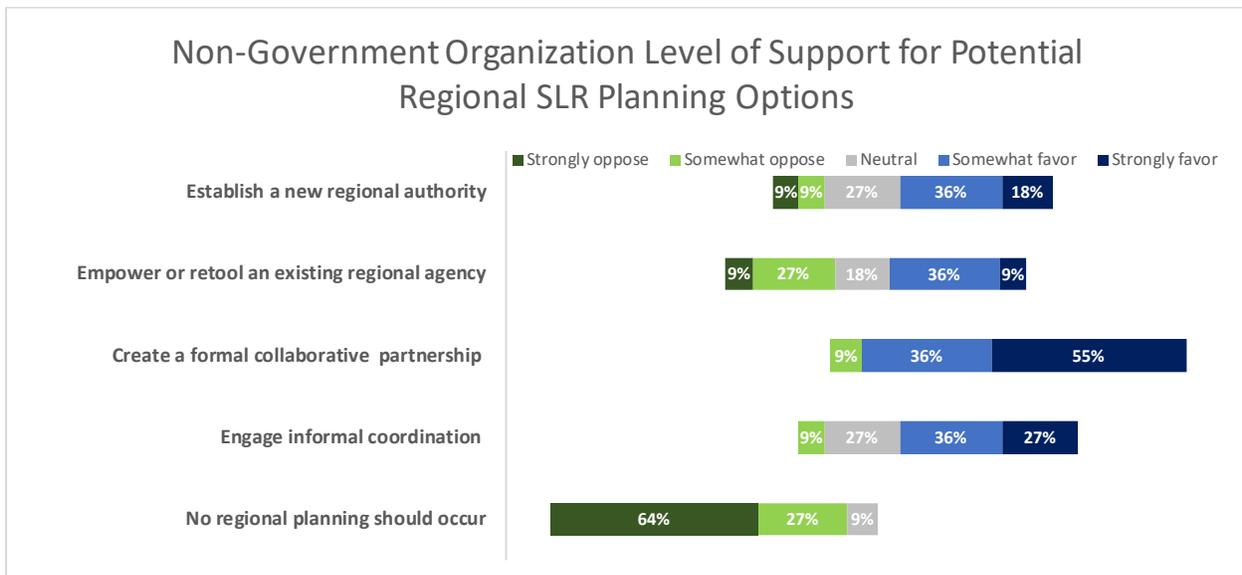


Figure 63. Non-Government Organization respondents' level of support or opposition for various strategies for regional coordination of SLR planning from the SLR Coastal Professionals Survey 2021 (n=11)

**Reference Links**

<https://www.friendsofthedunes.org/>

## Humboldt County

*See page 41.*

## Humboldt County Resource Conservation District

### *Roles & Responsibilities*



The Humboldt County Resource Conservation District (HCRCD) is a non-regulatory organization that works in voluntary cooperation with landowners, residents, and community groups in unincorporated Humboldt

County. HCRCD's stated mission is to enhance and improve the sustainability of natural resources by educating, providing training, and assisting private and public landowners and land users. HCRCD has successfully helped landowners and managers complete multiple implementation projects to restore ecosystems, remove fish barriers, reduce sediment delivery to local tributaries, and improve grazing management. The District has also maintained a successful dairy program on behalf of producers needing assistance with structural improvements, nutrient management, and regulation compliance. Their work also includes providing the general public and private landowners with information on drought and water conservation practices so that environmental resources can be preserved and protected.

Humboldt County Resource Conservation District was originally the Eel River Resource Conservation District, created by popular vote in 1987. In 1993 the District was expanded to be a countywide Special District under Division 9 of the California Public Resources Code which authorizes Resource Conservation Districts (RCDs) as legal subdivisions of the state government. This Division also defines the State of California's framework for conducting the business of resource conservation within the State and details the general powers and operations of RCDs. The district is governed by a voluntary Board of Directors consisting of community leaders appointed by the Humboldt County Board of Supervisors. The District provides primary technical services through a cooperative partnership with the United States Department of Agriculture's Natural Resource Conservation Service (NRCS) and provides technical staff specifically hired by the District through grant funding.

