Sea Level Rise: A Slow Moving Disaster?

ALREADY SEEN:
+ 8 inches SLR

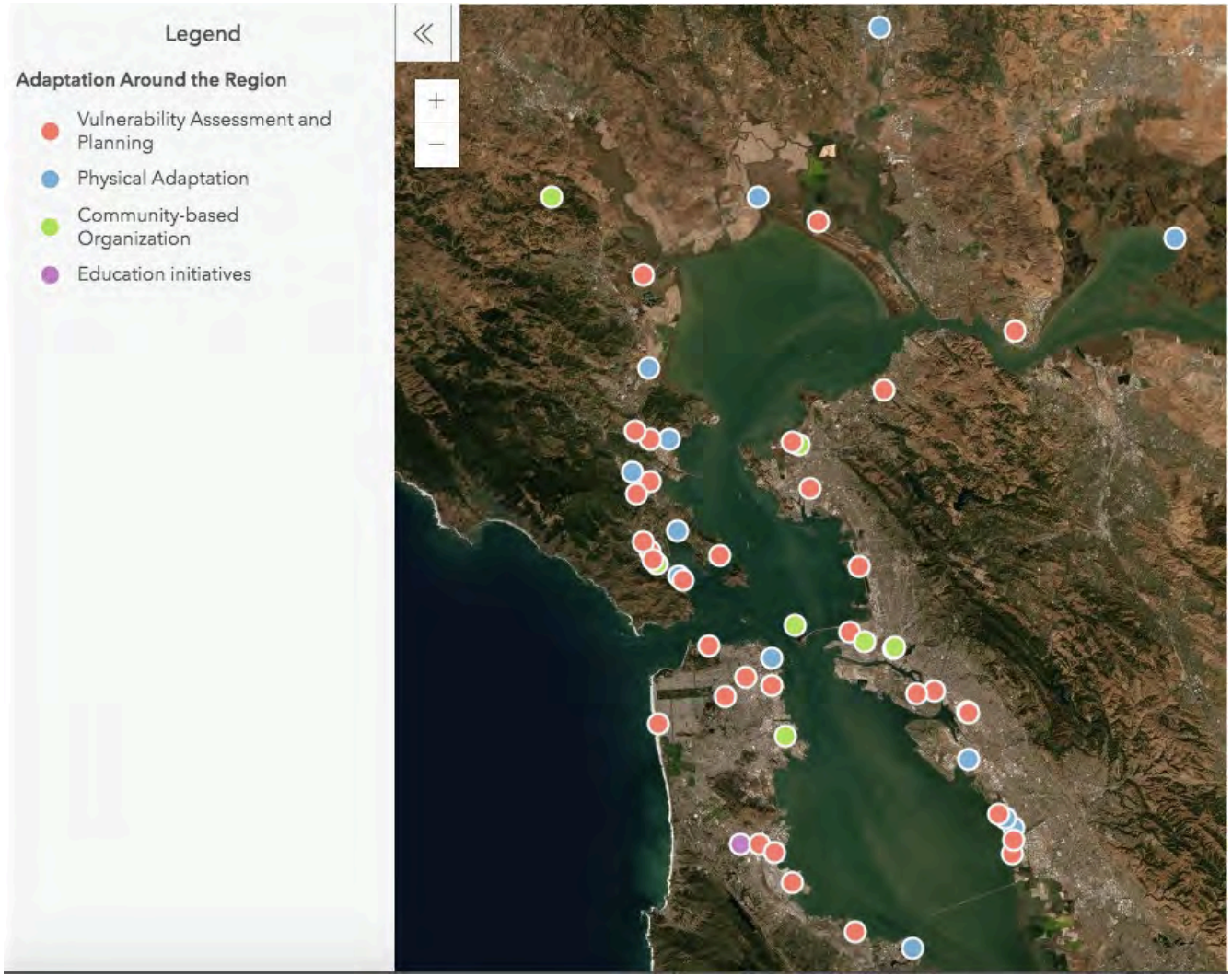
PROJECTED BY 2050:
+ 12 to 32 inches

	1’ TWL	3’ TWL
Households	11,000	27,000
Highway	10 miles	44 miles
Contaminated sites	22	97

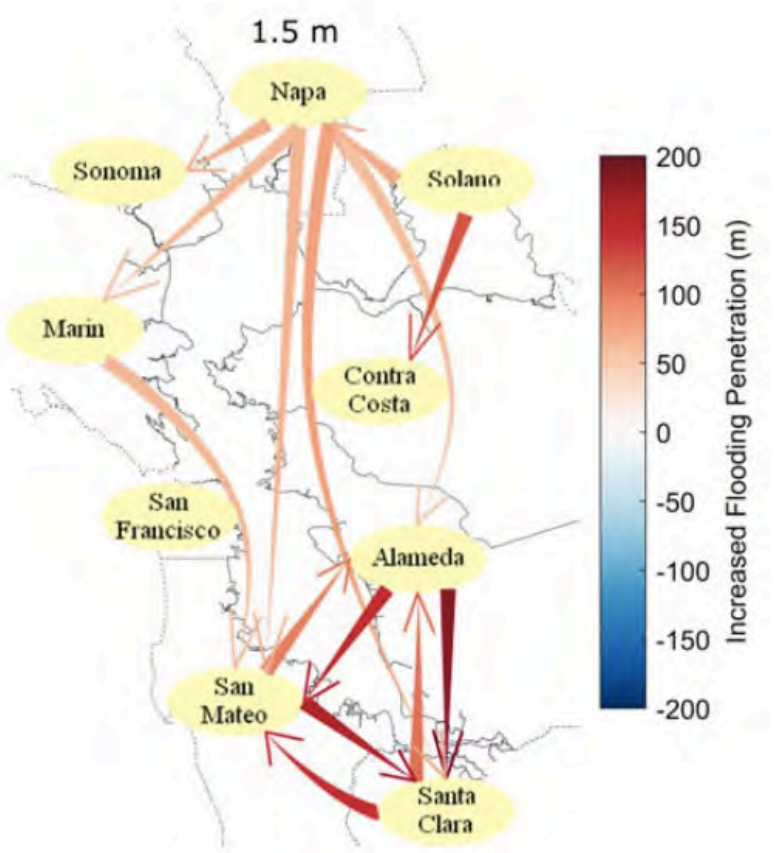
Inundation by the Numbers (ART Bay Area)

Photo: Levee Breach near Highway 37 (February 26, 2019)
Photo courtesy of Ghilotti Construction Company

Local adaptation is at the core of Bay Area adaptation

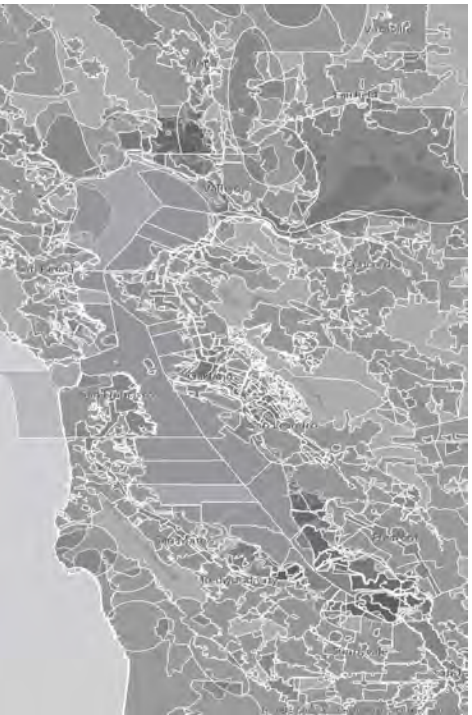


But **Local Only** adaptation will lead to sub-optimal **Local** and **Regional** outcomes



- Disproportionate impacts to disadvantaged communities
- Unintended flood impacts in a closed Bay system
- Other more pressing crises taking precedent
- Near-term loss of wetlands, as the ecosystems on the frontlines
- Economic hardship, with lack of financial tools and resources to meet the needs
- Lack of incentive to work across jurisdictions to solve joint problems
- No incentives for multi-benefit solutions
- No way to measure progress

