



**Design Phase
Final Report**

31st May 2018

EXECUTIVE SUMMARY	06	WHAT CAN WE DO?	94
ISLAIS HYPER-CREEK	08	OPPORTUNITIES IN THE BASIN	100
		TOOLS	110
PEOPLE & PLACE	16		
THE NEIGHBORHOOD	32	COMMUNITY ENGAGEMENT	138
HOPES & FEARS	38	ROUND 1 TOOLS & IDEAS	140
		ROUND 2 COMMUNITY ROUND TABLES	162
ACTORS	46		
WORKING GROUP	48	PILOT PROJECTS	178
ROADMAP	52	VISION	222
PROCESS	54		
		IMPLEMENTATION ROADMAP	224
CHALLENGES	60	GOVERNANCE & FUNDING STRATEGY	228
WHAT IS AT RISK?	76		
A HISTORY OF PLANNING	88	LETTERS OF SUPPORT	232
A HISTORY OF ENGINEERING	92	CREDIT	256



"The Old Clam House, opened in 1861, is one of the oldest restaurants in San Francisco.

When it opened, the restaurant was on the waterfront, sitting on Islais Creek which flowed into San Francisco Bay, and surrounded by a shallow marshy estuary.

When it opened, the Bay Area was a thriving fishing area. Dungeness crab fishermen started here around 1848, the oyster industry began in the 1850's when Gold Rush settlers arrived, and the shrimp industry started in the early 1860's.

And before the sardines disappeared in the 1950's, the area east of Islais Creek had the largest sardine cannery in the West."

THE LOST WATERFRONT, SUSAN SAPERSTEIN

EXECUTIVE SUMMARY

ISLAIS HYPER-CREEK

Islais Creek emerges into the bay at the low-lying southeastern edge of San Francisco's largest watershed. It is home to the City's most active maritime port, thriving production, distribution, and repair (PDR) jobs, and one of the City's most historically disadvantaged communities. Surrounded by mounting development and displacement pressures, this area is also highly vulnerable to risks of terrestrial flooding, liquefaction, and sea level rise.

The BIG + ONE + Sherwood team's vision for Southeastern San Francisco, Islais Hyper-Creek, includes the restoration of the natural ecosystem in a new major park that simultaneously addresses risks from coastal and stormwater flooding and becomes an opportunity to bring the existing industrial ecosystem into the next economy.

The real innovation of Islais Hyper-Creek is rooted in its renewed attitude toward the area's dual history of vibrant ecology and industry, land uses too often seen at odds with one another.

In linking these crucial functions in a considerate, resilient, and non-exploitative manner, vitality and local culture can be reconnected in this historic riparian corridor.

SHARED PROCESS

The complexity of the issues we are engaged with in Islais Creek prompted us to establish a 5-month community engagement process during the Design Phase as the first step of a longer journey. Finding success in protecting this area from the increasing risks outlined in this report will require collaboration between the City and the Community. To carry this collaboration forward, a shared vision is needed for Islais Creek and the surrounding neighborhoods, with clear benefits and implementation pathways.

During the Design Phase, we met with over 80 groups and agencies for direct discussions that explored the issues critical to these stakeholders in the area. Early in the process, a community working group formed organically. Our goal was to provide a long-term platform for developing a comprehensive vision that addresses the social, economic, and environmental needs of this area. Working together, we laid out the following roadmap to help guide the first stage of the community-driven planning process. These seven steps unfolded over the nine months that we worked on the visioning effort:

1. Research and Analysis
2. Raise Public Awareness
3. Co-define Goals and Aspirations
4. Form Coalition
5. Co-create Design Ideas
6. Form Vision Coalition
7. Refine Vision Plan

SHARED GOALS

During the Research Phase, we focused our efforts on research, data gathering, mapping, and planning review to grasp the complexity of Islais Creek. Understanding past and current endeavors helped us prepare for the first round of engagement with local stakeholders. As a next step, we met with city officials, community representatives, local business owners, and advisors to raise awareness around the project and co-define a road for collaboration over the following months. Based on research findings and our first interactions with community members and city officials, we compiled a short narrative to outline our understanding of the site and four goals emerged: PROTECT - RESTORE - CONNECT - GROW.

Following this first round of engagement, our team hosted public events with local communities, seeking input and feedback on ideas for a long-term vision and short-term pilot projects. Our larger events allowed the team to co-define potential opportunity sites that could be the first phase of pilots projects.

The following report collects and evaluates our findings and ideas for a shared vision, and points the way towards successful implementation of six pilots that we have defined.

WHERE WE ARE HEADING

The BIG + ONE + Sherwood team has established the following goals for this area of San Francisco:

1. Prototype a replicable, community-based process for San Francisco to respond to emerging climate risks.
2. Implement near-term pilot projects for coastal protection, creek restoration, industrial and Port land use.
3. Enable mid-term growth of the PDR economy, creek restoration and Port densification.
4. Provide viable long-term solutions for sea level rise adaptation at the Southeast wastewater treatment plant (SEP) and transportation linkages along I-280.

Challenges and related questions we have been working to address thus far, and that we will continue to address in the next phase, include:

1. How can we formulate information and messaging in a way that is accessible to a variety of stakeholders for a project addressing complex and overlapping systems?
2. How should we navigate the landscape of existing public and private projects whose ownership and timelines may be in conflict with longer-cycle integrated planning?
3. How can we work at the pace of existing community and city processes, while building on the momentum established by the Resilient by Design process?
4. How can we provide assurance and incentives for others to invest in this process and sustain a continued community planning and design effort?

VISION

ISLAIS HYPER-CREEK

LIVING WITH WATER
AT ALEMANY FARMERS MARKET 5

SF FOOD DISTRICT
AT PDR BASIN 4

RIVER PARK
AT CESAR CHAVEZ CORRIDOR 3

LIVING LEVEE
AT SEP 2

ISLAIS CREEK GATEWAY
AT PIER 90 1

INNOVATION COVE
AT PIER 80 6

ISLAIS HYPER-CREEK, A SOCIAL ECOSYSTEM

The former low-lying marshlands at the Islais Creek outlet to the Bay in San Francisco's southeast waterfront is now an area where ecology and urbanity co-exist in harmony. Winding through its center, Islais Creek flows freely, unconstrained by the pipes and hard edges that held it for 100 years. In fact, the Hyper-Creek absorbs millions of gallons of stormwater every year that would have otherwise flooded its surrounding neighborhoods; it is a vital part of San Francisco's efforts to adapt to a changing climate. The surrounding green acres, dubbed park, are home to both a rich ecology and a variety of amenities and recreational destinations for people, families, and youth in the dense surrounding neighborhoods. The creek, now swimmable, is testament to the fact that it provides multiple benefits, including cleaning the air, soil, and water. The park and its infrastructure has also become a place for learning about climate, native ecology, and environmental stewardship – a resilient new heart for Southeast San Francisco, and gateway between the Bayview and the City's Central Waterfront.

Adjacent to the park, the area's industrial, logistics, and Port functions, traditionally located on the creek's channel, have been strengthened and adapted to resist earthquakes and flooding. Organized more compactly, clusters comprised of complementary functions form a new industrial ecosystem of diverse and accessible jobs. This new industrial ecosystem is as dynamic as the first industrial boom of the 1940s in this area, but in the 21st century these industries are now clean and safe for the workers, many of whom come from the Bayview and other surrounding residential areas. The area's businesses host fabricators, artists, food related activities, and e-logistics: a whirl of new technology and the old way of working with your hands. These industries offer high-paying jobs and allow room for affordable work spaces to host the raw processes that still take place here and provide an entry point into the workforce. Befitting San Francisco, the project area has become a global showcase of innovative and clean urban industries and logistics linking the digital economy to the physical economy, and continuing to provide essential functions and working-class jobs for the City.

Rather than succumbing to a series of cascading environmental risks and urban stresses over time, Islais Hyper-Creek emerged as the culmination of a decade-long inclusive and integrated planning process driven by four principles: protect, restore, connect, and grow.

PROTECT

Today, the Islais Creek area of San Francisco is home to a vibrant mix of cultures. To the south, the Bayview has long been connected to the Islais basin as an essential place for a variety of different jobs, from entry level to advanced industrial employment. Additionally, as this area is one of the most affordable places for commercial space in the City, a variety of unique activities occur here: produce trading, art making, craftsmanship, fabrication, and much more. This economic diversity and opportunity should continue to thrive into the future.

At the top of the watershed, one can see the re-emergence of a naturalized section of Islais Creek in Glen Canyon Park. Before exiting the park, the creek goes below ground into pipes that grow in diameter and ultimately reappear downstream of I-280 in Islais Channel. The low-lying areas surrounding Islais Channel today were once marshland, filled in the early 20th century with material cut from the surrounding hills and 1906 earthquake debris. This fill and the marshy soils buried below create an unstable condition leading to potential liquefaction in a major earthquake. Filled areas throughout the watershed along the historic channel have seen repeated flooding. Sea level rise and storm surge will exacerbate this flooding, as the higher coastal water levels will block stormwater from releasing into the Bay over time. Sea level rise will cause a host of additional problems, with coastal flood events increasing in size and frequency.

Preventing stormwater and sewage flooding from becoming more problematic in the future will require one, or a combination, of the following strategies: separated sections of the sewer system, creation of large spaces for water buffering, improved conveyance, installation of very large pumping facilities—or, preferably, creation of additional upland retention space where the water can accumulate and other passive non-pumped drainage strategies.

Coastal flood protection measures will also need to be implemented. Without them, access to the Bayview and Hunters Point from the north will become compromised starting at the 3rd Street bridge and radiating out. Many of the Port properties and other lands around Islais Channel will be inundated in the coming decades if nothing is done. With these growing risks, the Port will want to protect its assets and operations, and can accomplish this by creating reinforcements (hard or soft edges) along its coastline. The importance of preventing future flood

events extends beyond job protection.

The creek is located amid a network of vital infrastructure hubs including the Wastewater Treatment Plant (which treats 80% of the City's sewage), the San Francisco Wholesale Produce Market, FEDEX, USPS, the MUNI Yards, cement and aggregate businesses, as well as additional industries that in turn support other industries. In many ways, this district can be considered the center of critical infrastructure that makes San Francisco work.

In addition, there is legitimate fear that increased flooding and a raised water table will unlock industrial pollutants that may have accumulated in soil and groundwater reserves over the years. In light of this concern, it is imperative to make space for water circulation and to make the necessary changes in land-use to combat the potential for pollution. As an extra benefit, these changes will, in turn, make space for earthquake retrofits.

RESTORE

The word Islais comes from the Native American name for the wild cherry that still grows in the basin. With the opening of the creek and the creation of space for water retention, it will become possible to re-introduce these trees alongside a diverse array of other native plantings. In line with the character of the area as San Francisco's working waterfront district, this 21st century park will feature an array of nature-based solutions. Rainwater gardens will filter runoff. Trees will capture particulates. Plants will remediate the soils. Constructed wetlands will treat effluent.

Islais Hyper-Creek will also provide a variety of other ecosystem services. It will reduce the urban heat island effect and improve health outcomes as temperatures are lower and the air is cleaner. Its parks will provide areas for food production, educational opportunities, and green jobs. A unique asset to San Francisco for its ecological benefits, the restored creek will link Glen Canyon to the Bay in a tidally-influenced system, providing habitats to native flora and fauna.

Most parks in San Francisco are located in low-density areas in the western part of the city. The creation of a large park on the Bay-side of San Francisco—the area least serviced by parks while subject to most of the City's future urban growth—is a once-in-a-lifetime opportunity to restore equity with the provision of green spaces. Connecting such a world-class performative park

to the surrounding neighborhoods and creating trail lines from peak to shore and along the waterfront has the potential to make it a favorite destination for all city dwellers.

CONNECT

Along the creek and in its surrounding neighborhoods, conflicts between trucks and other traffic will be resolved with bike and pedestrian byways that connect to the surrounding areas. Networks will be reorganized to provide better and safer access to work and recreation without disrupting crucial logistical functions.

A new Caltrain station will likely be added in the area, creating a critical node in the future of regional access. This will provide a great place-making opportunity and a new gateway for the Bayview. This station will be an important transit improvement opportunity for an underserved neighborhood. Mobility will be enhanced with a seamless transfer system linking to innovative last-mile mobility technologies for San Francisco's Southeast.

Connecting people to places is a central component of our shared vision. Connecting resource flows is another. One company's excess heat is another's energy. One company's waste is another's base product. By intelligently locating and connecting industries, economic and environmental synergies can be achieved, with district-wide innovation stimulated as a result. The changes in land-use resulting from the City's hazard mitigation strategy can trigger a process where functions can be optimized in industry clusters, and additional space can be created for complementary programs.

In the new economy of Islais Hyper-Creek, manufacturing and research, logistics and retail become much more intertwined. Supported by ambitious investment in business and workforce development, the Islais Creek basin can become an incubator for the same clean jobs on which the coming 21st century economy will be built.

A much-needed opportunity for connection exists in the current program for investment in the wastewater treatment plant and in augmenting the San Francisco Public Utilities Commission's (SFPUC) aging, fragile, and under-capacity sewer system. Building upon the billions of dollars in investment going into the plant in the coming decade, additional programs to extract nutrients, energy and recycled water from the wastewater plant could feed the eco-industrial park, which in turn would make it

easier to reach the City's overall resilience and sustainability goals.

GROW

San Francisco's need to make efficient use of its remaining production, repair, and distribution (PDR) zoning to provide much needed logistics functions coincide with other factors. These include publicly owned lands, functional docks, proximity to Silicon Valley, the presence of multi-level logistics and resource management processes, an existing community college focused on job training, and an adjacent historic blue collar labor force in Bayview-Hunters Point.

While much of the Islais Creek basin is zoned for an average allowed height of 6 stories, most of its present building stock reaches only one story. There are clear indications that this might be changing soon: land values are climbing and applications have been filed for multi-story logistics buildings on some of the area's parcels. This accelerating momentum for change necessitates a clear plan for the area and could create a window of opportunity for directed and efficient use of space.

These factors together suggest the potential for an advanced logistics and light industrial hub that leverages regional technology partnerships to solve shortfalls in civic functionality and provide much needed middle-class blue collar jobs. Simultaneously retreating from soft edges and armoring hard edges, uses can be concentrated and aligned in a zero-waste industrial ecosystem, increasing efficiency, optimizing adjacency of uses, and stacking functions to minimize unnecessary trips and waste products.

Done the right way, transitioning to multi-story development will help make space for the naturalization of Islais Creek, reduce flood risk zones, and allow for efficient earthquake proofing of new construction. With the right incentives and allowances for higher revenue functions to be balanced with current land uses, it is possible to preserve the affordability that is so critical while providing additional jobs. Consolidation of land-use in clusters will generate innovation and accelerate economic growth. It will also reduce the use of energy and provide opportunities for placemaking and strengthen the identity of the area.

Intensifying the currently decentralized uses on consolidated land allows for new building forms that become a 'sandwich' of different programs. In the future, building here will be comprised half by current uses (and affordability), and half by new complementary programs. In order to realize such a

'sandwich', landowners can layer the finances in a similar way, combining funding for public benefits and efficiencies with revenue from complementary programs.

In line with the approach of pilot projects, we propose to start this consolidation mechanism by using municipally-owned and key underutilized properties for the synergistic strategy of making space for water and open space, while growing and consolidating PDR-uses. When successful and fine-tuned, this will lead to further land acquisition and replication of these types of development both in the PDR areas and at the Port.

With a focus on closed-loop resource management and "circular economies," there is the potential to create largely automated Eco-Industrial Innovation Docks that orient uses vertically to optimize space, use Silicon Valley tech for operational efficiency, and create opportunity for the neighboring community to reclaim its historic role of contributing to civic operations on these docks.

SIX PROJECTS

Connecting hazard mitigation to land use, industry to open space, access to jobs, and water to waste systems requires an integrated planning approach at a large scale with a long-term horizon. In order to jumpstart this process, and to make the outcomes more resilient and adaptive, we have formulated an approach that grows out of a small number of distinct pilots.

Pilot projects allow for quick wins, helping build the necessary capacity for coordination and collaboration, revealing what works (and what does not), and providing input for long-term studies, planning, and funding. Pilot projects are central in engaging the community and the stakeholders in the overall process while getting the feedback necessary for active stewardship and adaptation.

1. ISLAIS CREEK GATEWAY AT PIER 90

At Pier 90, underutilized lands can be naturalized into a soft-shoreline to adapt to rising sea levels and to better handle storm flows throughout the area. This pilot will create an expanded Gateway park to the Bayview and space for stacked vertical industry alongside working spaces near the iconic grain silos, kicking off a longer-term naturalization of the creek's southern edge.

Islais Creek Gateway connects the neighborhood and its future economy to the creek. Building on recent improvements along Islais Creek's crossing with 3rd Street such as the skatepark,

kayak launch, and Bayview Gateway Park, the Port and its partners can develop the underutilized areas east of 3rd Street into a substantial park with shoreline access, restored wetlands, neighborhood amenities, and a ferry station.

These moves can open up much needed open space for the Bayview community, space for economic development, and widening of the flow channel.

Islais Creek Gateway can play an important role in strengthening the cultural and functional connections along 3rd Street. This effort should include re-assessment of the two bridges over Islais Creek to ensure they can be adapted to sea level rise.

2. LIVING LEVEE AT SOUTHEAST PLANT

At the Southeast Treatment Plant, natural treatment systems can be piloted along the creek, along with sea level rise adaptation using wetlands to process wastewater, accomplish resource recovery, and tie into a future decking of the plant itself. These interventions can create space for much needed recreation, open space, and educational opportunities for the neighborhood.

On the lots just north of the Southeast Treatment Plant, the SFPUC can combine community benefits and educational programs with a number of interventions focused on flood protection, water treatment, resource recovery, and urban farming. This public park can serve as an important step in the further future integration of the Southeast Plant with its environment.

3. RIVER PARK AT CESAR CHAVEZ CORRIDOR

Building upon green infrastructure improvements along Cesar Chavez Street, areas of biodiverse habitat and water detention can be reintroduced to the neighborhood. This will be the start of a continuous alignment that eventually becomes a restored Islais Creek integrated with significant areas of storage volume to intercept peak flows and spaces for living along its banks.

The predominantly municipally-owned areas south of Cesar Chavez Street and select streets in the basin can be re-organized so that a portion of the space is freed for water management. This pilot could be partially linked to the temporary San Francisco Flower Market at 2000 Marin Street. As part of the traffic improvements in this area, new buildings could be set back from a restored channel.

4. SF FOOD DISTRICT AT PDR BASIN

The San Francisco Wholesale Produce Market has begun a process of modernization. By stacking additional functions in

this part of the district, this pilot can be a catalyst for a food and high-tech logistics district in the heart of the basin. This could be a place where production, storage, goods exchange, and visitors come together as a new destination in the Bayview. In the next series of capital investments planned by the SF Wholesale Produce Market, complementary functions such as food production, processing, distribution, a culinary school, and even food consumption could be stacked on top of the existing market. By introducing separated truck and pedestrian networks, traffic safety will improve while the food district can link to the creek as a walkable, city-wide destination. Such a proof-of-concept can be replicated with other complementary programs in the PDR area, creating space for water retention and creek restoration, and adding jobs while allowing lower revenue-generating programs and production to stay in San Francisco. Made in the Southeast!

5. LIVING WITH WATER AT ALEMANY FARMERS MARKET

Alemany Farmers Market sits at a critical reach in the creek naturalization plan. With a multi-functional site design, this area can accommodate space for water, a new market, and housing. Adjacent parcels under the freeways can double as both parking and water storage.

In this area, creek daylighting can be combined with improvements in traffic circulation, including parking, pedestrian pathways, and bike connections under the highway intersection. Rainwater gardens in underutilized right-of-way areas will alleviate the recurring stormwater flooding. These public realm improvements can link to the redevelopment of Alemany Farmers Market.

6. INNOVATION COVE AT PIER 80

At the Bay's shore, lands ringing Warm Water Cove can help extend the City's waterfront network into the Southeast, providing a platform for a new Innovation Dock where local business incubators, research facilities, and experiments in resilient floating architecture form a hub of innovation for the city. The extension of Warm Water Cove to the south with additional shoreline park improvements will provide ecological and public realm benefits for many of the new residents in the surrounding neighborhoods. Improved access can link new developments to the start of San Francisco Port's Innovation District starting with the repurposing of the areas at the end of 25th Street for industrial cleantech incubators integrated with maritime access research and development facilities.



ISLAIS CREEK GATEWAY AT PIER 90



SF FOOD DISTRICT AT POTRERO BASIN



LIVING LEVEE AT SOUTHEAST PLANT



LIVING WITH WATER AT ALEMANY FARMERS MARKET



RIVER PARK AT CESAR CHAVEZ CORRIDOR



INNOVATION COVE AT PIER 80

PEOPLE & PLACE



The Islais Creek watershed is the largest watershed of San Francisco. Historically, from its sources in Glen Canyon, the creek provided up to 85% of the potable water for the city, fostering a long tradition of living and working with nature. Today, the creek basin is home to many neighborhoods and serves as an anchor for the city's industrial areas.

The shoreline has been transformed from a rich fluvial valley where the indigenous Muwekma Ohlone tribe once harvested mussels, shrimp, and clams, into an active industrial port. Over time, the creek basin shifted from absorptive marshlands to an important city-wide logistical center for food produce, shipping, and auto industries.

Early western settlements adjacent to Islais Creek were centered around maritime jobs and food production. As farmers began to move into what is now the Bayview area, they utilized the nutrient-rich banks of the creek and water for vegetable crops following the practices of native tribes. Following the 1850s Gold Rush and the industrialization of the Port in the 1870s, the quality of the water and the connection of the residents with the creek began declining.

In the early 20th century, the City passed bonds to fill in the tidal marsh at the mouth of the creek to expand port activity, and by the 1940s, the surrounding communities were strongly connected with maritime industries and city-wide logistical operations.

The area south of Islais Creek was known as "Butchertown," hosting the city's meatpacking, shipping, and processing areas, which – in light of the time's loose regulations – disposed of sewage and waste in the creek's basin. City officials covered the creek with concrete and forced the runoff water into pipes in the 1930s. In the following decades, Butchertown slowly transformed largely into auto wrecking yards. The construction of Highways 101 and 280 further disconnected the creek from the surrounding communities, followed by the construction of a wastewater treatment plant in the 1970s.

Decades of heavy industrialization of this area compromised the deeply-rooted communities that once thrived here. Large-scale infrastructure and noxious uses situated in the basin left adjacent communities, especially the Bayview and Hunters Point, increasingly disconnected and exposed over time.

Climate stresses will soon begin to threaten local jobs and the City's critical infrastructure in this area and, with no action, could further compromise disadvantaged communities. Today, the spectre of rising sea levels and other climate hazards make it necessary to rethink infrastructure holistically, preparing for adaptation and climate mitigation. By leveraging the underlying ecological assets and emerging industrial technologies, we can form a truly integrated and resilient vision for Islais Creek.

The Islais Creek Valley today is the last and largest refuge for the City's blue collar jobs, infrastructure, logistical operations and warehousing, as well as an important center for food distribution, shipping and mailing. We see an emerging ecosystem of food production, construction materials, recycling, innovation and resource recovering already forming in the area around the creek.

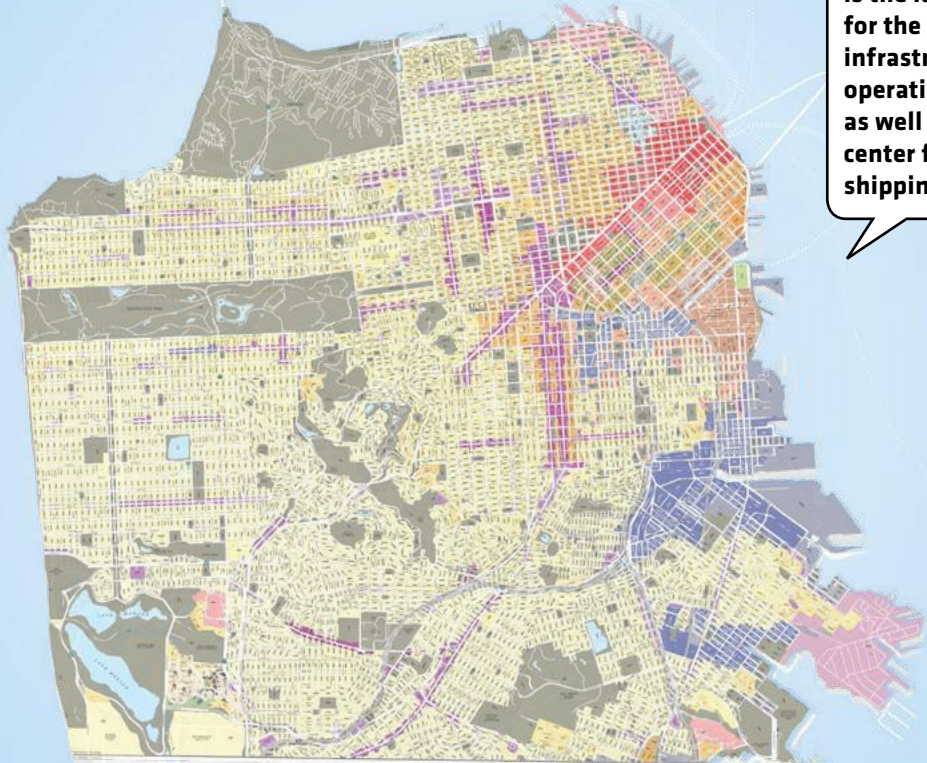
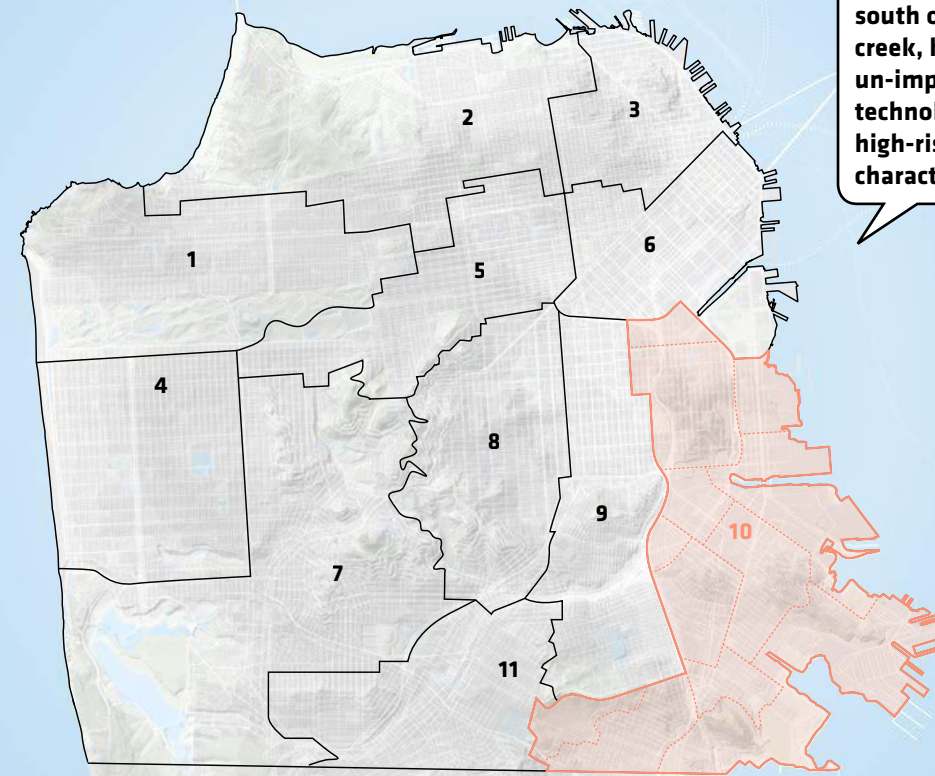
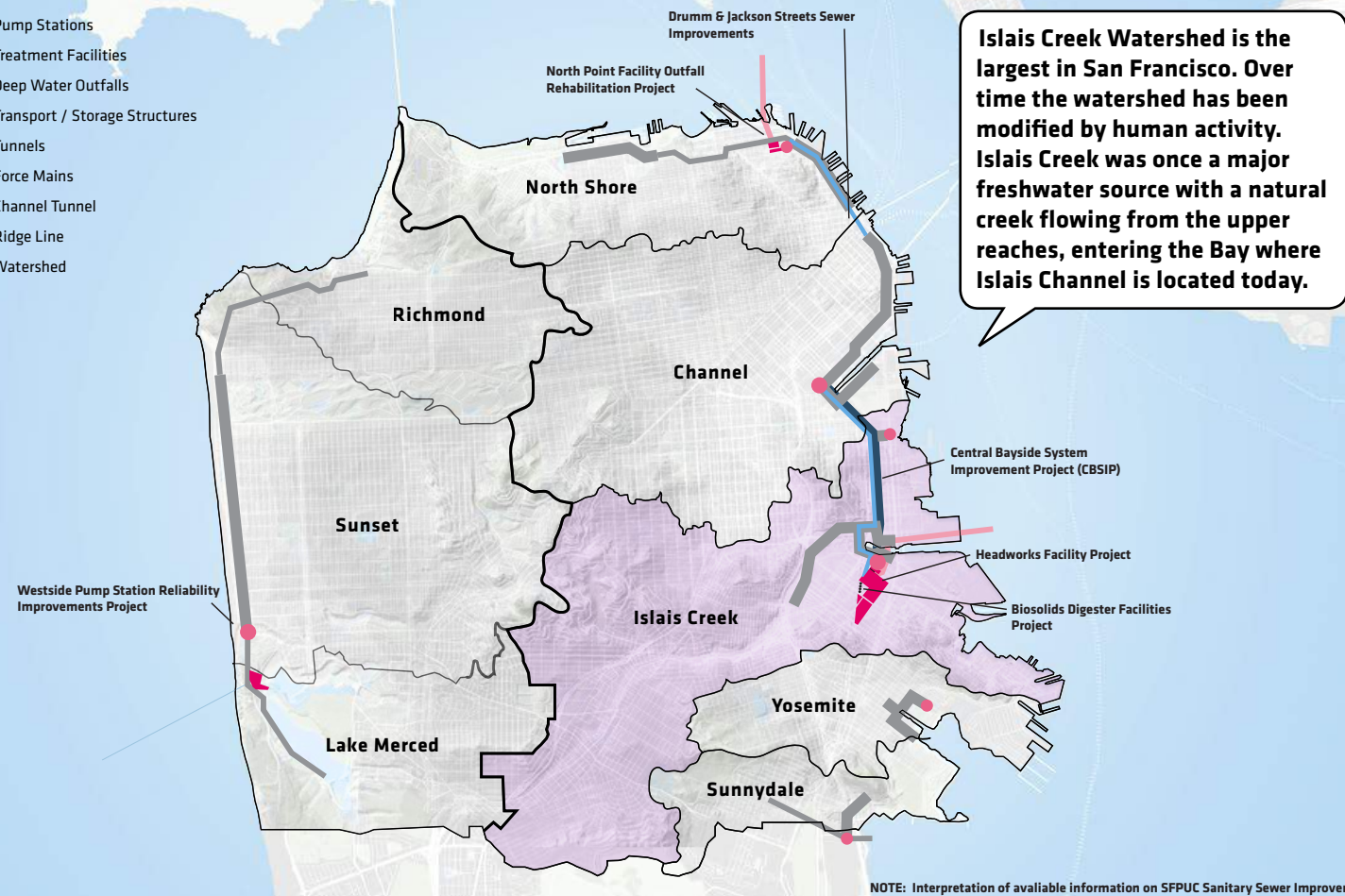
Between the Port's aspiration to move into the future by welcoming innovation and research, the Wastewater Treatment Plant's efforts to upgrade and possibly welcome nature-based solutions, and the potential for local workforce development around ecological industries, we observe a resilient economic

ecosystem slowly forming around the creek. The lack of green open space and the need to preserve affordability are some of the most important issues for the communities and should be at the core of our explorations.

Bayview and Hunters Point, the vibrant neighborhoods just south of the creek, have been impacted by the boom in technology companies, rising rents, and housing prices. Despite all this, there still exist tight-knit community of families, businesses, and community advocates.

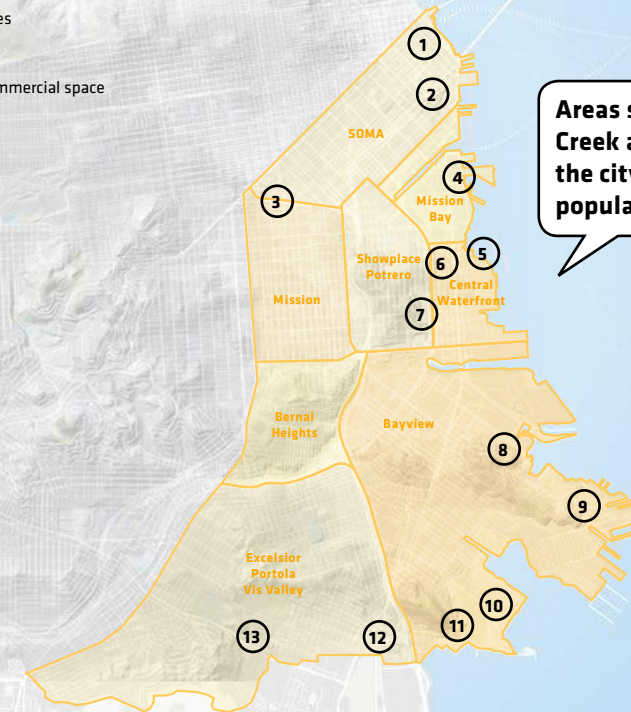
The area has also fostered creatives, makers, and local food producers. Old warehouses in the PDR area offer informal incubators for small businesses and owners collectively coming together in groups, like the Merchants of Butchertown, for support and shared resources. Industrial spaces are being transformed into small-scale production facilities and tasting rooms, strengthening the community's local economy day by day.

- Pump Stations
- Treatment Facilities
- Deep Water Outfalls
- Transport / Storage Structures
- Tunnels
- Force Mains
- Channel Tunnel
- Ridge Line
- Watershed

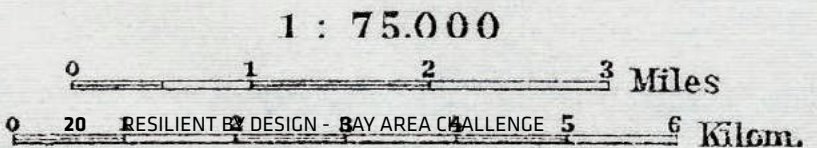


**SAN FRANCISCO HOUSING PROJECTS
PENDING AND RECENTLY ADOPTED (JUNE 2017)**

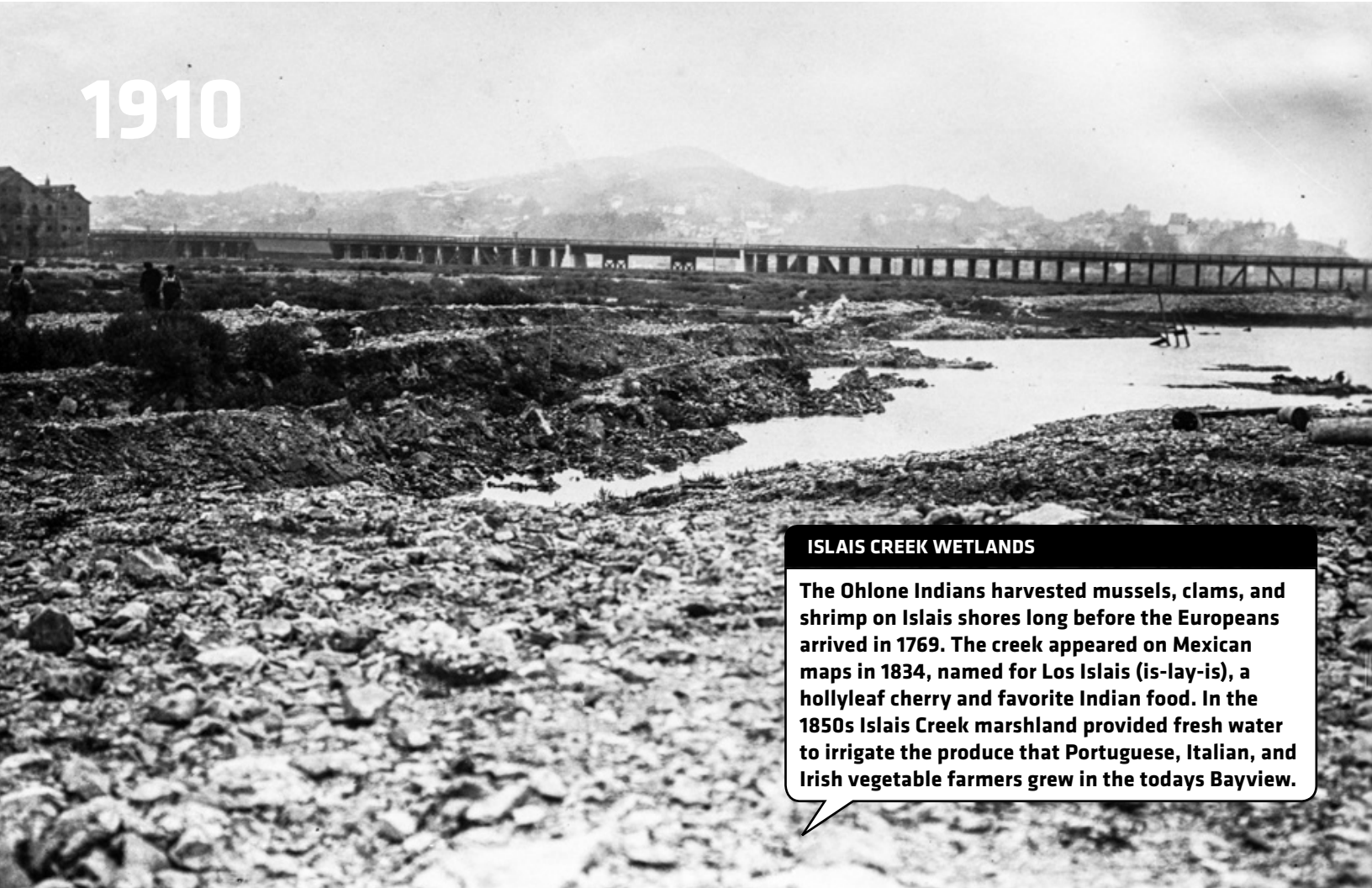
1. TRANSBAY: 4,000 units | 25,000 jobs
2. CENTRAL SOMA: 7,500 units | 45,000 jobs
3. THE HUB: 9,050 units | commercial and retail
4. MISSION ROCK: 1,000 units | commercial space
5. PIER 70: 1,600 units | commercial space
6. FORMER POTRERO POWER PLANT SITE: 1,700 units | retail and community uses
7. POTRERO HOPE SF: 1200 units | commercial space
8. FORMER PG&E HUNTERS POINT POWER PLANT SITE: 1,200 housing units | commercial space
9. INDIA BASIN: 1,240 units | commercial space
10. HUNTERS POINT SHIPYARD: 10,500 units | office and retail
11. EXECUTIVE PARK: 2,700 units | retail
12. SCHLAGE LOCK: 1,679 units
13. SUNNYDALE HOPESF: 1,770 units | retail and community space



1909



1910



ISLAIS CREEK WETLANDS
The Ohlone Indians harvested mussels, clams, and shrimp on Islais shores long before the Europeans arrived in 1769. The creek appeared on Mexican maps in 1834, named for Los Islais (is-lay-is), a hollyleaf cherry and favorite Indian food. In the 1850s Islais Creek marshland provided fresh water to irrigate the produce that Portuguese, Italian, and Irish vegetable farmers grew in the todays Bayview.