### *Specific Hydrological Unit Assets and Concerns*

#### **All hydrological units**

- **Natural resources in unincorporated Humboldt County**



#### **Mad River Slough**

- **Mad River Slough Demello Parcel Restoration Project**

## **South Bay**

- **White Slough Wetlands Enhancement Project**

### *General Concerns*

✓	Shoreline Management		Sea Level Rise Impacts:
	Property Ownership and Adaptation Responsibility		Erosion
	Regulatory Authorization and Compliance		Tidal Inundation
	Feasible Adaptation Strategies		Backwater and/or Emerging Groundwater Flooding
	Funding		Saltwater Intrusion

### *Planning Efforts*

HCRCDC handles planning for sea level rise on a case by case basis for easements they acquire, and for existing easements associated with restoration plans still in the implementation phase. They also import and re-use fill to adapt restoration sites for SLR impacts. There are a few completed projects that have incorporated plans for SLR. At the time of the SLR Stakeholder Interview, there were two that they were focused on: the Mad River Slough Demello Parcel Restoration Project and White Slough Wetland Enhancement Project.

Mad River Slough Demello Parcel Restoration Project is a parcel acquired in 2010 by USFWS and transferred to the Humboldt Bay National Wildlife Refuge. There is proposed coastal dune restoration to this site and nearby parcels. Dune restoration is intended to build up sand in the foredune and backdune habitat.

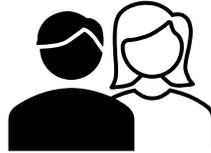
The White Slough Wetland Enhancement Project was undertaken in cooperation with the USFWS at the Humboldt Bay National Wildlife Refuge at the White Slough Unit. Because the area behind existing dikes has subsided, dike failure would result in a conversion of brackish marsh to mudflat, and would expose the Tompkins Hill Road-Highway 101 Interchange, which provides access to the College of the Redwoods, to increased threat of flooding. The threat of dike failure is exacerbated by sea level rise. This project restored salt marsh, enhanced brackish and freshwater wetlands, and will help to maintain the Tompkins Hill-101 interchange and access to the College of the Redwoods.

### *Key Stakeholder Coordination Themes*

During the SLR Stakeholder Interview, 22 shared themes about SLR regional planning and adaptation were identified to have been explicitly mentioned by two or more stakeholder groups. The HCRCDC interview contained 10 of these shared themes as shown in the table to the right, reported from highest to lowest percent of stakeholder groups interviewed that shared each interview theme. For more description of themes, reference the Key Stakeholder Themes section of the Introduction on page 12.

#### **Interview Themes Important to HCRCDC**

- Shared Funding Coordination
- Regional Coordination in General
- Increased Landowner Participation
- Permitting Limitations
- Diked Former Tidelands
- Restoration and Mitigation
- Personnel Constraints
- Dedicated Time Constraints
- Dredged Material
- Additional Governmental Guidance



### *Relevant SLR Public Survey Findings*

There were 577 total participants during the SLR Public Survey 2021, though participation varied by individual question. One section of questions asked survey respondents to rate the priority of assets located within the Humboldt Bay region for consideration in flood protection and future SLR planning, some of which were identified above in this catalogue section as HCRCDC assets that could be subject to sea level rise impacts and were confirmed as such by HCRCDC representatives during the SLR Stakeholder Interview 2021. Responses for priority ratings ranged from “not at all a priority” to “exceptionally high priority”. The top-rated prioritized asset by the public related to HCRCDC is “Agricultural land to protect inland infrastructure” with 81% of respondents rating them a moderate to exceptionally high priority (n=545). Two other assets are related to HCRCDC assets and concerns but were rated much lower: “Agricultural land to preserve agricultural activities” (66%, n=542) and “Natural wetlands, wildlife areas, etc.” (57%, n=537). Results for priority ratings are reported in the graph on the next page.