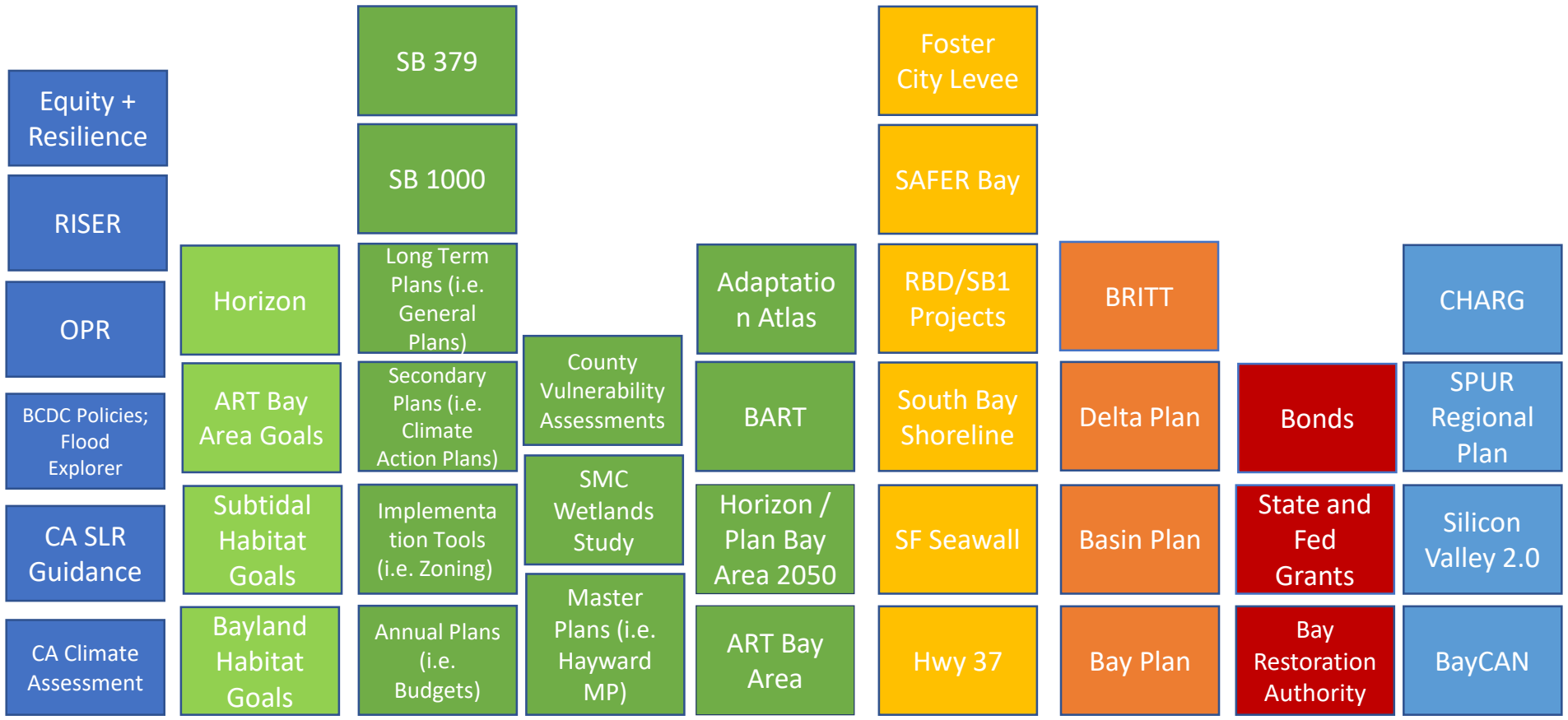
Wang, R.-Q., Stacey, M. T.,Herdman, L. M. M., Barnard, P. L.,& Erikson, L. (2018). The influence of sea level rise on the regional interdependence of coastal infra tructure.Earth's Future,6, 677–688.https://doi.org/10.1002/2017EF000742



9 counties
101 cities
5 state/regional agencies
3 federal agencies
374 PDA/PCAs
3700 Protected Areas

1 Bay

THE GOOD NEWS: A Foundation for Action



Purpose

Over the next 6 months, develop and adopt a strategy that lays out the actions necessary to adapt the Bay area to rising sea level to protect people and the natural and built environment

Intended Outcomes

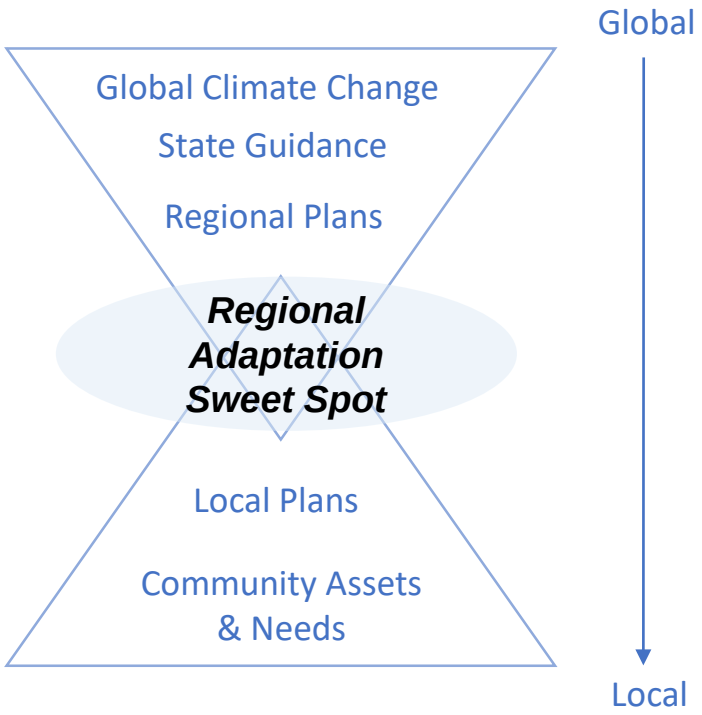
A clear vision for where the Region is headed, and a set of actions that will get us there:

Adapt Better

- Reduce risk collectively
- Elevate local adaptation
- Prioritize and act regionally

Adapt Faster

- Fast-track implementation
- Remove barriers
- Unlock and align funding + financing