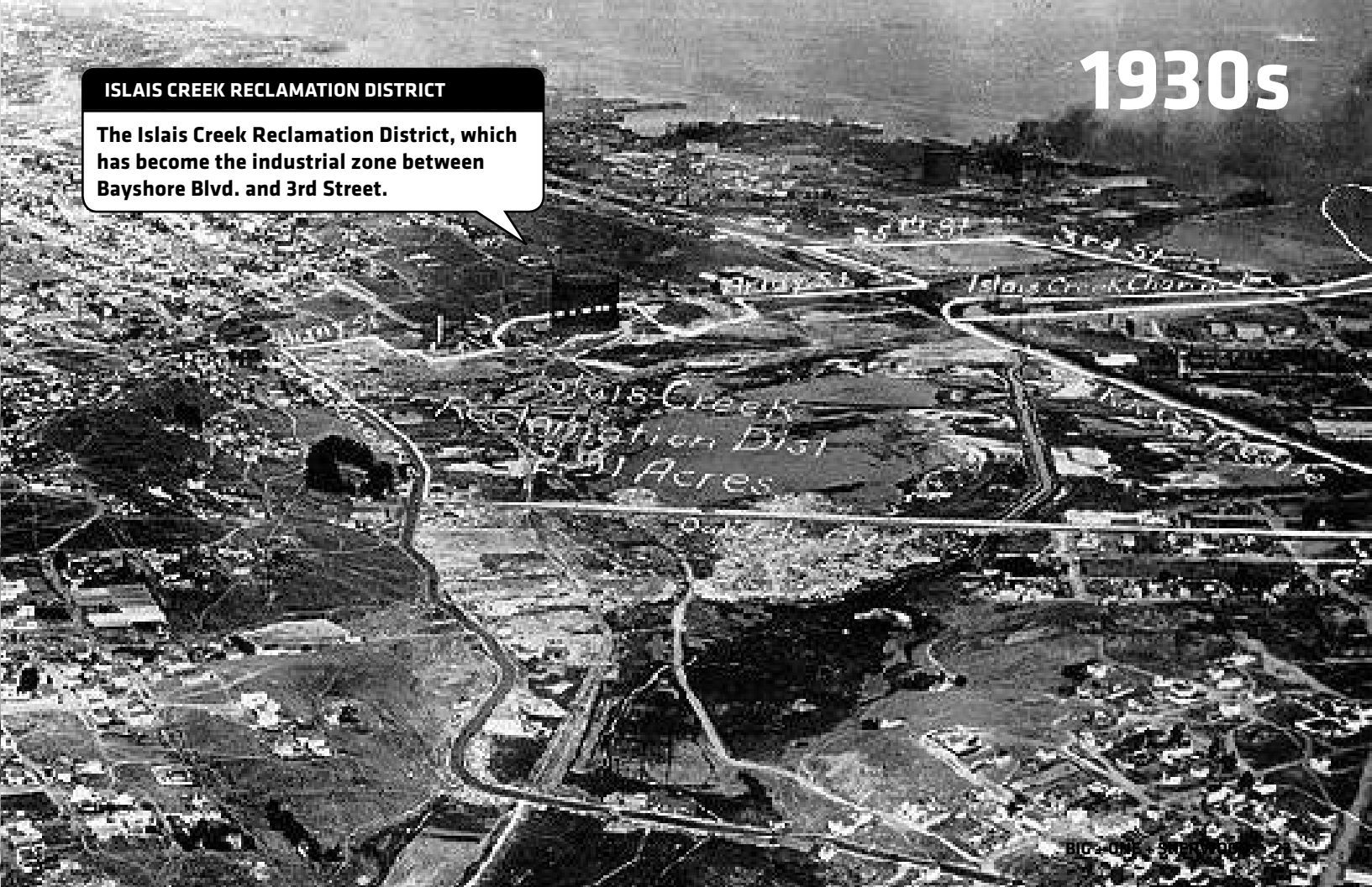
1920s



1915

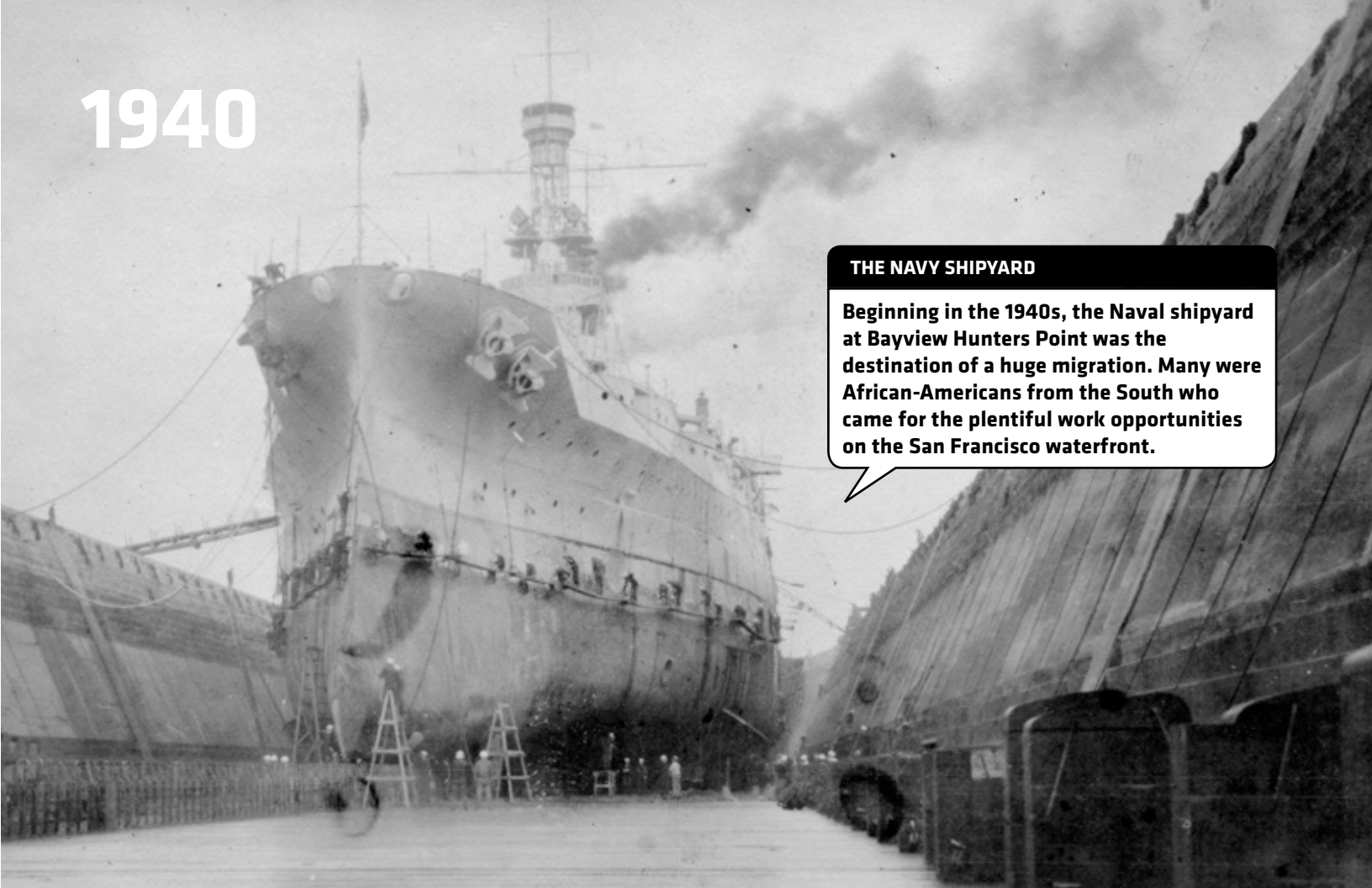


1930s



ISLAIS CREEK RECLAMATION DISTRICT
The Islais Creek Reclamation District, which has become the industrial zone between Bayshore Blvd. and 3rd Street.

1940



THE NAVY SHIPYARD

Beginning in the 1940s, the Naval shipyard at Bayview Hunters Point was the destination of a huge migration. Many were African-Americans from the South who came for the plentiful work opportunities on the San Francisco waterfront.

1950s



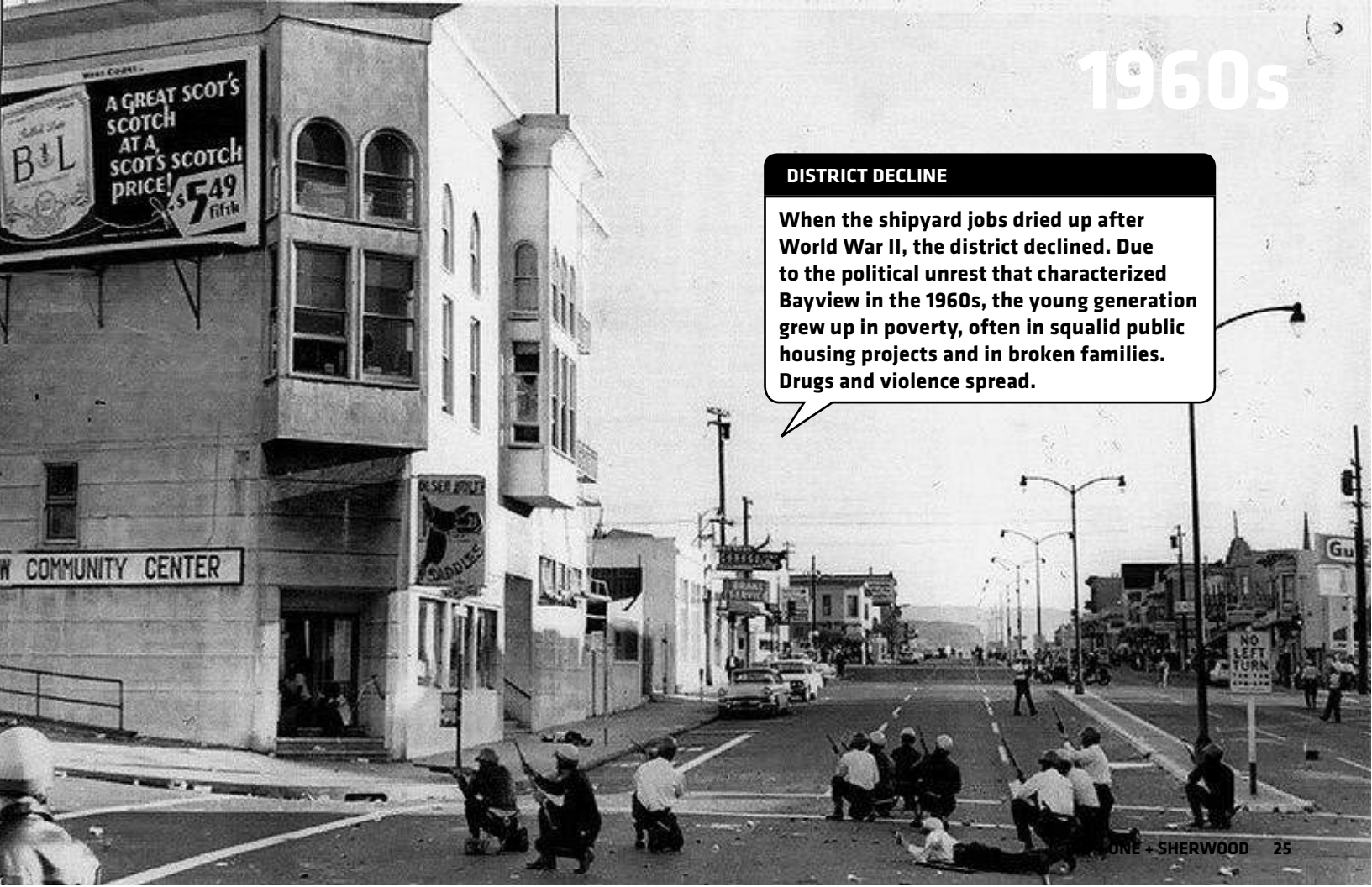
BLACK COMMUNITY CONSOLIDATION

The African-American community settled in San Francisco, mainly in the Fillmore and Hunters Point neighborhoods, because of the workforce needed during World War II. Although many of these settlements were built to be temporary by the City, the community gradually consolidated and grew. Bayview and Hunters Point shortly became the heart of the black community, especially after the demolition of a large part of Fillmore.

1940s



1960s



DISTRICT DECLINE

When the shipyard jobs dried up after World War II, the district declined. Due to the political unrest that characterized Bayview in the 1960s, the young generation grew up in poverty, often in squalid public housing projects and in broken families. Drugs and violence spread.

1968



CIVIL RIGHTS MOVEMENT

In November 1968, the Black Student Union at San Francisco State University presented a list of 10 “non-negotiable” demands to administrators: a list focusing on creating a black studies department and increasing black access to the university. College officials didn’t grant these demands. So the students launched what would become the longest campus strike in U.S. history, lasting for 115 days.

1970-90s



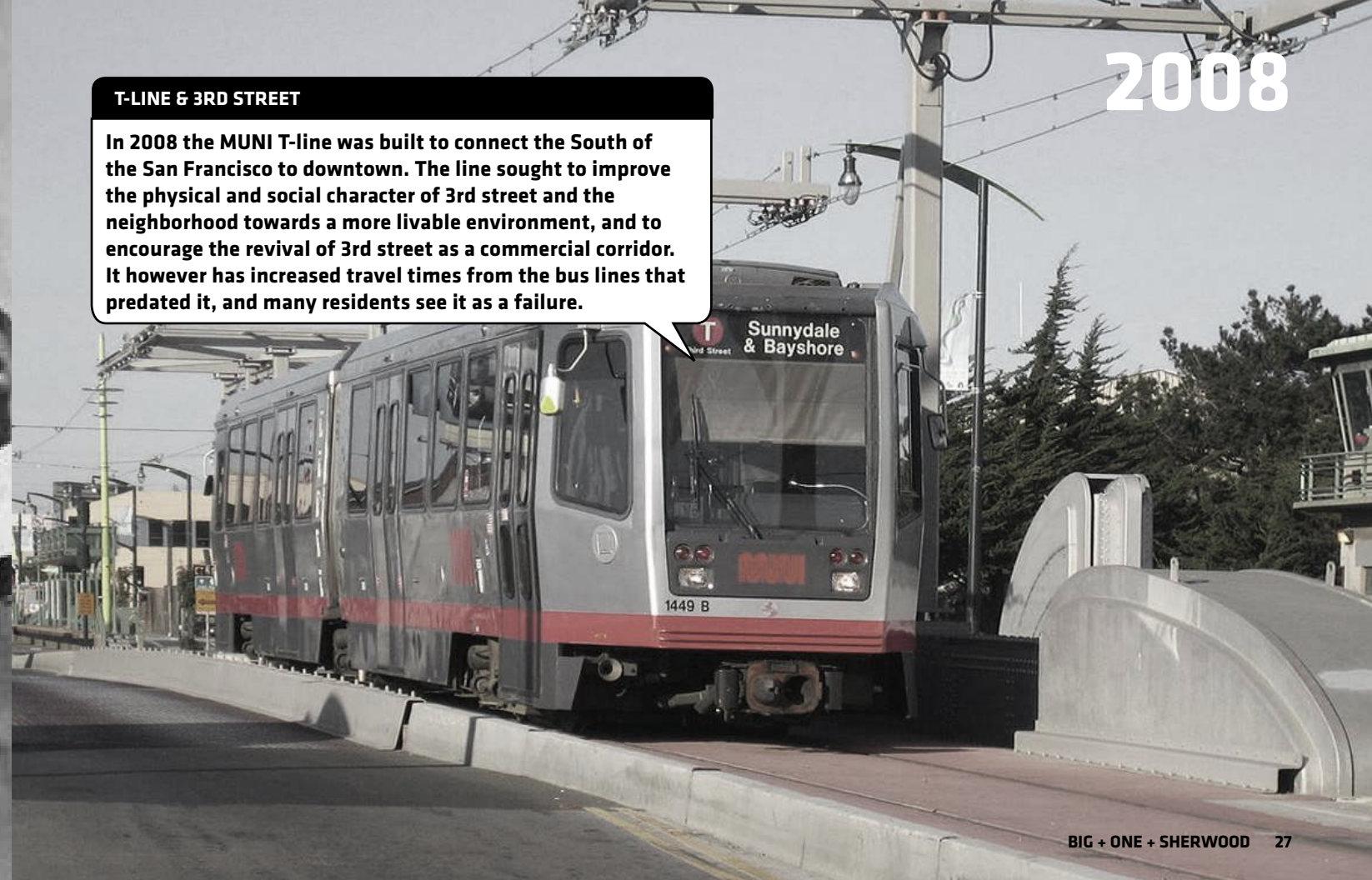
JOB CRISIS & ISOLATION

The closure of the Shipyard in 1974 precipitated significant job loss in the area, with the commercial and retail opportunities impacted. Additional challenges related to neglect, the impact of urban drug-use and isolation created a series of stressors over the next couple of decades.

1970s



2008



T-LINE & 3RD STREET

In 2008 the MUNI T-line was built to connect the South of the San Francisco to downtown. The line sought to improve the physical and social character of 3rd street and the neighborhood towards a more livable environment, and to encourage the revival of 3rd street as a commercial corridor. It however has increased travel times from the bus lines that predated it, and many residents see it as a failure.



While the Bayview has experienced systemic disadvantaging over the decades, a strong tradition of community activism has been born.



Bayview is today enriched by places that weekly host pop-up events educational activities or markets for local food and craft vendors. the Bayview Underground Food Scene bring the community together through shared interests and amazing skills.



TODAY

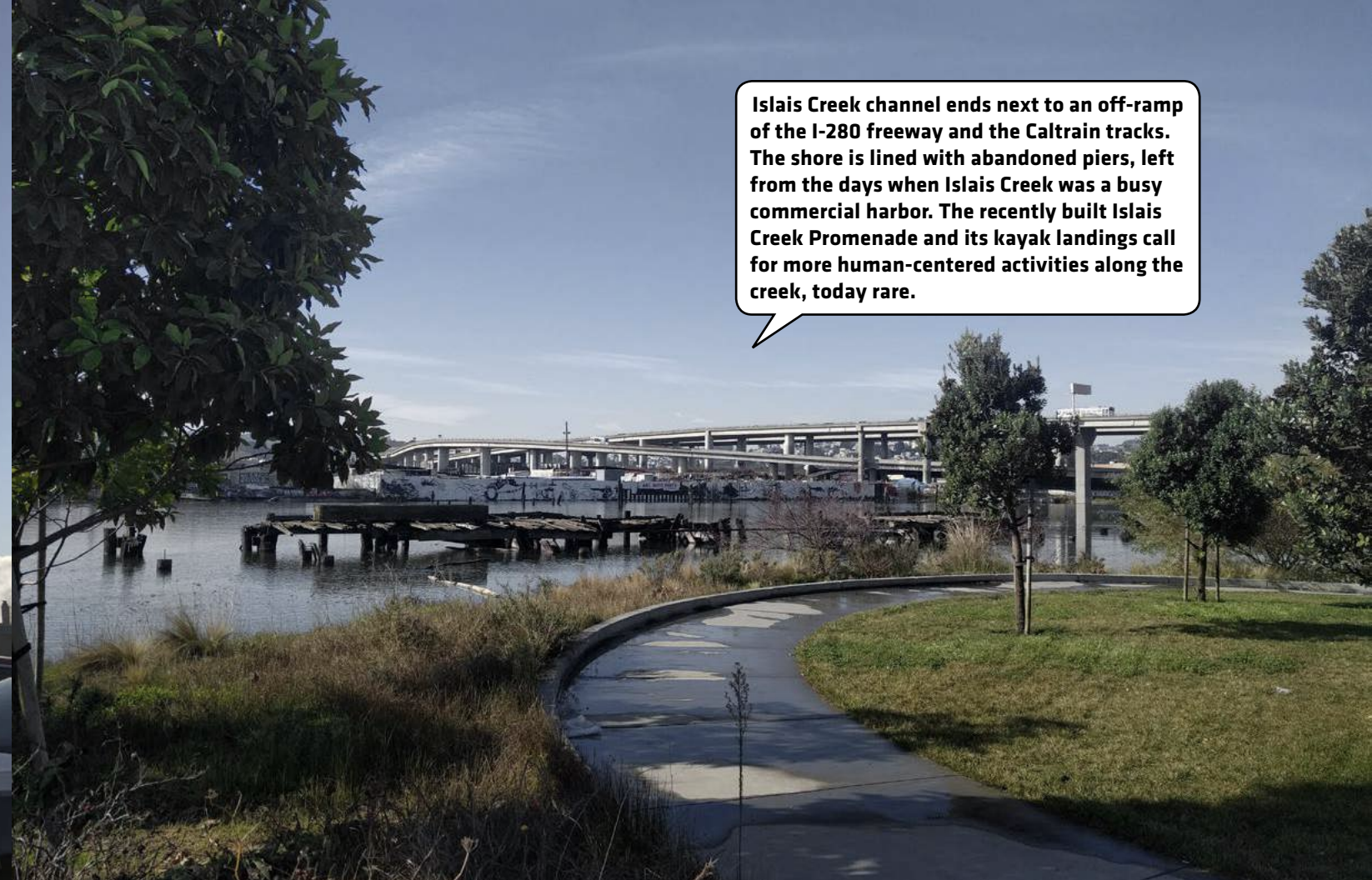
Murals are popping up left and right in Bayview, thanks to a group of local artists associated with an organization called Imprint.City. Led by Bayview resident Tyra Fennell and former District 10 Community Arts Program Manager of the San Francisco Arts Commission. It aims to create arts and cultural programs in Bayview while encouraging economic development.



The spirit of a bygone meatpacking powerhouse lives on in the makers and small businesses of San Francisco's Bayview.



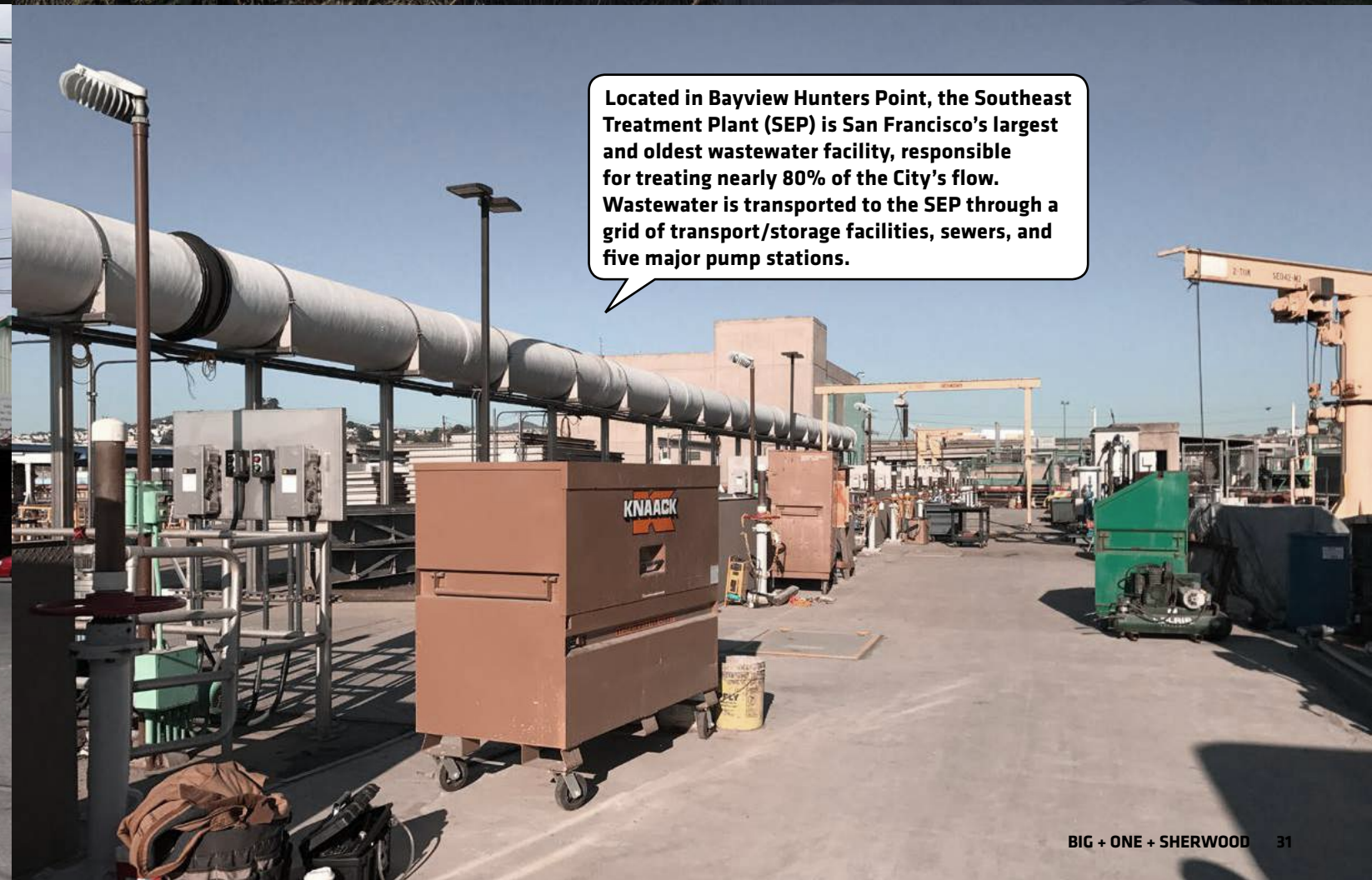
Islais Creek Waterfront is today the largest active functional port of the City of San Francisco. Extending between Pier 80 and 96, it concentrates breakbulk and cargo operations, vehicular import and export, construction and eco-industrial facilities.



Islais Creek channel ends next to an off-ramp of the I-280 freeway and the Caltrain tracks. The shore is lined with abandoned piers, left from the days when Islais Creek was a busy commercial harbor. The recently built Islais Creek Promenade and its kayak landings call for more human-centered activities along the creek, today rare.



The Islais Creek Basin is today home to the last and largest PDR hub of San Francisco: refuge for the City's blue collar jobs, infrastructure, logistical operations and warehousing, as well as an important center for food distribution, shipping and mailing.



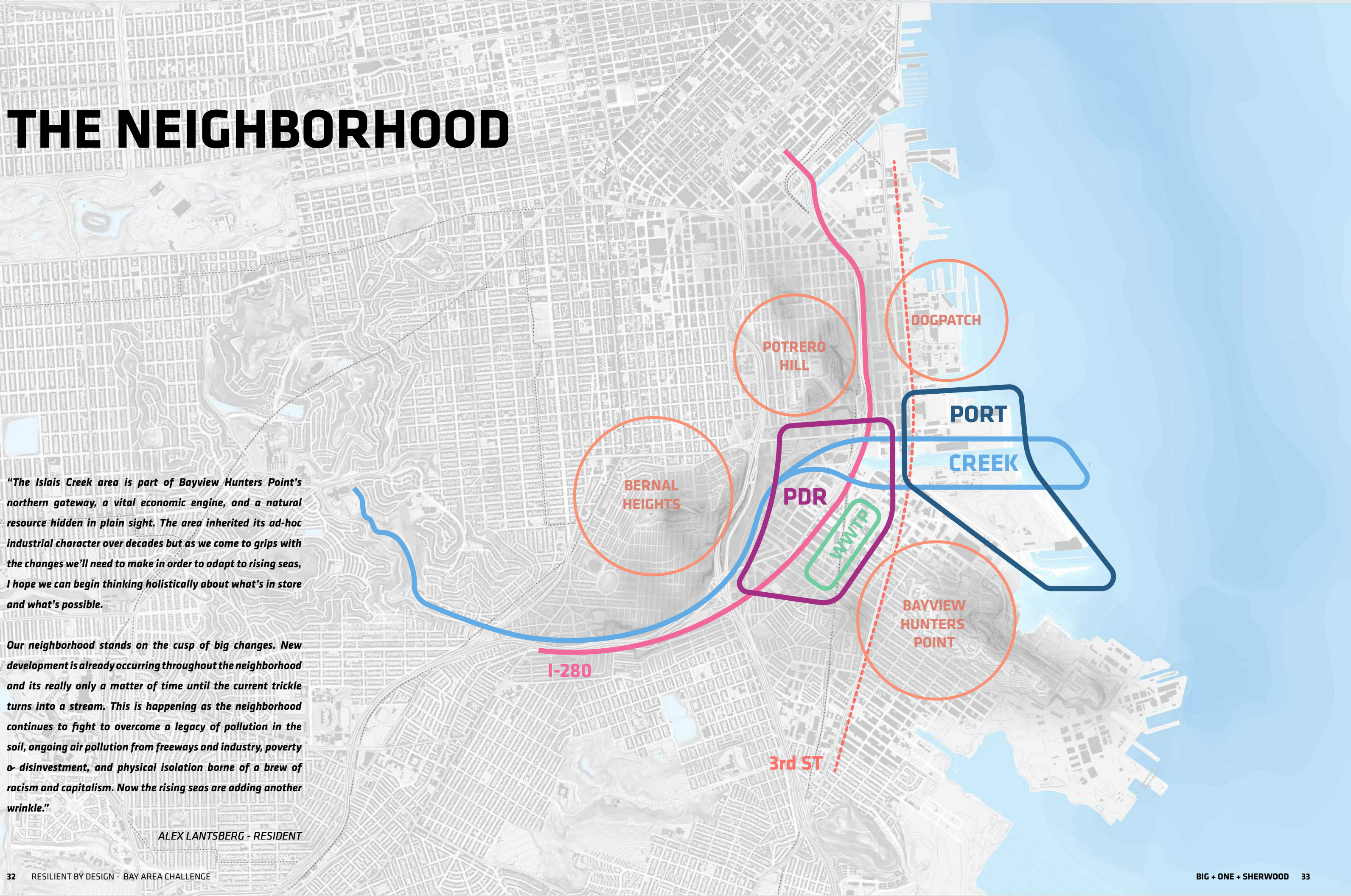
Located in Bayview Hunters Point, the Southeast Treatment Plant (SEP) is San Francisco's largest and oldest wastewater facility, responsible for treating nearly 80% of the City's flow. Wastewater is transported to the SEP through a grid of transport/storage facilities, sewers, and five major pump stations.

THE NEIGHBORHOOD

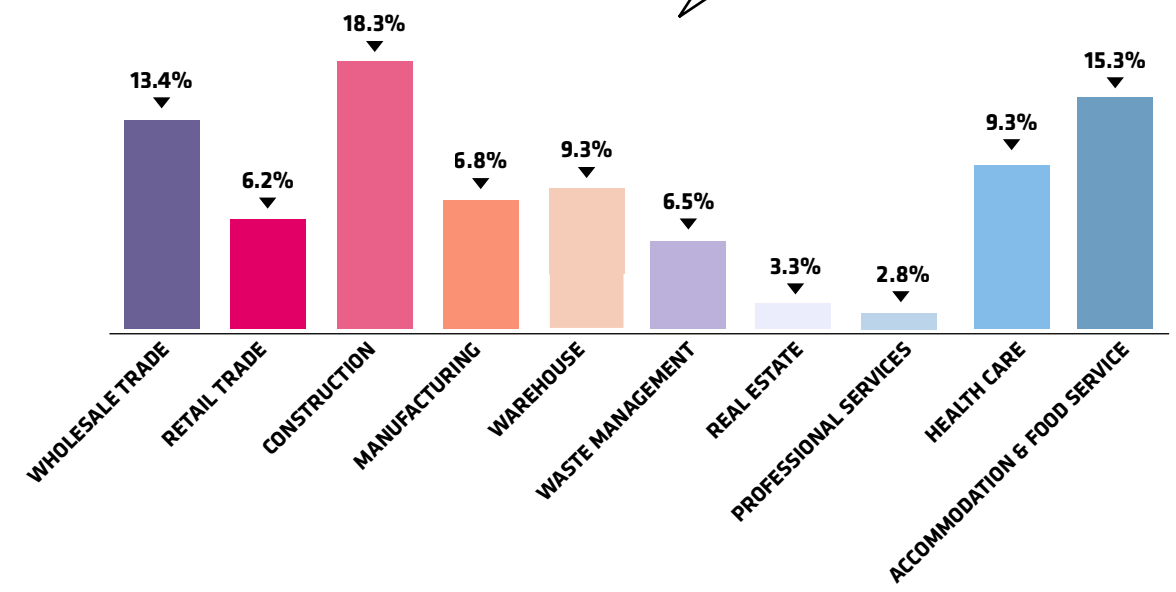
"The Islais Creek area is part of Bayview Hunters Point's northern gateway, a vital economic engine, and a natural resource hidden in plain sight. The area inherited its ad-hoc industrial character over decades but as we come to grips with the changes we'll need to make in order to adapt to rising seas, I hope we can begin thinking holistically about what's in store and what's possible."

"Our neighborhood stands on the cusp of big changes. New development is already occurring throughout the neighborhood and it's really only a matter of time until the current trickle turns into a stream. This is happening as the neighborhood continues to fight to overcome a legacy of pollution in the soil, ongoing air pollution from freeways and industry, poverty & disinvestment, and physical isolation borne of a brew of racism and capitalism. Now the rising seas are adding another wrinkle."