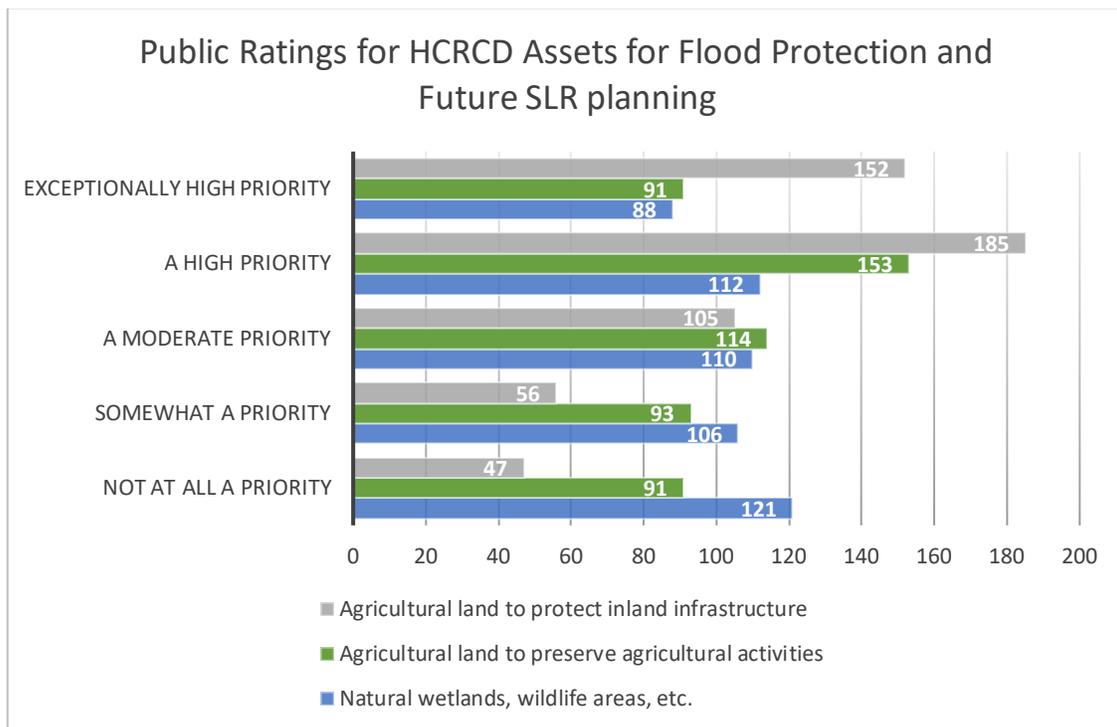
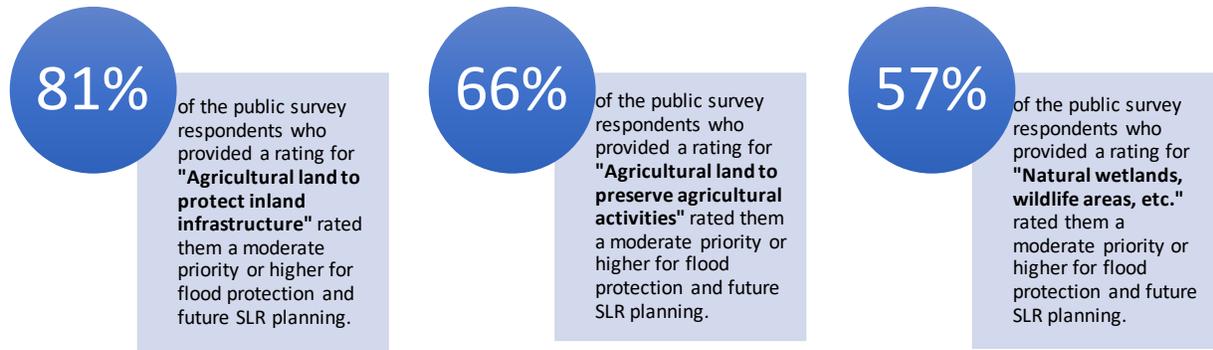


Figure 64. Priority Ratings for Agricultural land to protect inland infrastructure (n= 545 shown in grey), Agricultural land to preserve agricultural activities (n=542 shown in green), and Natural wetlands, wildlife areas, etc. (n=537 shown in blue), regarding Flood Protection and Future SLR Planning by participants of the SLR Public Survey 2021

### Relevant SLR Coastal Professionals Survey Findings

Results presented in this section for the SLR Coastal Professionals Survey 2021 do not necessarily represent an official view of the agency/organization or categories with which respondents identified, as explained in the introduction. Results presented below are intended only to provide general guidance in future planning and collaboration efforts. For more information on sampling methods and data collection, refer to the section on Community Input within the Introduction on page 2 and Appendix ii - SLR Regional Coordination: Coastal Professional Survey Results within the Appendices beginning on page 229.