RSAS Components

1. Develop Guiding Principles

for rising sea level

+

2. Develop a Joint Platform

of priority actions

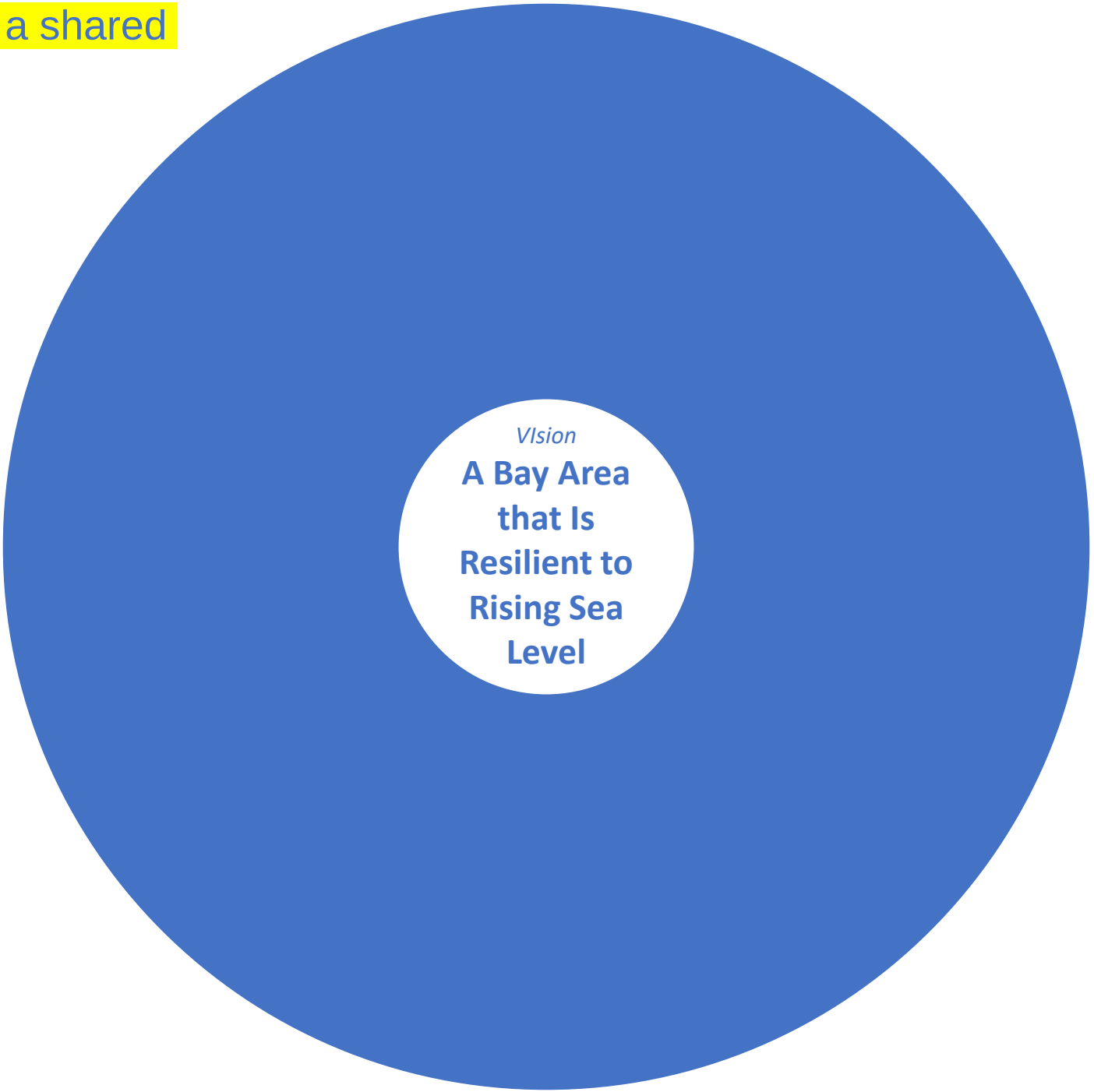
+

3. Make a Commitment

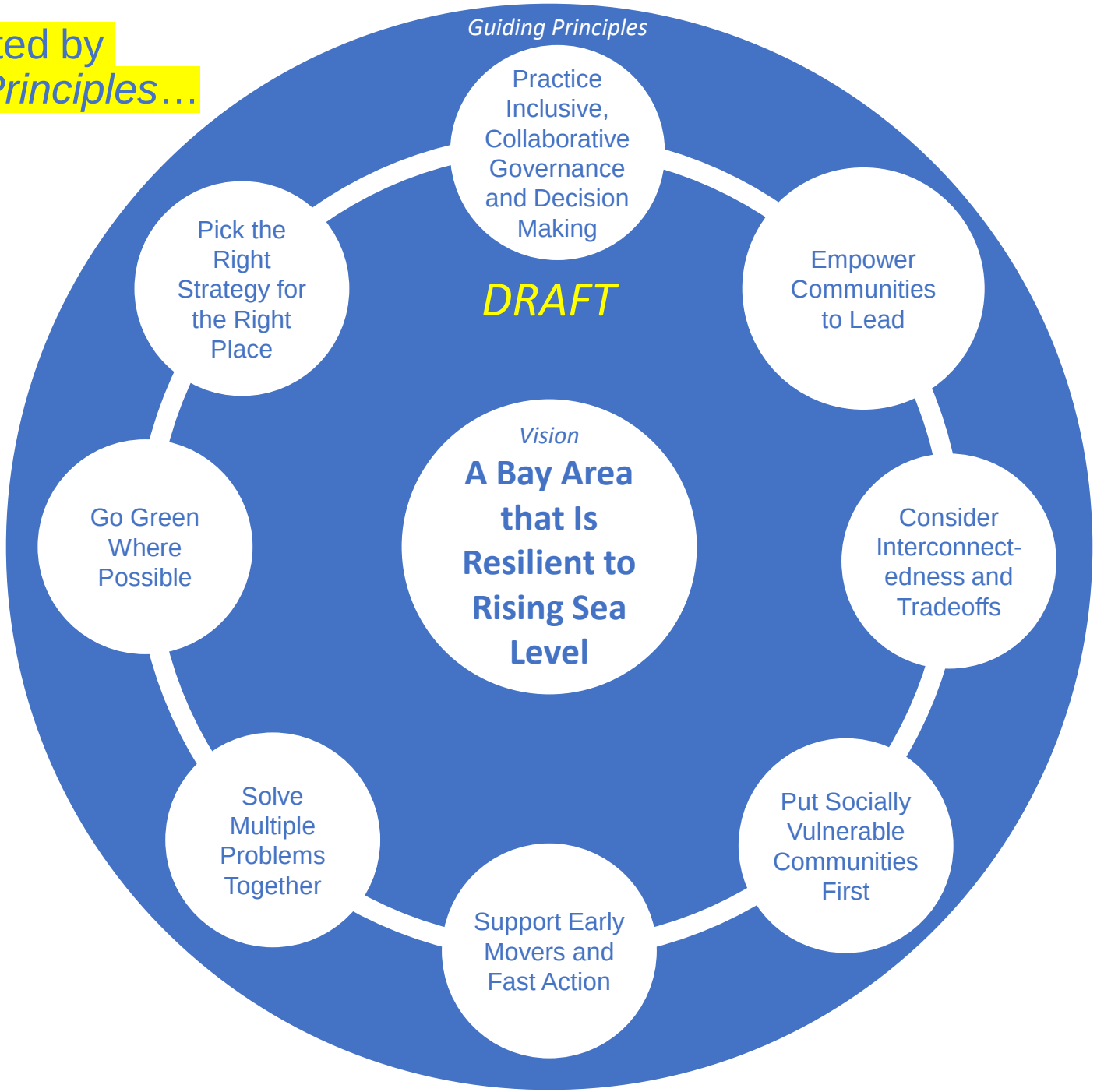
to act together

How do we get there?

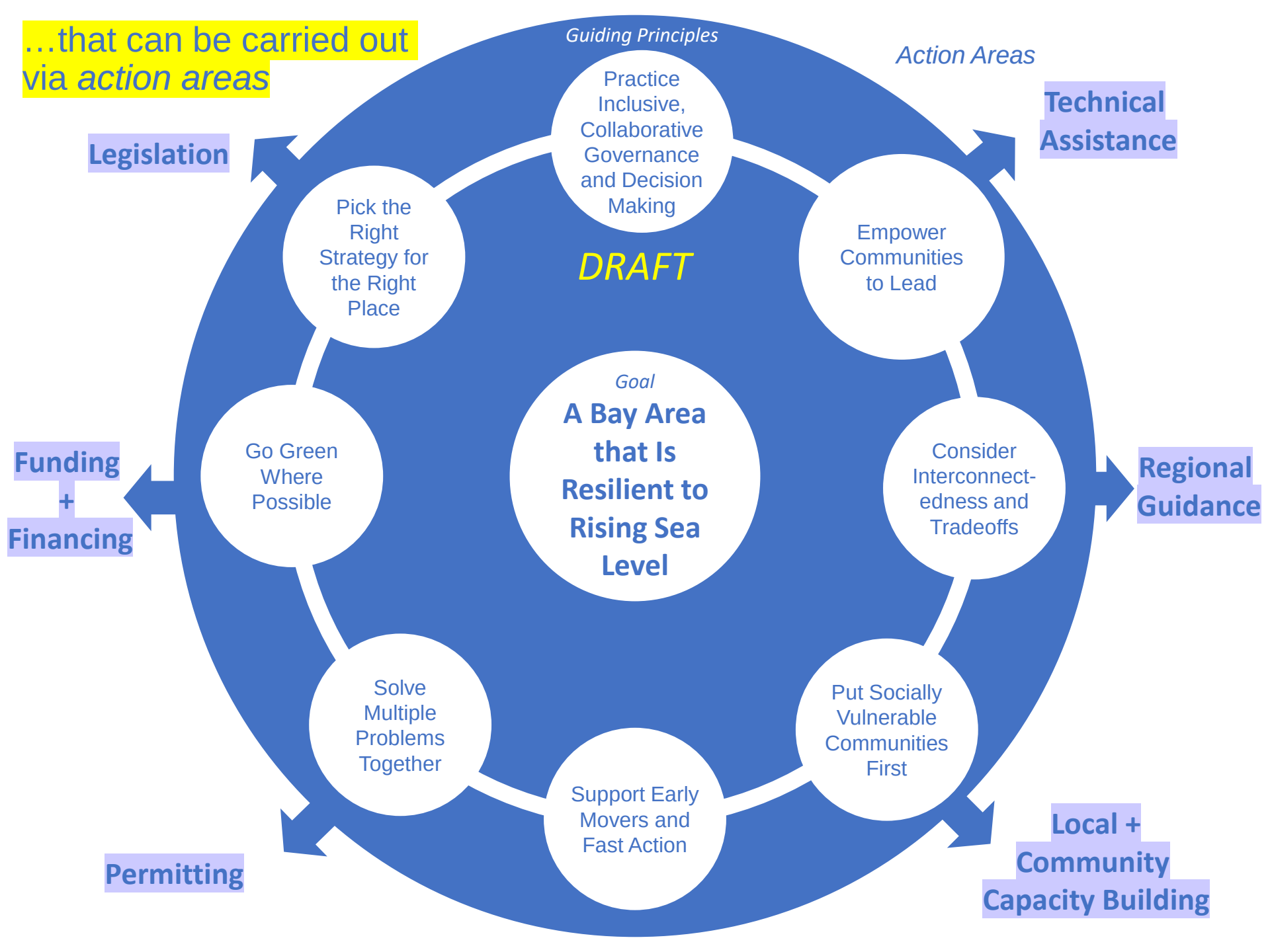
Start with a shared *vision*...