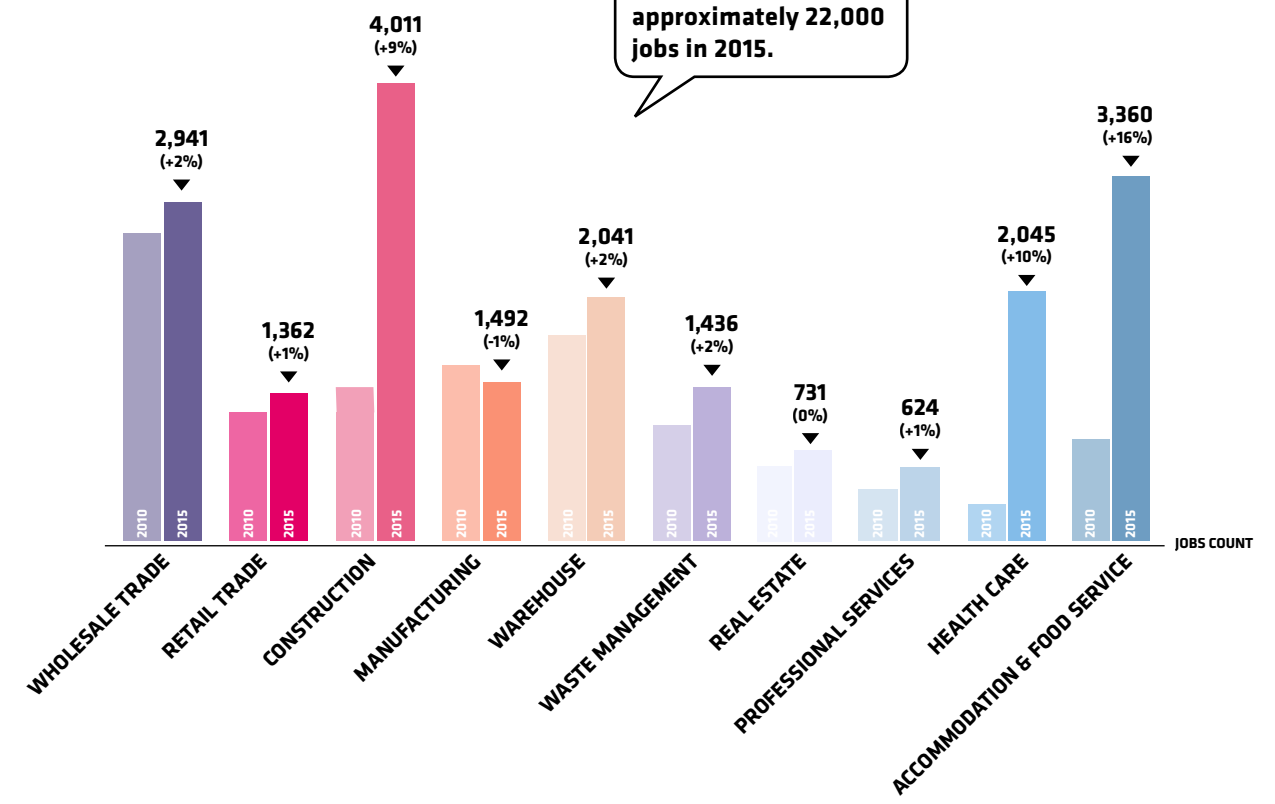
ALEX LANTSBERG - RESIDENT



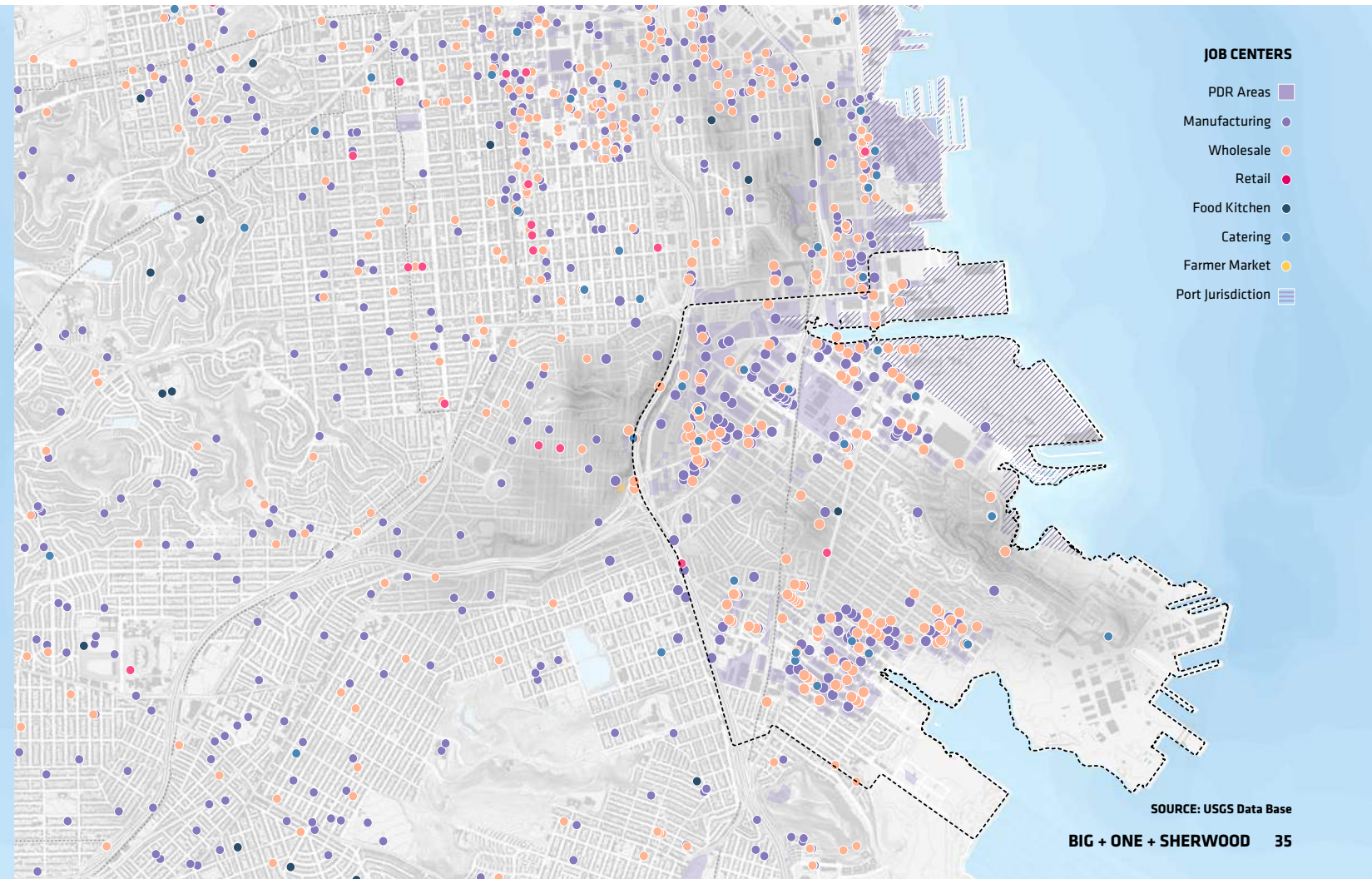
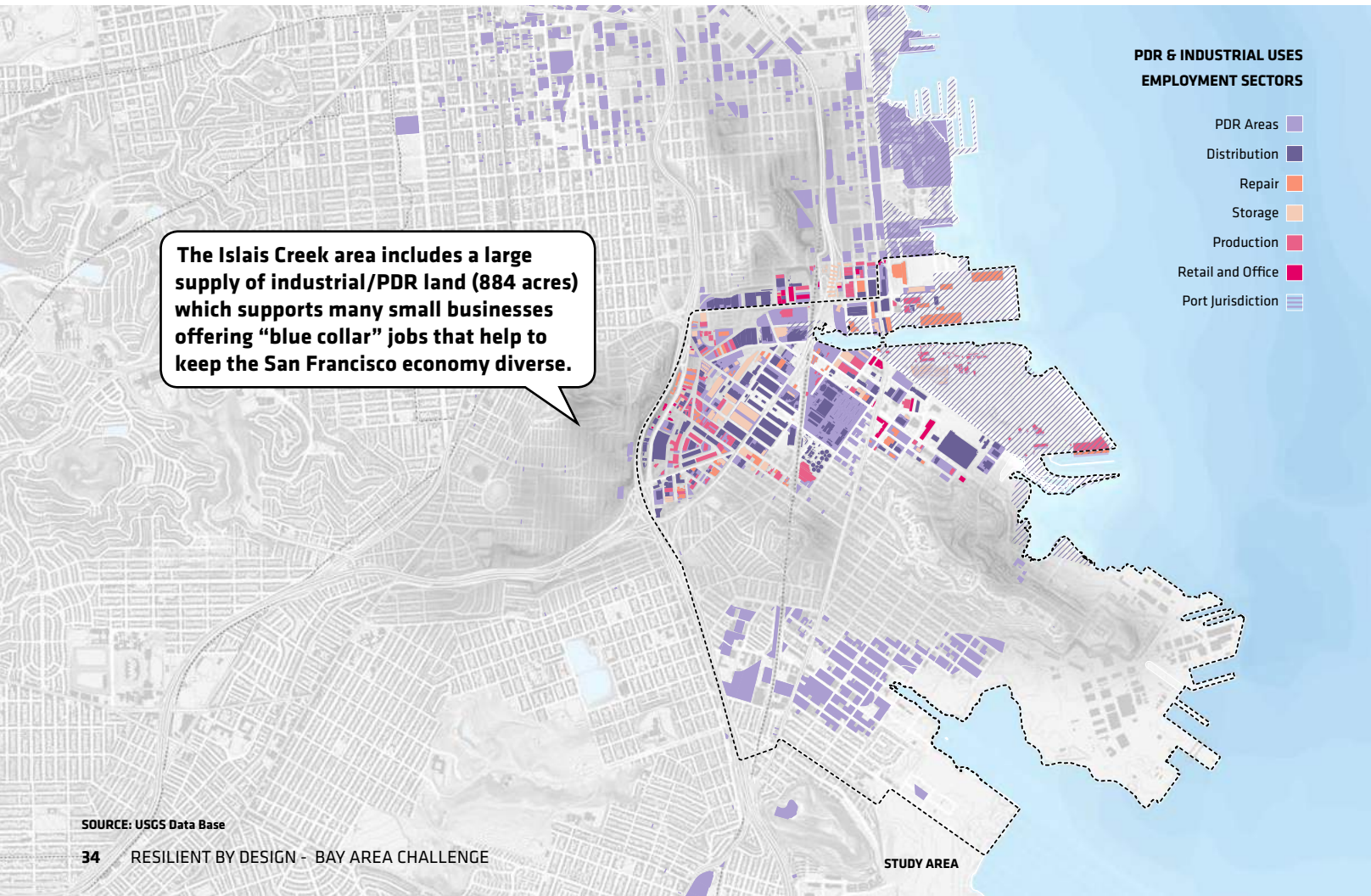
The largest and fastest growing sector in the area is construction, followed by Accommodation and Food Services, Wholesale Trade, and Warehousing. Despite the loss of jobs in the 2010-2015 time period, Manufacturing employment continues to increase in the Bay Area, it is possible to see that there is a future role for this sector in San Francisco.



The Study Area had approximately 22,000 jobs in 2015.



The Islais Creek area includes a large supply of industrial/PDR land (884 acres) which supports many small businesses offering "blue collar" jobs that help to keep the San Francisco economy diverse.



MOBILITY

EMPLOYEE LOCATIONS

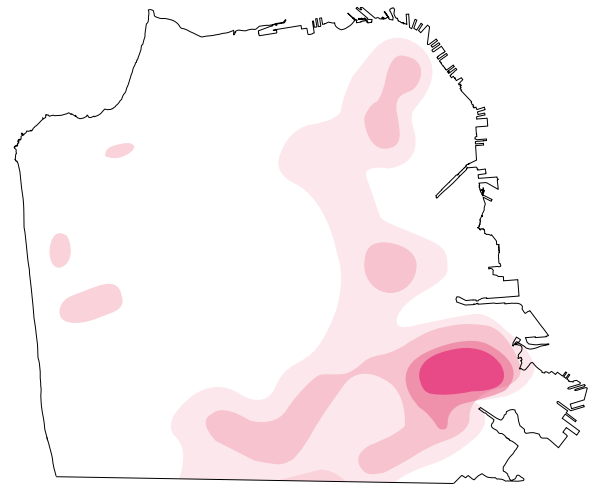
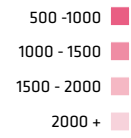
EMPLOYEES HOME LOCATION DENSITY PER SQ. MILES



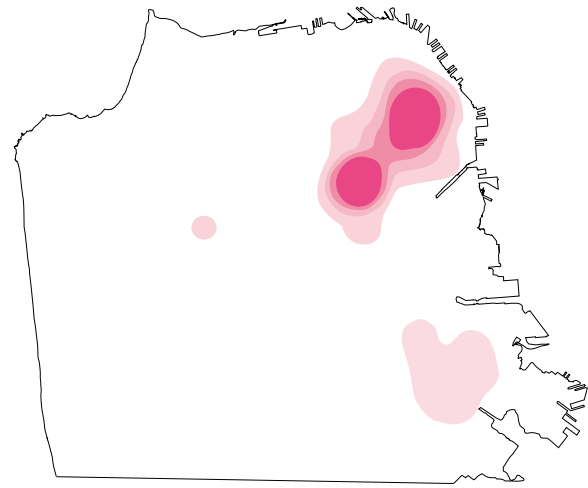
Employees of the Islais Creek area live mostly around BVHP, in neighborhoods immediately to the west, or outside of San Francisco. Residents of BVHP mostly work in the Islais Creek Area or in Downtown and Mission.

RESIDENTS LOCATION

EMPLOYMENT LOCATION DENSITY PER SQ. MILE

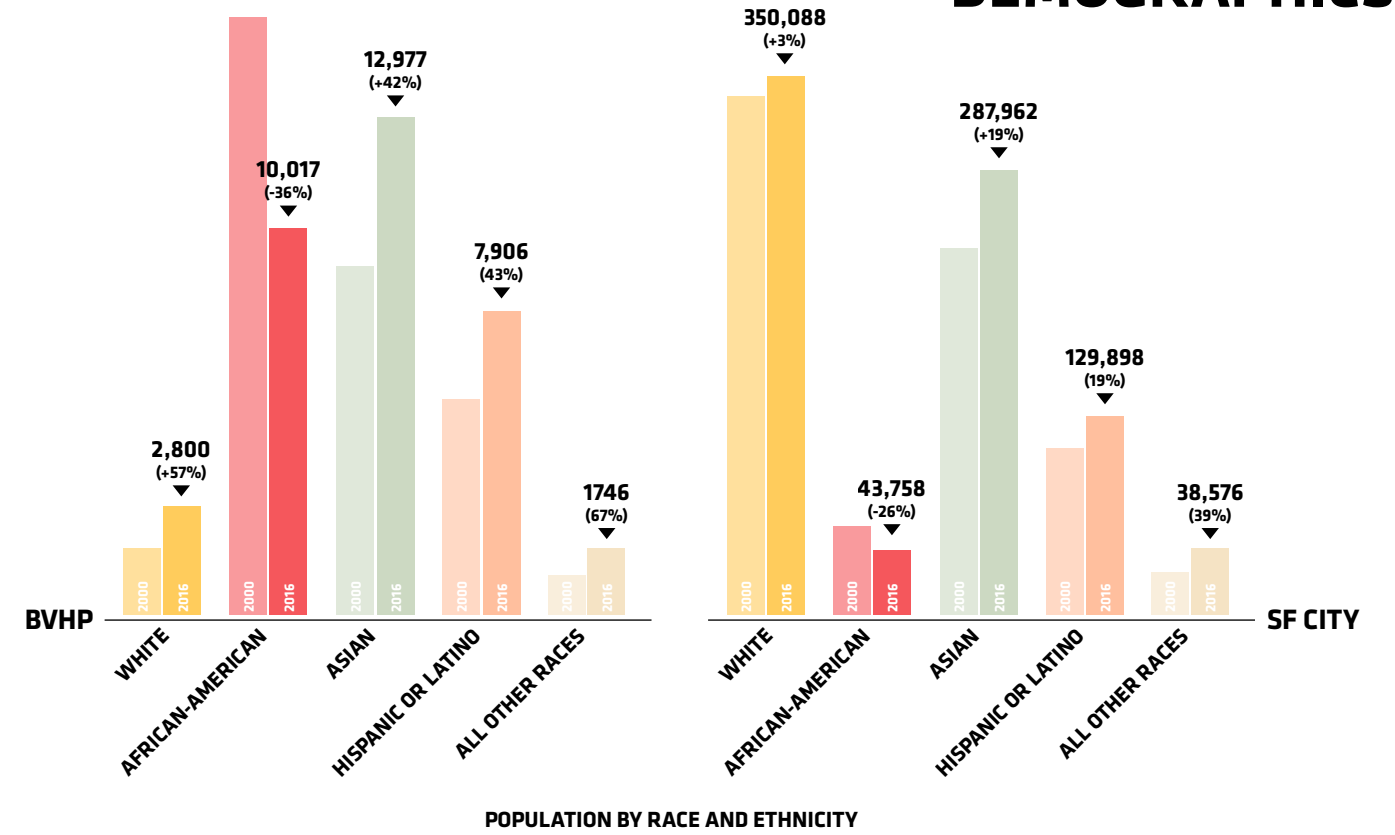


LOCATIONS WHERE BVHP EMPLOYEES LIVE



LOCATIONS WHERE BVHP RESIDENTS WORK

DEMOGRAPHICS



POPULATION BY RACE AND ETHNICITY

Despite the intense daily commute between downtown and Bayview Hunter Point, the public transportation network doesn't provide an efficient and fast connection. The local T-line service is slow and the green infrastructure system is disjointed.

MOBILITY & PUBLIC TRANSIT

RAILWAY

- Caltrain
- Caltrain Station
- T-line Lightrail
- T-Line Stops
- BART Line
- BART Station

BUSES

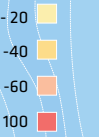
- Express Line
- Local Bus Line

BIKE ROUTES

- Bay Trail
- Ridge Trail
- Crosstown Trail
- Dedicated Bike Lane
- Separated Bike Lane
- Shared Bike Route

DEMOGRAPHICS

Minority Race (%)



Population without High School Diploma (%)



HOPES & FEARS

The complexity of the issues we are engaged with in Islais Creek prompted us early to establish a 5-month period in the Design Phase as the first step in a longer collaboration between the City and the Community. During the Design Phase, we met with over 80 groups and agencies for direct discussions in order to explore the issues critical to the stakeholders in the area.

The Bayview-Hunters Point (BVHP) area is one of the most socially complex and traditionally underserved neighborhoods in the forty-nine square miles of San Francisco, with a long history of racial oppression, economic neglect, extreme environmental injustice, and resultant challenges in public health, crime rates, economic mobility, and more.

Due to these challenges, locally based CBOs are plentiful, numbering more than 120, yet often work on specific issues without uniting as a singular voice. At the same time, low-lying northern regions of BVHP which comprise our project focus area are primarily controlled by public agencies including SF Port, SFPUC, SFMTA, Caltrans, and others, operating as both city-wide and regional resources, responsible for local jobs and city-wide resource systems.

For our team, the first weeks of the Design Phase were instrumental in understanding the dynamic between entities on the ground and what is at stake for each. On one hand, meetings with City Officials –especially with the SF Port, the Planning Department and the Public Utilities Commission– helped our team understand what assets are at risk, and gave us an opportunity to look into past, current, and future plans. It became clear that agencies are individually searching ways to evolve over the next decades and set a roadmap for future adaptation and environmental mitigation. On the other hand, community leaders and residents have expressed their concerns about environmental justice, local workforce development, government accountability, and lack of investment.

Being part of a competition structure has helped our team establish a position “in between,” without a specific client to serve. This has allowed us to freely hear and transmit some of the most prominent hopes and fears from both the community and City. We were inspired by this context to generate an approach that builds on and connects current endeavors, integrating risk reduction with ecological restoration, infrastructural rethinking, economic regeneration, and respect for a vibrant community.



MEETING AND SITE TOUR WITH SFPUC AT THE TREATMENT PLANT



MEETING WITH ARTSPAN ARTISTS AT GUESS BOHO GALLERY



MEETING WITH SF PRODUCE MARKET MANAGER, MICHAEL JANIS



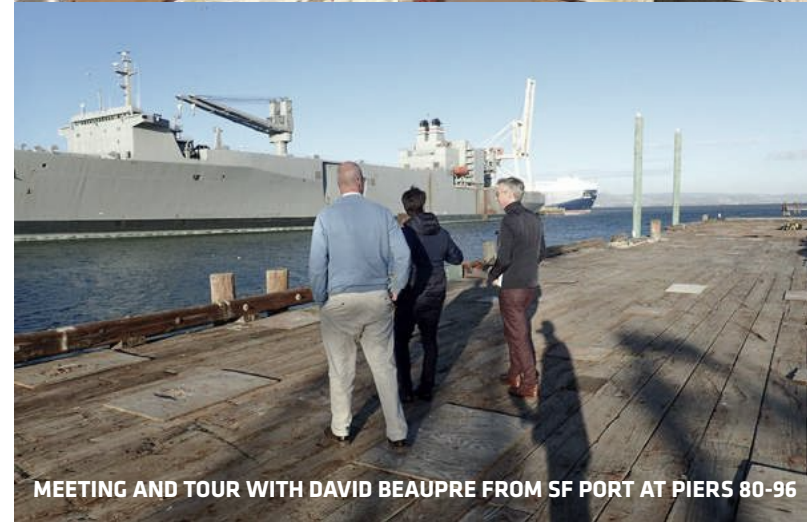
MEETING WITH POTRERO BOOSTERS NEIGHBORHOOD ASSOCIATION



BREAKFAST SUMMIT WITH APRIL ROBINSONS AND RESILIENT BAYVIEW



MEETING WITH SHAKIRAH SIMLEY AT THE SE COMMUNITY FACILITY

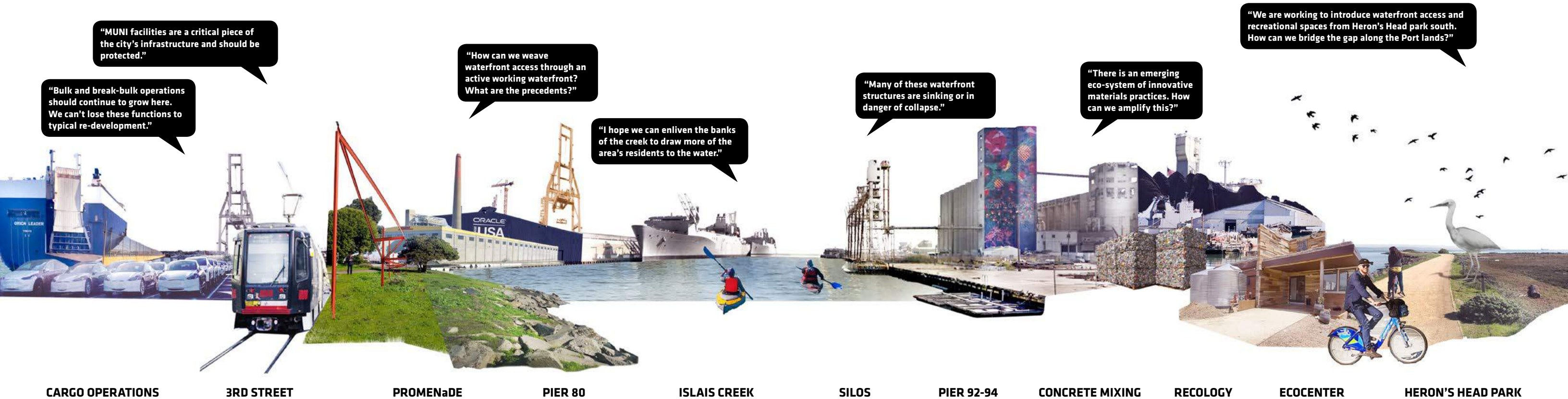


MEETING AND TOUR WITH DAVID BEAUPRE FROM SF PORT AT PIERS 80-96



MEETING WITH SUPERVISOR COHEN

PORT AND SHORELINE



CARGO OPERATIONS

3RD STREET

PROMENADE

PIER 80

ISLAIS CREEK

SILOS

PIER 92-94

CONCRETE MIXING

RECOLOGY

ECOCENTER

HERON'S HEAD PARK

"MUNI facilities are a critical piece of the city's infrastructure and should be protected."

"Bulk and break-bulk operations should continue to grow here. We can't lose these functions to typical re-development."

"How can we weave waterfront access through an active working waterfront? What are the precedents?"

"I hope we can enliven the banks of the creek to draw more of the area's residents to the water."

"Many of these waterfront structures are sinking or in danger of collapse."

"There is an emerging eco-system of innovative materials practices. How can we amplify this?"

"We are working to introduce waterfront access and recreational spaces from Heron's Head park south. How can we bridge the gap along the Port lands?"

"I think that some of our low areas could temporarily raised to protect the land, however the ground will continue to sink. We could build more rip-rap sea walls and continue to raise grades, but we will always be catching up. As long as the high tides force water in to land masses, and gravity leaches the water back out, we will always be catching up. Twenty years ago the Port raised the grades at Pier 80, well it's about time we do it again. If a better sea wall could be installed it just might slow down the process."

DAVE RAUENBUEHLER - DOCKWORKER

"Sometimes you see pelicans out here flying in circles and taking turns at diving for fish, sometimes seals are out here, playing around. In the afternoon, when the light is just right and the fog is rolling over the hills, it's just really beautiful. This is our little bit of heaven. We would like to see more people here".

MARK MOREY - RESIDENT

PDR BASIN

"PDR uses are critical to the city and need to remain here. As buildings age out or are damaged by climate events, how can we re-construct in an economical way? These uses depend on low-cost spaces."

"The basin seems industrial, but there are hidden gems here hosting art, food, and all kinds of making."

"The spaces this area provides for artists are much needed, and possible because of the low rent. We are afraid of being pushed out, but want to move the area into the future. How can we provide designated spaces for art in the future basin?"

"The produce market is a key asset for the region, and will be growing and modernizing in the future. How can we better plan for it's growth? Can we extend food related destinations into the community fabric?"

"Trucks need to access this area but often conflict with pedestrians, with deadly results. How can we allow these two flows to co-exist?"

"The I-280 does cut the Basin in half, but is a much needed regional bypass for through traffic. Can we improve it at ground level in the near-term, and plan for it's potential transformation in the long-term?"



REPAIR

CONSTRUCTION MATERIALS

MAKER SPACES

OAKDALE AVE

PRODUCE MARKET

WAREHOUSES

JERROLD AVE

I-280

"We have an extraordinary opportunity to couple design talent with the passion and commitment of those of us in Bayview/Hunters Point. We hope we can be part of long-term innovative solutions around resiliency both in the neighborhood and in the PDR zone."

MICHAEL JANIS - SF WHOLESALE PRODUCE MARKET

"Our healing will come and bellies will be full when we dismantle corporate control of our food systems by empowering our own communities. This is already happening. We're teaching our own to launch good food businesses. We're directing investments to black-owned food startups and reshaping ownership in our city to reclaim space and economic equity. We're starting organizing networks within food spaces to force a power paradigm shift."

SHAKIRAH SIMLEY - SFPUC SE COMMUNITY FACILITY

3RD STREET CORRIDOR



"Despite all the new housing that is being built all around us, we have very little access to affordable units. We want real access to affordable housing, for the communities who are bearing the brunt of all this construction."

"Our kids want access to good jobs, and there are ways for them to get trained - I hope we can have access to good jobs in construction, building, and even more of the high-tech methods that are developing in other parts of the Bay."

"Get to know the ministries and their congregations. They are one of the backbones of this community."

"3rd Street is our Main Street, our lifeblood. It has fallen into decline but it can come back. If we can draw more visitors here our businesses will thrive."

"Health here is very poor due to the surrounding freeways, industrial uses, and the old power plants. We deserve a better environment for our kids."

"We care about our parks here - we want to create more, and take care of them well, with local stewardship."

"There are so many amazing things going on here in terms of food - wine, ice cream, pasta, whiskey, even marijuana! Bayview should totally become a destination for food and drink. Made in Bayview!"

"The T-Line was a multi-billion dollar promise to connect the Bayview to San Francisco. It failed."

AFFORDABLE HOMES

YOUTH ENGAGEMENT

SUNDAY ACTIVITIES

BAYVIEW OPERA HOUSE

ENVIRONMENTAL JUSTICE

SPRING MARKETS

MERCHANTS OF BUTCHERTOWN

3RD STREET

"I hope that Bayview will be better integrated into the SF community, including that there will be less trash on the streets and better (faster) access to public transportation, that there will be more green spaces and parks where I can take my dog and not have to worry about her stepping on or eating needles. I would love to see a community center related to the arts where existing and new residents can come together, learn, bond, teach, and help each other. A large center that welcomes both visual and performing arts, activities for senior citizens and school children would be a dream come true."

NIKKI VISMARA - LOCAL ARTIST

"Gentrification is the most pressing concern when it comes to the Bayview. Our hope is to find a balance between neighborhood beautification and improvements while respecting and empowering the current community (especially racial minorities) and support them to stay in their neighborhoods and enjoy the positive changes that are underway"

MAY AGUIAR - SF PARKS ALLIANCE

ACTORS

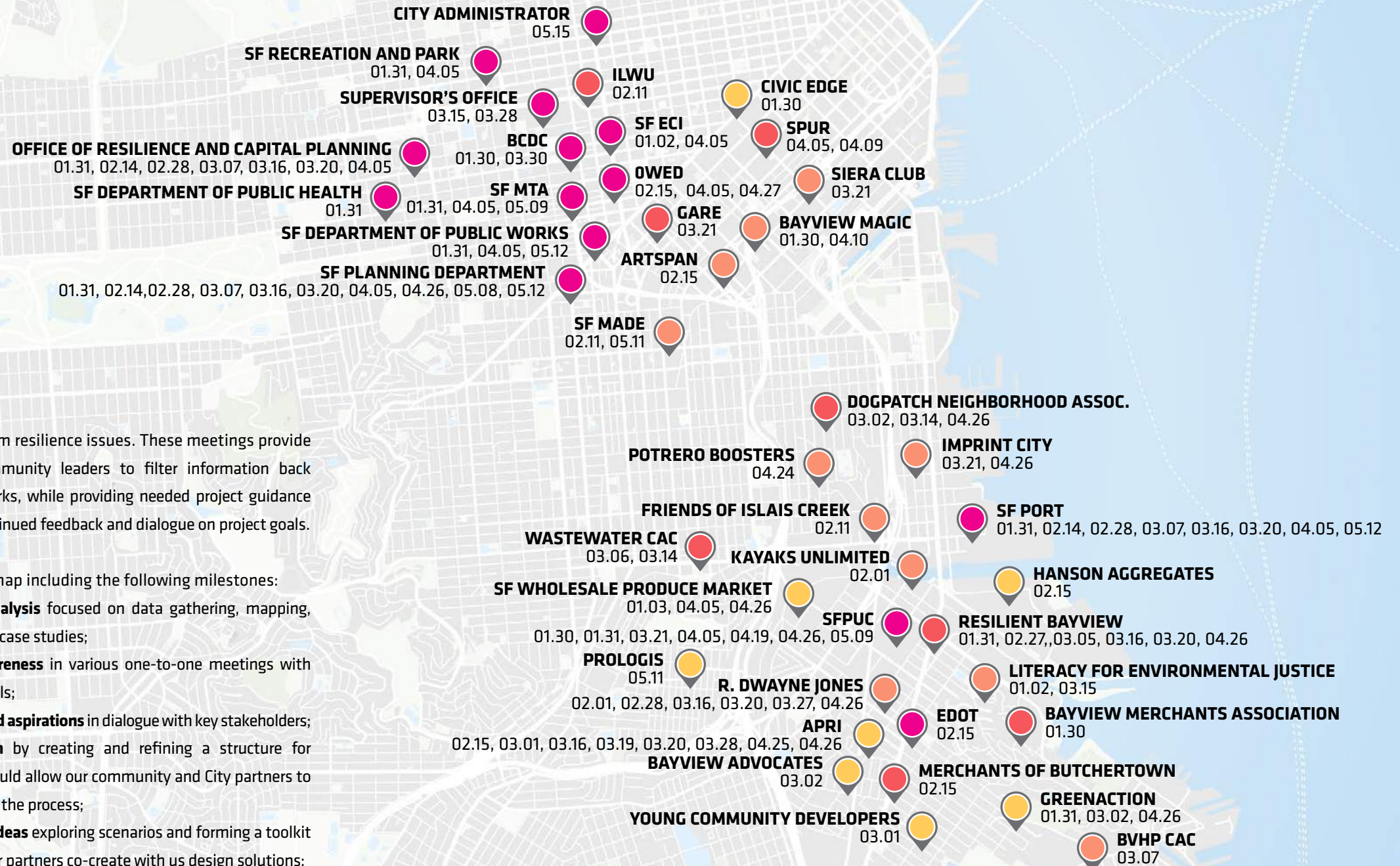
Early on in the process, our team focused on understanding the variety of local and regional actors in the area and hear their goals and aspirations for Islais Creek and the Southeast Waterfront. Actors include City agencies, local organizations and advisory groups, local businesses, and community groups associated with the City. In order to create a collaborative and inclusionary process, our team formed a working group with members of the community, representatives of the local workforce, CBOs and City officials, with the aim of bringing a diversity of voices and ideas to the group. This group emerged organically out of conversations with Resilient By Design, local residents, and those with a long history working in the area, and represent well-respected organizations working on key issues of relevance to long-term climate change adaptation and mitigation.

These issues include: social resilience, environmental justice, local jobs, economic justice, and government accountability. The working group convened bi-weekly, with alternating meetings taking place at local Bayview businesses. These meetings also included other groups the conveners wanted to include in the discussion at times. These “breakfast summits” were, and we hope they continue to be, a nexus for input and awareness

building on long-term resilience issues. These meetings provide a platform for community leaders to filter information back through their networks, while providing needed project guidance and allowing for continued feedback and dialogue on project goals.

We then set a roadmap including the following milestones:

- 1. Research and analysis** focused on data gathering, mapping, planning review, and case studies;
- 2. Raise public awareness** in various one-to-one meetings with locals and City officials;
- 3. Co-define goals and aspirations** in dialogue with key stakeholders;
- 4. Form a coalition** by creating and refining a structure for engagement that would allow our community and City partners to have an active role in the process;
- 5. Co-create design ideas** exploring scenarios and forming a toolkit of ideas to enable our partners co-create with us design solutions;
- 6. Form a vision coalition** through the bi-weekly Breakfast Summits with our working group, pop-up events, public workshops, and community round tables, to co-create ideas and foster alliance;
- 7. Refine a vision plan**, set the groundwork, and think about funding mechanisms for a continuous engagement process after May.



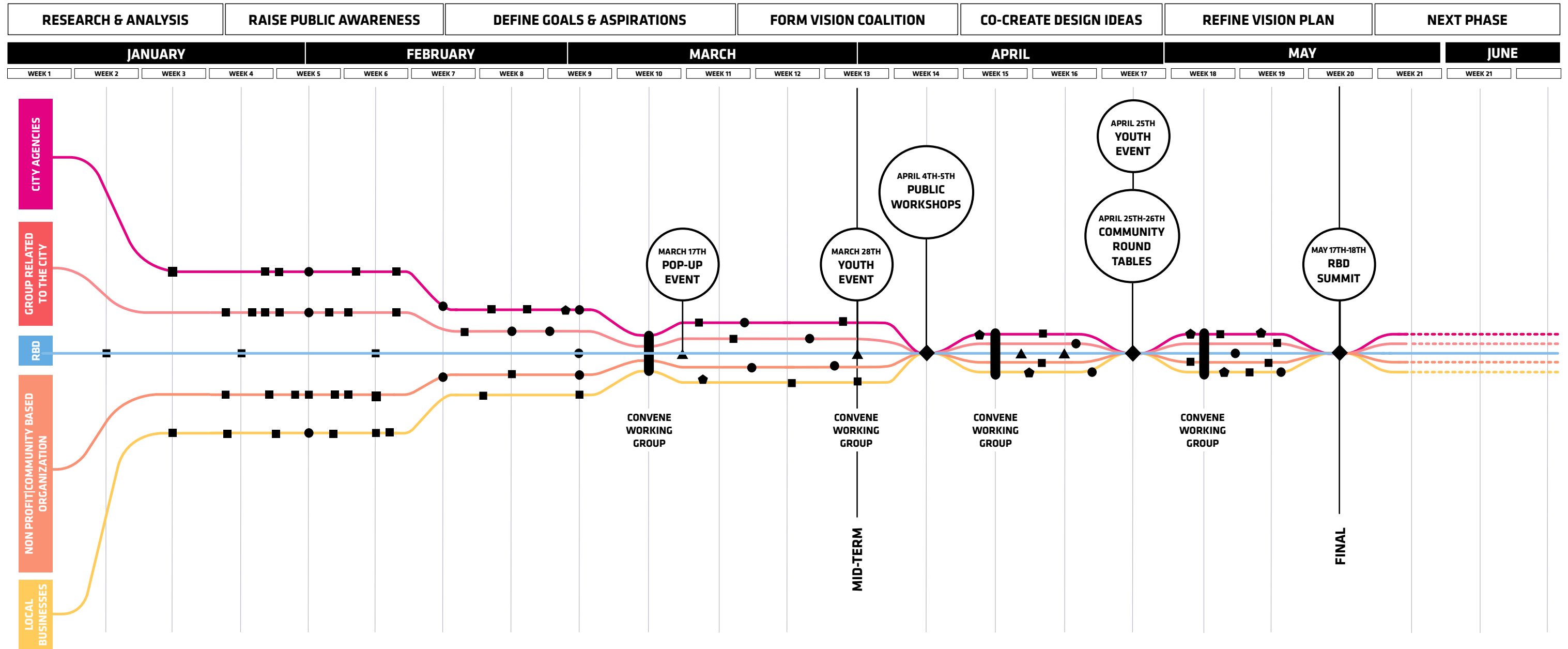
CITY AGENCY ■ ORGANIZATION RELATED TO THE CITY ■ NON PROFIT / CBO ■ LOCAL BUSINESS ■ MEDIA ■



CITY AGENCY ■ ORGANIZATION RELATED TO THE CITY ■ NON PROFIT / CBO ■ LOCAL BUSINESS ■ MEDIA ■

ROADMAP

RBD CHALLENGE - DESIGN PHASE



◆ Type 1 – Public Workshops (2) and Community Round Tables (2) ▼ Type 2 – Pop-Up and Educational Events (3)

◆ Type 3 – Existing Agendas

■ Type 4 – One-on-One Stakeholder Consultation

The team held two public workshops at the beginning of April with a focus on co-creating a vision for the area. Activities developed by the design team prompted participants to discuss and establish project goals as well as the pros and cons of various resilience and sustainability “tools,” exploring the potential arrangements of those tools. The team continued with two community round tables at the end of April focusing on three topics to identify opportunity sites to kick start the process.

The team focused on hosting pop-up events targeted towards youth and families. More educational in nature, these provided students with awareness of long-term resiliency issues in the area, potential tools to PROTECT, CONNECT, RESTORE, and GROW, and allowed for continued feedback and dialogue on project goals as they start to solidify. These activities enabled us to discuss our changing climate and gain valuable feedback from the future stewards of Islais Creek.

For the first five months of 2018, there were numerous opportunities to introduce the team and project to existing organizations in the area by taking time on agendas for pre-standing meetings. At the beginning of the process, these meetings helped us introduce our team, the Resilient By Design challenge, and emerging project goals. Following the mid-term, these touch-points helped us share design updates and review ideas with various groups.

Individuals, subject matter experts, and elected officials were consulted at every step in one-on-one settings. Conversations over morning coffees, site walks, bike tours, and kayak outings allowed the team to gain an inside understanding of the day-to-day life around Islais Creek, learn about individual aspirations of local stakeholders, and more intimately assess the process and outcomes as they developed.

PROCESS

WEEKLY ACTIVITIES - DESIGN PHASE

KICK-OFF & RESEARCH

WEEK
01-03

At the beginning of January we regrouped in SF for the Design Phase kickoff and the planning for the future stakeholder engagement. During the first meetings, we initiated conversation around environmental justice, local community, PDR uses and food distribution with the aim to understand the value of the area and its needs.