During the SLR Coastal Professionals Survey 2021 there was a total of 25 respondents for the State Government category though participation for individual questions varied. Participants included the

California Coastal Commission, California Department of Fish & Wildlife, California Geological Survey, California State Coastal Conservancy, Caltrans, Humboldt County Resource Conservation District, North Coast Regional Water Quality Control Board, Governors’ Office of Planning and Research, and State Lands Commission. These Coastal Professionals were asked a variety of questions including what the preferred level of involvement in SLR planning was for the entity they represented. Respondents were given a sliding scale to rate their role ranging from “not involved” to “participate” and “lead”. The results for the State Government category ranged from “participate” to “lead” with a 65% preference for participation as shown in the graph below.

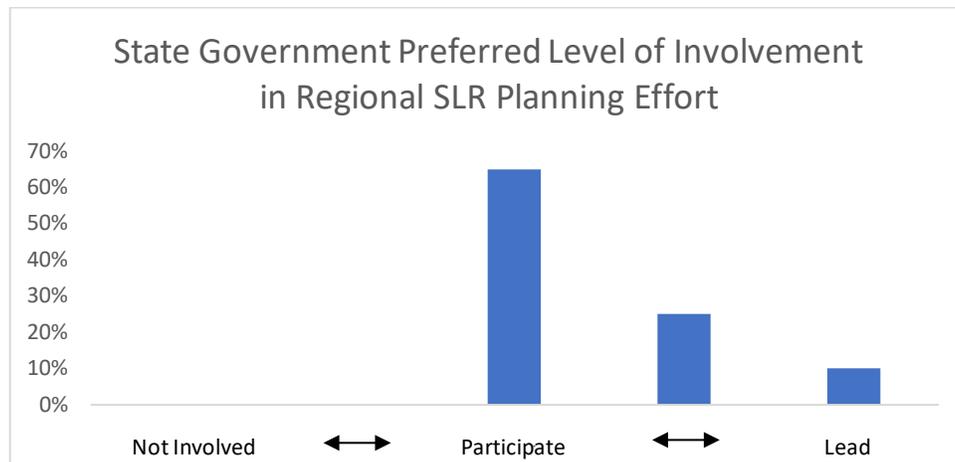


Figure 65. State Government respondents’ preferred level of involvement in SLR planning effort from the SLR Coastal Professionals Survey 2021 (n=20)

These Coastal Professionals were also asked about their preferred spatial scale for SLR planning. Respondents were given a sliding scale ranging from planning on a “project by project” basis to planning on a larger scale of “Watershed/HU” and “Humboldt Bay”. The results for the State Government category ranged from Watershed/HU to Humboldt Bay in scale with a 68% preference for a Humboldt Bay approach as shown in the graph below.