…supported by *Guiding Principles*…

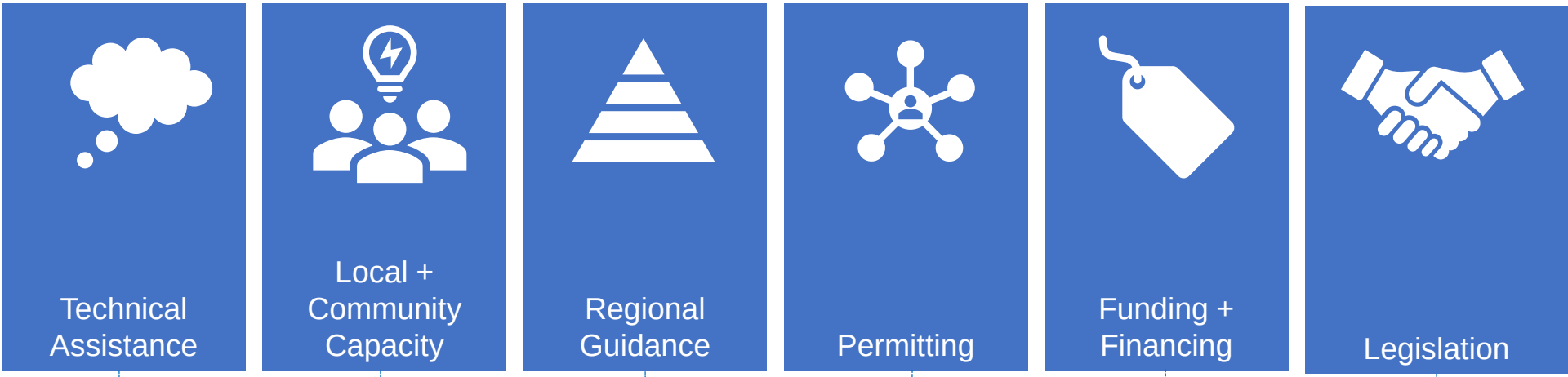


…that can be carried out via *action areas*



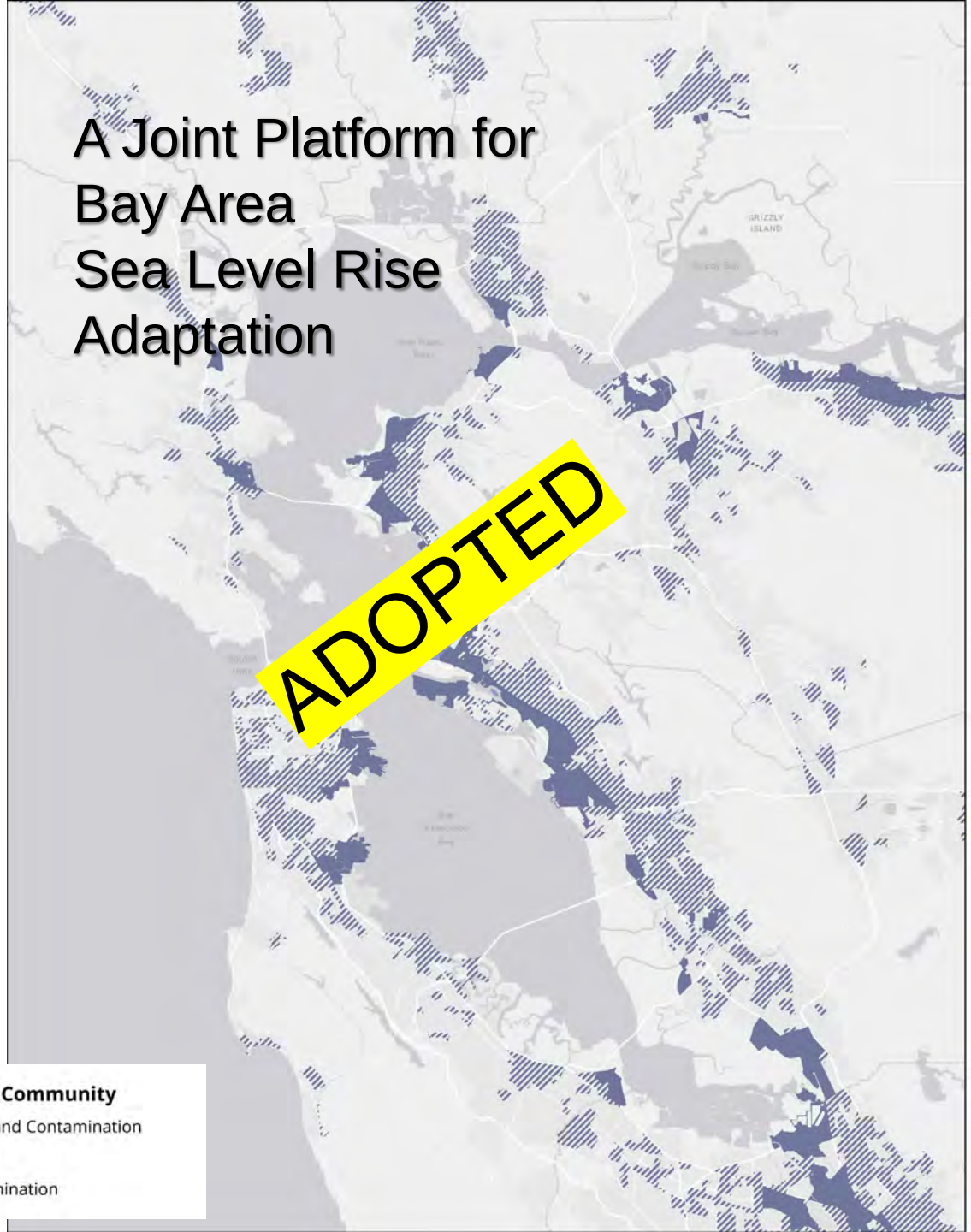
Specific actions will be developed…

Action Areas



Actions

…and combined into a Joint Platform that can be endorsed + implemented region-wide!

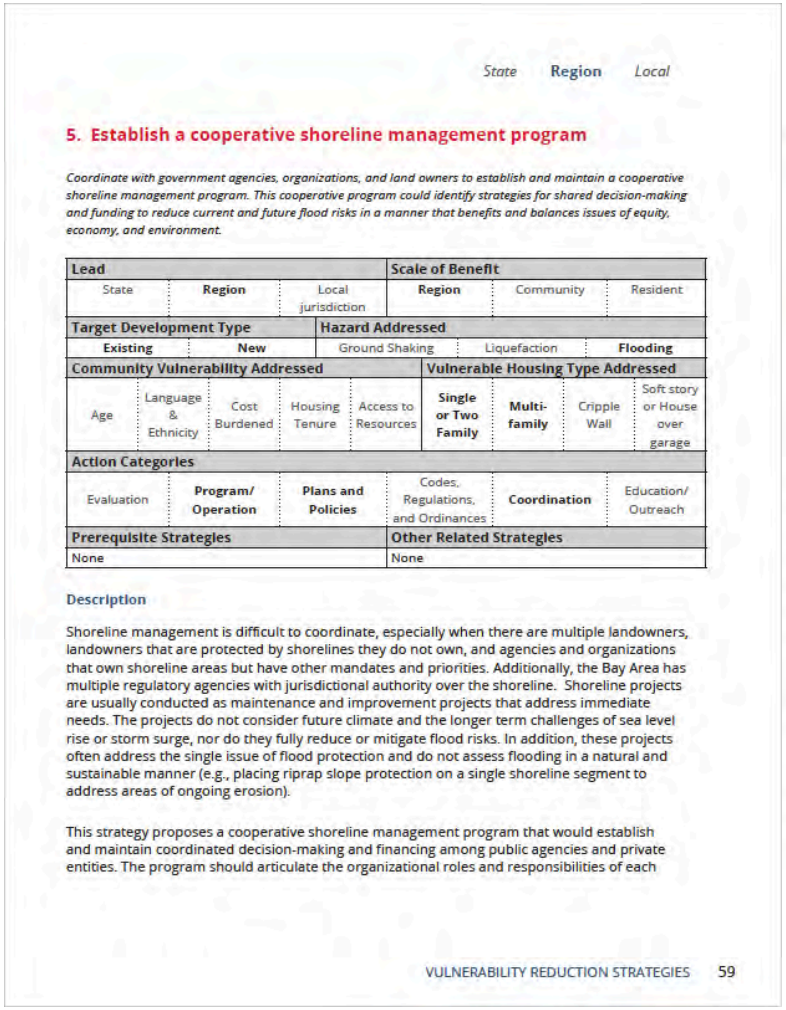


What is a Joint Platform?

A set of policy or action proposals for coordinated Bay Area sea level rise adaptation:

- 10 - 15 actions (2 pages each)
- Co-owned, co-created, multi-purpose
- Actionable, fundable, and/or implementable
- Short and Long Term; Low Hanging and Ambitious
- Include: Desired effect, responsible agency, timeframe, summary and detailed description

Example Action Proposals



State **Region** *Local*

5. Establish a cooperative shoreline management program

Coordinate with government agencies, organizations, and land owners to establish and maintain a cooperative shoreline management program. This cooperative program could identify strategies for shared decision-making and funding to reduce current and future flood risks in a manner that benefits and balances issues of equity, economy, and environment.

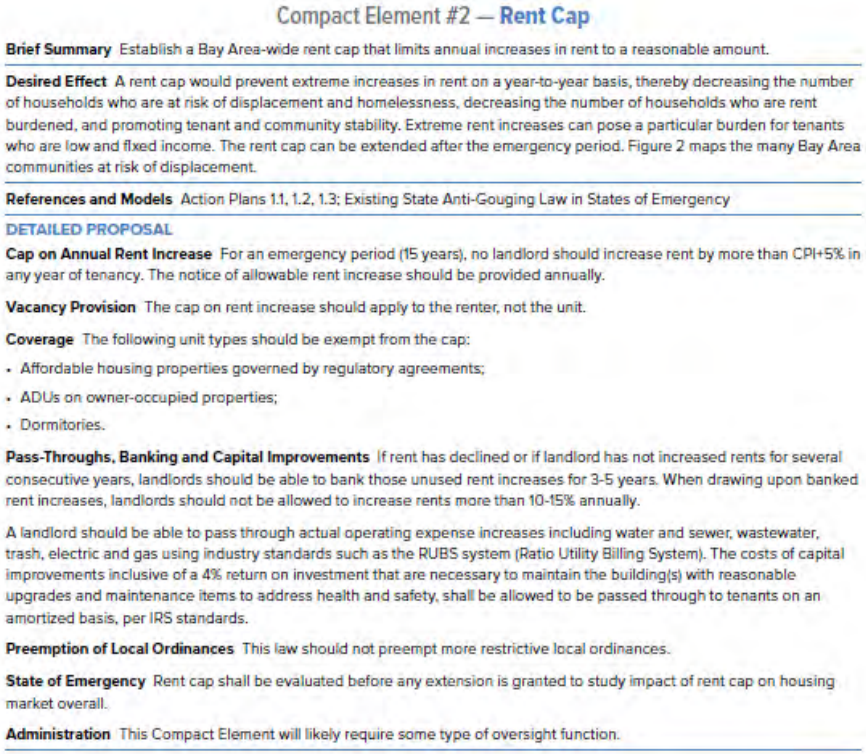
Lead			**Scale of Benefit**		
State	**Region**	Local jurisdiction	**Region**	Community	Resident
Target Development Type		**Hazard Addressed**			
Existing	**New**	Ground Shaking	Liquefaction	**Flooding**	
Community Vulnerability Addressed				**Vulnerable Housing Type Addressed**	
Age	Language & Ethnicity	Cost Burdened	Housing Tenure	Access to Resources	**Single or Two Family**	**Multi-family**	Cripple Wall	Soft story or House over garage
Action Categories					
Evaluation	**Program/ Operation**	**Plans and Policies**	Codes, Regulations, and Ordinances	**Coordination**	Education/ Outreach
Prerequisite Strategies			**Other Related Strategies**		
None			None		

Description

Shoreline management is difficult to coordinate, especially when there are multiple landowners, landowners that are protected by shorelines they do not own, and agencies and organizations that own shoreline areas but have other mandates and priorities. Additionally, the Bay Area has multiple regulatory agencies with jurisdictional authority over the shoreline. Shoreline projects are usually conducted as maintenance and improvement projects that address immediate needs. The projects do not consider future climate and the longer term challenges of sea level rise or storm surge, nor do they fully reduce or mitigate flood risks. In addition, these projects often address the single issue of flood protection and do not assess flooding in a natural and sustainable manner (e.g., placing riprap slope protection on a single shoreline segment to address areas of ongoing erosion).