We met with:

- 01.02 Alex Lantsberg**
- 01.02 Tracy Zhu**
- 01.03 Michael Janis - SF Wholesale Produce Market**
- 01.10 CAC Group Bayview**

ENGAGEMENT PREPARATION

WEEK
04

After a productive internal workshop, we started to focus on identifying key stakeholders and emerging topics. We prepared the first round of engagement supported by the identification of critical issues, key stakeholders.

We met with:

- 01.23 RBD Conversations: Adaptive Governance**
- 01.24 RBD Community Workshop**
- 01.25 RBD - Policy and Politics for Bay Area Lands**
- 01.27 RBD - Learning from Resilience**

1ST ROUND ENGAGEMENT

WEEK
05

The full team met in San Francisco for the first round of meetings with key stakeholders and community organizations to initiate conversations around the RBD process and desirable outcomes. The conversations focused around shared goals, strategies and aspirations for the project, understanding the nature of a potential outcome. During the engagement one-to-one meetings we learned and deepened our understanding on critical issues in relation with environmental justice, integration of heavy infrastructure with the surrounding community and residents needs. To support this research phase, we also engaged with local groups representatives and expert advisors.

We met with:

- 01.30 Lindy Lowe - BCDC, SF PORT**
- 01.30 Shakirah Simley - SFPUC**
- 01.30 Al Williams Consulting Interview**
- 01.30 Bayview Magic**
- 01.30 Civic Edge**
- 01.31 City Working Group**
- 01.31 John Thomas - DPW**
- 01.31 Erica Uribe - SFPUC**
- 01.31 Tim Doherty - MTA**
- 01.31 Nicole Avril - SF Parks and Recreation**
- 01.31 Cyndy Comerford - SF DPH**
- 01.31 Leigh Lutenski - SF Planning**
- 01.31 Daniel Homsey - Empower SF**
- 01.31 Sheryl Evans Davis - SF Human Rights**
- 01.31 GL Hodges + Felisia Thibodeaux, ResilientBayview**
- 01.31 Michelle Pierce + Karen Pierce - Greenaction**
- 02.01 Bo Barnes - Kayaks Unlimited**
- 02.01 Robert Dwayne Jones**
- 02.01 Laura Tam - Sustainable Development at SPUR**

GOALS DEFINITION

WEEK
06

Based on the inputs collected during the CE meetings, we started to frame a set of goals and strategies to address the climate related risks while responding to residents' hopes and fears.

We met with:

- 02.08 Nwamaka Agbo Feedback Call**
- 02.09 Liz Ogbu Community Engagement Plan Review**

2ND ROUND OF ENGAGEMENT

WEEK
07

We continued the conversations with local stakeholders, advisors and team consultants, opening up a dialogue around the different needs and issues that the area faces today.

We met with:

- 02.11 Robin Chiang - Friends of Islais Creek Volunteer**
- 02.13 Tom Radulovich - Livable Cities**
- 02.13 May Aguiar- Parks Alliance**
- 02.14 City Planning with Diana Sokolove**
- 02.14 Jeni Weber + Caroline Sly**
- 02.14 CRO Brian Strong**
- 02.14 David Beaupre - SF PORT**
- 02.15 Susan Ma + Larry McClendon - OEWD**
- 02.15 Jackie Flin - APRI**
- 02.15 Earl Shaddix - EDoT**
- 02.15 Joshua Feliciano - MOB**
- 02.15 ARTSPAN artists at Guerrero Gallery**
- 02.15 Mike Bishop - Hanson Aggregates**
- 02.16 Sophia Kittler - LA to Supervisor Cohen**

DESIGN EXPLORATION

WEEK
08

We brought further conversations with local union workers including Kevin Gibbons from International Longshore and Warehouse Union (ILWU) to better understand port operations, the future of industrial waterfronts and the needs of local workers.

We met with:

- 02.11 Kevin Gibbons - ILWU**

DESIGN EXPLORATION

WEEK
09

We started to explore and identify a matrix of tools and strategies looking at the wastewater treatment plant, the industrial areas in the PDR zone and mobility. Team continues the conversation around goals and aspirations with local groups in order to refine the structure of the engagement process and ensure transparent and open forms of dialogue.

We met with:

- 02.27 GL Hodge - Resilient Bayview**
- 02.28 City Positioning Check In**
- 02.28 Rosie Digler**
- 02.28 R. Dwayne Jones**
- 03.01 Jackie Flin + Kurt Grimes - APRI**
- 03.01 Shamann Walton @ YCD + DJ Brookter**
- 03.01 Mayoral Panel on Sea Level Rise**
- 03.02 Bayview Advocates + Greenaction**

PROCESS

WEEKLY ACTIVITIES - DESIGN PHASE

WEEK 10 COLLABORATIVE DESIGN REPORT

After a productive internal workshop, we started to focus on identifying key stakeholders and emerging topics. We prepared the first round of engagement supported by the identification of critical issues, key stakeholders.

We met with:

- 03.06 Wastewater CAC - Anietie Ekanem**
- 03.07 BVHPP CAC**

WEEK 11 CONVENER KICKOFF BREAKFAST

Week 11 featured a full schedule of design briefings and charrettes. We held one charrette with the Dogpatch Neighborhood Association, several one on one meetings with important stakeholder groups like LEJ, and had an exceptionally important briefing with the District Supervisor Malia Cohen's office. To cap the week, we gathered at Auntie April's Chicken + Waffles with our core community conveners to outline our Public Outreach strategy and schedule. On the technical outreach side, we also met with the SFPUC for a briefing on our emerging pilot projects.

We met with:

- 03.14 SFEI - Robin Grossinger and Katie McKnight**
- 03.14 Project Briefing call with Anietie Ekanem**
- 03.15 Dogpatch Neighborhood Association Charrette**
- 03.15 Literacy for Environmental Justice - Patrick Rump**
- 03.15 Supervisor Cohen's office - Project Briefing**
- 03.16 Convener Kickoff - Felisia Thibodeaux, Daniel Homesy, Rosie Dilger, Jackie Flin**
- 03.16 SFPUC SPUR Briefing - Anna Roche, Mira Chokshi**
- 03.17 Heron's Head Pop up**

WEEK 12 3RD ROUND OF ENGAGEMENT

We used week 12 to continue our successful strategy of small, targeted briefing and feedback meetings. Having shared promising vision to mid level staffers at the City, we met with the head of the SFPUC and the director of SF planning, in order to start to get critical feedback on pilot project development. Strengthening our environmental outreach, the Sierra Club and Audubon Society helped expand and support a vision for a swimmable Islais Creek!

We met with:

- 03.20 CE Check In - APRI and RDJ**
- 03.20 City Planning - AnMarie Rodgers**
- 03.20 Golden Gate Audubon Society - Noreen Weeden**
- 03.21 Sierra Club - Arthur Feinstein**
- 03.21 GARE - Dwayne Marsh**
- 03.21 Imprint City - Tyra Fennell**
- 03.21 Director of SFPUC - Harlen Kelly**

WEEK 13 YOUTH EDUCATIONAL EVENT

While much of this week was devoted to the MidTerm Critique and Regulatory office Hours, we took the chance when the full team was in town to meet with the District Supervisor, Malia Cohen, as well as to kick off our public events with a high-school outreach session in The Bayview. Following the Mid Term critique, we used time with the Regulatory Officials that RBD assembled to get technical with our emerging pilot projects.

We met with:

- 03.28 Supervisor Malia Cohen**
- 03.30 Regulatory Office Hours: BCDC, The Bay/Water Trail, SFEI RBD Finance Advisors (NHA Advisors) San Francisco Regional Water Quality Control Board**

WEEK 14 PUBLIC WORKSHOPS

Week 14 was our first big public engagement week. We held two widely publicized events in the Bayview and Dogpatch where participants could explore what the different consequences and opportunities could be through a physical modeling exercise. In addition, we held our second Mayoral Taskforce on Sea Level Rise meeting in order to best reach diverse city leaders.

We met with:

- 04.04-05 Public Workshops @ Bayview & Dogpatch**
- 04.05 Presentation @ SPUR**
- 04.05 Mayoral Task Force on Sea Level Rise**
Steven Reel, Lindy Lowe, Byron Rhett - SF Port
Diana Sokolove - SF Planning Department
Sheila Nickolopoulos - SF Planning Department
Paul Maltzer - SF Planning Department
Leigh Lutenski - OEWD
Fuad Sweiss - SF Mayor's Office
Tim Doherty - SF MTA
Anna Roche - SF Public Utilities Commission
Bimu Shrestha, Bassam Aldhafari, Boris Oeunert - DPW
Melissa Higbee, Heather Green - ORR
Wendy Goodfriend - Department of the Environment
Brian Stokle - SF Recreation & Parks Department

WEEK 15 MORE FEEDBACK

Following an exciting engagement push, we took a week to gather notes and get more feedback.

We met with:

- 04.09 Presentation @ SPUR Water Policy & Climate Board**
- 04.10 B-Magic Parks briefing - Lyslynn Lacoste**

WEEK 16 COMMUNITY ROUND TABLES

What a week! Week 16 was anchored by our thematic, smaller charrettes, and buffered by pilot project briefings and supervisor syncs. This week was exceptionally productive - it served as an opportunity to share with almost 75-100 individuals what we have heard as ideas over the months, now as pilot projects with logical places to start, champions, and funding sources.

We met with:

- 04.24 Potrero Boosters meeting - J.R. Eppler**
- 04.25 Supervisor Candidate: Shamann Walton & DJ Brookter**
- 04.25 Supervisor Candidate: Theo Ellington**
- 04.25 Port Leadership: Bryon Rhett, Rod Iwashita, Lindy Lowe**
- 04.26 Pilot Projects Charrette: Supervisor Ronen's Office**
- 04.27 Office of Economic and Workforce Development**
- 04.27 Finance Charrette - NHA Advisors**
- 04.27 Ecology Review - San Francisco Estuary Institute**
- 04.29 Mayoral Candidate Series: Supervisor Jane Kim**

WEEKS 17-18 MORE FEEDBACK

In the midst of a final design push, we are focused on taking community input and tethering it to real momentum within the City.

We met with:

- 05.08 SF Planning Sync: Director John Rahaim**
- 05.09 SFPUC General Managers Briefing: Harlen Kelly**
- 05.09 SFMTA Project Briefing: Tim Doherty + 40 attendees**
- 05.11 Prologis Briefing - Vice President Mark Hansen**
- 05.11 SFMade Briefing - Executive Director Kate Sofis**
- 05.11 SFDPW Hydrology Review - Greg Braswell**
- 05.12 City Administrator Project Briefing: Elaine Forbes - SF Port, Naomi Kelly - SF City Administrator, Muhammad Nuru - SF DPW, Brian Strong - Chief CRO**



LEIGH LUTENSKI - SF PLANNING



AL WILLIAMS



NICOLE AVRIL - SF PARKS DEPARTMENT



DANIEL HOMESY - SF RESILIENT NEIGHBORHOOD INITIATIVE



BRIAN STRONG - SF CAPITAL PLANNING



BO BARNES - KAYAKS UNLIMITED



SHAKIRA SIMLEY - SFPUC



SF PUBLIC UTILITIES COMMISSION



JACKIE FLIN, APRI



DIANA SOKOLOVE, JOSHUA SWITZKY - SF PLANNING



FELICIA THIBODEAUX, RESILIENT BAYVIEW



EARL SHADDIX - ECONOMIC DEVELOPMENT ON THIRD



DAVID BEAUPRE - PORT OF SF



BAYVIEW ARTISTS



TIM DOHERTY - SF MTA



ISLAIS CREEK KAYAKING

CHALLENGES



Pollution



Vehicular Conflicts



Displacement



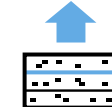
Lack of Accessibility



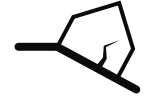
Coastal Inundation



Terrestrial Flooding



Groundwater Rising



Seismic Hazard

URBAN CHALLENGES AND ENVIRONMENTAL RISKS

Several environmental and social risks converge at the Islais Creek basin, where they compound to dramatically increase vulnerability. The environmental risks include coastal flooding, terrestrial flooding, shallow groundwater, seismic hazards, air pollution, and soil contamination. The social challenges are related to affordability, congestion, displacement, and accessibility. These risks have been accounted for as the design direction was developed, creating a framework for a more resilient and promising future for the area.

POLLUTION

The Islais Creek industrial basin and its surrounding residential neighborhoods are subjected to extensive pollution including soil contamination, poor air quality from congested freeways and streets, and combined sewer discharges into the Bay. This area is also home to some of the last remaining affordable commercial space available for artists, makers, and small industrial facilities. The entire Southeast area, including the Islais Creek Basin, has problematic legacy soil contamination related to the area's history of heavy industrial use in the maritime industry, slaughter houses

and rendering facilities, a Pacific Gas & Electric (PG&E) energy plant, and other polluting industries. The various fill materials used to develop the PDR basin from its historic marsh conditions raises complicated soil contamination issues.

Air quality issues have been addressed to some extent through the closure of two power plants, Hunters Point Power Plant in 2006 and Potrero Generating Station in 2010. However, Interstate Highways 280 and 101 continue to expose residents and workers to particulate matter associated with elevated asthma and other public health risks. In addition, odors from the SEP continue to plague the neighborhood. The SFPUC has a 24-hour 311 hotline residents can call to report issues, which are in turn communicated to the SEP operations team. Fortunately, the major source of odors, floating cap anaerobic digesters, will be addressed by the new biodigester facility planned for construction in 2019.

DISPLACEMENT

The residential neighborhoods south of Islais Creek are very much in transition from working class neighborhoods occupied by families of color to neighborhoods occupied by a mixture of new residents.

This dynamic presents a considerable strain on residents that have depended on the sense of community that kept it intact.

Historically, the Bayview had a higher percentage of homeownership than San Francisco as a whole, despite having lower median incomes than the rest of the City. Factors that have kept prices low include racist land-use policies, poor connectivity to the rest of San Francisco and the region at large, lack of amenities, and polluting industrial conditions. Today, given the region's notoriously high housing prices and the relative proximity of this neighborhood to both downtown San Francisco and to Silicon Valley, old market patterns are breaking down.

While overall population growth in the area has been relatively slow since 2000, this number alone masks other significant demographic changes that have occurred over the past 16 years, including a 36 percent decline in the African-American population and a 42 percent increase in the Asian-Pacific Islander population. The number of families with children living in the area has decreased by 12 percent since 2000, while the number of single person households has increased by 31 percent.

Some families may choose to take advantage of these changing market trends by selling their home, moving to a lower cost area, and using any additional cash for other purposes. But at the same time, families who want to stay in the area have no place where their children or grandchildren can also afford to buy a home and live close by. These are the kinds of pressures that may not show up on the displacement maps but do contribute to a loss in community cohesion and strike a blow to the area's rich cultural history.

CONGESTION

The Bayview-Hunters Point neighborhoods and the 3rd Street commercial corridor are flanked by industry and highways. 3rd Street is used as a bypass when the highways get congested, causing major accessibility issues in the local street network with ripple effects for those attempting to use public transit or alternative modes, such as bicycle or walking. Despite recent efforts to add bike lanes, pedestrian paths, and bike share services, community members have noted that bicycling is not a common means of transportation in the Southeast. This may also be due to a lack of a continuous bikeway connecting Bayview and the Islais Basin to the rest of the city.

The MUNI T-Line was introduced to replace the Line 15 bus to promote economic development in the Bayview, and came with the promise of more reliable transportation to downtown. However, it has been met with many complaints, including that it is slow, with too-frequent stops, often runs behind schedule, and its construction caused the closure of many locally-owned businesses along 3rd Street. The shortcomings of the T-line have further increased resident frustrations and congestion from personal automobile use, aggravating the area's congestion and accessibility issues.

The primary transportation hazards in the neighborhood have little to do with vehicle volumes or truck volumes, but rather speed. The problem is that many streets were designed according to suburban, high-speed design criteria. Streets should be re-designed to bring speeds to 25 mph or below to better align with the design tolerance of the human body at around 15 to 18 mph.

ACCESSIBILITY

Access to the Islais Creek Basin, the Port property, and the Bayview-Hunters Point residential neighborhoods is an ongoing challenge, with the area lacking any BART, Caltrain, or ferry service. To some extent, the T-Line was intended to address this lack of connectivity by supplementing the MUNI bus lines serving the area. However, since the line opened in 2007, it remains slow, and can have very long headways, leaving residents and workers frustrated with delays.

The area's shoreline creates a missing link in the waterfront Bay Trail that could be further enhanced with pathway connections along both North-South and East-West axes. It is crucial that open spaces such as those proposed have 24-hour access, with appropriate lighting to increase safety. However, wide roadways designed to move vehicular traffic often discourage pedestrians from accessing public shoreline, and can potentially be breached in the future. Due to this neighborhood-waterfront disconnect, parks such as Heron's Head and other open spaces are often underutilized.

Even with the lack of adequate transit services, the majority of people who live in the Islais Creek Basin or Bayview-Hunters Point work elsewhere, requiring a significant amount of commute time on inefficient public transportation systems or in personal automobiles. The majority of trips originating in the Southeast are in personal automobiles, and approximately

30 percent of these trips do not leave the area. The next most frequent mode of transit is by walking or biking, then public transportation systems.

COASTAL FLOODING

Key elements of risk associated with coastal flood hazards for any site include tidal water levels and waves. The combination of these elements augment flood hazard. Water levels include a wide range of influencing factors including astronomical tides, storm surge, and El Niño effects. Waves may include swells (waves from distant storms), wind-waves associated with local storm events in the Bay, tsunamis, or even vessel wakes. When sea levels rise in the future, the combination of higher water levels and waves would result in even greater flood hazards. *Risk* is usually evaluated by comparing the *Likelihood* of an impact from specific events, to the *Consequence* of these impacts, and can be expressed as: $Risk = Likelihood \times Consequence$.

Events could be present-day phenomena such as storm events resulting from high water levels and waves or a gradual future phenomenon such as sea level rise. Consequences of impacts to any asset depend on its *Vulnerability* (a measure of the magnitude, scale, and extent of the impact). For a risk assessment, it therefore becomes important to evaluate both present-day vulnerability (from coastal flooding) as well as future vulnerability (due to sea level rise). Both are addressed below.

The Sewer System Improvement Program (SSIP) maps indicate that the banks (essentially very low levees) on either side of Islais Creek are high enough that, even for 100-year storm surge conditions, coastal flooding does not occur. However, a significant portion of the areas behind the levees are lower than the 100-year storm surge, indicating that upstream flooding could occur if adequate storm drainage infrastructure does not exist. This outcome is consistent with historical flood records for the area, which indicate flooding during large precipitation events. The low-lying areas, although not shown as inundated in the SSIP maps, are marked in a floodplain in the FEMA Flood Insurance Rate Maps (FIRM) because of inadequate levee freeboard. With future sea level rise, the freeboard would be reduced even further, and overtopping of the levees would become more frequent.

TERRESTRIAL FLOODING

Islais Creek comprises the largest watershed in the City of San Francisco. Once a major freshwater source for the Ohlone and

later Western settlers, the natural creek ran from the upper reaches of Glen Canyon down to the Bay where Islais Channel is today. Historically, Precita Creek converged with Islais Creek at the intersection of Cesar Chavez Street and Highway 101. Over time, the watershed has been altered drastically. Low lying areas, once freshwater marsh, were filled in with construction debris and other available fill materials. Today, most of the creek flows in the combined storm sewer (CSS) network with large culverts running beneath Alemany Boulevard. Only the upper most reach still runs freely in a natural channel in Glen Canyon Park.

The CSS has a limited conveyance capacity as it is sized for a 5-year storm event, per San Francisco Public Utilities Commission (SFPUC) "level of service" design criteria, larger events surcharge the system. When surcharged, the street network is designed to carry flows of up to a 100-year storm event without overtopping curbs or other flood structures. However, due to limitations in the conveyance system and the historical hydrology and topography of the Islais Creek Channel, the area is still prone to flooding. Areas along Alemany Boulevard and Cayuga Street see flooding during heavy rainfall when flows periodically overwhelm the system, entering homes and businesses.

The Islais Creek watershed could see hundreds of acres of low-lying land inundated during an extreme rainfall event. Extreme rainfall has occurred several times in recent years with storms defined by the SFPUC as 25-year and 100-year storms—of which there are, respectively, four and one percent likelihoods in any given year. These large events result in as much as seven feet of flood depth in certain places. Beyond the storms that the current City standards are set to, management of larger storms may be needed. The probable maximum precipitation (PMP) for this area is estimated to approximately three times the precipitation depth to the 100-year storm, to provide perspective on a worst-case scenario potentially increasing risk exponentially.

The Southeast Treatment Plant (SEP) treats the dry weather CSS flows and discharges the treated effluent to designated outfalls in the Bay. Wet weather flow rates up to 150 million gallons per day (MGD) receive secondary treatment before passing to the Bay. Wet weather flow rates above 150 MGD and up to 250 MGD receive primary treatment in the SEP. During extreme events, when the treatment plant is at maximum capacity, combined flows are pre-treated in CSS transportation and storage boxes, where sedimentation occurs and baffles prevent floatables

from entering the Bay. These combined sewer discharges (CSD) are permitted to occur a maximum of 10 times annually from CSD boxes 18-35 (Per National Pollutant Discharge Elimination System (NPDES) permit NO. CA0038610). CSDs create an ongoing impact on aquatic ecology and public access to the Bay. Climate change is likely to increase the intensity of rainfall in San Francisco, which would further aggravate the issue of CSDs.

SUBSIDENCE + SETTLEMENT

Coastal areas along San Francisco Bay that are built on fill material, like portions of the Islais Basin, are sinking at a rate as high as 0.4 inches per year, according to a newly released study by Shirzaei and Bürgmann. This research suggests that coastal flooding due to sea level rise will be exacerbated in these areas, including Port-owned land at the mouth of Islais Creek Channel. In meeting with City engineers, it appears that there may not be any other quantitative source of subsidence data for the area. Based on the high groundwater in the Islais Basin, the cause of subsidence is likely linked to settling of structures in the unconsolidated soils in the site of historic marshlands.

SEISMIC HAZARD

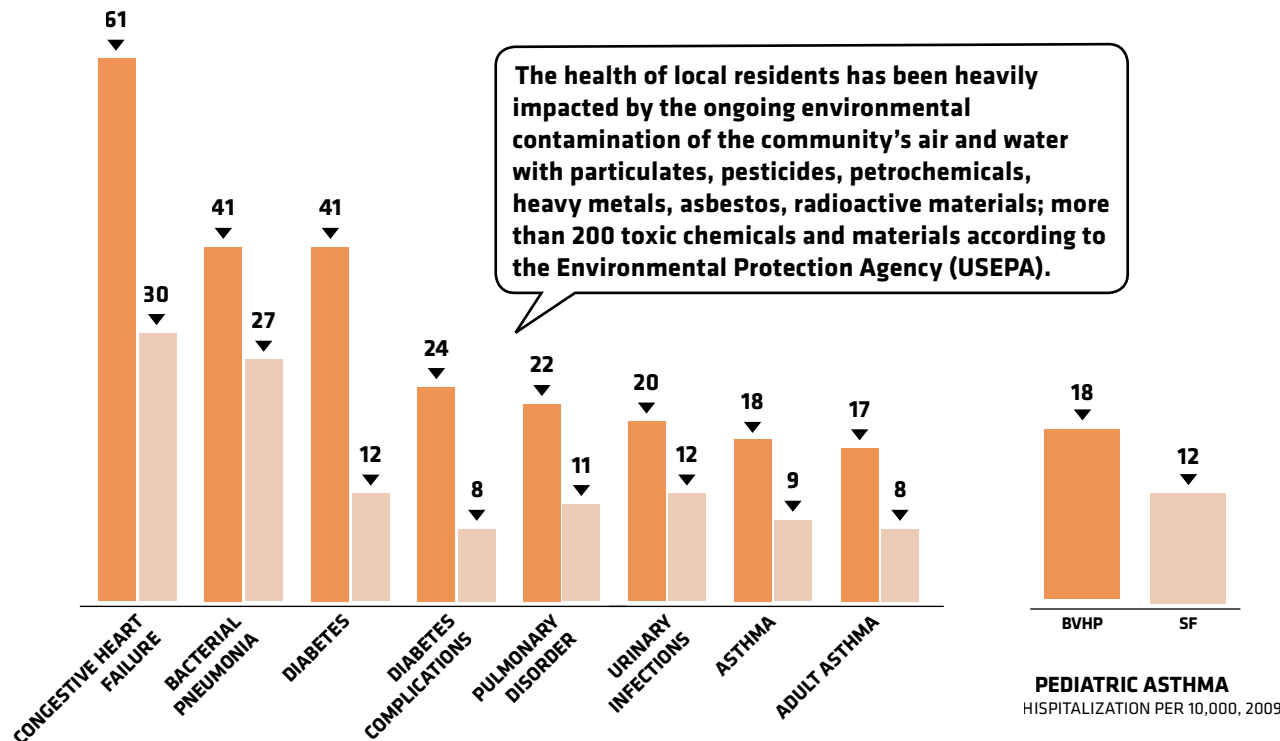
The San Francisco Bay Area is earthquake prone with regular seismic activity and a history of destructive earthquakes including the 1906 earthquake and the more recent 1989 Loma Prieta earthquake, with respective magnitudes of 7.9 Mw and 6.9 Mw. Building code changes and upgrades of the municipal water system have since then been implemented, including the recent near completion of the Hetch Hetchy Regional Water Supply System seismic upgrades. The Islais Basin now rests to a large degree on building rubble discarded after the 1906 earthquake. Bay mud and other poor fill materials make the area especially prone to liquefaction during seismic events. Furthermore, old building stock is primarily built to less stringent standards, further increases the risks during a future earthquake. On top of this risk, future increased groundwater levels with sea level rise amplifies the seismic risk in areas with unstable soils.

NEXT STEPS

The Islais Hyper-Creek project has challenged our team to create meaningful opportunities for bottom-up, community-centered design and cross-group collaboration. We have found that this kind of process has enabled desperate community members and groups, as well as traditionally siloed City agencies, to join at the same table and co-create together.

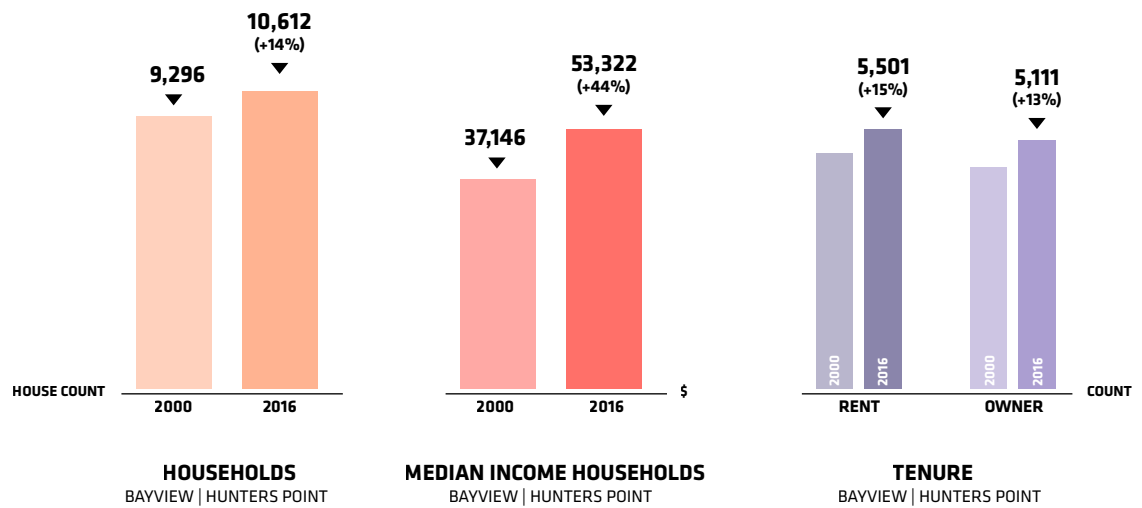


LEADING HOSPITALIZATIONS
CASES PER 10,000 INHABITANTS - 2009



The health of local residents has been heavily impacted by the ongoing environmental contamination of the community's air and water with particulates, pesticides, petrochemicals, heavy metals, asbestos, radioactive materials; more than 200 toxic chemicals and materials according to the Environmental Protection Agency (USEPA).

Historically, BVHP neighborhoods have been viewed as relatively affordable, and have thus had a higher percentage of homeownership than San Francisco as a whole, despite having lower median incomes than the City as a whole.

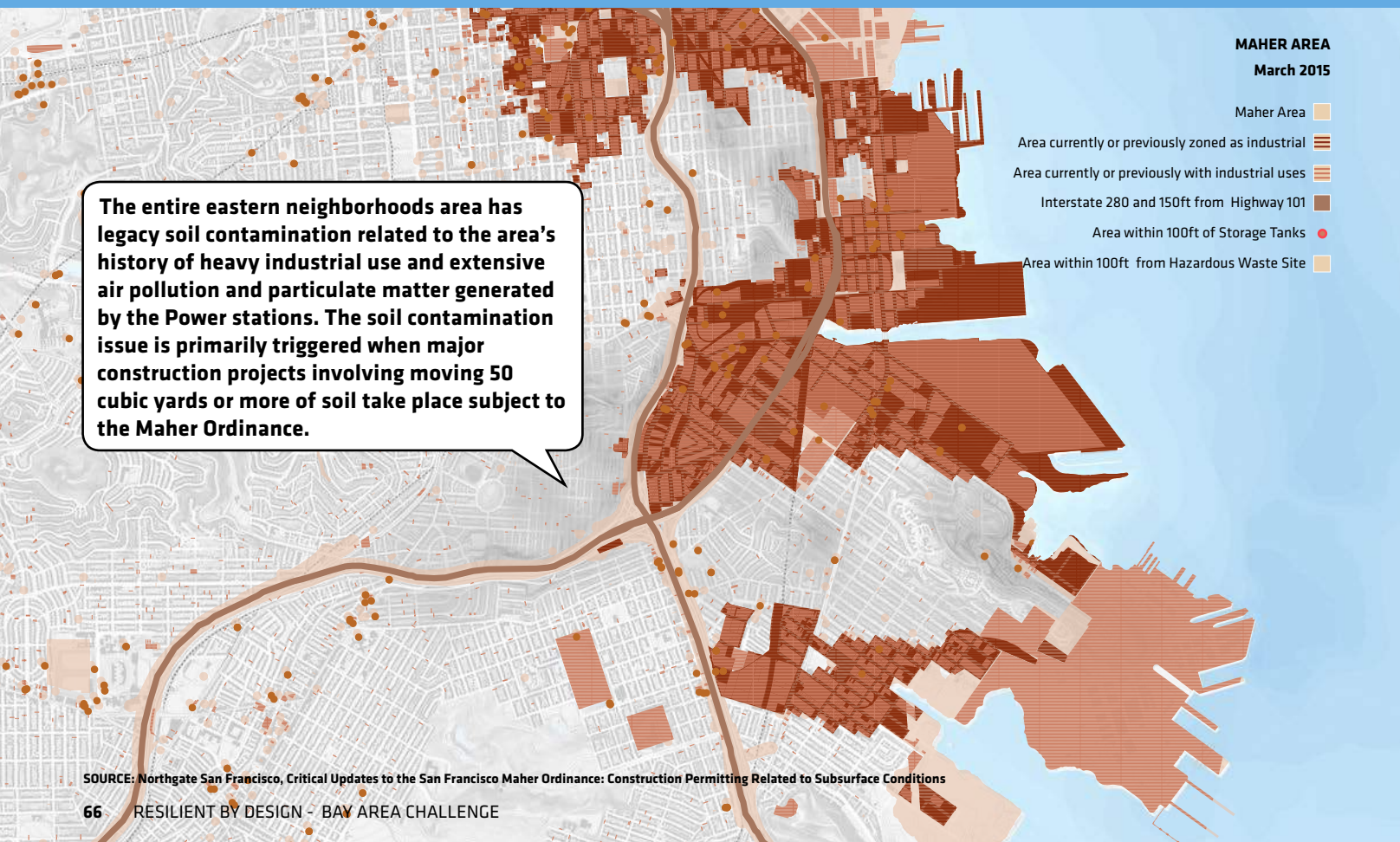


SOURCE: HCMP, Your Neighborhood at a Glance: Bayview-Hunters Point and Visitacion Valley

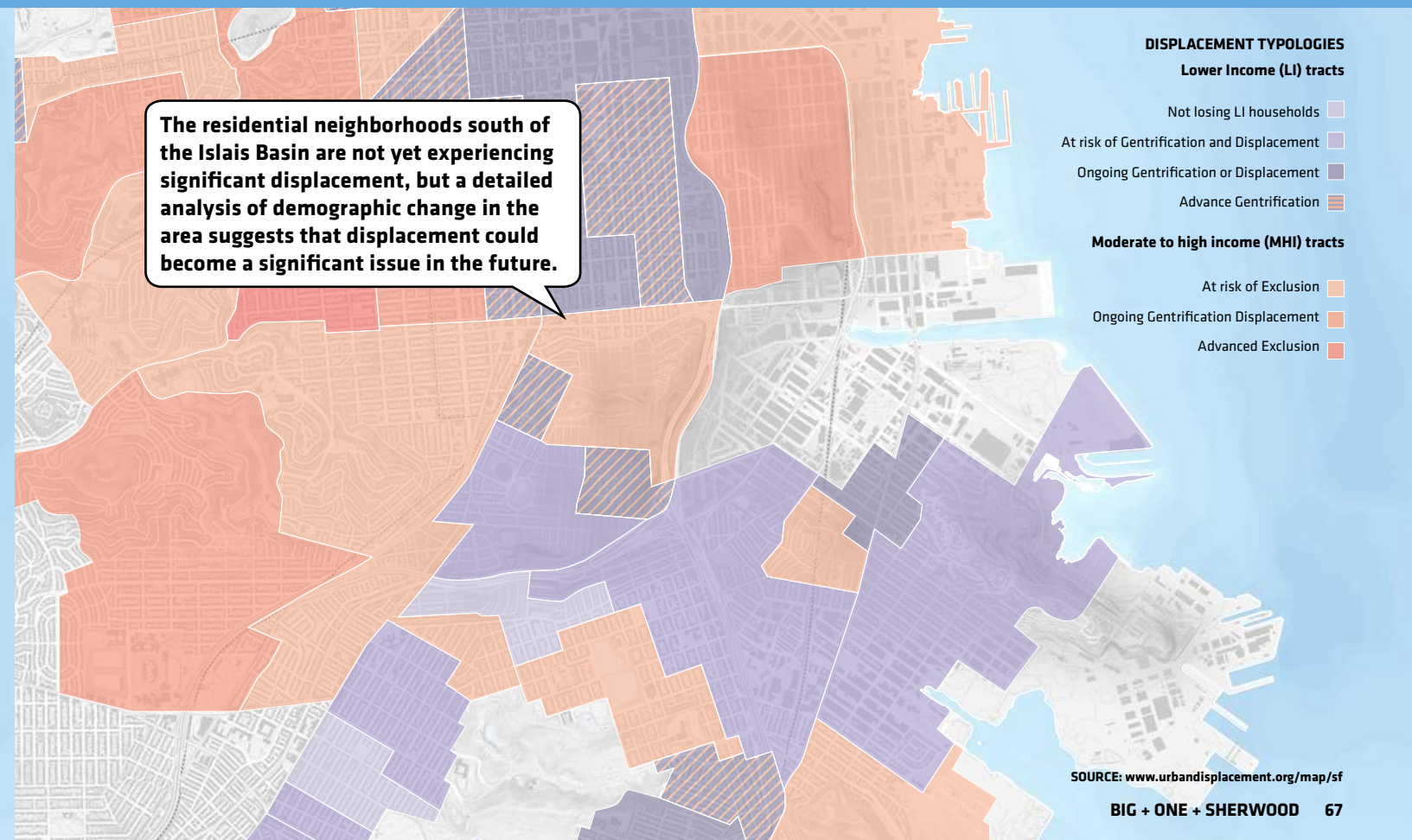
SOURCE: www.urbandisplacement.org/map/sf

POLLUTION

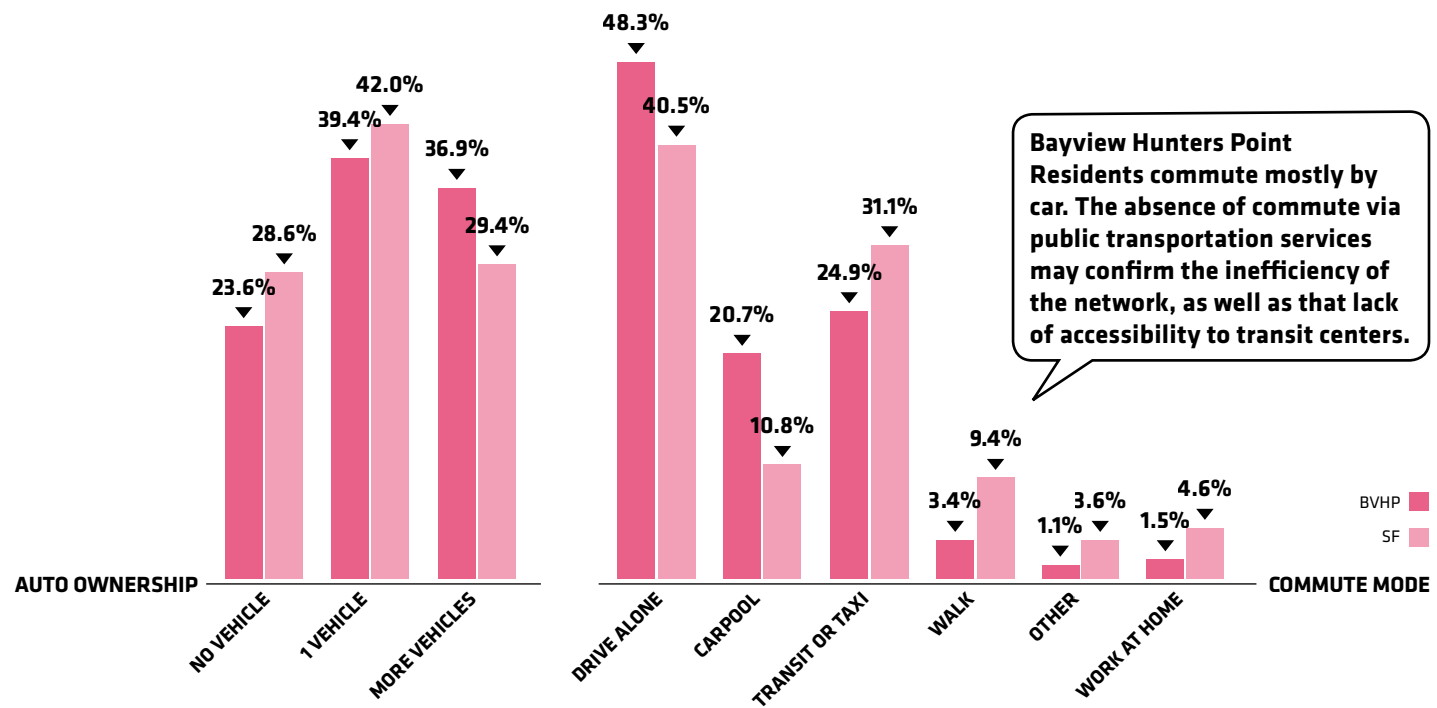
DISPLACEMENT



SOURCE: Northgate San Francisco, Critical Updates to the San Francisco Maher Ordinance: Construction Permitting Related to Subsurface Conditions

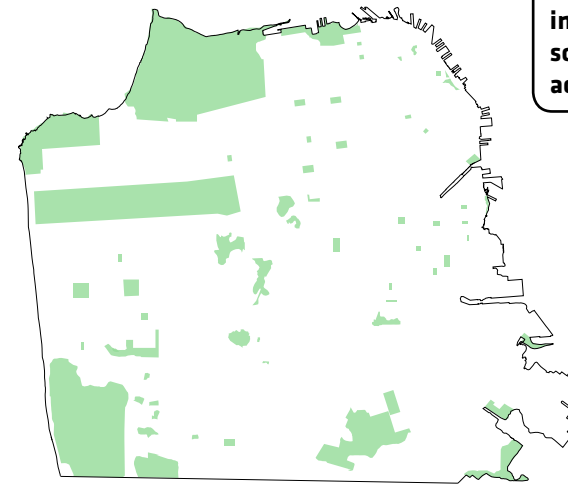


SOURCE: www.urbandisplacement.org/map/sf



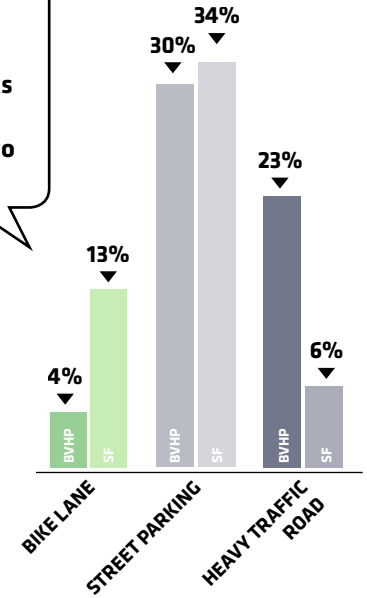
SOURCE: San Francisco County Transportation Authority, Bayview Hunters Point Neighborhood, Transportation Plan Final Report

The amount of areas dedicated to parks and public space is clearly in disparate between the Pacific Coast and San Francisco Bay side.