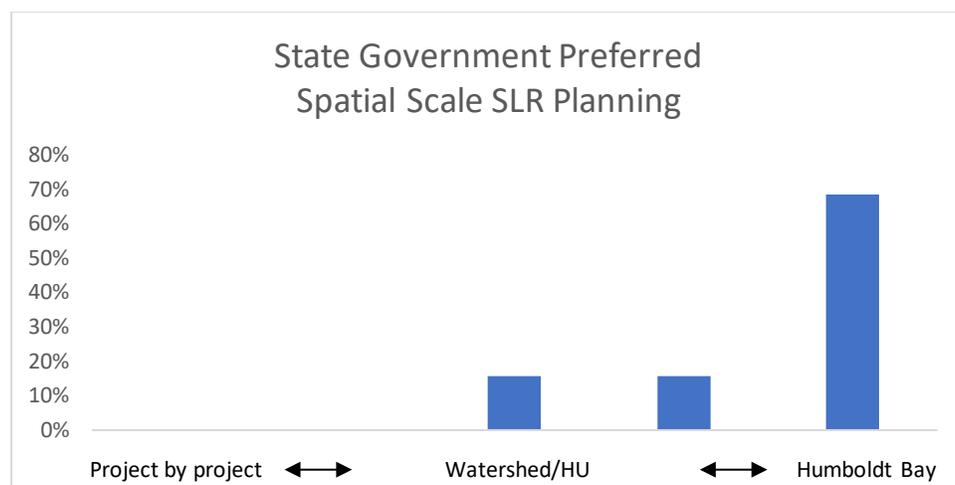


Figure 66. State Government respondents’ preferred spatial scale to focus regional SLR coordination efforts in the SLR Coastal Professionals Survey 2021 (n=19)

To better understand the preferred style of future regional SLR coordination, Coastal Professionals were asked their level of support for several potential regional SLR planning options on a five-point Likert scale ranging from "strongly oppose" to "strongly favor". The results for the State Government favored creating a formal collaborative partnership with 72% of respondents rating this option somewhat favorable or higher. Similarly, 95% of respondents answered they somewhat or strongly oppose having no regional planning as shown in the graph below.

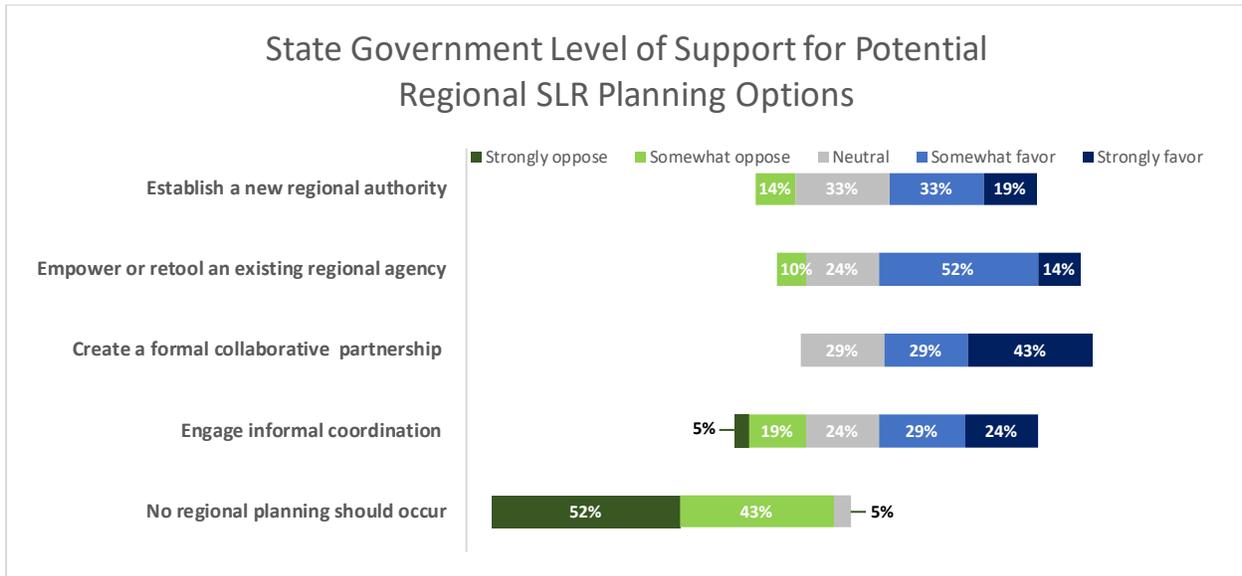


Figure 67. State Government respondents' level of support or opposition for various strategies for regional coordination of SLR planning from the SLR Coastal Professionals Survey 2021 (n= 21)

*Reference Links*

<http://humboldtrcd.org/>

[https://files.ceqanet.opr.ca.gov/262306-2/attachment/\\_C-CoVNgF0v4YpPGRDiDsLvHrFo1jFAA\\_wYwJO0QgmfF1Ombkejx1mjxXHLclKB58MULaiURW\\_egqFM0](https://files.ceqanet.opr.ca.gov/262306-2/attachment/_C-CoVNgF0v4YpPGRDiDsLvHrFo1jFAA_wYwJO0QgmfF1Ombkejx1mjxXHLclKB58MULaiURW_egqFM0)