This strategy proposes a cooperative shoreline management program that would establish and maintain coordinated decision-making and financing among public agencies and private entities. The program should articulate the organizational roles and responsibilities of each

VULNERABILITY REDUCTION STRATEGIES 59



Compact Element #2 — Rent Cap

Brief Summary Establish a Bay Area-wide rent cap that limits annual increases in rent to a reasonable amount.

Desired Effect A rent cap would prevent extreme increases in rent on a year-to-year basis, thereby decreasing the number of households who are at risk of displacement and homelessness, decreasing the number of households who are rent burdened, and promoting tenant and community stability. Extreme rent increases can pose a particular burden for tenants who are low and fixed income. The rent cap can be extended after the emergency period. Figure 2 maps the many Bay Area communities at risk of displacement.

References and Models Action Plans 1.1, 1.2, 1.3; Existing State Anti-Gouging Law in States of Emergency

DETAILED PROPOSAL

Cap on Annual Rent Increase For an emergency period (15 years), no landlord should increase rent by more than CPI+5% in any year of tenancy. The notice of allowable rent increase should be provided annually.

Vacancy Provision The cap on rent increase should apply to the renter, not the unit.

Coverage The following unit types should be exempt from the cap:

- Affordable housing properties governed by regulatory agreements;
- ADUs on owner-occupied properties;
- Dormitories.

Pass-Throughs, Banking and Capital Improvements If rent has declined or if landlord has not increased rents for several consecutive years, landlords should be able to bank those unused rent increases for 3-5 years. When drawing upon banked rent increases, landlords should not be allowed to increase rents more than 10-15% annually.

A landlord should be able to pass through actual operating expense increases including water and sewer, wastewater, trash, electric and gas using industry standards such as the RUBS system (Ratio Utility Billing System). The costs of capital improvements inclusive of a 4% return on investment that are necessary to maintain the building(s) with reasonable upgrades and maintenance items to address health and safety, shall be allowed to be passed through to tenants on an amortized basis, per IRS standards.

Preemption of Local Ordinances This law should not preempt more restrictive local ordinances.

State of Emergency Rent cap shall be evaluated before any extension is granted to study impact of rent cap on housing market overall.

Administration This Compact Element will likely require some type of oversight function.

Example Commitments

BROWARD COUNTY FLORIDA

MIAMI-DADE COUNTY

Regional Climate LEADERSHIP SUMMIT

PALM BEACH COUNTY FLORIDA

Southeast Florida Regional Climate Change Compact

WHEREAS, there is consensus among the world's leading scientists that global climate change is among the most significant problems facing the world today; and

WHEREAS, Florida is considered one of the most vulnerable areas in the country to the consequences of climate change with Southeast Florida on the front line to experience the impacts of climate change, especially sea level rise; and

WHEREAS, Broward, Miami-Dade, Palm Beach and Monroe Counties, herein the four counties that constitute the Southeast Florida Region, share in common a strong quality of life rooted in the region's rich cultural heritage, vigorous economy, and environmental resources of global significance; and

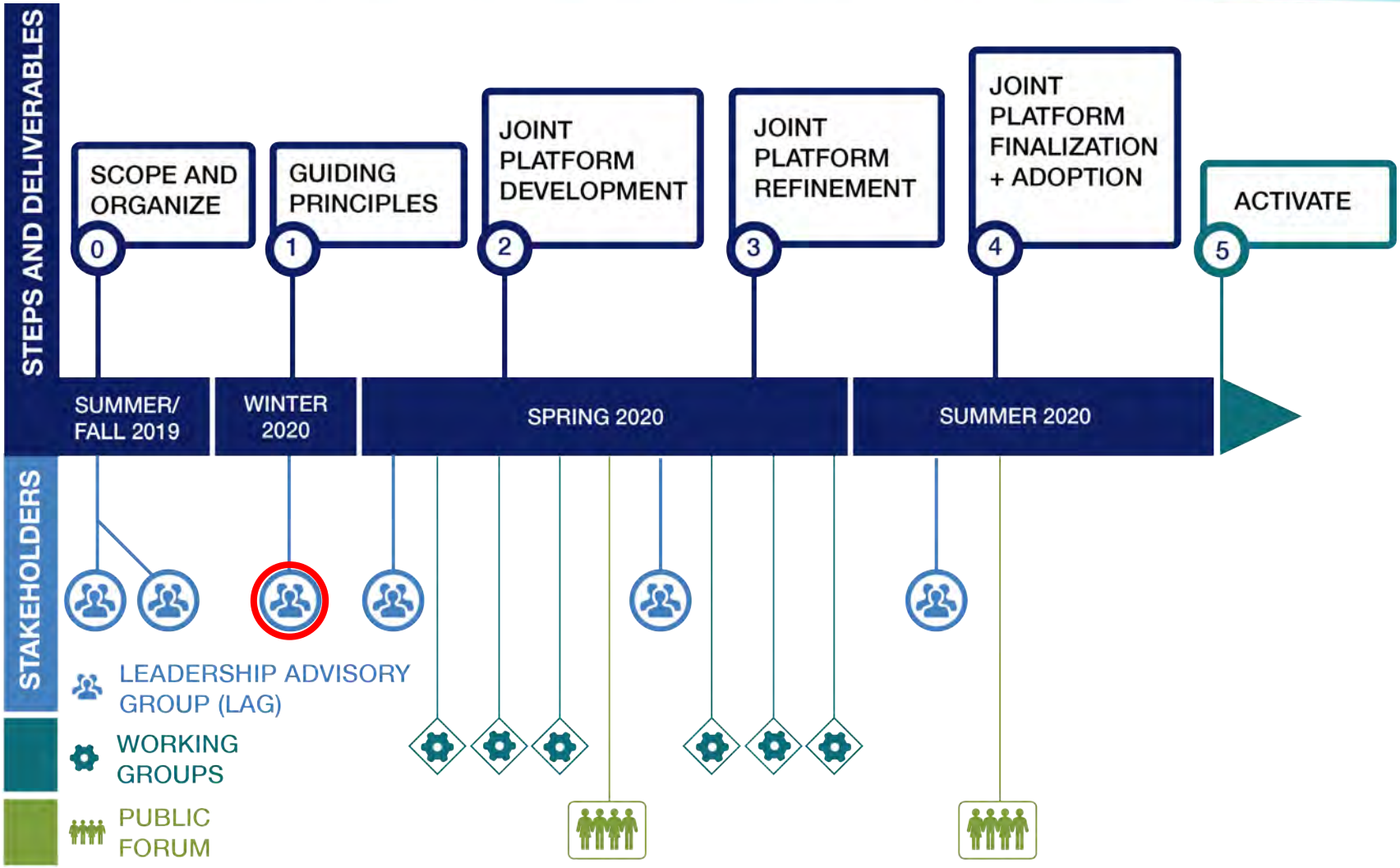
WHEREAS, the aforementioned four counties of Southeast Florida, which represent approximately 30% of the population of the State of Florida, are physically linked one to the other by the Atlantic Ocean coastline and share some of the world's most renowned natural resources such as the Everglades, our unique coral reefs, beautiful beaches, and fragile Keys ecosystem; and

WHEREAS, the four counties of Southeast Florida and their respective populations, totaling more than five million residents, are expected to share in disproportionately high risks associated with climate change due to low land elevations, rising sea level projections, and anticipated increases in tropical storm events; and