LACK OF PARKS AND OPEN SPACE IN ISLAIS CREEK AREA

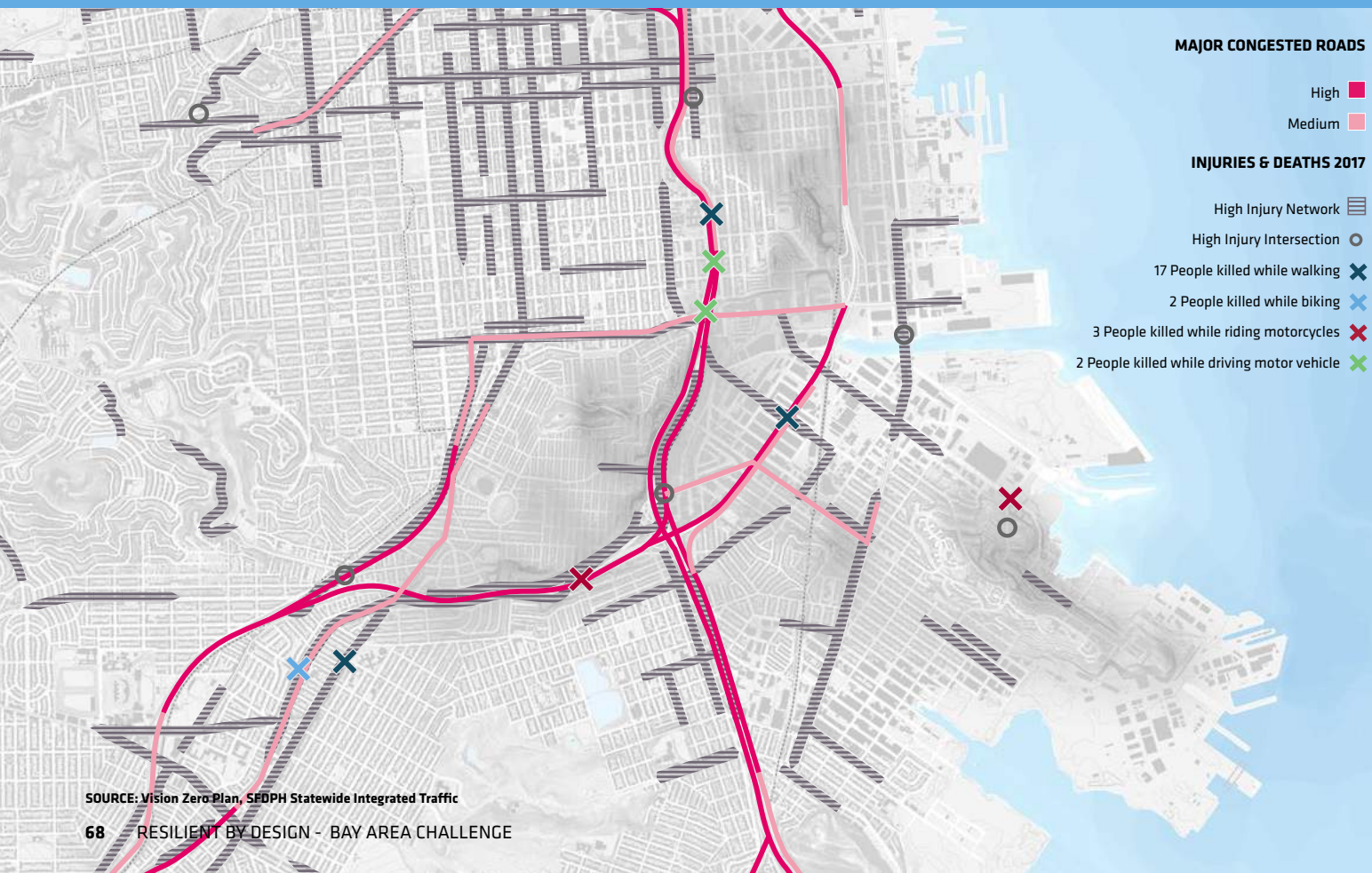
The PDR uses of the basin have informed the roadway network of the Islais Creek area: today mostly designed for heavy traffic connectivity and logistic corridors. The local network lacks investment at the neighborhood scale, making the area difficult to access by light mobility flows.



ROADWAY TYPE & QUANTIFICATION

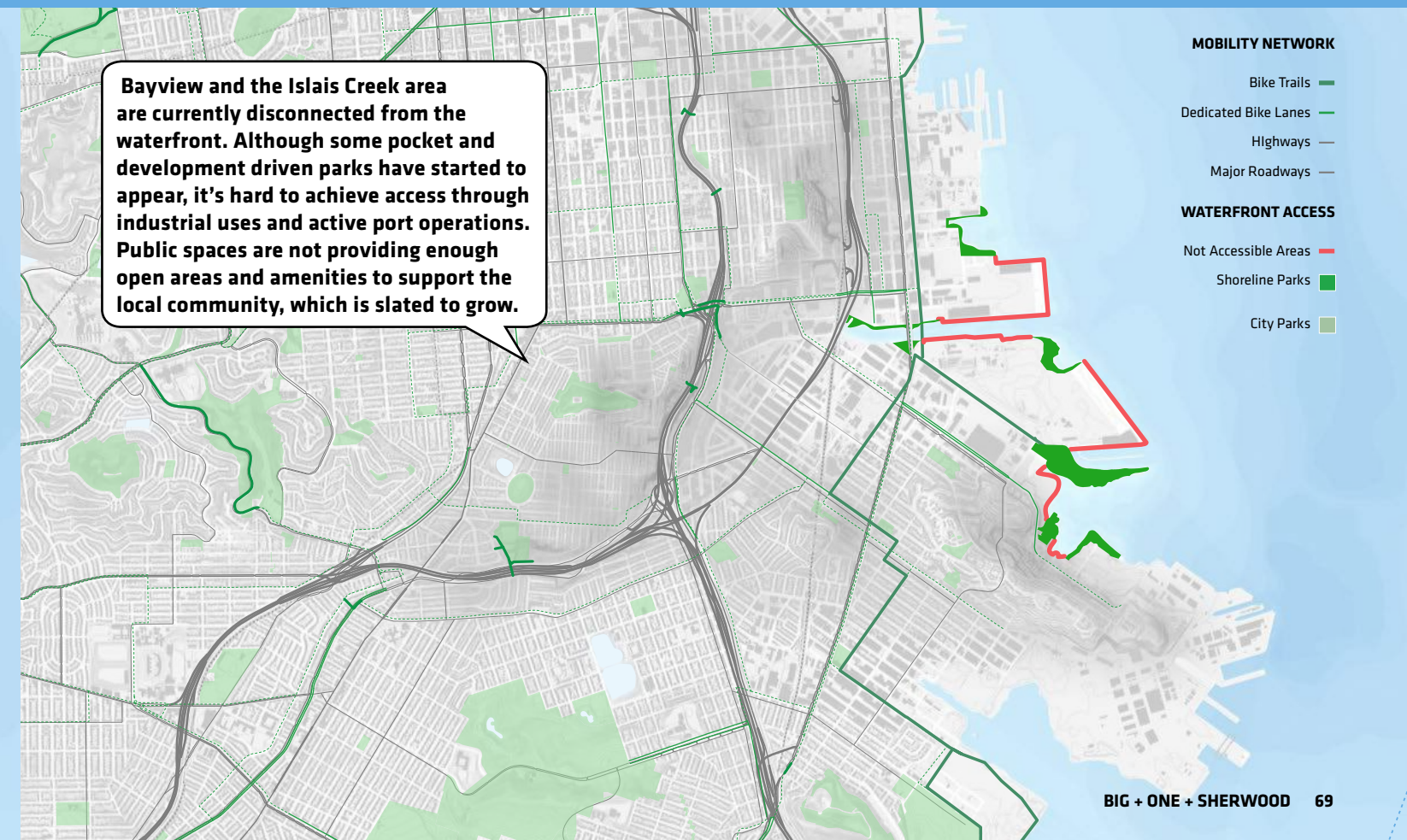
Quantification by our team based on USGS data

VEHICULAR CONFLICTS



SOURCE: Vision Zero Plan, SFPD Statewide Integrated Traffic
68 RESILIENT BY DESIGN - BAY AREA CHALLENGE

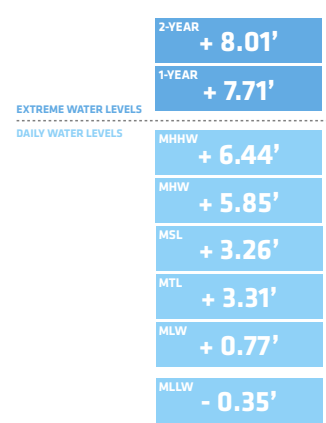
LACK OF ACCESSIBILITY



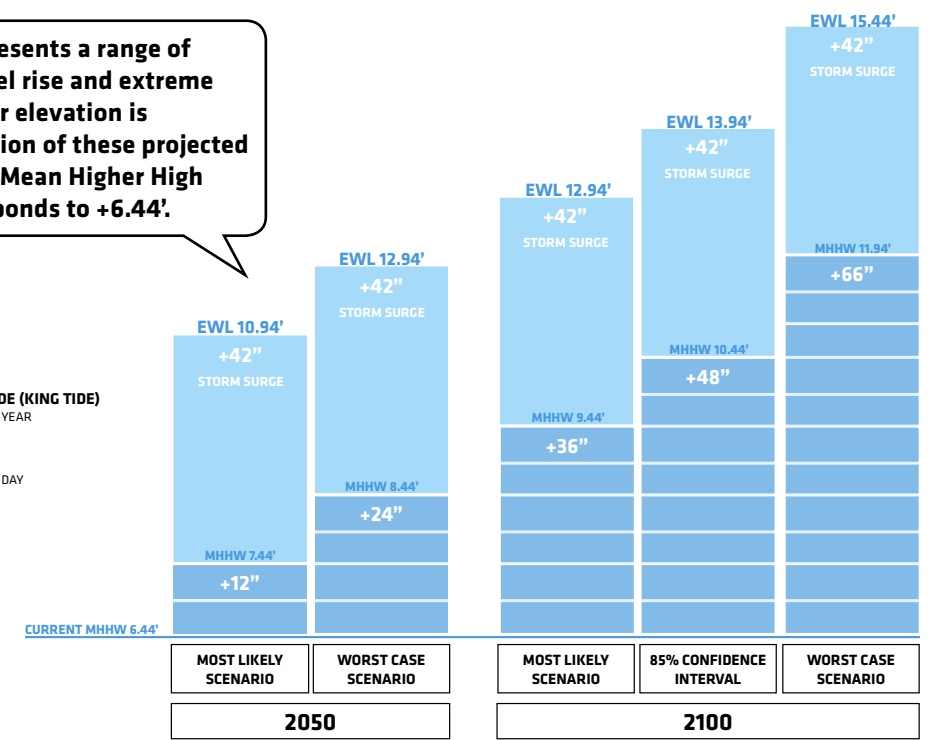
BIG + ONE + SHERWOOD 69



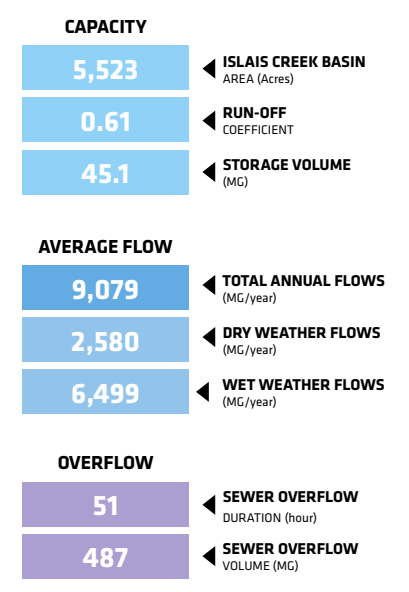
Coastal inundation represents a range of combinations of sea level rise and extreme tide scenarios. The water elevation is determined by the addition of these projected scenarios to the current Mean Higher High Water Level that corresponds to +6.44'.



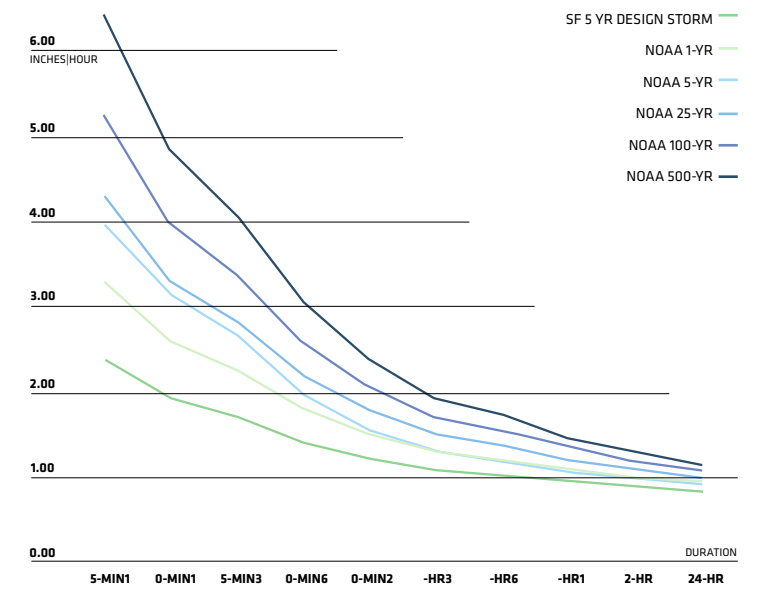
CURRENT TIDAL RANGE
ASTRONOMICAL TIDES



FUTURE INUNDATION SCENARIOS ABOVE MHHW
FUTURE PERMANENT INUNDATION + TEMPORARY FLOODING DURING HEAVY STORM EVENTS (2050-2100 projections)
NORTH AMERICAN VERTICAL DATUM (NAVD88)



ISLAIS BASIN
CURRENT CAPACITY

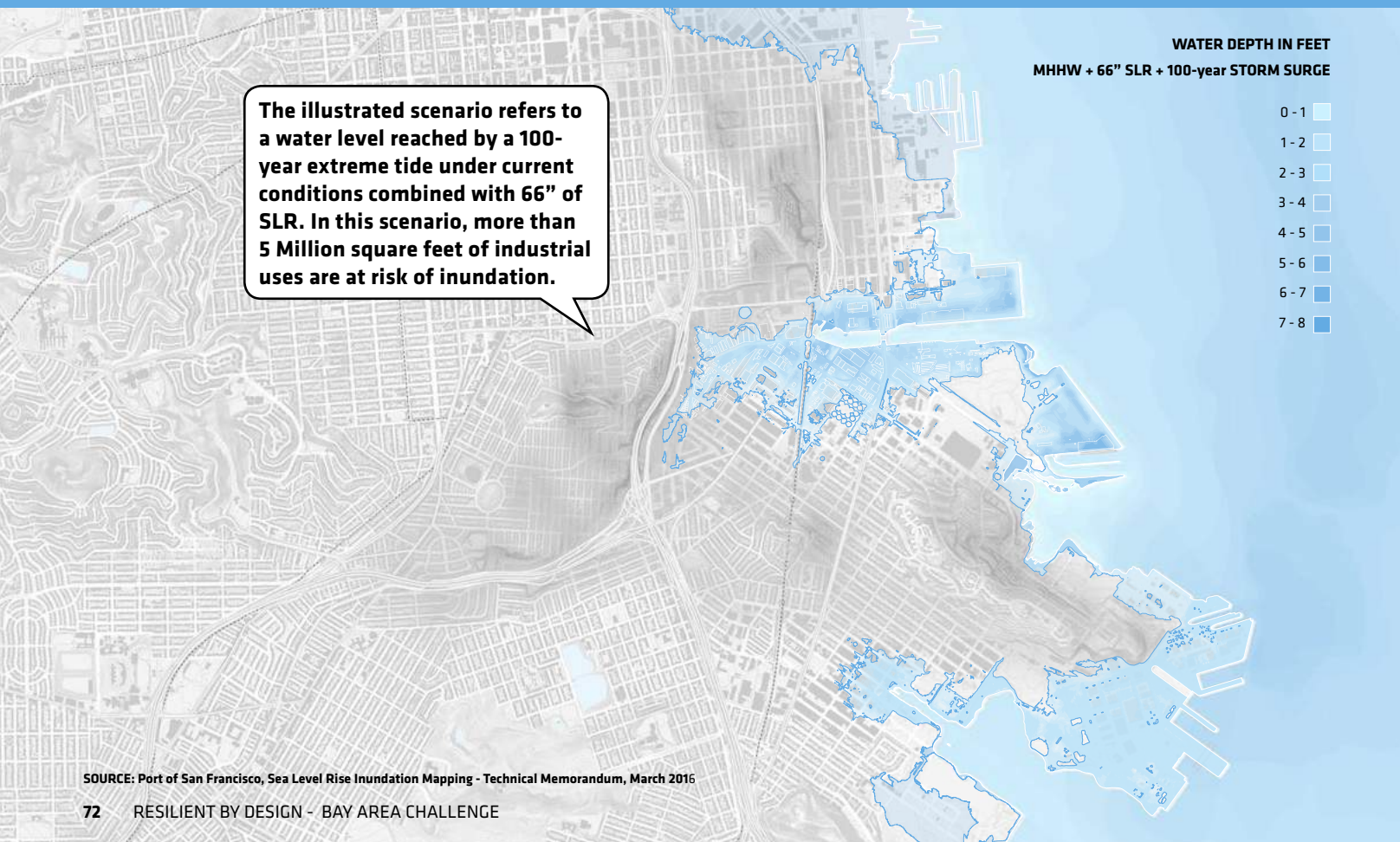


PRECIPITATION EVENTS
RAINFALL INTENSITY AND DURATION OF STORM EVENTS

COASTAL INUNDATION

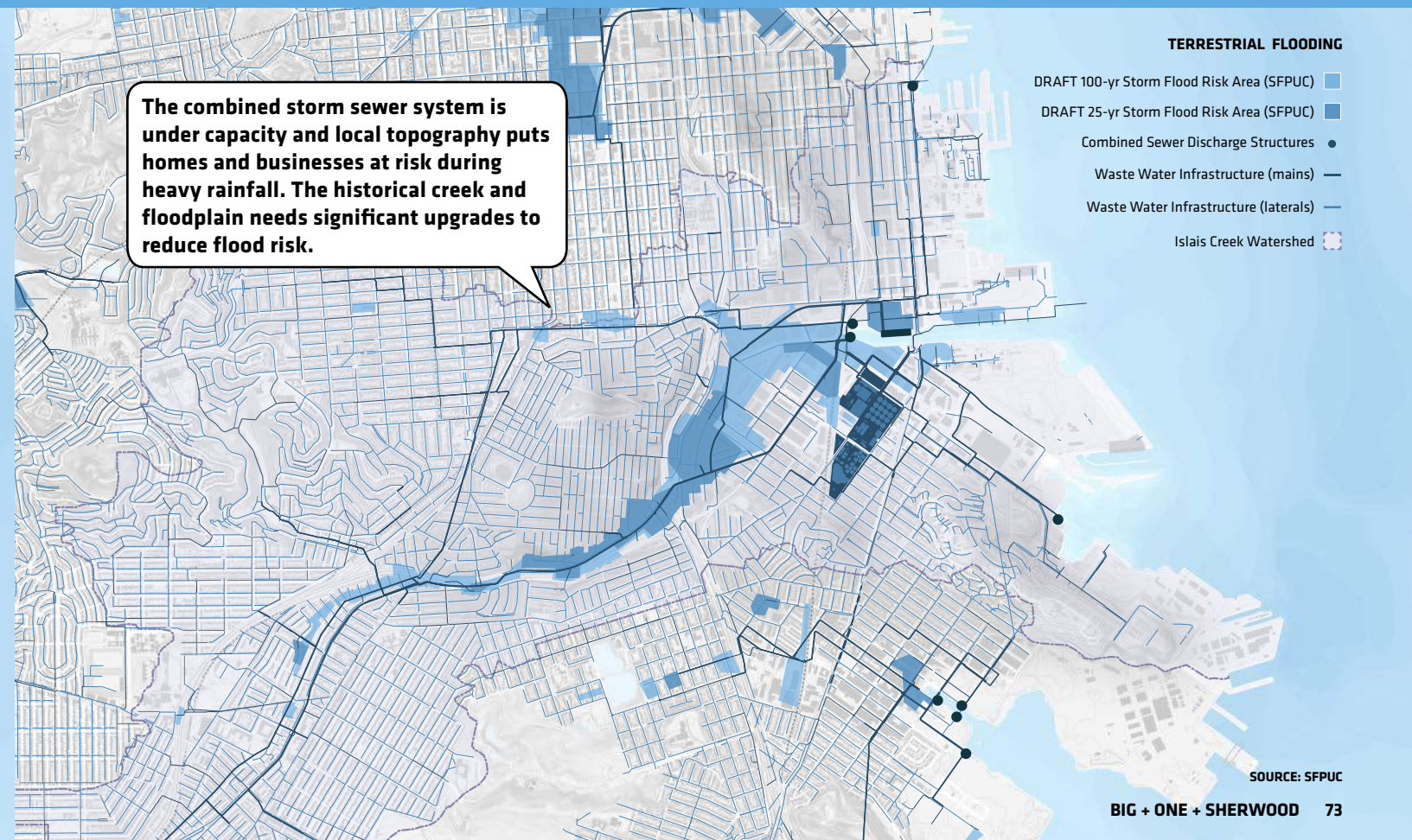
TERRESTRIAL FLOODING

The illustrated scenario refers to a water level reached by a 100-year extreme tide under current conditions combined with 66" of SLR. In this scenario, more than 5 Million square feet of industrial uses are at risk of inundation.



SOURCE: Port of San Francisco, Sea Level Rise Inundation Mapping - Technical Memorandum, March 2016

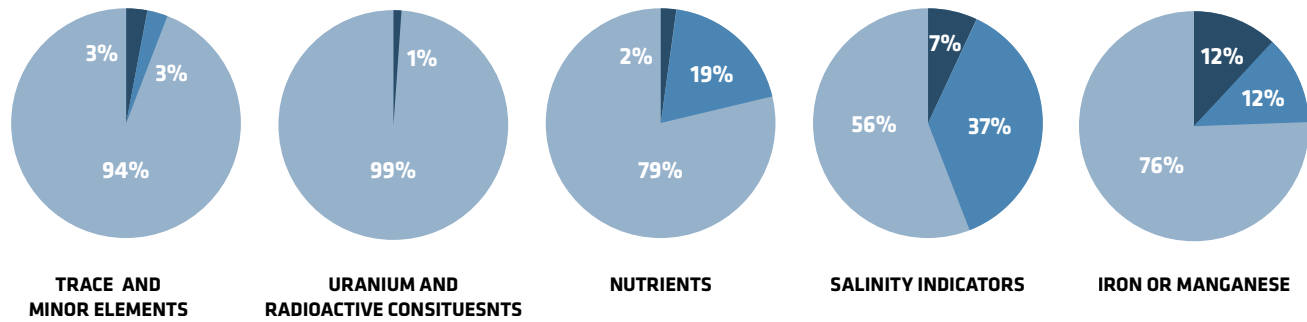
The combined storm sewer system is under capacity and local topography puts homes and businesses at risk during heavy rainfall. The historical creek and floodplain needs significant upgrades to reduce flood risk.



SOURCE: SFPUC

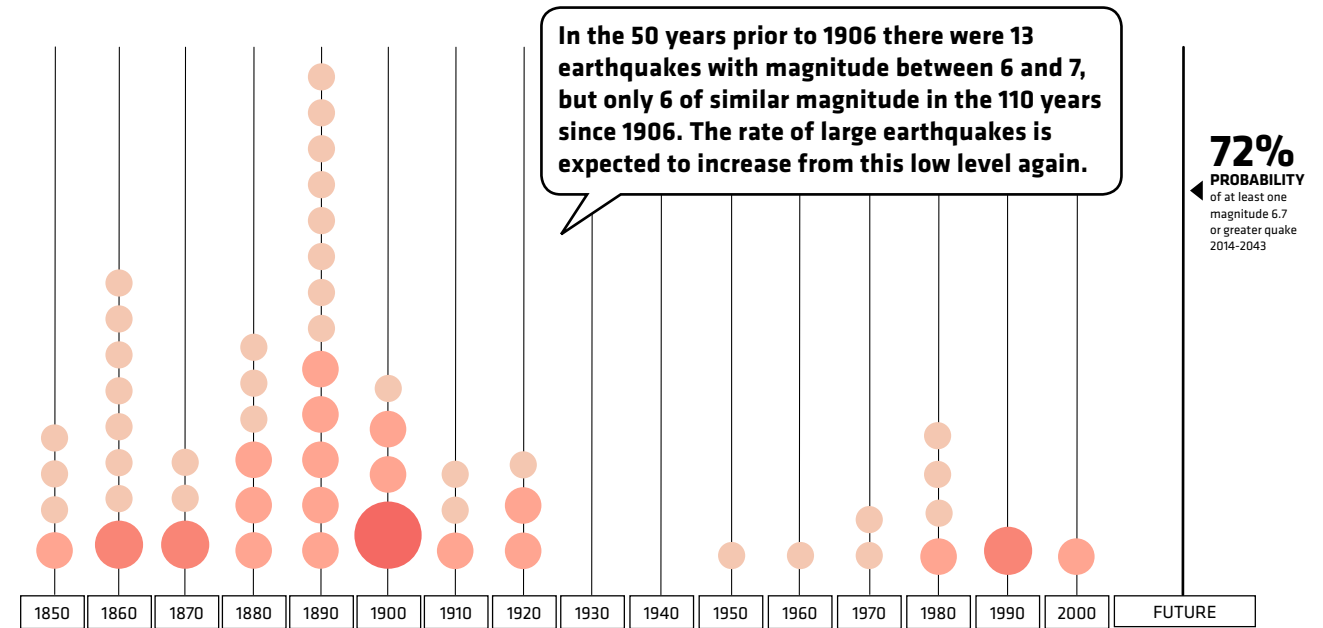
SF QUALITY OF UNDERGROUND UNTREATED WATER

LOW MEDIUM HIGH



SOURCE: HCMP, Your Neighborhood at a Glance: Bayview-Hunters Point and Visitacion Valley

>7.0 6.5 - 6.9 6.0 - 6.4 5.5 - 5.9 EARTHQUAKE MAGNITUDE

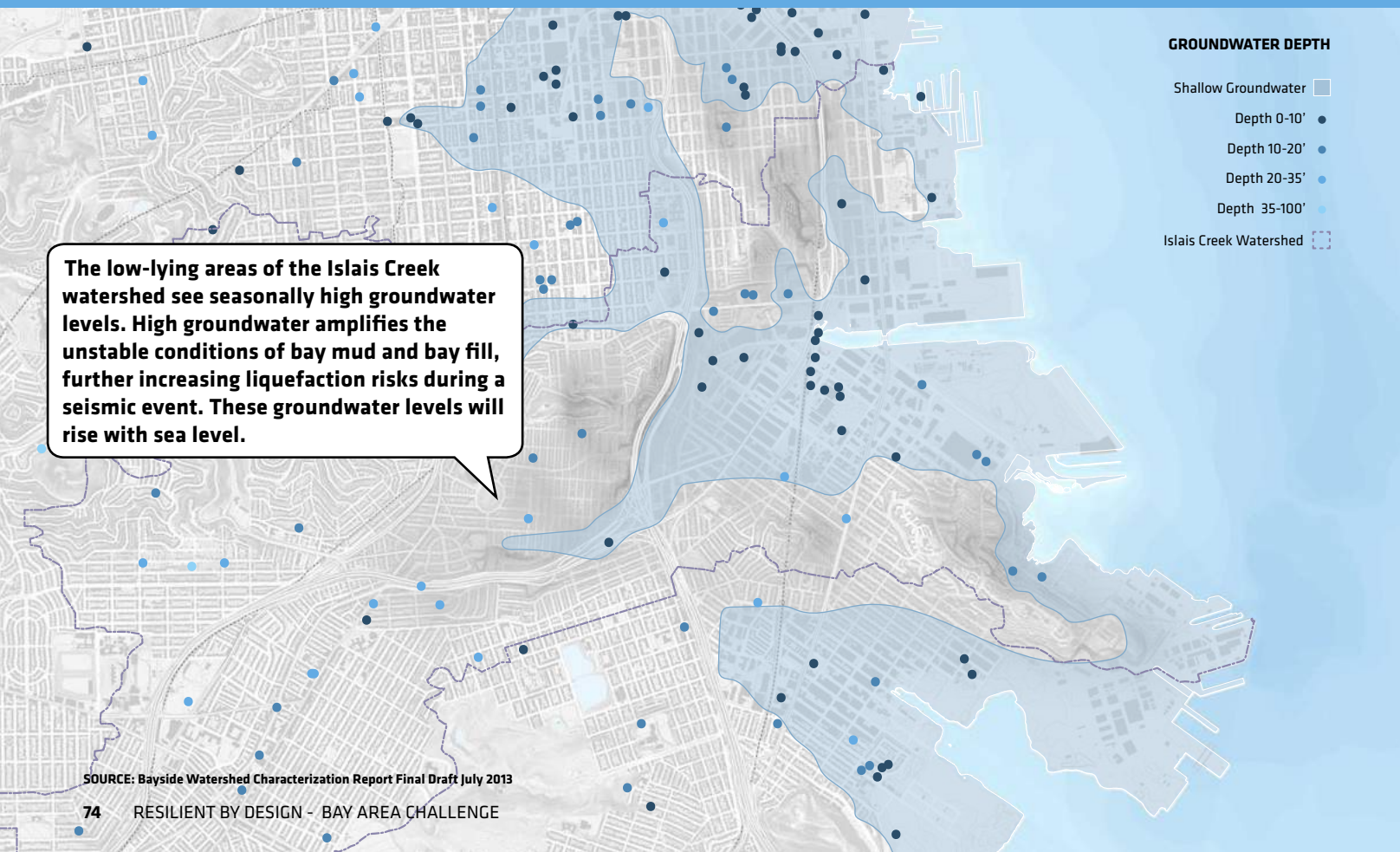


72% PROBABILITY of at least one magnitude 6.7 or greater quake 2014-2043

SF BAY REGION EARTHQUAKE TIMELINE

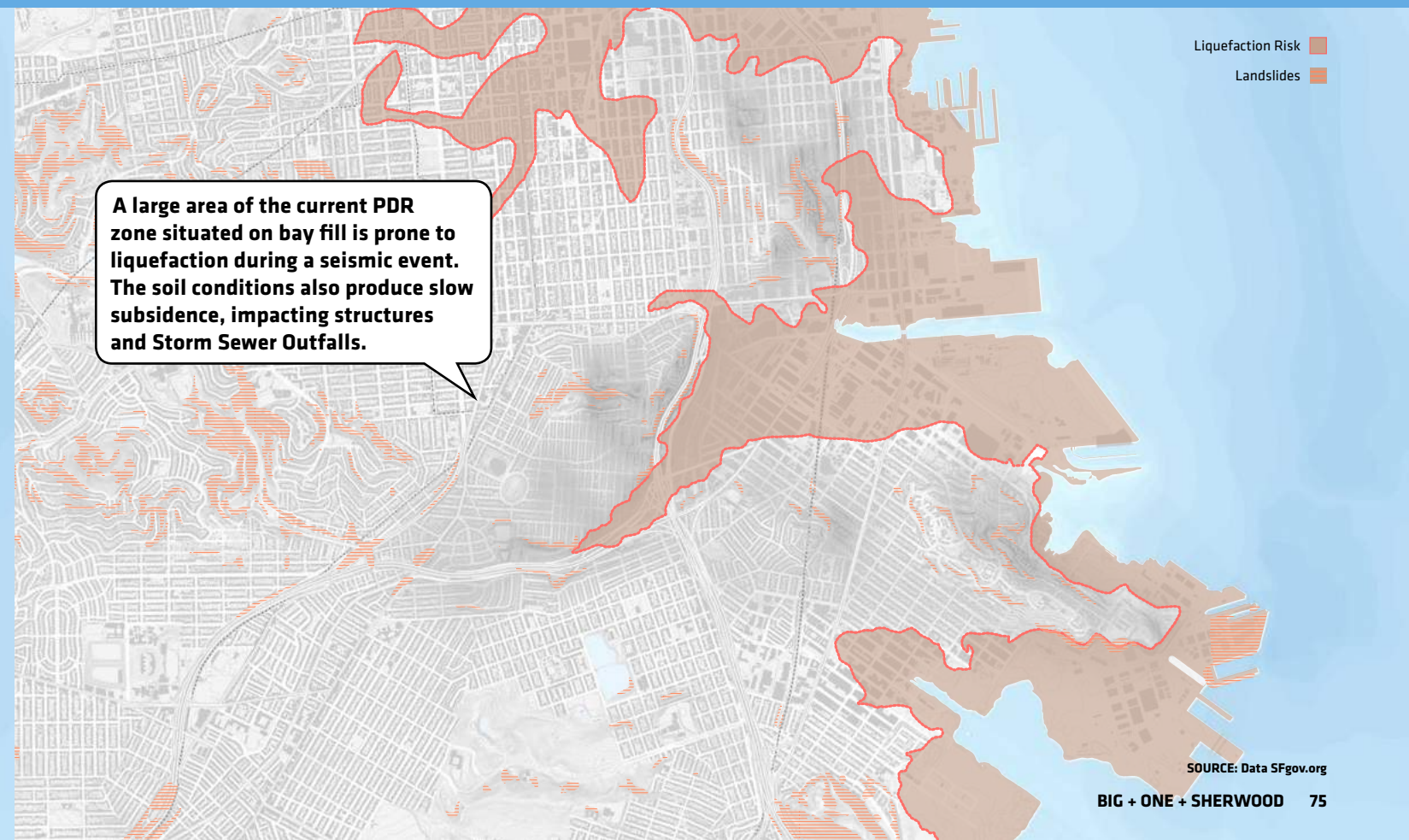
SOURCE: Earthquake Report: Berkeley, CA

GROUNDWATER



SOURCE: Bayside Watershed Characterization Report Final Draft July 2013

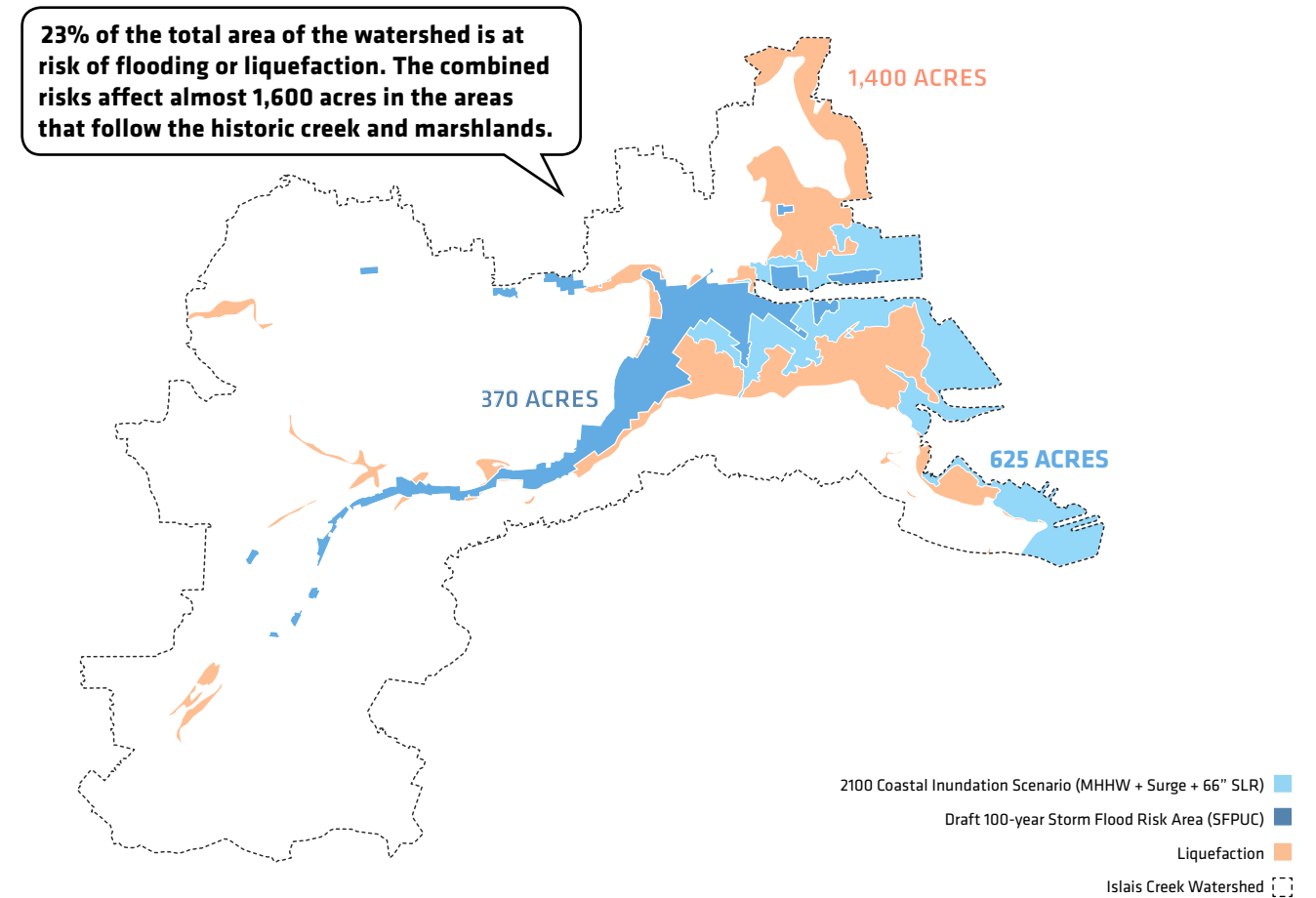
SEISMIC HAZARD



Liquefaction Risk Landslides

SOURCE: Data SFgov.org

WHAT IS AT RISK?