[http://humboldtrcd.org/projects/in-stream\\_and\\_habitat\\_restoration](http://humboldtrcd.org/projects/in-stream_and_habitat_restoration)

## Northcoast Regional Land Trust

*Roles & Responsibilities*

- Private Property Owner 
- Nonprofit Organization 

The Northcoast Regional Land Trust (NCRLT) is a nonprofit organization headquartered in Arcata governed by a large Board of Directors. NCRLT is focused on protection of land and water resources in California’s north coast region including Humboldt, Del

Norte, and Trinity Counties, and has conserved more than 50,000 acres of wild and working land on the North Coast alone.

NCRLT is dedicated to the protection and economic viability of working landscapes, farms, forests, and grazing lands, and to the preservation and protection of land for its natural, educational, scenic, and historic values. Working with landowners on a voluntary basis, they promote stewardship of the region's resource base, natural systems, and quality of life. Their program areas include Land Conservation (conservation easements or acquisitions), Conservation Planning, and Building Community for Conservation (outreach and education).

### *Specific Hydrological Unit Assets and Concerns*

#### **Eureka Slough**

- **Freshwater Farms Reserve**



Shoreline Protection



Environmental

#### **Elk River Slough**

- **Martin Slough**

### *General Concerns*

	Shoreline Management		Sea Level Rise Impacts:
✓	Property Ownership and Adaptation Responsibility		Erosion
	Regulatory Authorization and Compliance		Tidal Inundation
	Feasible Adaptation Strategies		Backwater and/or Emerging Groundwater Flooding
	Funding		Saltwater Intrusion

### *Planning Efforts*

This organization was one of 22 partners in the Humboldt Bay Sea Level Rise Adaptation Planning Working Group (APWG) which ended in 2015.

### *Reference Links*

<https://ncrlt.org/>

## Reclamation District 768

### *Roles & Responsibilities*

Local Agency 

Public Property Owner 

Reclamation District 768 is a California special district with legal and regulatory oversight over Land Reclamation and Levee Maintenance in Humboldt County. It is the only existing reclamation district on Humboldt Bay. The District was formed in 1904 via

petition by E.B. Jackson et al to the County Board of Supervisors under the Green Act. According to the petition for the formation of the District, the District covers 1,499 acres, and borders Humboldt Bay on the south, Mad River Slough on the west, and Daniels Slough runs through the eastern portion of the District (presumed to be McDaniels Slough). More specifically, it covers the northern portion of Arcata Bay west of Arcata and up Mad River Slough to the junction with Liscom Slough. The District is comprised of “Swamped Overflowed Land” that was mostly salt marsh and deemed unfit for cultivation because it was at times covered by salt water prior to its reclamation.

According to the formation petition, the District’s plan of reclamation “contemplates the keeping of salt water off said land by means of a system of dykes (sic) or levees constructed along the margin of said Bay the bank of said Mad River Slough and Daniels Slough, of heighth (sic), size and character sufficient to prevent the salt water from the bay and sloughs from flowing upon said land within the District.” The original plan of reclamation was completed prior to the formation of the District. Dikes on the east side of Mad River Slough and along the Bay margin that connected to the Arcata and Mad River Railroad bed on the east end, and along both banks of McDaniel Slough from the mouth north approximately one-half mile, were constructed at the time the District was formed. The dikes had an average width of 20 feet at the base and an average height of 3.5 feet, with a ditch on the inside, and included flood gates.

Reclamation, defined primarily as flood control and drainage but also includes irrigation of any land subject to any manner of overflow, is one of the earliest forms of public improvement in California. Lands subject to overflow, also commonly referred to as wetlands, were granted to the state by the Federal Swamp Land Act of 1850. These Reclamation Districts were intended to help landowners coordinate the local reclamation of land. Reclamation districts now operate under Water Code Division 15 section 50000 et seq. Under *Id* section 50932 and 50933, a District is authorized to specifically “construct, maintain and operate such drains, canals, sluices, bulkheads, water gates, levees, embankments, pumping plants, dams, diversion works, or irrigation works” in order to support reclamation public works. This also includes bridges and road systems that ensure access to reclamation works.