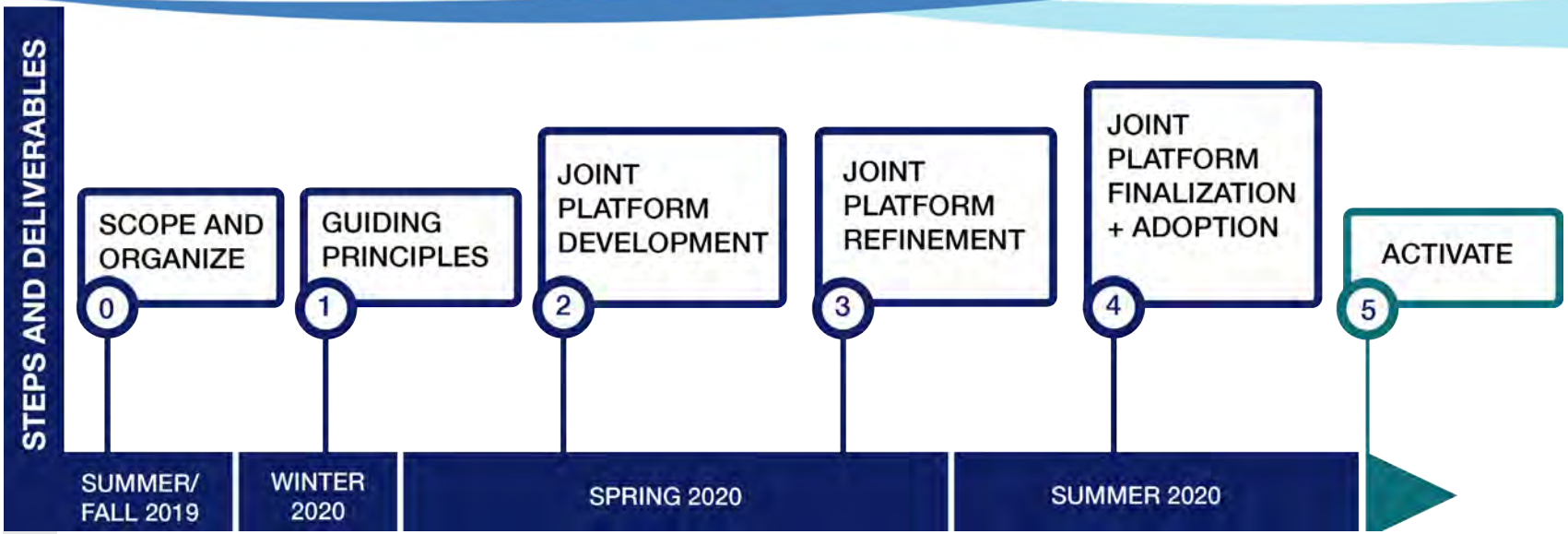
WHEREAS, rising sea levels could limit the effectiveness of critical drainage infrastructure, endanger beaches, and coastal natural resources and increase incidents of saltwater intrusion on the Biscayne Aquifer – putting at risk the drinking water supply for the entire population of Southeast Florida; and

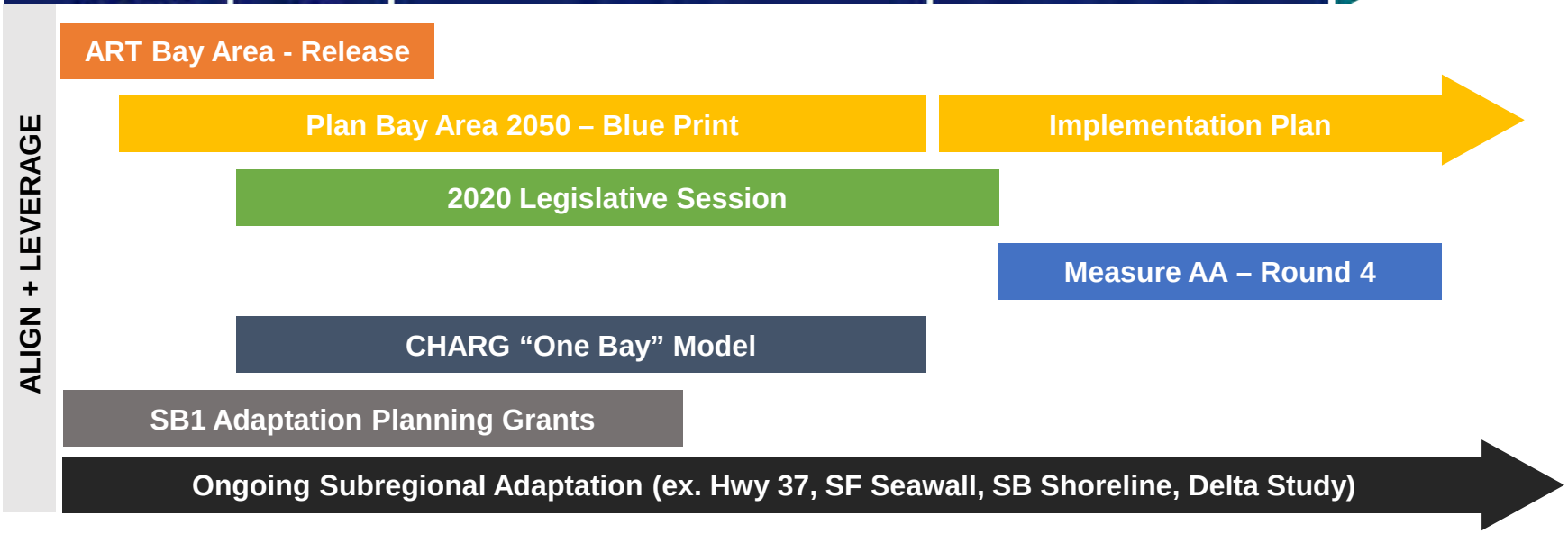
WHEREAS, local governments, and the region as a whole, must give significant consideration to adaptation strategies designed to protect public infrastructure, property, water resources, natural areas and native species, and basic quality of life; and