ASSETS AT RISK

To better understand the impact of combined urban and climate stresses, the team mapped the assets at risk within the total area affected by one or more of the three major risks (liquefaction, stormwater flooding, coastal inundation), which adds up to 1,600 acres—or 23 percent of the total 6,990 acres of Islais Creek watershed. The unique character of the affordable industrial basin with abundance of publicly owned lands and the working shoreline, prompted us to map what is at risk in terms of land value, land use, businesses, public assets and water infrastructure.

LAND OWNERSHIP & VALUE

In the overall watershed there are around 1,100 acres of public lots, 5,800 acres of private lots, and around 350 acres allocated to rights-of-way and other uses. In the combined hazard risk area there are 450 acres of public lots (40 percent of the public lots in the watershed), 870 acres of private lots (18 percent of the private lots in the watershed) and around 100 acres of right-of-way (28 percent of the right-of-way in the watershed). In terms of land value, looking at the Assessor's Data from 2016, the total value of privately owned lots add up to approximately \$700 million, in

Districts 9 and 10 only, which accounts for 13 percent of the total value of privately owned parcels in the watershed. The FedEx facility at the end of today's Islais Channel is the parcel with the highest value, a little over \$19 million dollars.

LAND USES

The basin is dominated by production, distribution and repair (PDR) zoning. The PDR industry is the land use type most affected by the combined hazards in the watershed, with 76 percent of PDR lots (270 acres, 4.5 million sqft) in the risk area. Out of the residential areas, only two percent of residential uses, and five percent of mixed residential uses are affected, which is comprised of 71 acres of residential lots with 1.85 M sqft of residential spaces. The potentially affected buildings account for a total of 2540 residential units at risk.

BUSINESSES

The basin is a place of work and infrastructure. However, when reviewing NAICS data of registered business, it becomes clear that within the combined risks area, certain sectors seemed to be disproportionately impacted. For instance, 53 percent of the businesses in the wholesale trade sector (194 businesses) and 40

percent of those in the manufacturing sector (94 businesses) are affected by the combined risks in Islais Creek watershed. In retail trade, 170 registered businesses (19 percent of the watershed's retail) fall within the risk areas. These businesses form the backbone of local commerce and the economic vitality of neighborhood corridors.

PUBLIC ASSETS

Critical infrastructure for the City including the Port, MUNI and MTA bus and rail yards, DPW warehouses and equipment yards, assembly, and distribution spaces are located in the affected areas. It is imperative to protect these 'back-of-house' operations in order to ensure that the City and County of San Francisco will continue to function in centuries to come. Of City owned real estate in the watershed, 87 percent (which includes the SF Wholesale Produce Market) is potentially affected by the combined hazards. In addition, 29 percent of the assets owned by DPW and 60 percent of those owned by MTA could also be at risk within the next few decades. Further up the watershed Cayuga and Alemany see regular flooding of streets, homes and businesses, and in recent history large storm events have caused frequent damage to homes, and have major impact to roadways and transportation.

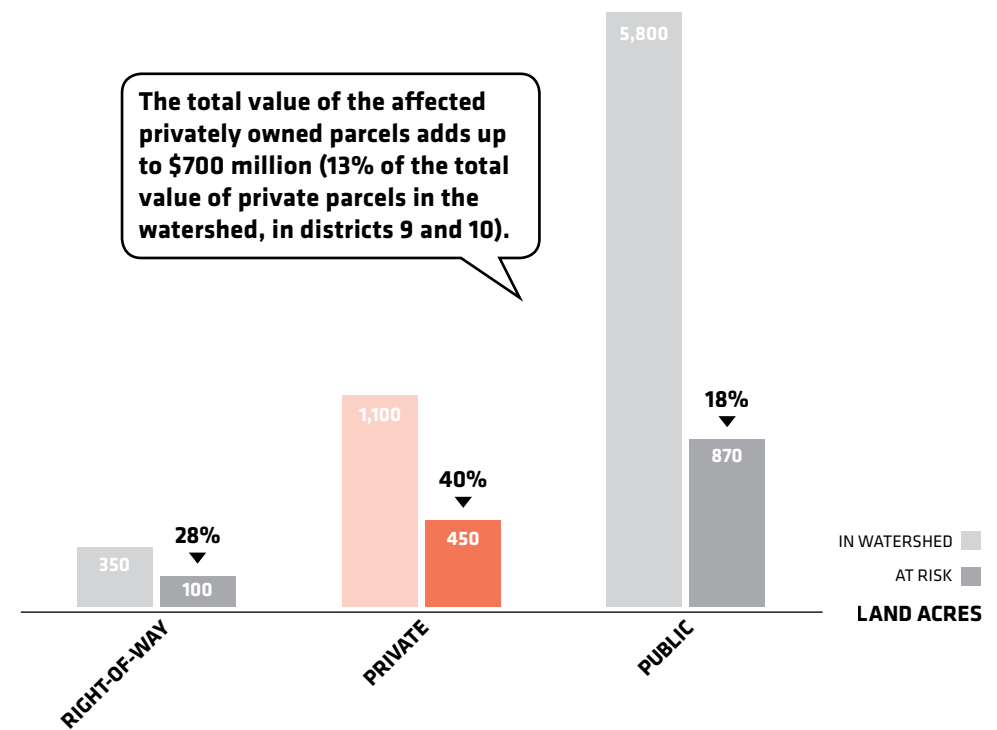
INFRASTRUCTURE

SF Port and the Public Utilities Commission have the most assets at risk in Islais Creek watershed. Parts of the Southeast Treatment Plant (SEP), which treats 80 percent of the City's wastewater, are located in areas that are subjected to liquefaction risks during a seismic event. To address risks on the magnitude of such systems, it is critical to think large-scale and long-term.

Of the PUC's land assets, 35 percent (63 acres that includes 820,000 square feet of program) in the watershed might be at risk. Approximately 16 percent of the sewer pipes and four combined sewer overflow (CSO) structures are potentially affected. The foremost threat to the SEP and the CSO structures is sea level rise. As the Bay elevation increases over time, the overflow weirs will be overwhelmed and Bay water will enter the system on a regular basis. This phenomenon already occurs during annual high tides. To a certain extent weirs can be adjusted in elevation to manage incremental sea level rise; beyond that, the current system would rely on backflow preventers. The treatment plant itself will see flooding of its land and operations in the northern portion of the site but could be retrofitted to ensure it is not inundated.

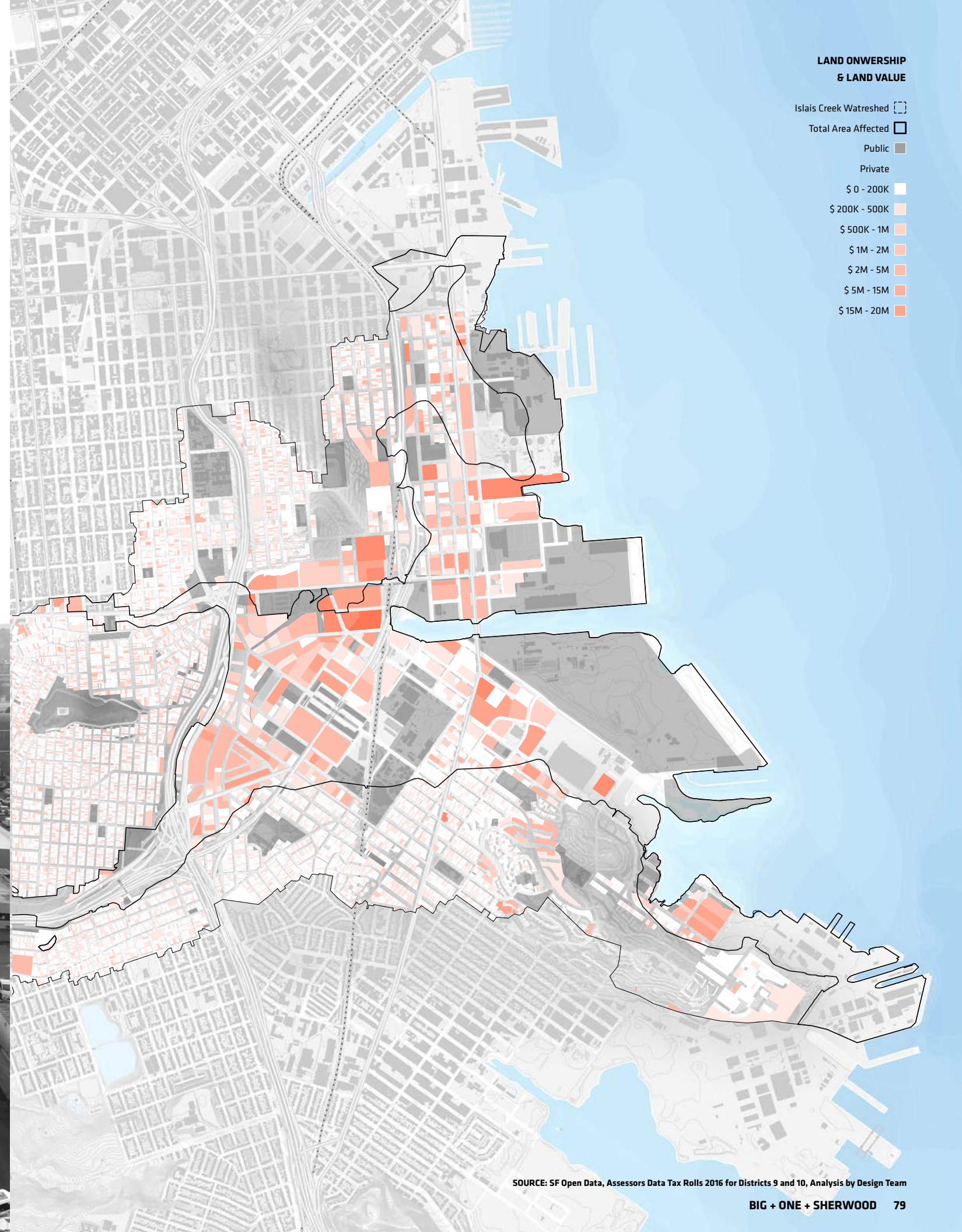
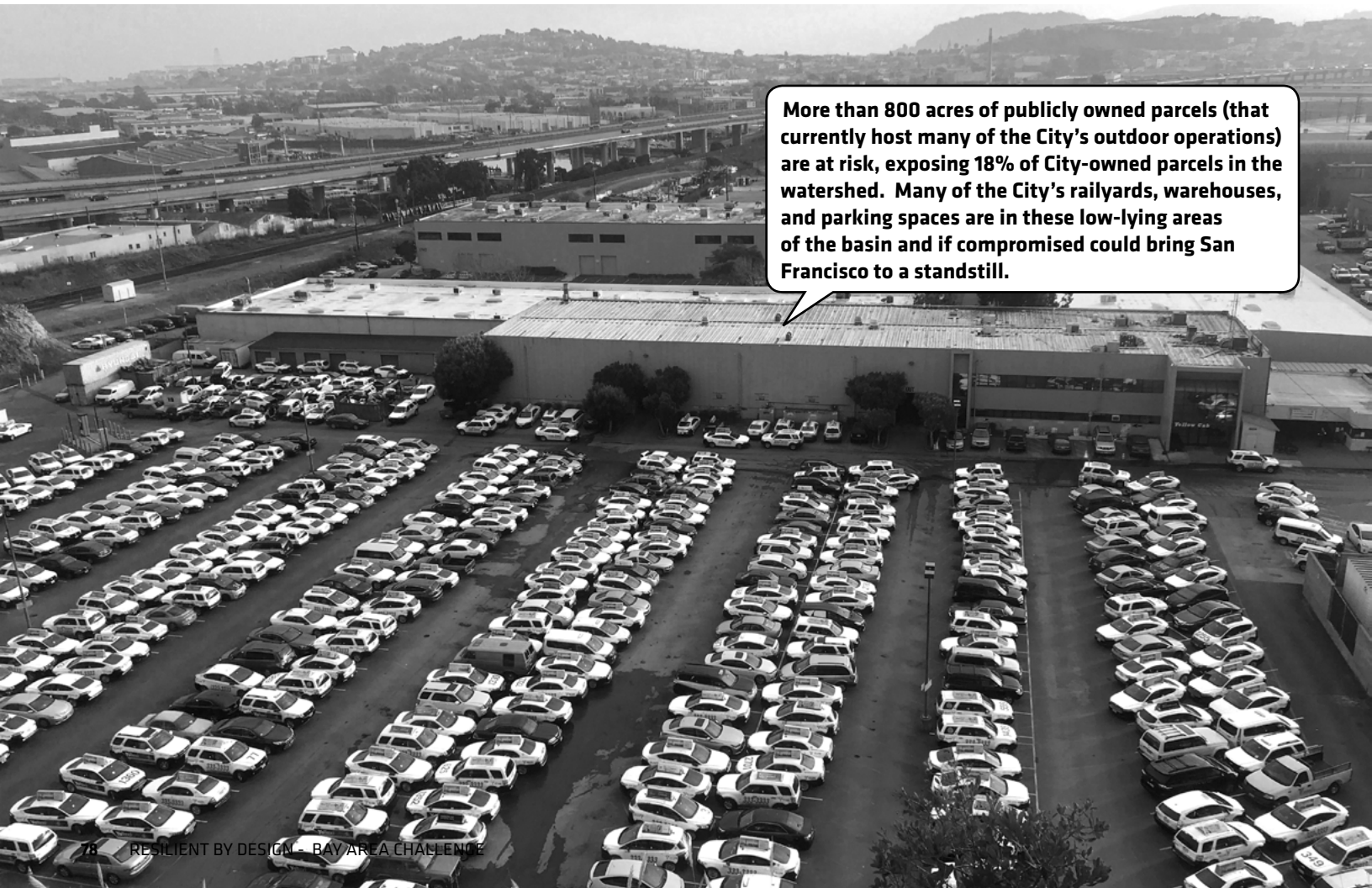
LAND VALUE AT RISK

The total value of the affected privately owned parcels adds up to \$700 million (13% of the total value of private parcels in the watershed, in districts 9 and 10).



LAND OWNERSHIP IN AFFECTED AREA
(% OF EACH CATEGORY IN THE WATERSHED)

More than 800 acres of publicly owned parcels (that currently host many of the City's outdoor operations) are at risk, exposing 18% of City-owned parcels in the watershed. Many of the City's railyards, warehouses, and parking spaces are in these low-lying areas of the basin and if compromised could bring San Francisco to a standstill.

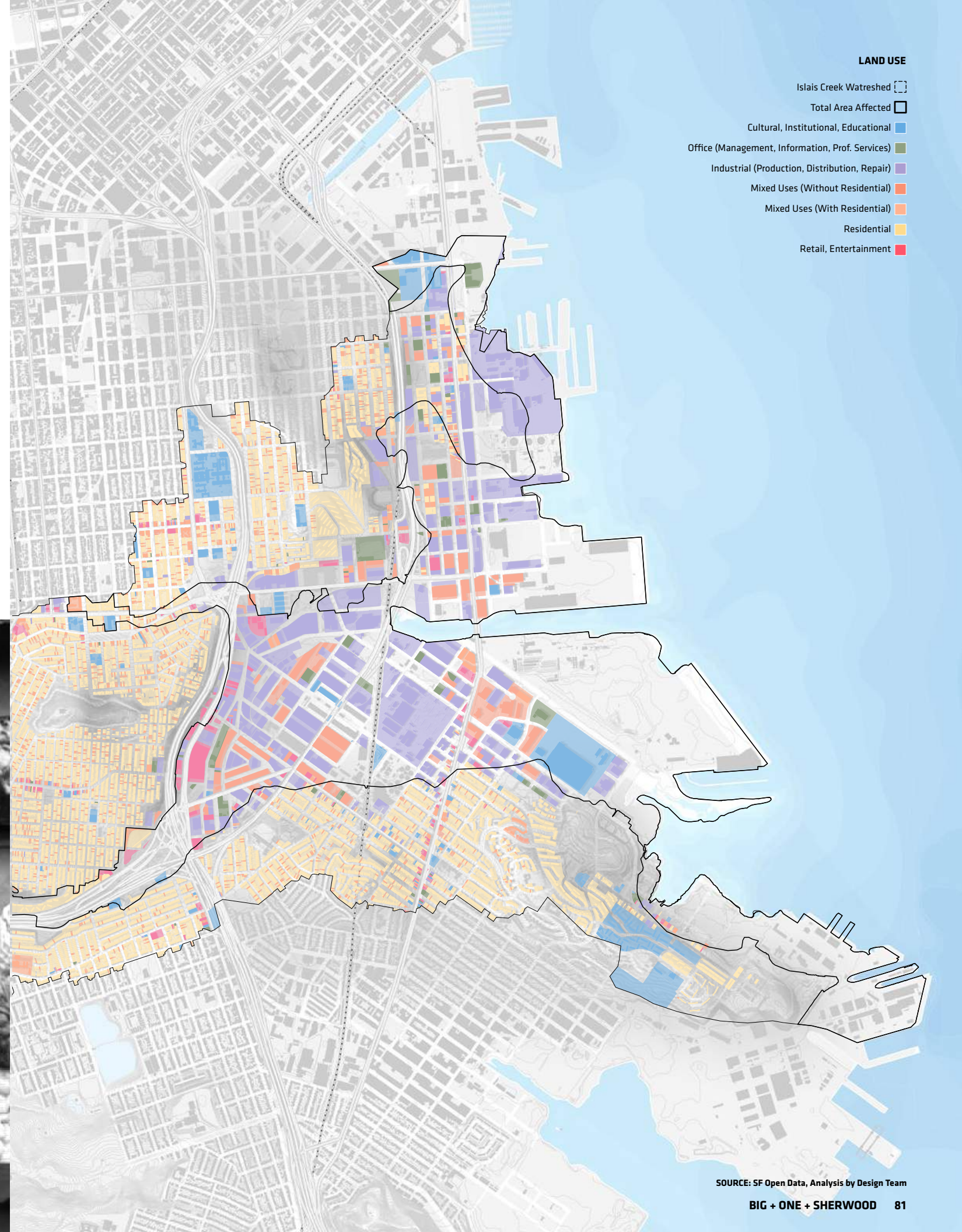
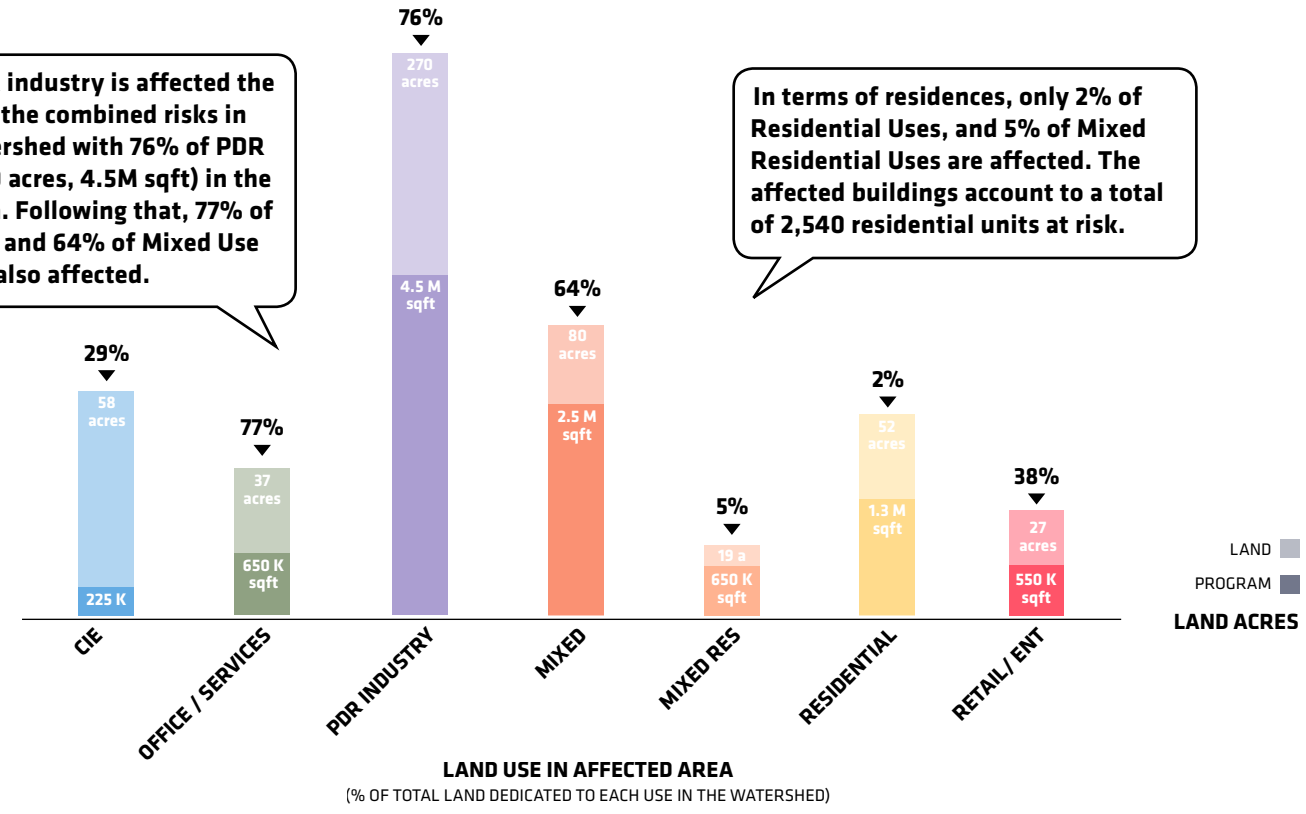


SOURCE: SF Open Data, Assessors Data Tax Rolls 2016 for Districts 9 and 10, Analysis by Design Team

LAND USE AT RISK

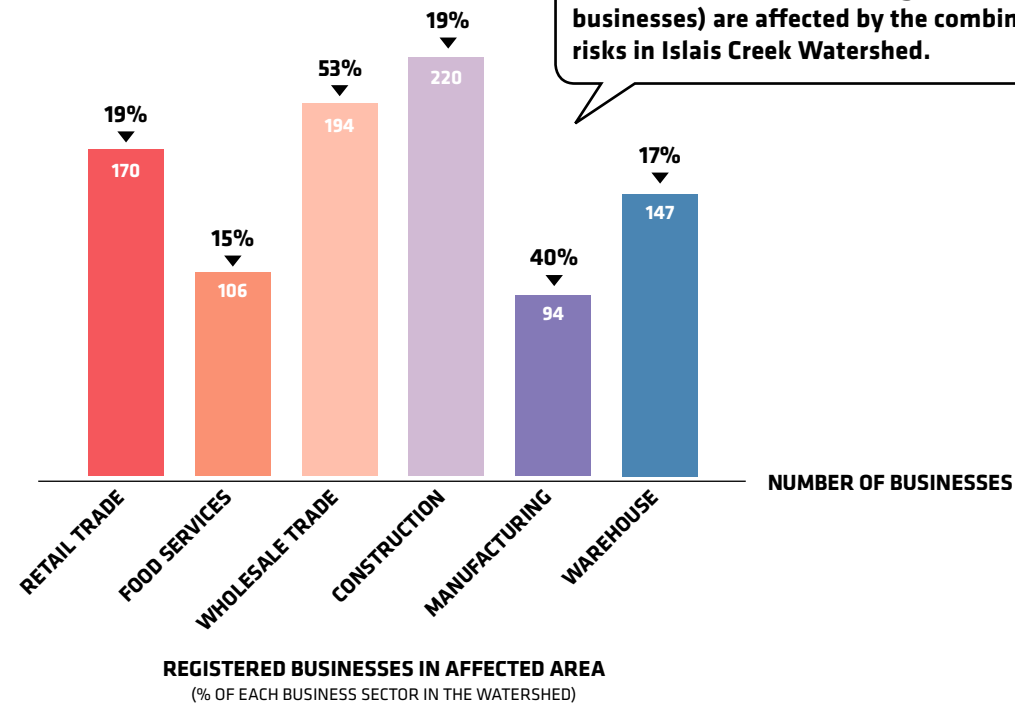
The PDR industry is affected the most by the combined risks in the watershed with 76% of PDR lots (270 acres, 4.5M sqft) in the risk area. Following that, 77% of Services and 64% of Mixed Use lots are also affected.

In terms of residences, only 2% of Residential Uses, and 5% of Mixed Residential Uses are affected. The affected buildings account to a total of 2,540 residential units at risk.



SOURCE: SF Open Data, Analysis by Design Team

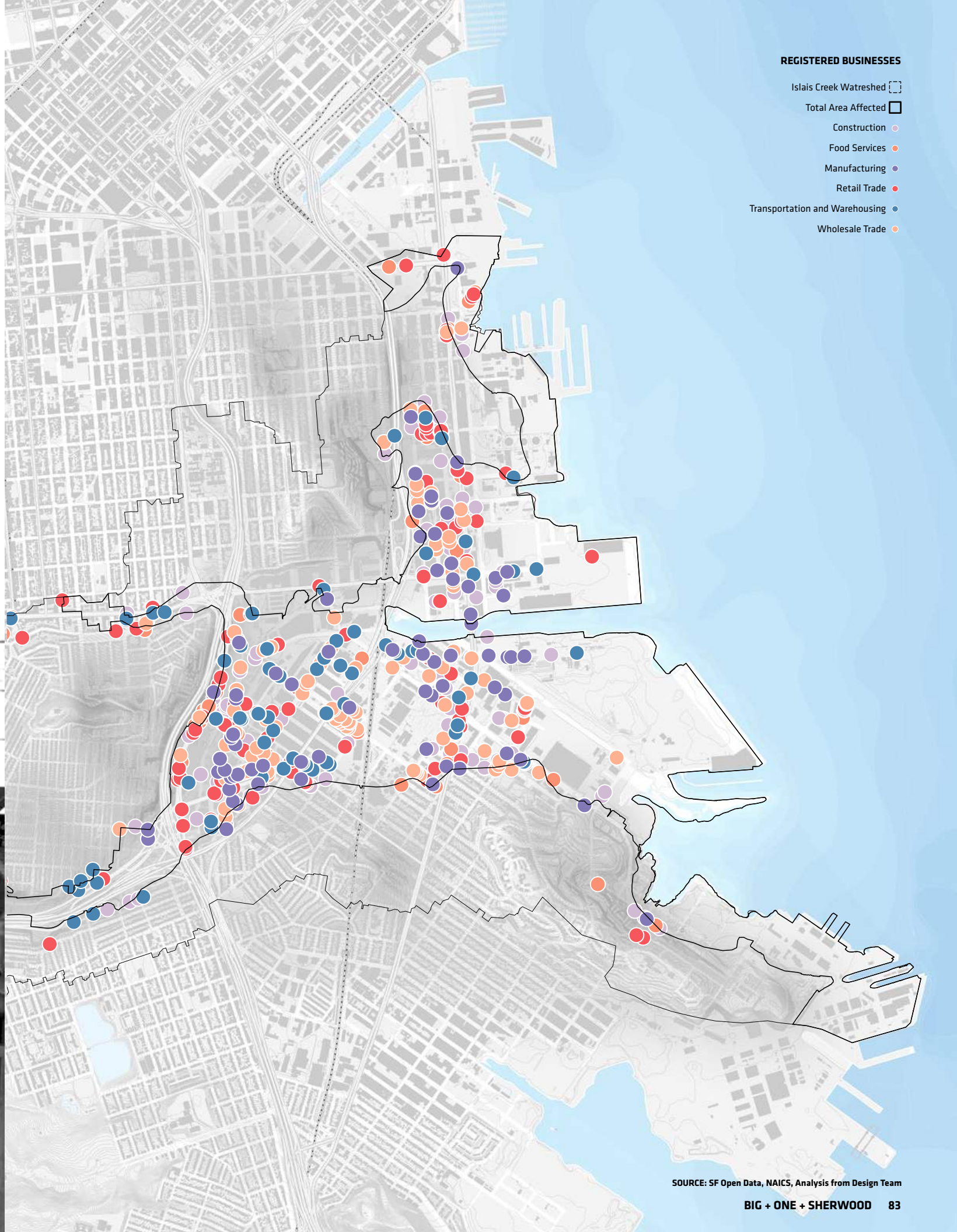
BUSINESSES AT RISK



53% of the businesses in the Wholesale Trade sector (194 businesses) and 40% of those in the Manufacturing sector (94 businesses) are affected by the combined risks in Islais Creek Watershed.

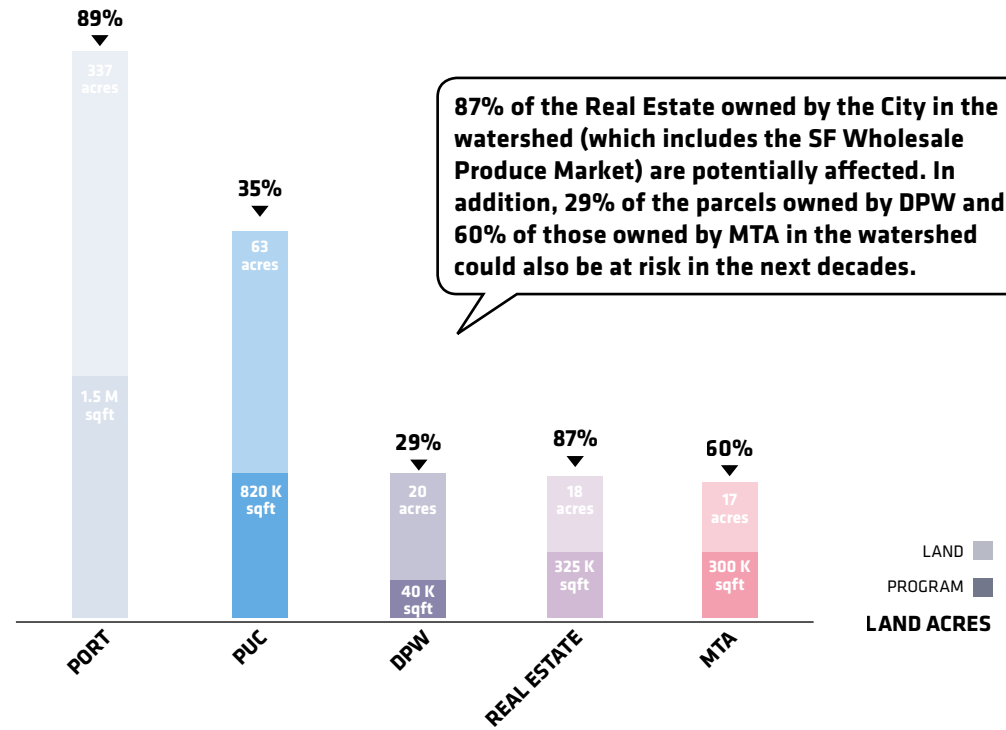


170 registered businesses in Retail Trade (19% of the watershed's Retail) fall within the risk areas. These businesses form the backbone of local commerce and the economic vitality of neighborhood corridors.



SOURCE: SF Open Data, NAICS, Analysis from Design Team

PUBLIC ASSETS AT RISK



PUBLIC LAND AND PROGRAM IN AFFECTED AREA
 (% OF TOTAL LAND OWNED BY EACH AGENCY IN THE WATERSHED)

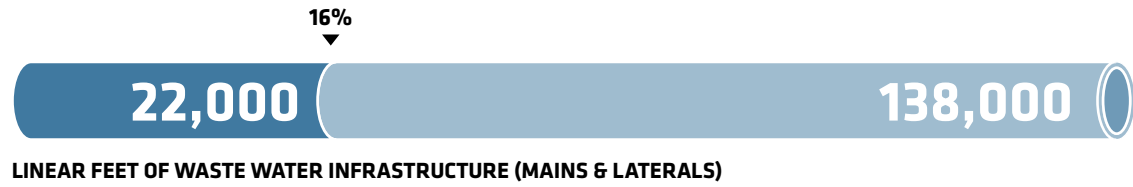
Critical infrastructure for the City such as bus & rail yards, warehouses, assembly, and distribution spaces are located in the affected areas. It is imperative to protect these 'back-of-the-house' operations in order to ensure that San Francisco will continue functioning in the next decades.