As a special district, this public entity is able to exercise certain governmental functions within the boundaries of its District such as acquire, build, and operate reclamation projects but is also subject to all laws generally applicable to local districts such as the Brown Act and public bidding. A reclamation district also has the authorization to join powers with other entities for a common purpose. Following a major breach on Mad River Slough in 2003 and Hurricane Katrina in 2005, the Reclamation District was the recipient of emergency funds from the Federal Emergency Management Agency to fortify its dikes.

*Specific Hydrological Unit Assets and Concerns***All hydrological units**

- Reclaimed tidal wetland and levees



## Shoreline Protection

*General Concerns*

✓	Shoreline Management		Sea Level Rise Impacts:
	Property Ownership and Adaptation Responsibility	✓	Erosion
	Regulatory Authorization and Compliance	✓	Tidal Inundation
	Feasible Adaptation Strategies		Backwater and/or Emerging Groundwater Flooding
	Funding		Saltwater Intrusion

*Planning Efforts*

No known planning has or is occurring.

*Reference Links*

<https://ceqanet.opr.ca.gov/Project/2004092095>

<https://documents.coastal.ca.gov/reports/2009/6/F6a-6-2009.pdf>

<http://www.balmd.org/reclamation-levee-maintenance-district.html>

[Petition of E.B. Jackson for the formation of Reclamation District 768, Book A of Land Claims, Page 117, Records of the County of Humboldt \(no link\)](#)

<https://humboldt.gov/DocumentCenter/View/89123/Historical-Resource-Evaluation-Report-April-2018?bidId=>

<https://humboldtbay.org/sites/humboldtbay2.org/files/Humboldt%20Bay%20Sea%20Level%20Rise%20Adaptation%20Planning%20Project%20Phase%20I%20Report%20-%20Compressed.pdf>

## California Department of Fish & Wildlife

*See page 70.*

## North Coast Railroad Authority (Great Redwood Trail Agency)

### *Roles & Responsibilities*



The North Coast Railroad Authority (NCRA) was formed in 1989 by the California Legislature under the North Coast Railroad Authority Act, which was intended to insure continuation of railroad service in northwestern California. NCRA has various powers and duties for the north coast areas intended to ensure

service continues on the Northwestern Pacific (NWP) rail line. In addition to overseeing policy, the NCRA has the authority to acquire, own, operate, and lease property related to the operation and maintenance of the railroads without operational funding from the state or governmental agencies. They have responsibility for all repairs and maintenance derived from a budget comprised of a variety of property leases along the NWP line, the lease of rolling stock and equipment, and lease payments made by the operator NWP Co.

The 2017 Update of the HCOAG 20-Year Regional Transportation Plan includes a Goods Movement Element, which includes an assessment of rail transport needs. This assessment notes that to reinstate service on a belt line from South Fork, around Humboldt Bay to Samoa, would require \$30 million for repairs, environmental clearance, and a rail-barge transfer would be desirable. For restoration through the Eel River Canyon, the assessment notes the requirement of a Business Plan identifying freight volume sufficient to justify repair and maintenance costs, an Environmental Impact Report, repair costs have been determined, and funding for repairs has been identified.

The NCRA allows bike and pedestrian paths on their right of way and although their tracks are in disrepair, they remain in place. In 2018 SB 1029, a bill to establish a Great Redwood Trail in the rail corridor from Marin County to Humboldt County, was signed by Sen. Mike McGuire and Gov. Jerry Brown. This bill includes a pathway to the dissolution of NCRA as a railroad authority. SB 69, introduced in 2020 and amended in 2021, would rename NCRA the Great Redwood Trail Agency (GRTA), and would require NCRA to transfer all rights, interests, privileges, and responsibilities relating to the northern portion of their right-of-way (this would include the portion within Humboldt County) to the Agency. In early March 2022 this transfer began when the newly created GRTA held its inaugural meeting and was given control of a key segment of line in Humboldt and Mendocino counties amounting to 200 miles. Senator McGuire declared the NCRA officially ceased to exist in a speech on March 14, 2022, and the new trail-focused GRTA began with the same board of directors as the NCRA.