Phases and Deliverables

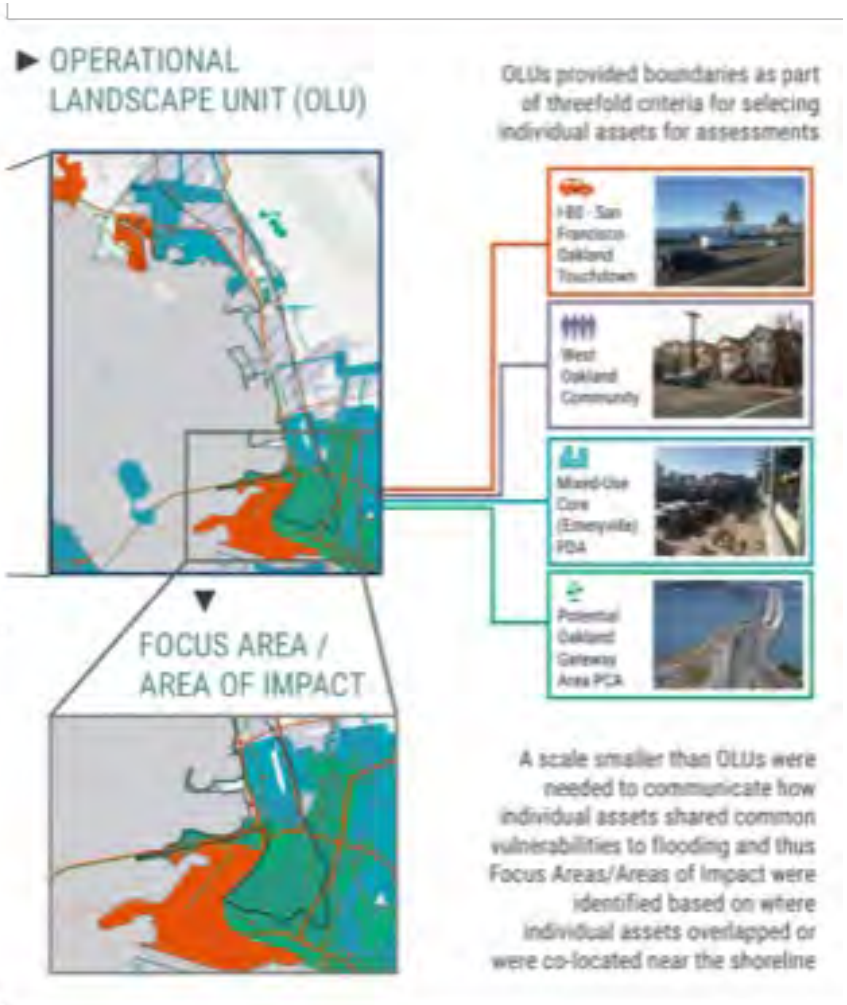


Aligning and Leveraging, Not Replacing

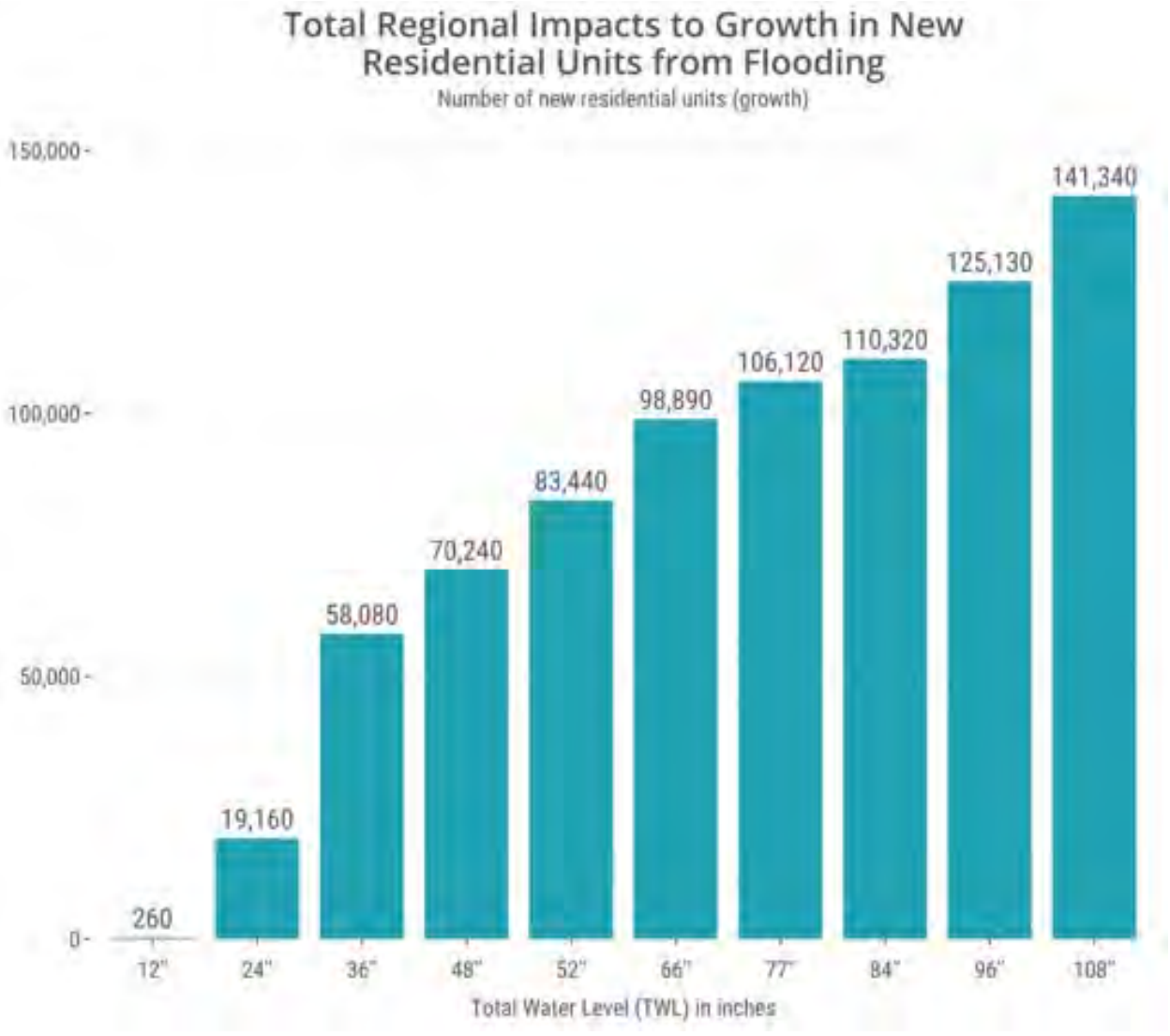




ART Bay Area Systems and Scales



The Regional Future Growth Areas Picture



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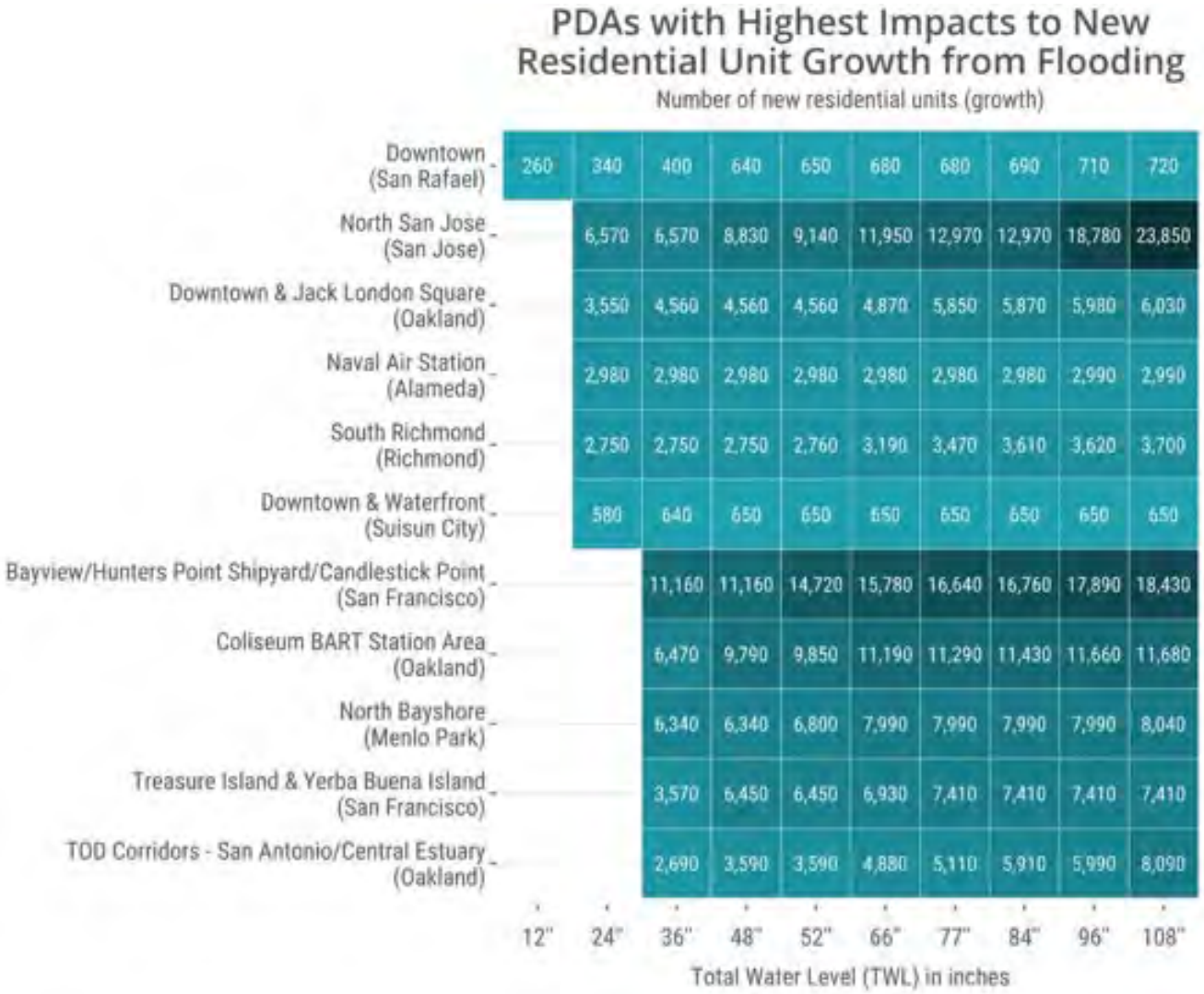
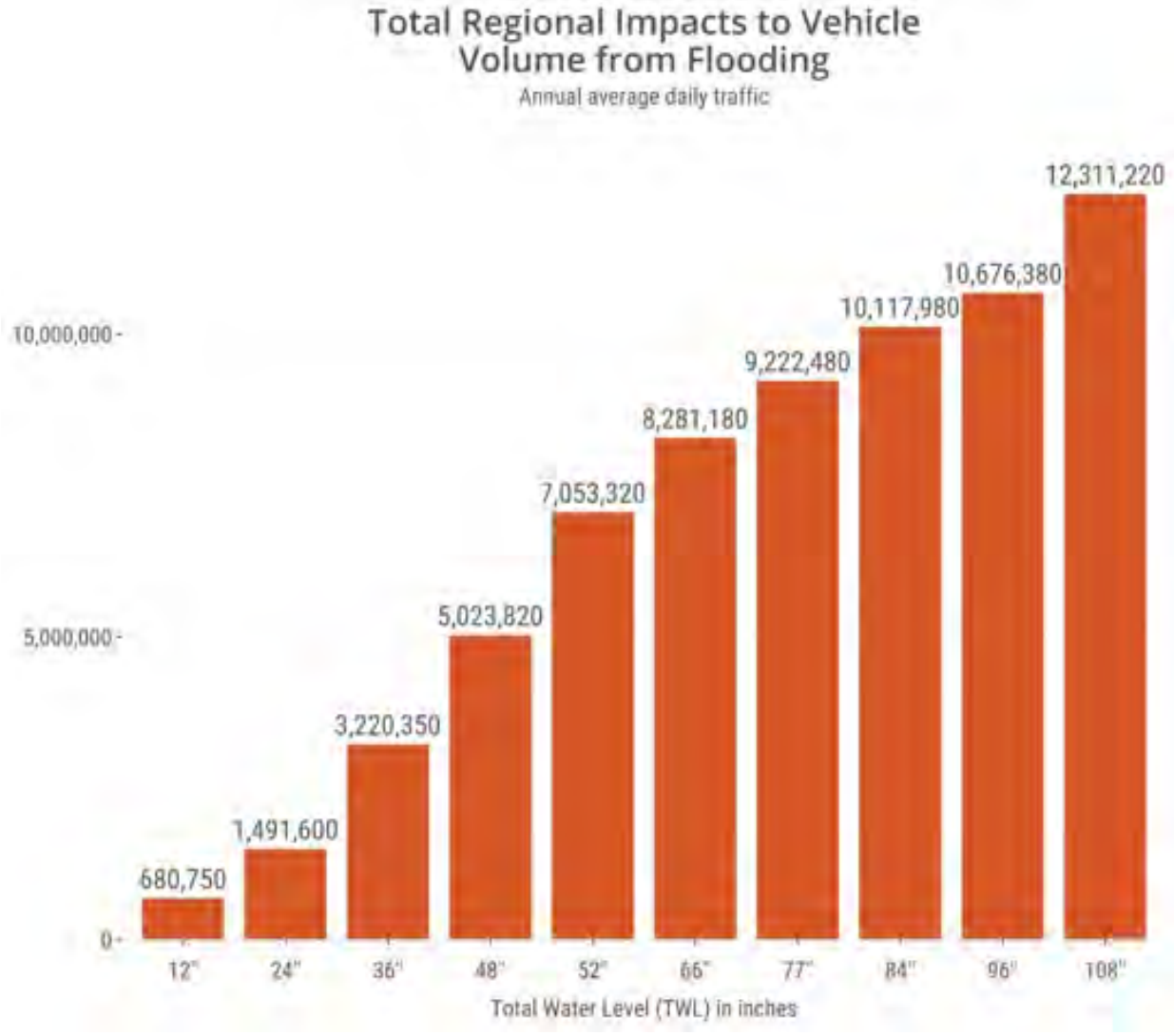
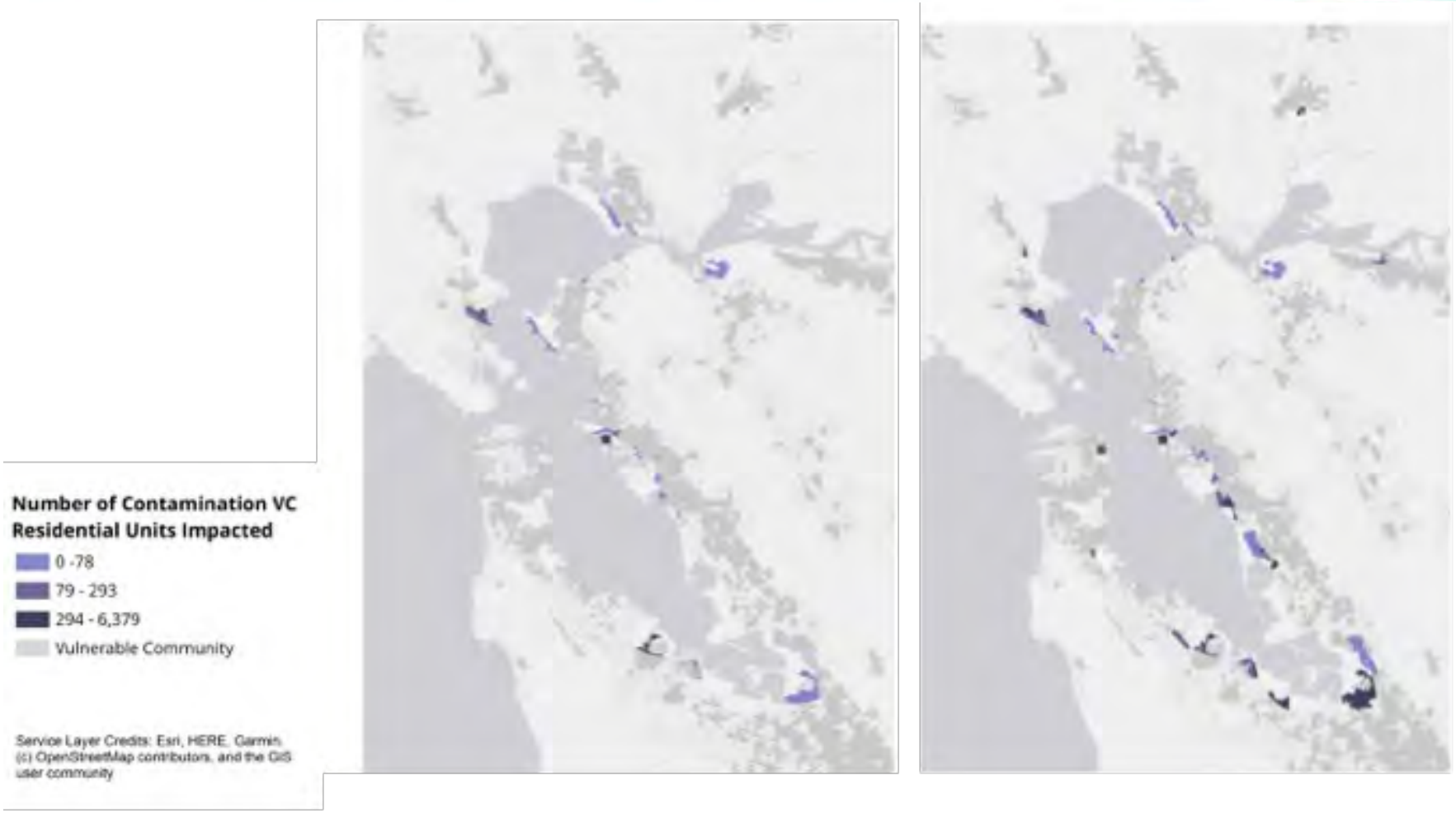