SOURCE: SF Open Data, SF PUC, Analysis by Design Team

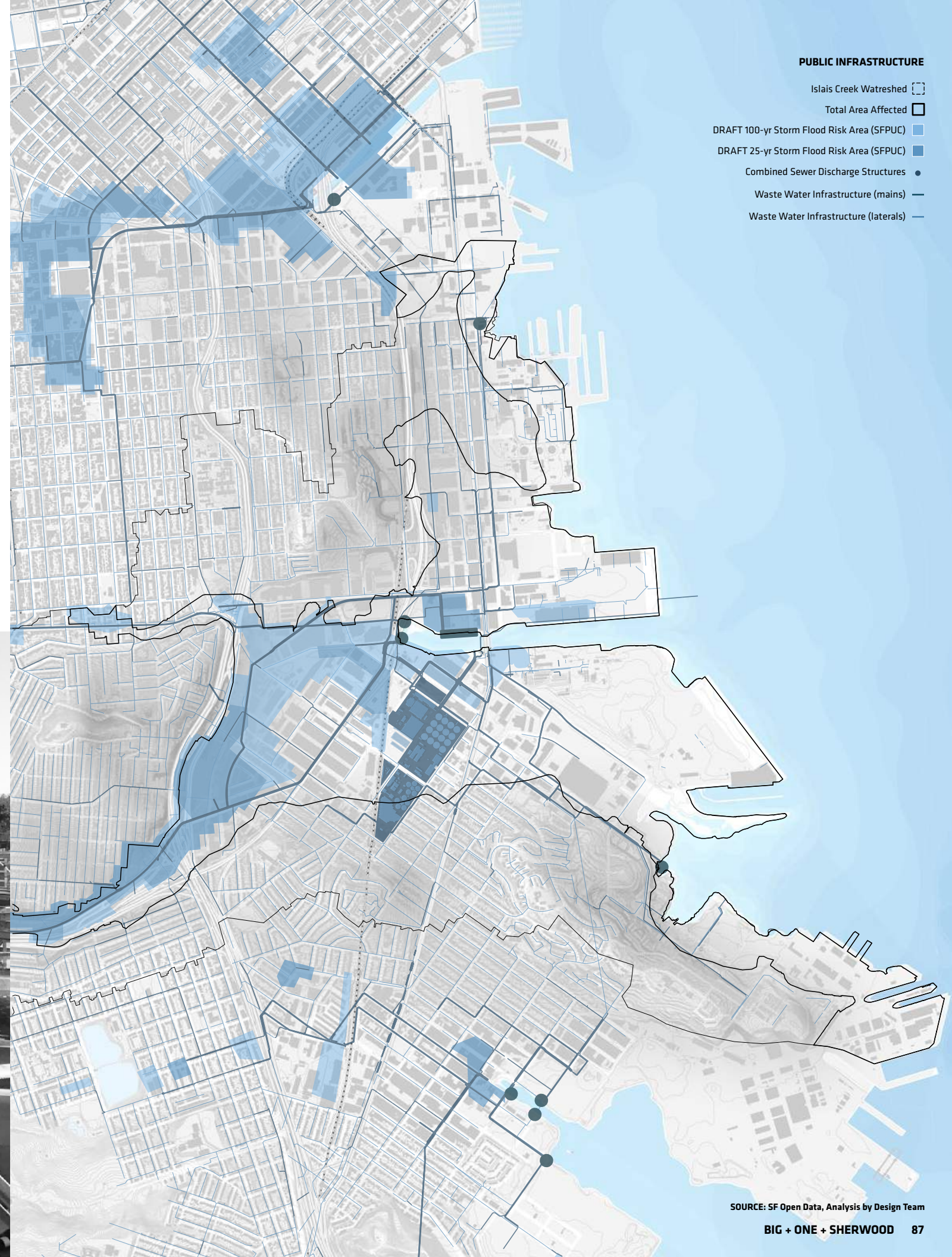
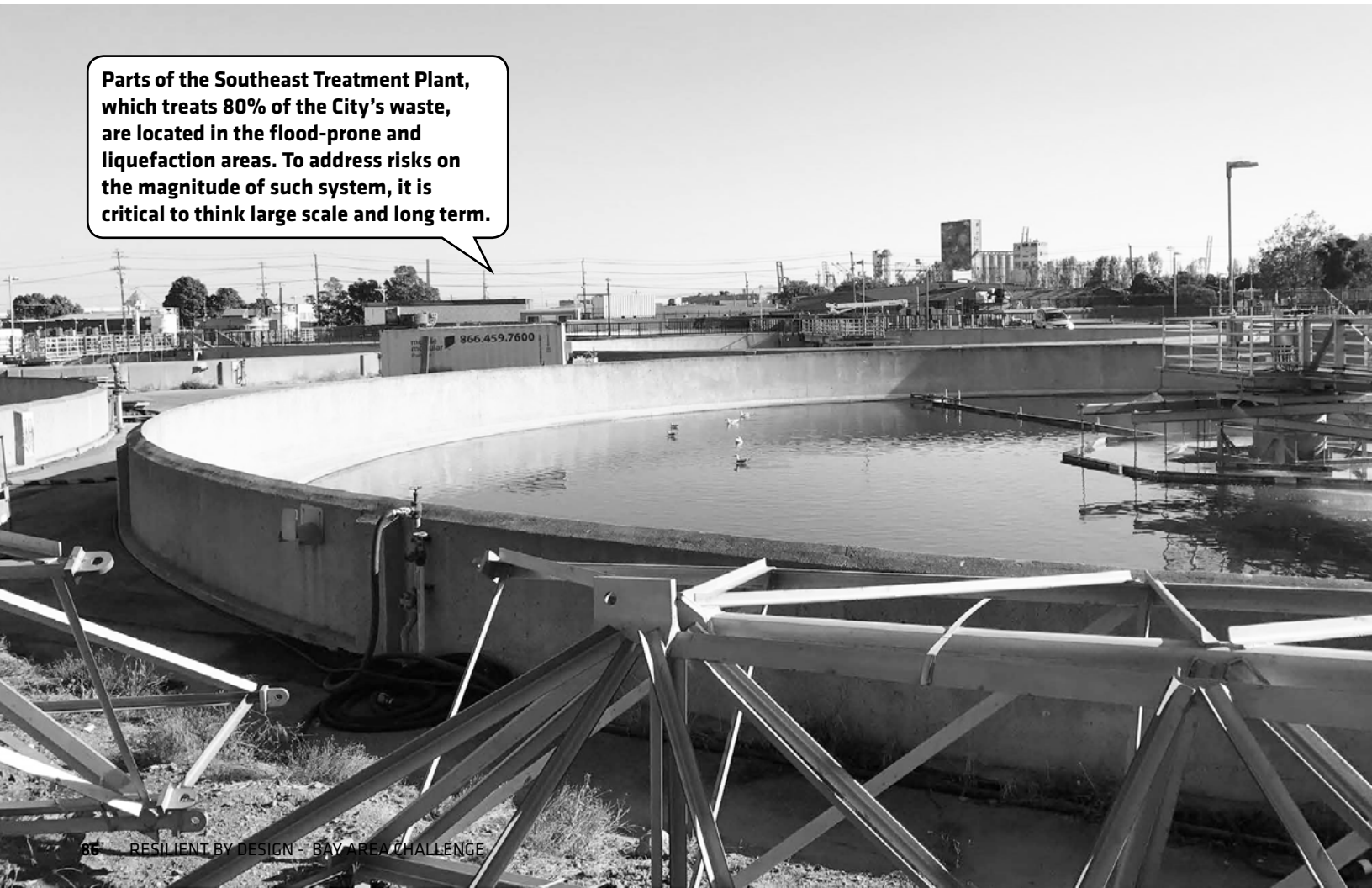
INFRASTRUCTURE AT RISK

SF Port and the Public Utilities Commission have the most assets at risk in Islais Creek Watershed with 16% of the sewer pipes and 4 CSOs potentially affected. 35% of PUC's land assets (63 acres that includes 820K sqft of program) in the watershed might be at risk.



WASTE WATER INFRASTRUCTURE IN AFFECTED AREA
(% OF THE TOTAL IN THE WATERSHED)

Parts of the Southeast Treatment Plant, which treats 80% of the City's waste, are located in the flood-prone and liquefaction areas. To address risks on the magnitude of such system, it is critical to think large scale and long term.



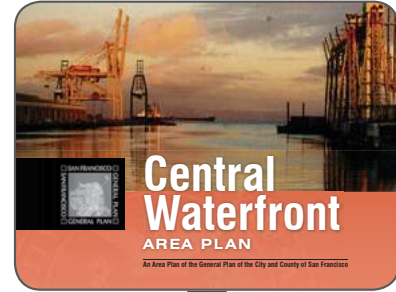
SOURCE: SF Open Data, Analysis by Design Team

HISTORY OF PLANNING

1. 2006 BVHP General Plan Amendment
2. 2006 BVHP Redevelopment Plan
3. 2008 East SOMA Area Plan
4. 2008 Mission Area Plan
5. 2008 Showplace / Potrero Area Plan
6. 2008 Central Waterfront Area Plan
7. 2009 India Basin Shoreline Plan
8. 2010 Mission Bay Redevelopment Plan
9. 2010 Hunters Point Shipyard
10. 2010 BVHP Neighborhood Transportation Plan
11. 2010 The Mission District Streetscape Plan
12. 2010 Pier 70 Mix Use Project
13. 2011 Blue Greenway
14. 2012 Cesar Chavez East Community Design
15. 2013 Sewer System Improvement Program Urban Watershed Assessment
16. 2014 Third Street Economic Development And Corridor Strategy
17. 2016 Piers 80-96 Maritime Eco-Industrial Strategy
18. 2017 Seawall Resiliency Project

The areas north, south, and west of the Islais Creek area have undergone various planning and redevelopment efforts over the last decades, with particular emphasis on mixed-use development of post-industrial areas such as Pier 70 and the Naval Shipyards. While an economic strategy for the Port lands comprising Piers 80-96 was completed in 2016, a comprehensive strategy taking the full valley and watershed into account has not yet been undertaken. There is, therefore, a unique opportunity to connect disparate efforts and create a community-driven vision for the future. These plans form a cohesive base, upon which our team has been able to build, expand and create new possible linkages.

2008
Central Waterfront Area Plan,
SF Planning



2009
India Basin Shoreline
SubArea Plan, SF Planning



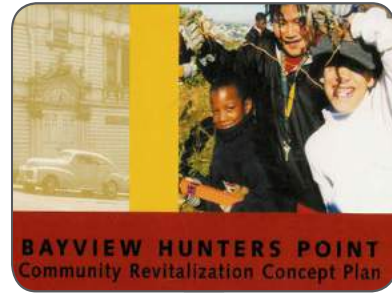
2012
Cesar Chavez East Community
Design, SF Planning & Caltrans



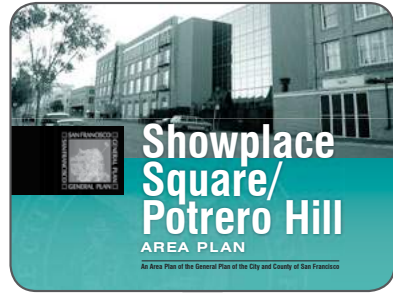
2014
Makers & Movers,
SPUR & SF Planning



2002
BVHP Revitalization Concept,
Plan, SFRA



2008
Showplace/Potrero Area Plan,
SF Planning



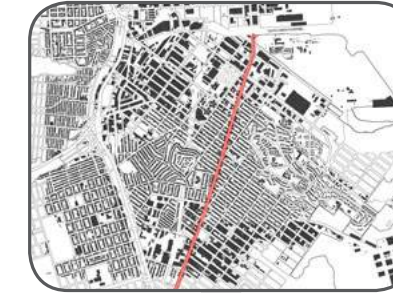
2010
Mission District Streetscape
Plan, SF Planning



2010
Hunters Point Shipyard Redev
Plan, SF Planning & SFRA



2014
Third Street Economic
Development Strategy, EDoT



2016
The Sea Level Rise Action Plan,
SF Planning



2000

2018



2006
BVHP General Plan Area
Amendment, SF Planning



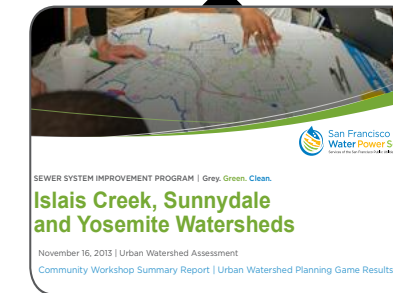
2008
Mission Area Plan,
SF Planning



2010
Pier 70 Mix Use Project,
SF Port & SF Planning



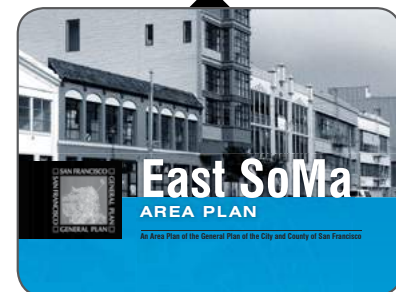
2010
Mission Bay Redevelopment
Plan, SFRA



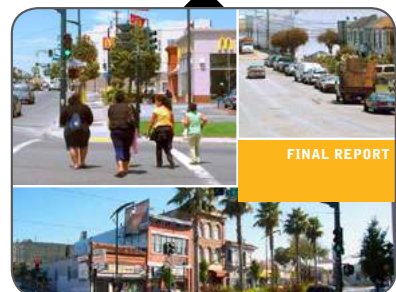
2013
SSIP, Urban Watershed
Assessment, SFPUC



2017
Seawall Resiliency Project,
SF Port



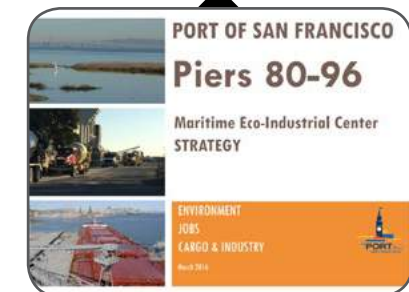
2008
East SOMA Area Plan, SF
Planning



2010
BVHP Neighborhood
Transportation Plan, SFCTA



2011
Blue Greenway Project, SF Port
& SF Parks Alliance



2016
Maritime Eco-Industrial Center
Strategy, SF Port

HISTORY OF ENGINEERING

1899
Sewer System Improvement Project, Grunsky



1899

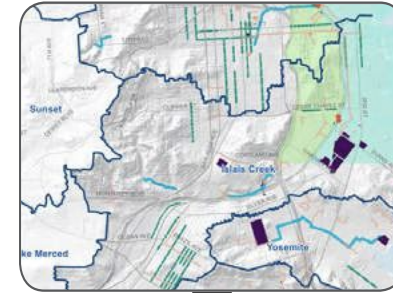
1909
North Point Main Drainage Map, ASCE



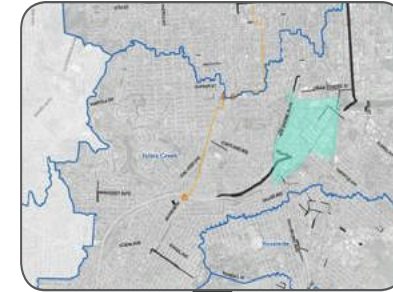
2010
Urban Watershed Assessment Workshop, SFPUC



2014
SSIP Bayside Drainage Basin Urban Watershed Opportunities, SFPUC



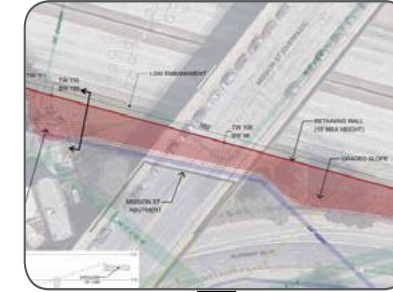
2015
SSIP Bayside Drainage Basin Urban Watershed Alternatives, SFPUC



2017
Alemany Auxiliary Sewer, DPW & SFPUC



2017
Cayuga Stormwater Improvement Project, DPW & SFPUC

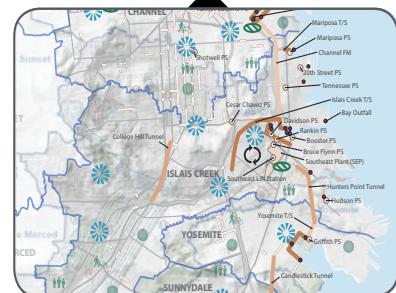


2017
Collection System Capital Plan, SFPUC



2018

The once natural Islais Creek watershed has seen a gradual change from a free-flowing creek to a completely engineered water management system. The natural buffer zones around the creek were gradually filled to make land for development. All of the water in the system has now been diverted into culverts and pipes which carrying a combined flow from sewers and stormwater runoff. The primary remaining natural areas in the original waterway is in Glen Canyon Park. The expansion of the City encroached into the fresh and tidal marshes until it was completely altered and eventually fully built upon. Over the past five decades there has been an attempt to improve the water quality in the Bay. Increasingly stringent water quality regulations forced the initial construction of the wastewater treatment plant followed by a series of improvements in the watershed and to the plant itself. The past two decades has seen continued community interest and public sector participation to create engineering improvements to the collection system in order to reduce flooding in the watershed and to improve the quality of the effluent from the treatment plant. The timeline to the right provides an overview of the series of important technical studies referenced as inputs to our engineering analysis.



2013
SSIP Bayside Drainage Basin Urban Watershed Characterization, SFPUC



2015
Preliminary Flood Insurance Rate Map, FEMA



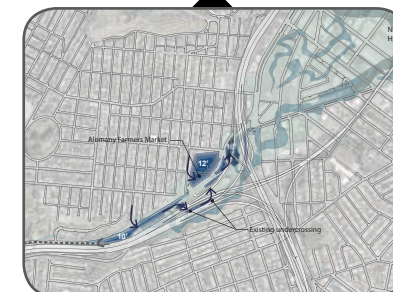
2017
Draft Lower Alemany Boulevard Surface Detention Study, DPW



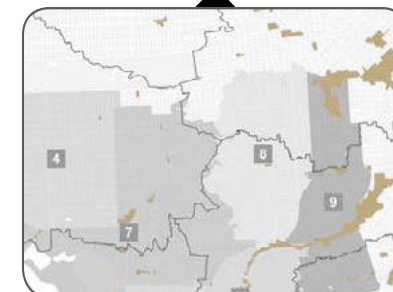
2018
Southeast Treatment Plant Campus Plan, SFPUC



2009
LID Basin Analysis Technical Memorandum Islais Creek, SFPUC

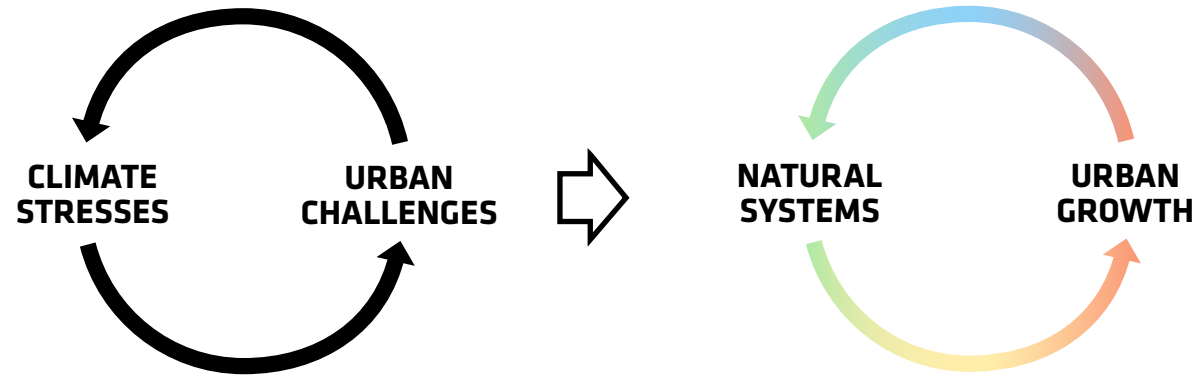


2016
Alemany Floodway Concept, DPW



2017
Flood Resilience Pragmatic Strategies, SFPUC

WHAT CAN WE DO?



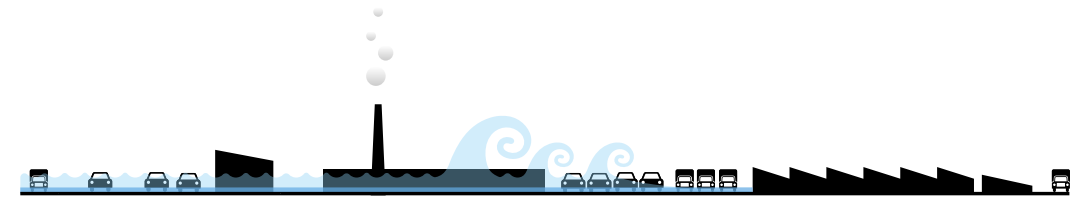
THE VISION

Climate and urban challenges force us to think collectively to envision a future where water is no longer constrained but has space to flow, slow down, and be absorbed. The historic marshlands can be reestablished and natural flood management for the creek rebuilt. A clear concept has emerged through our design process: we need to make space for water, while allowing industries, communities and local stewards to live, grow and thrive alongside it.

The BIG + ONE + Sherwood team's vision for Southeastern San Francisco is an Islais Hyper-Creek—a restoration of the natural ecosystems in a new major park that addresses risk from coastal and storm-water flooding and serves as an opportunity to bring the existing industrial ecosystem into the next economy. We envision an elegant mechanism allowing for selective retreat and program stacking to achieve this resilient future that holistically addresses the community's needs. Sensitive landscapes will be protected and lost habitats will be restored to floodplains and wetlands. The Hyper Creek is a place that allows for a future of living and working with water.

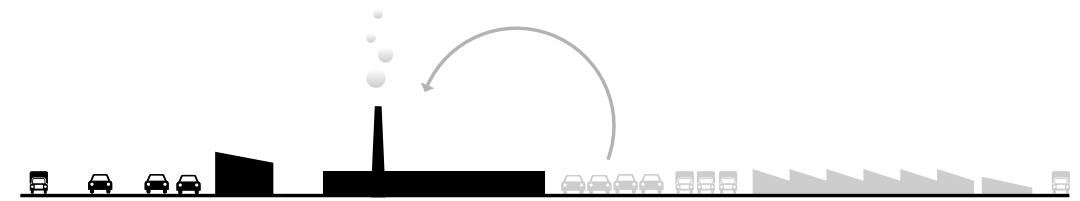
A NEW MECHANISM

To achieve this goal, our team looked at the urban and economic attributes of the basin and the surrounding communities. We began studying the different typologies that currently characterize light industrial and logistical zones to understand their potential for densifying, economic strengthening, and integrating with nature. In addition, we explored ways to combine protective and restorative measures with logistical operations to understand their effectiveness as absorptive and productive buffers. This approach, led us to the development of a new mechanism that is replicable in creek basins around the region but is especially suited to Islais Creek, which has deep cultural connection to industrial jobs. By focusing on industrial parcels that today are underutilized (i.e., low density, lots of space for parking and inefficient logistics), we can envision an adjustment to land use where industry is consolidated to allow other parts of a site to be designated for water management and open space interventions. This shift allows us to add program or increase FAR within current zoning allowances, and to incorporate complementary uses with revenue generating program to compensate for locked-in affordability.



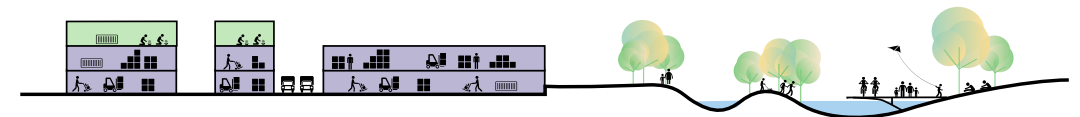
1. CURRENT SITUATION

Industrial parcels today are underutilized: dominated by parking and scattered economic activities



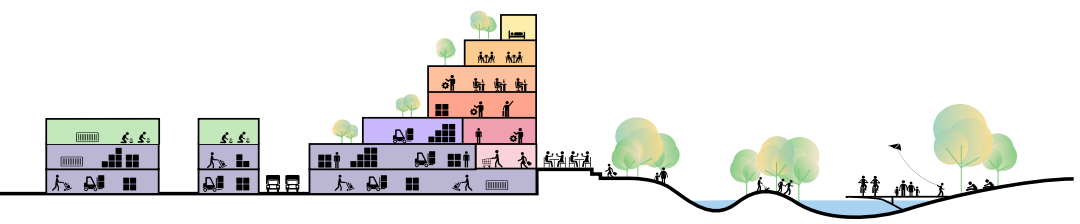
2. LAND PURCHASE AND ASSEMBLY

Re-purposing part of this site to water management and landscape systems is a key opportunity; coupled with consolidation of future growth.



2. BUILD AT MAXIMUM CAPACITY

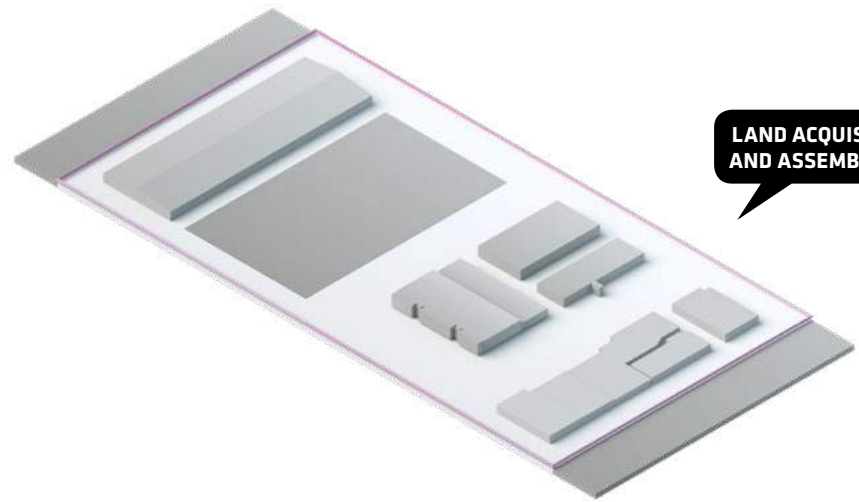
On the land designated for intensification, FAR is increased within current zoning allowances



4. MIXED-USE

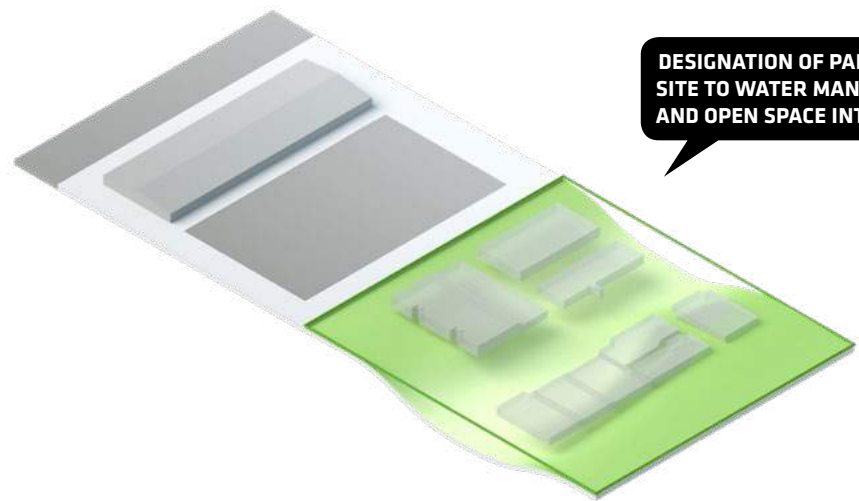
The addition of complementary uses and revenue generating programs will help to ensure affordability and diverse economic activities – allowing production, distribution, repair, and other forms of making in the district to be preserved and to grow.





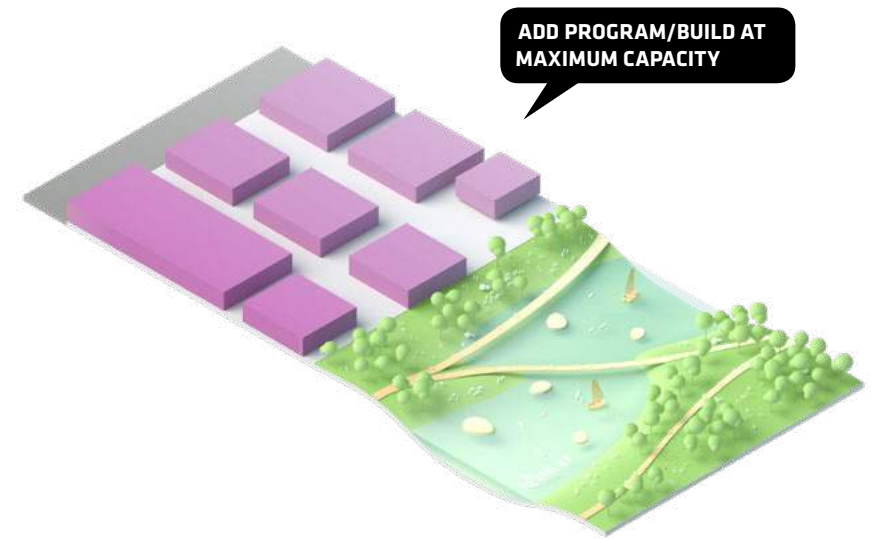
LAND ACQUISITION AND ASSEMBLY

1. EXISTING CONDITION



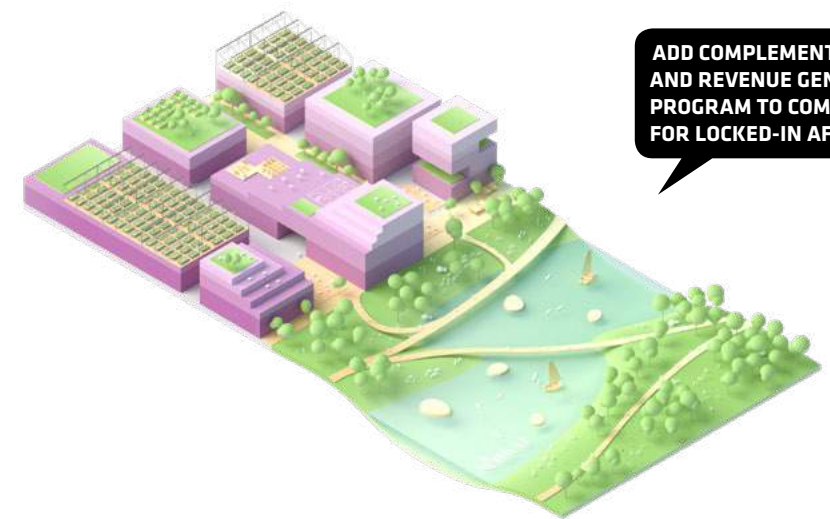
DESIGNATION OF PARTS OF THE SITE TO WATER MANAGEMENT AND OPEN SPACE INTERVENTIONS

2. LAND AQUISION



ADD PROGRAM/BUILD AT MAXIMUM CAPACITY

3. RE-DEVELOPMENT



ADD COMPLEMENTARY USES AND REVENUE GENERATING PROGRAM TO COMPENSATE FOR LOCKED-IN AFFORDABILITY

4. CURRENT ZONING ALLOWANCE

OPPORTUNITIES IN THE BASIN

OPPORTUNITIES

It is well known that in Islais Creek, and across the Bay Area, the risks of coastal flooding, stormwater flooding, and liquefaction will increase with time. In parallel, the effects of climate change, such as sea level rise, increased storm intensity, and rising groundwater levels will encroach more and more on the built environment. Islais Creek is at risk not only from catastrophic events, but also the gradual compounding stresses such as the urban heat island effect and repeat flooding.

Along with physical threats, the Bayview, Dogpatch, and adjacent neighborhoods jobs and their critical role in making San Francisco function are at risk as well. An integrated approach to mitigating these risks in concert should be a key objective for the city. Such an integrated approach, at the same time, brings opportunities to radically rethink the area while safeguarding its current functions. This approach looks at the natural, social and industrial ecosystems of the basin, with the aim to reinstitute nature based infrastructure, establish anchor institutions for community support and workforce development, and encourage industry clusters to leverage working spaces and create synergies.

NATURAL ECOSYSTEM

A soft approach to hazard mitigation and climate change adaptation would mean that space in the basin would be naturalized to make room for detention, conveyance, and treatment of water. Consolidation of maritime functions and softening of the shoreline for coastal protection from future higher sea levels could also be achieved. Combined, these measures provide opportunities for ecosystem and habitat enhancement through shuffling of land use, deliberately densifying, and bringing the creek back to its historic natural condition. In such an ecosystem, the ecological hub of Glen Canyon Park will be connected to a new ecological hub for the Bay. Islais Hyper-Creek will have restored tidal marshes and wetlands, a thriving riparian corridor. It will be planted with native species, including willow thickets (to provide nesting locations) and pollinator gardens, located on either side of the daylighted creek. This overall diversity of habitats, will strengthen the ecological value of each individual component. It will also strengthen tributary ecological corridors to nearby park spaces such as Bernal Heights and John McLaren Park. By enhancing the finer-grain ecological fabric in the district's backyards and right-of-ways, a re-naturalized Islais Creek will become an ecosystem of regional significance and draw.

SOCIAL ECOSYSTEM

Building resilience is as much about strengthening social connections and collective understanding as it is about strengthening infrastructure. It starts with helping people understand the potential impacts of climate change in general. In Islais Creek in particular, it is also important to emphasize how a changing climate might influence the withered relationships between the creek and its surrounding communities, both physically and mentally. Socializing this understanding within communities is often a first and important step in building social resilience: the ability of a community to prepare or recover from shocks. By actively engaging the community in this planning process, it also becomes easier to deliver on the multiple benefits that climate adaptation in the form of a restored creek can bring. More broadly, this process necessitates linking resilient infrastructure to social infrastructure through the creation of community facilities, and overall imbuing any new public spaces with a strong identity firmly rooted in its local people. Altogether, it is imperative to combine physical interventions with a concerted effort to build up a strong social ecosystem allowing new spaces to thrive at full potential.

INDUSTRIAL ECOSYSTEM

The need to have an earthquake-proof building stock and infrastructure in the liquefaction area, combined with the land-use changes connected to the creation of space for the water and the consolidation of uses, provide an opportunity to develop a stronger industrial ecosystem.

Moving PDR and Port programs around provides a distinct opportunity to develop industrial clusters with strong identities to link resource streams. Adding additional vertical footage makes it possible to introduce complementary programs that strengthen these clusters. New buildings to house these programs can be made earthquake proof, more efficient, and more sustainable. Improving the logistics and the connections improves economic development and access to jobs throughout the area. The leveraging of these coordinated efforts can bring Islais Creek to the forefront of the 21st-century clean economy: "Made in Islais Creek."

BUILT FAR

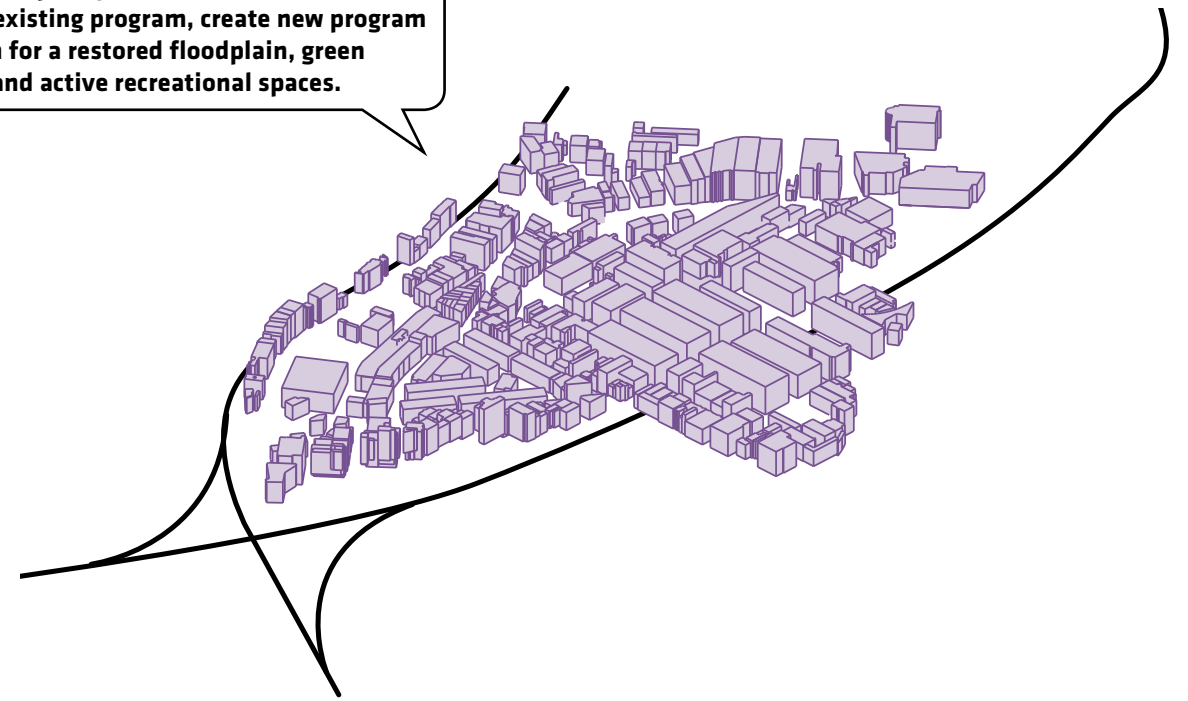
The Allowable Floor Area Ratio (FAR) around Islais Creek is not currently being used to its fullest. Site observations and mapping analysis indicate that the average built FAR is currently 0.5:1, comprised of 1-story warehouses, acres of parking lots, outdoor staging areas, and auto yards.