Although the Sonoma Marin Area Rail Transit (SMART) will be in charge of the Great Redwood Trail from Larkspur to Cloverdale, the GRTA will be building the trail from Cloverdale to Humboldt Bay. However, there remains challenges to the completion of the trail from Humboldt Bay onward. For instance, in 2021 portions of the North Coast railroad were targeted for redevelopment in a federal application by a Wyoming company interested in shipping coal.

### *Specific Hydrological Unit Assets and Concerns*

#### **Mad River Slough**

- **Railway tracks**

#### **Arcata Bay**

- **Railway tracks**
  - The city of Arcata and the county of Humboldt have left the tracks in place while constructing the trails around Humboldt Bay in the NCRA right-of-way. Along the Eureka and Arcata 101 corridor, NCRA property includes dikes that are documented to be vulnerable to SLR inundation.



#### **Eureka Slough**

- **Railway tracks**

#### **Eureka Bay**

- **Railway tracks**
  - The city of Eureka also has plans to leave the tracks in place as they construct trails around Humboldt Bay on NCRA right-of-way. Eureka has an interest in promoting the utilization of the rail assets around Humboldt Bay by cooperatively developing a belt line between South Fork to the Port of Humboldt Bay and possibly excursion services around the Bay. Beginning in 2009, the Timber Heritage Association (THA) began offering a limited number of regular speeder car rides from Samoa to Manila and special rides in other locations. However, further maintenance needed to maintain a full-size locomotive is currently out of budget. Infrastructure improvements on NCRA right-of-way will need to consider the impacts of SLR.

#### **Elk River Slough**

- **Railway tracks**

#### **South Bay**

- **Railway tracks**
- **Abandoned railroad grade and water control structures that divide the commercial/industrial waterfront from the residential area of Fields Landing.**

*General Concerns*

✓	Shoreline Management		Sea Level Rise Impacts:
✓	Property Ownership and Adaptation Responsibility	✓	Erosion
✓	Regulatory Authorization and Compliance		Tidal Inundation
✓	Feasible Adaptation Strategies		Backwater and/or Emerging Groundwater Flooding
✓	Funding		Saltwater Intrusion

*Planning Efforts*

No known planning has or is occurring by NCRA, however SLR vulnerability assessments performed by other entities have included shoreline structures within the railroad right of way. Portions of the line now under GRTA control will be part of a new Masterplan for the Trail, a process that will begin in July 2022 in partnership with the State Coastal Conservancy who is also in charge of the California Coastal Trail.

*Reference Links*

<http://www.northcoastrailroad.org/>

<http://www.northcoastrailroad.org/sb-1029-state-mandate.html>

[https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180SB1029](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB1029)

[http://www.hcaog.net/sites/default/files/rtp\\_maps\\_appendices\\_included\\_0.pdf](http://www.hcaog.net/sites/default/files/rtp_maps_appendices_included_0.pdf)

[https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\\_id=202120220SB69](https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB69)

<https://www.times-standard.com/2019/04/11/rail-authority-environmental-groups-reach-settlement-after-nearly-a-decade-of-legal-battle/>

<https://www.pressdemocrat.com/article/news/great-redwood-trail-to-stretch-from-sf-bay-to-humboldt-bay-enters-plannin/?artslide=0>

<https://mendovoice.com/2020/11/whats-the-status-of-the-great-redwood-trail-we-looked-into-it/>

<https://www.sfchronicle.com/travel/article/Great-Redwood-Trail-stretching-from-S-F-Bay-to-17001982.php>

<https://kymkemp.com/2022/03/16/the-great-redwood-trail-agency-takes-over-the-north-coast-rail-line/>

<https://www.petaluma360.com/article/news/north-coast-railroad-authority-shuts-down-board-rebrands-as-great-redwood/>

## U.S. Fish and Wildlife Service

*See page 108.*

## Agricultural Properties

*See page 138.*