The Regional Highways Picture

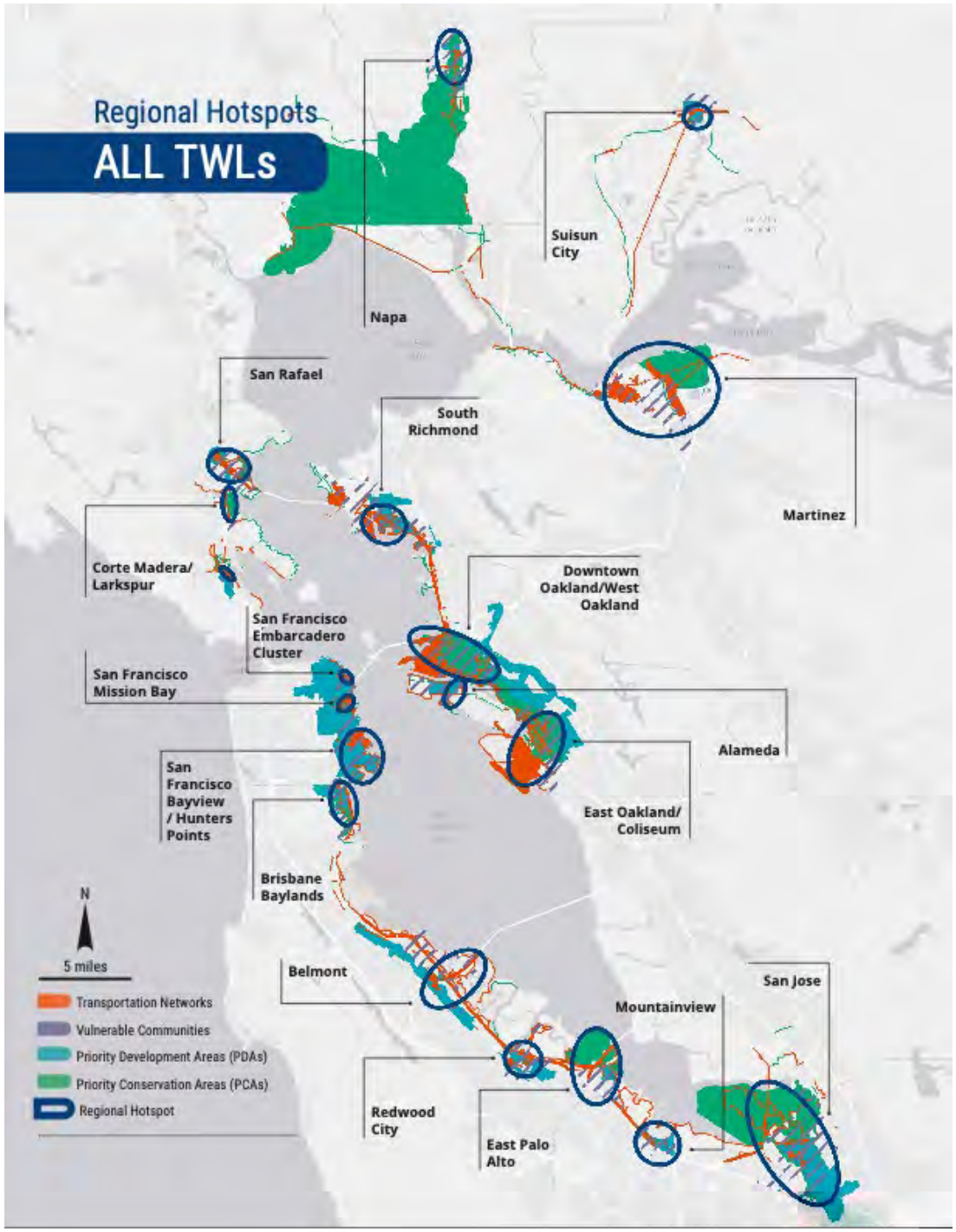


The Regional Contamination Picture



12” TWL

48” TWL


Regional Hotspots
ALL TWLs
Napa
Suisun City
San Rafael
South Richmond
Martinez
Corte Madera/ Larkspur
Downtown Oakland/West Oakland
San Francisco Embarcadero Cluster
San Francisco Mission Bay
Alameda
San Francisco Bayview / Hunters Points
East Oakland/ Coliseum
Brisbane Baylands
N
5 miles
Belmont
San Jose
Mountainview
Transportation Networks
Vulnerable Communities
Priority Development Areas (PDAs)
Priority Conservation Areas (PCAs)
Regional Hotspot
Redwood City
East Palo Alto

ART Bay Area Summary

- Presents a picture of how the regional sea level rise story will unfold over time across 4 systems *in the absence of action*
- Provides data for regional and local prioritization and decision-making
- Organizes the major planning issues around sea level rise
- 80+ adaptation responses to help inform Joint Platform

What to Expect Next

- Report official release end of February
  - Summary Report
  - Full report
- Media
- Last Regional Working Group meeting
- Regional road show, webinars, other education opportunities
- Companion reports
  - Community Engagement & Financing White Paper
  - Updated Adaptation Guidance

How do we get there?
Act strategically and tactically…

- Not starting from scratch
- Use existing mechanisms first
- Support “early movers” and restoration
- Speak as a region to Sacramento
- Link to issues that matter to people
- *BCDC role is to lead a dialogue, not dictate final word*

Today's ask

- Do you sign on to participating in this 6-months, action-oriented process? (4 mtgs + prep/follow up)
- Can you commit any staff or other resources to lead or participate in Working Groups? (6-8 mtgs + prep/follow up)