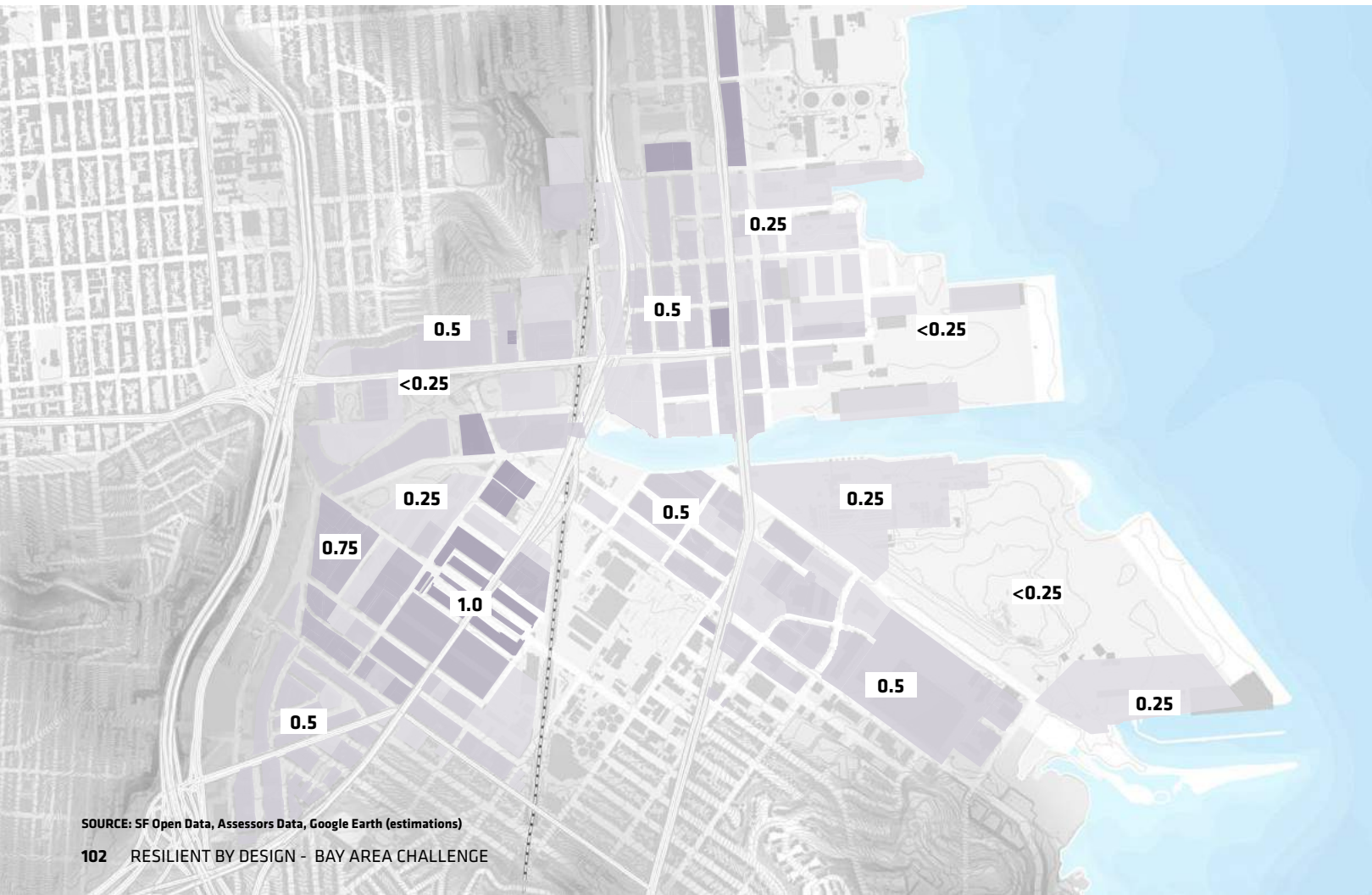
AVERAGE FAR 0.5:1

ALLOWABLE FAR

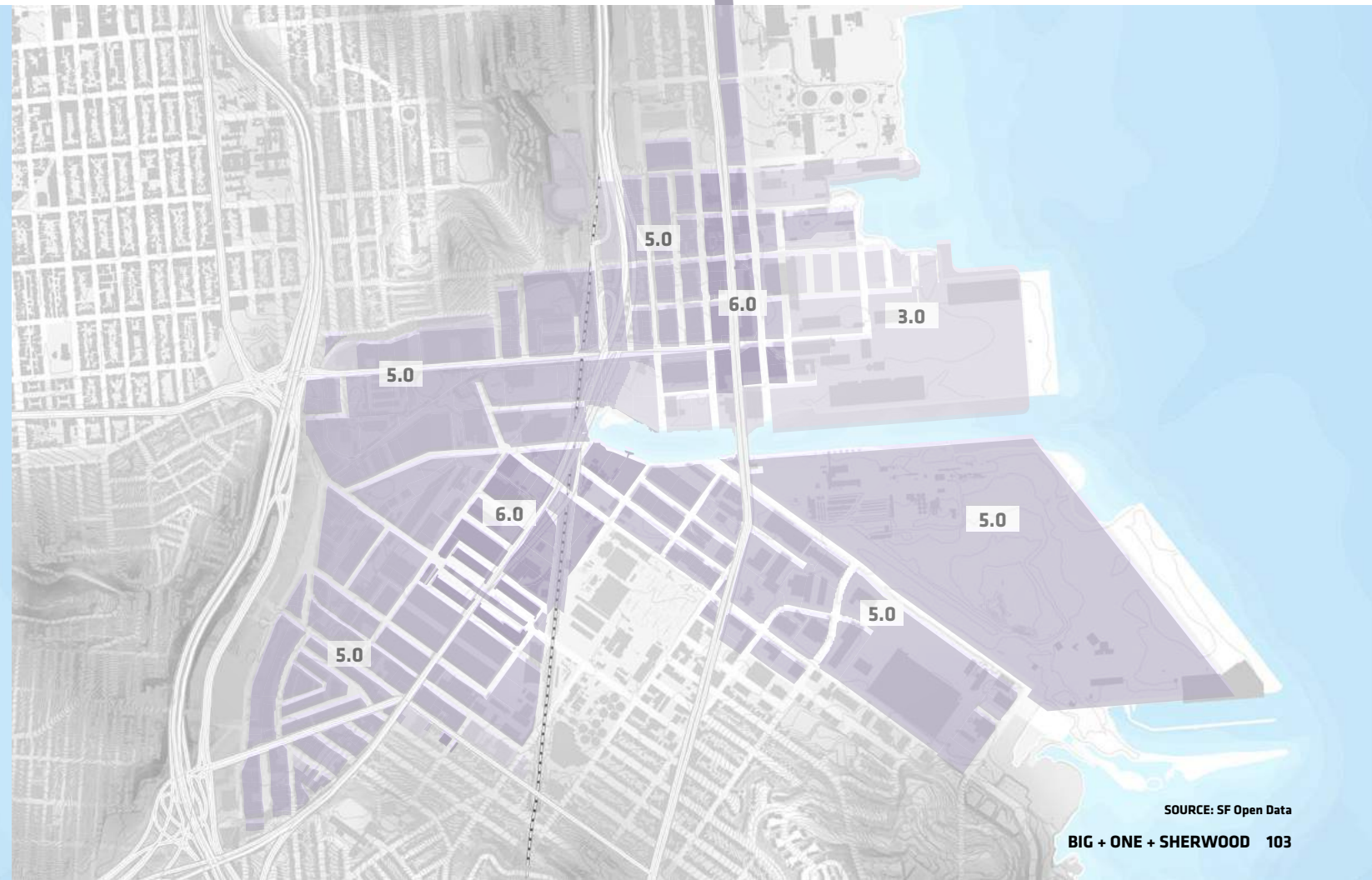
The Generalized Commercial and Industrial Density Plan allows for an average of 5.0 FAR and up to 6.0 FAR around the SF Wholesale Produce Market. There is enough capacity within the allowable FAR to consolidate existing program, create new program and make room for a restored floodplain, green infrastructure and active recreational spaces.



AVERAGE FAR 5.0:1



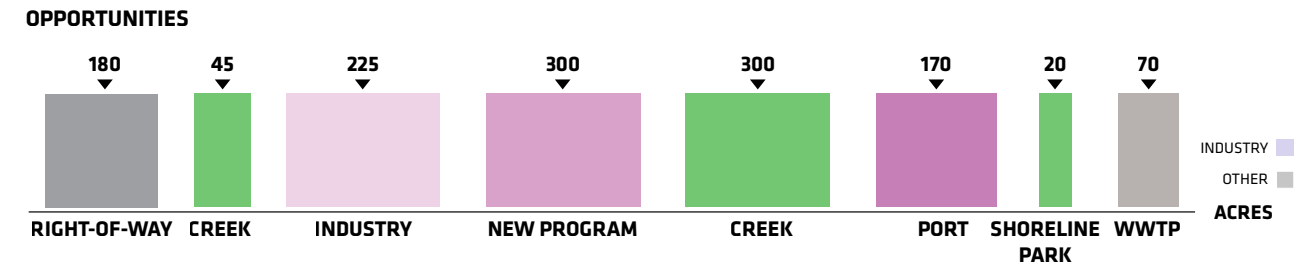
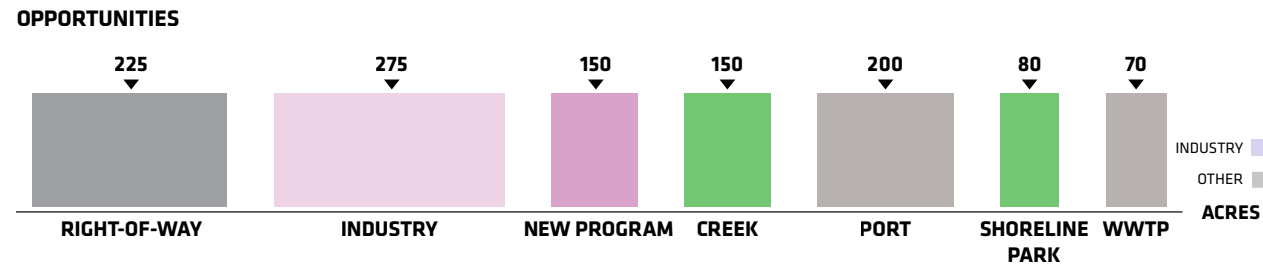
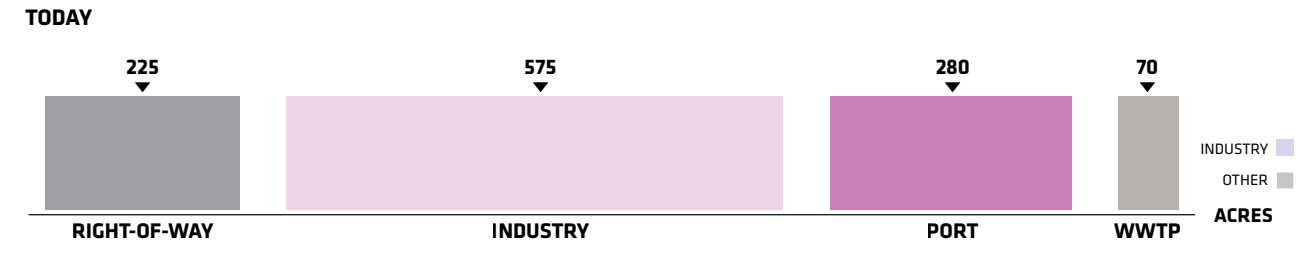
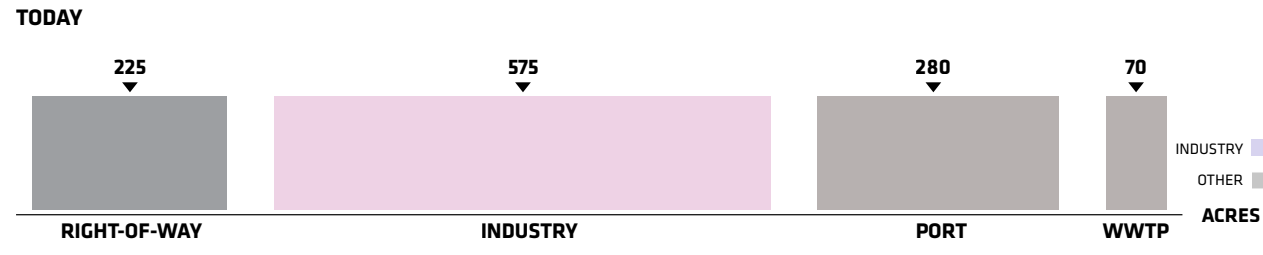
SOURCE: SF Open Data, Assessors Data, Google Earth (estimations)



SOURCE: SF Open Data

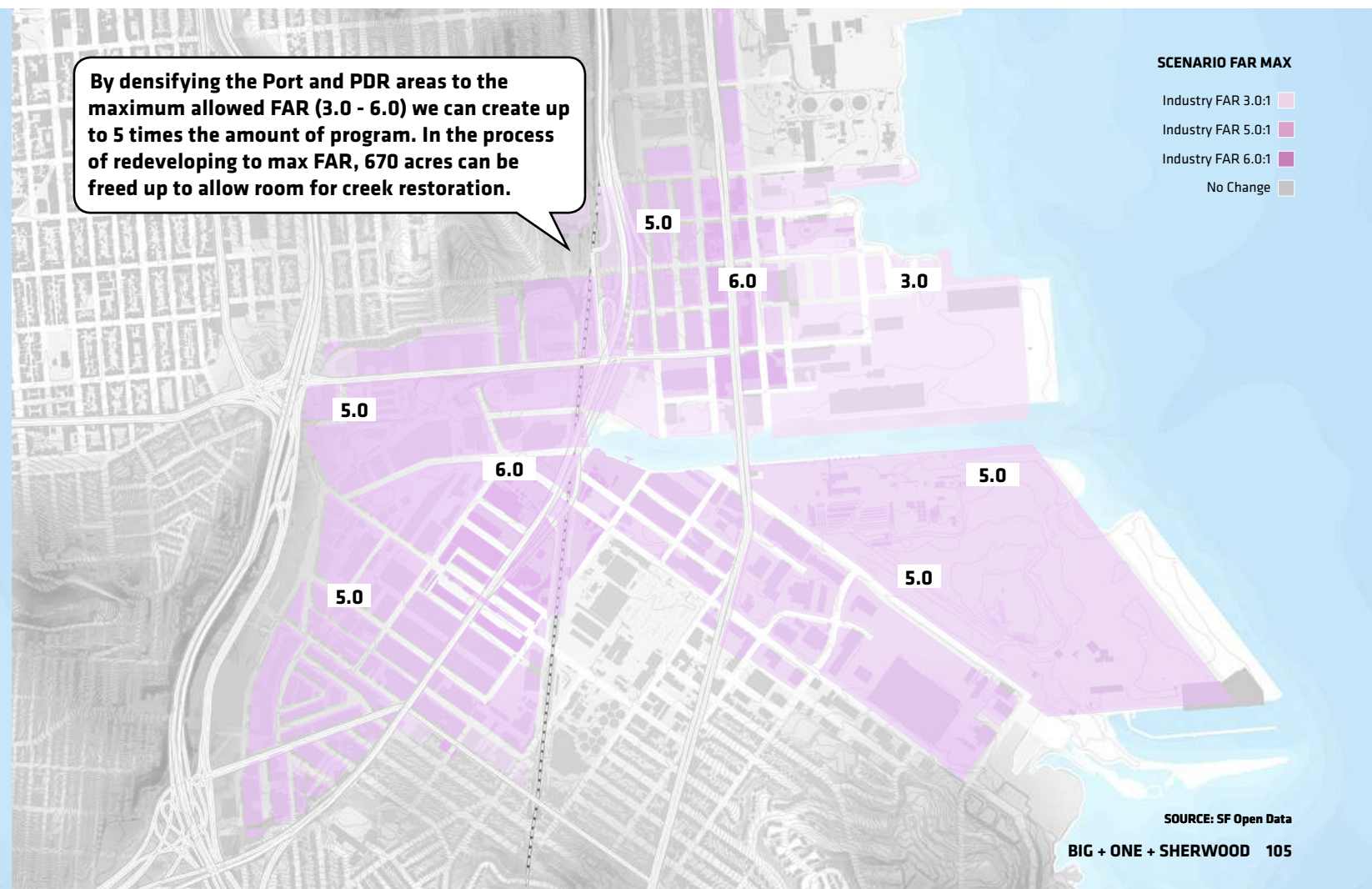
DENSIFY TO FAR 2.0

DENSIFY TO MAX FAR

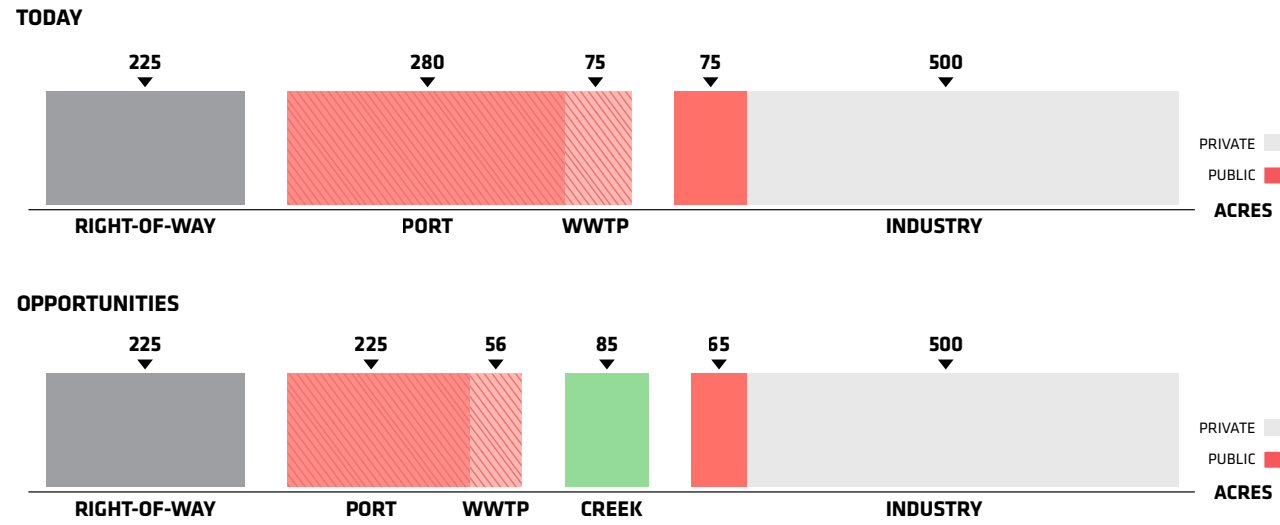


PROGRAM ALLOCATION

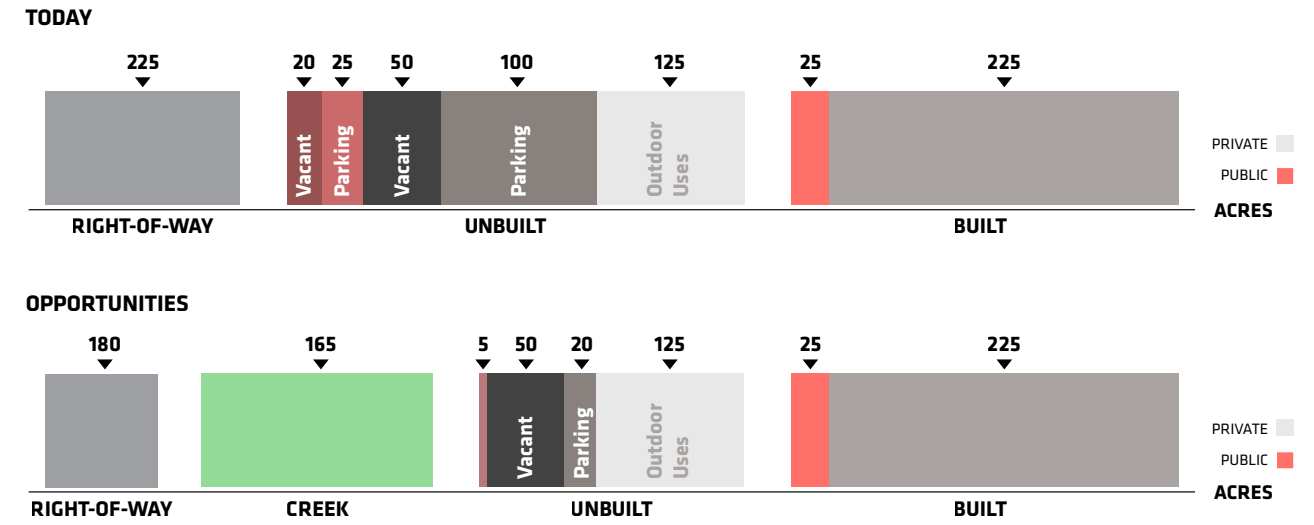
PROGRAM ALLOCATION



PUBLIC LAND



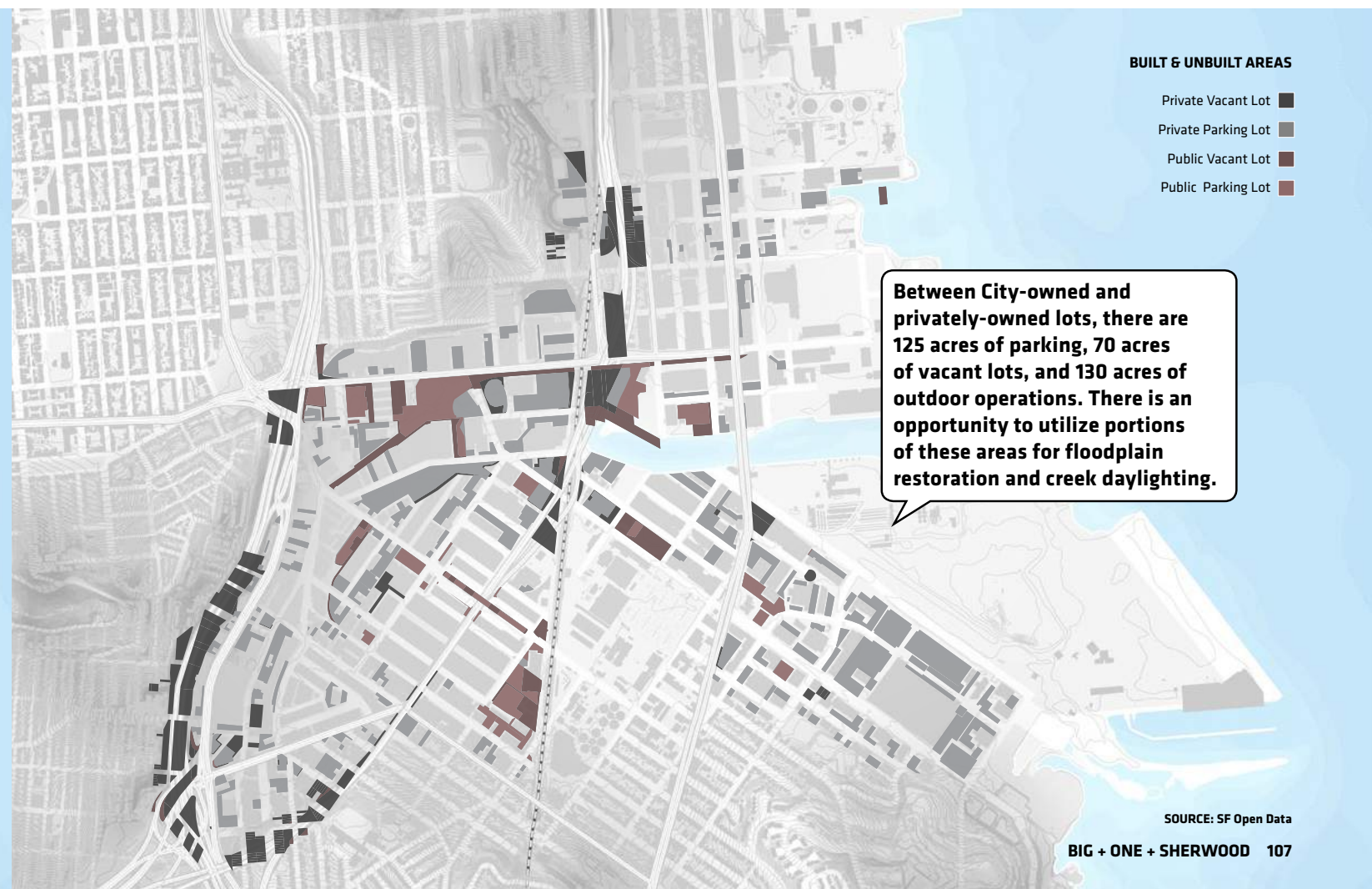
UNBUILT AREAS



LAND ALLOCATION



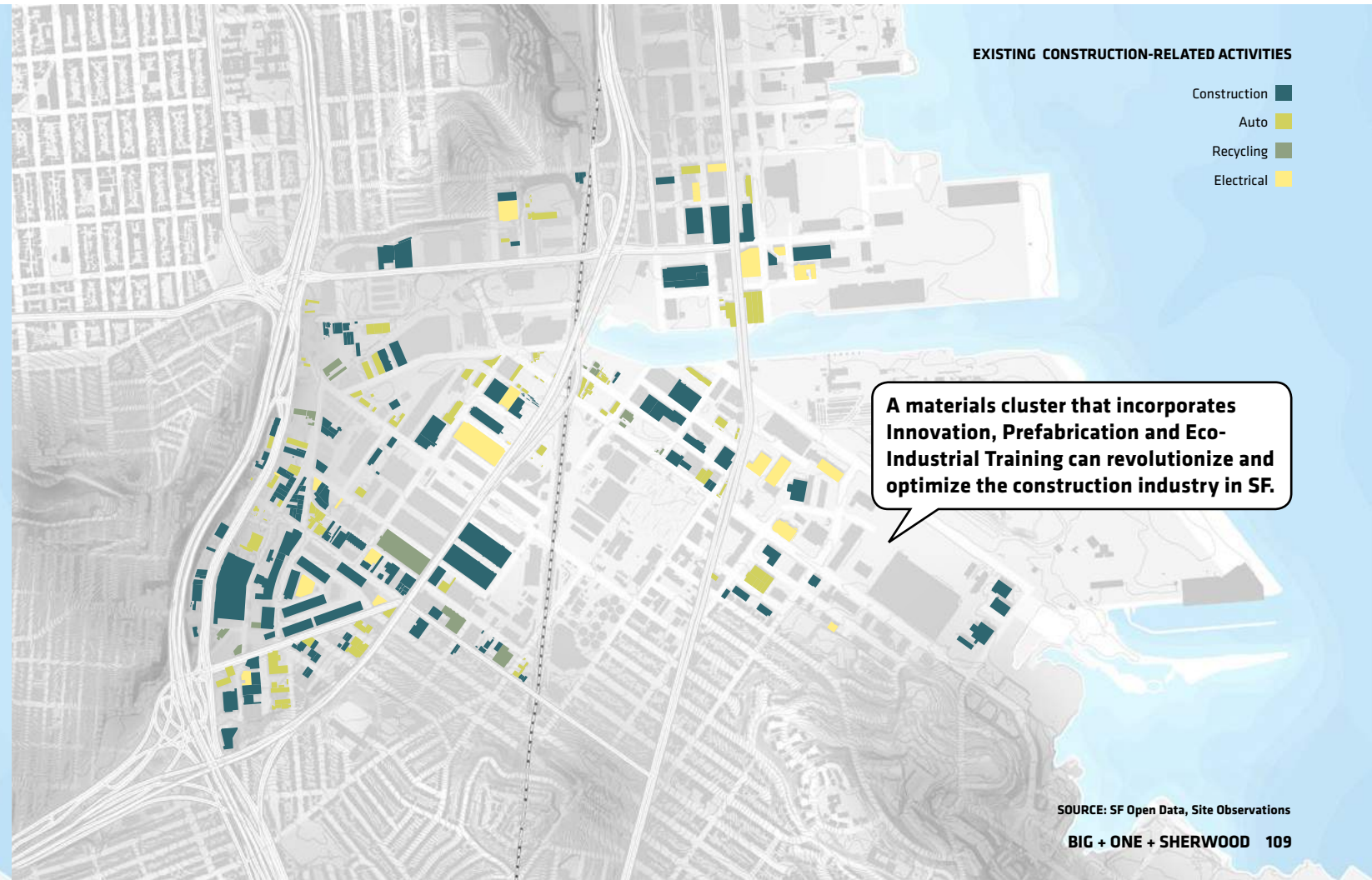
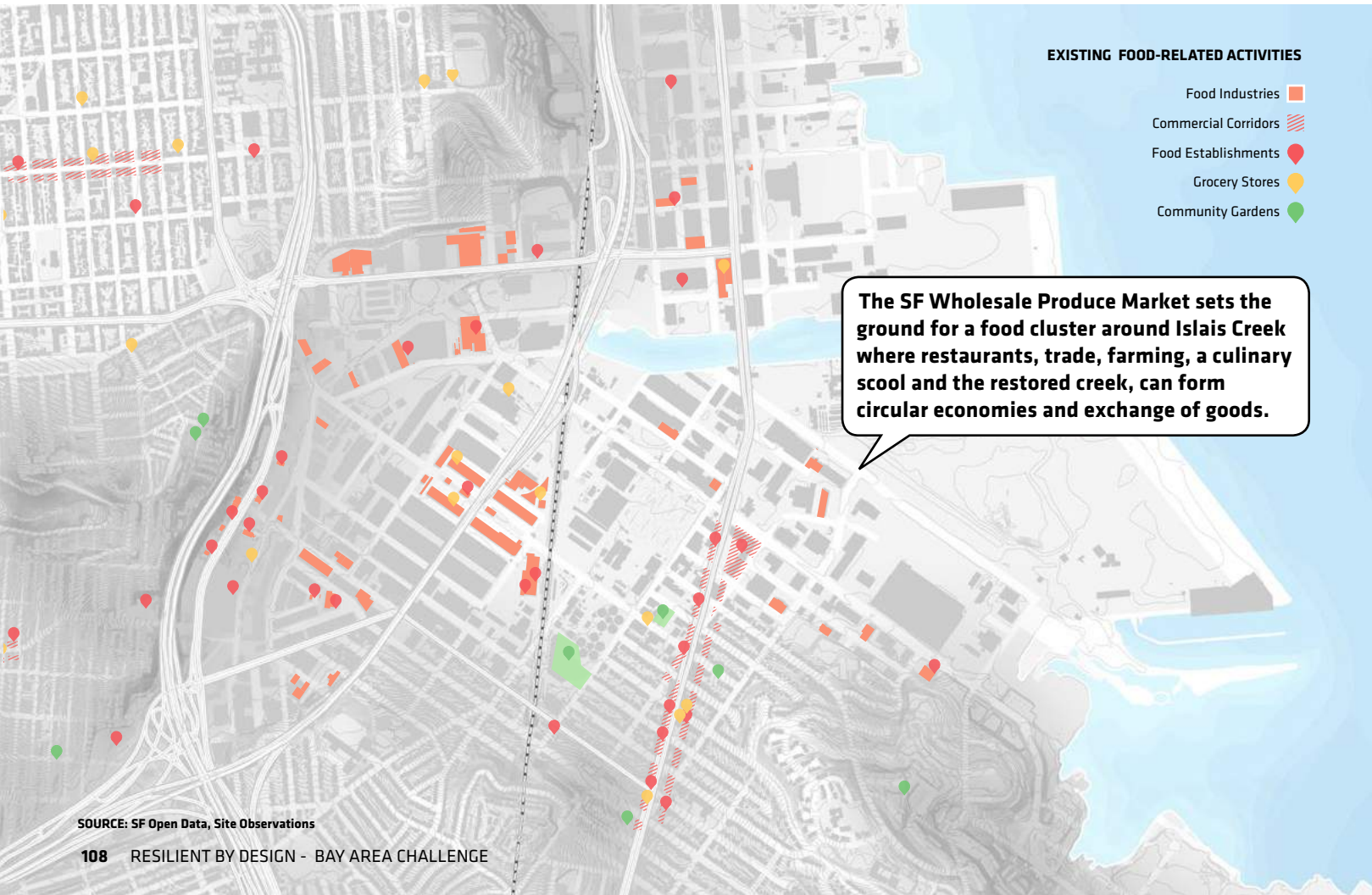
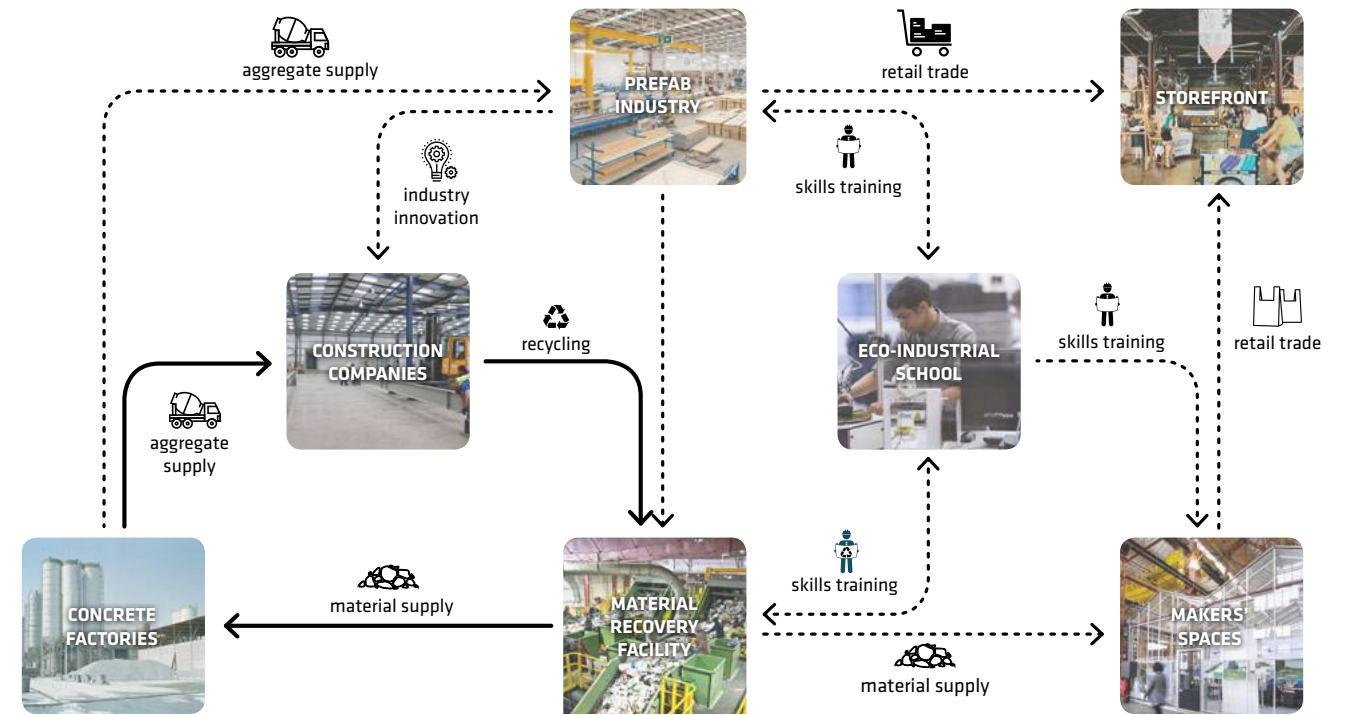
BUILT & UNBUILT FAR



FOOD CLUSTER



MATERIALS CLUSTER

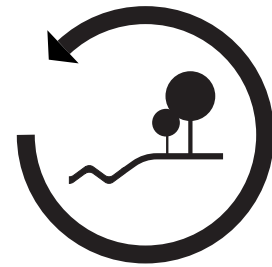


TOOLS



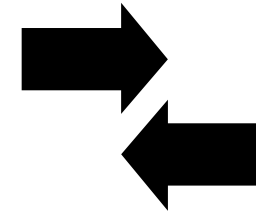
1. PROTECT

Sea level rise and storms, seismic hazards, and the potential value of the shoreline pose a critical need for protection of the Port areas, the PDR uses, and the local jobs that they sustain. We need to work with nature in adapting to the effects of climate change and integrate soft and hard measures along the shoreline. We need to adapt our existing economic and social structures for climate change in order to protect the deep water port, which is critical infrastructure, providing thousands of jobs both in the PDR zone and in the flood zone.



2. RESTORE

More frequent storms and heavy rain events will result in extensive floods in the low-lying areas. In parallel, the practices of past decades have caused severe environmental contamination calling for the need to restore a healthy environment. We need to help restore the creek's ecological functions at the watershed scale while increasing its retention capacity. A restored natural framework could become a resource for economic growth and community development. We need to rebuild the community's connection with the waterfront and local food production, helping to revive local stewards and champions around the creek.



3. CONNECT

Traffic congestion on the highways, redundant truck routes, lack of accessibility in Bayview and decades of exclusion of the community in decision-making processes, call for the need to connect on multiple levels both physical and social. We need to improve accessibility to the neighborhood by bringing new innovative modes of transit. We need to connect communities to activities, nature, and open spaces, while linking resources and infrastructure to a more sustainable loop.



4. GROW

The importance of PDR as a place for local jobs and industrial operations for the city, the potential to rethink innovation in the Port areas, and years of disinvestment in the adjacent communities demonstrate the need to grow and modernize logistics and port operations to ultimately enhance and increase local job opportunities. In addition, we need to help invest in local education, training and culture to help empower the community around its identity, economic development, and growth.

PROTECT



Increased Port Value



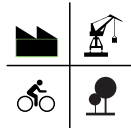
Intensified Port Operations



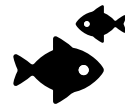
Safeguard Jobs



Shoreline Accessibility



Diverse Waterfront Uses



Enhanced Environmental Qualities

OBJECTIVE

Islais Creek, emerging into the Bay at the southern end of San Francisco, sits between a diverse set of communities and vulnerable to climate risks, following the wide contours of the historic streambed and marsh. Sea level rise, coastal and riverine flooding, seismic hazards, and the potential value of the shoreline pose a critical need for protection of the Port areas, the PDR uses and the local jobs that they sustain.

We are investigating ways that the lands spanning from Pier 80 to Pier 96 could adapt to sea level rise (SLR) as well as incorporate innovative circular processes supported by inter-modal transportation and innovation components. From 25th Street to Heron's Head Park, we need to work with nature to adapt in a changing climate and integrate soft and hard coastal protection measures along the shoreline. We need to adapt existing economic and social structures to climate change in order to protect and evolve in a resilient way the deep water port, the critical infrastructure in the PDR uses and related jobs in the flood zone.

TOOLS

Our PROTECT toolkit includes hard and soft measures for coastal protection around areas of the Port that are critical to protect and grow in the future. This allows our team to think about the areas that have the most potential for growth over the next century and attract the right kind of investment for San Francisco. Piers 80 to 96 are the largest remaining undeveloped parts of the San Francisco Waterfront and it is critical during our explorations to understand the type of development that can occur, one that does not follow typical waterfront development practices but that encompasses research and innovation, and enhances the Port's activities. For the areas that we can adapt and/or retreat from, the toolkit includes soft landscape approaches that can be either utilitarian, productive, and/or recreational, allowing the shoreline to be a gateway, a destination, and resource for both industry and community.



EAST SIDE COASTAL RESILIENCY - NEW YORK, USA



BIG U COASTAL PROTECTION - NEW YORK, USA



WETLAND PARK - KONGJIAN YU, CHINA



BOSTANLI SUNSET LOUNGE - IZMIR, TURKEY



RIVERWALK - CHICAGO, USA



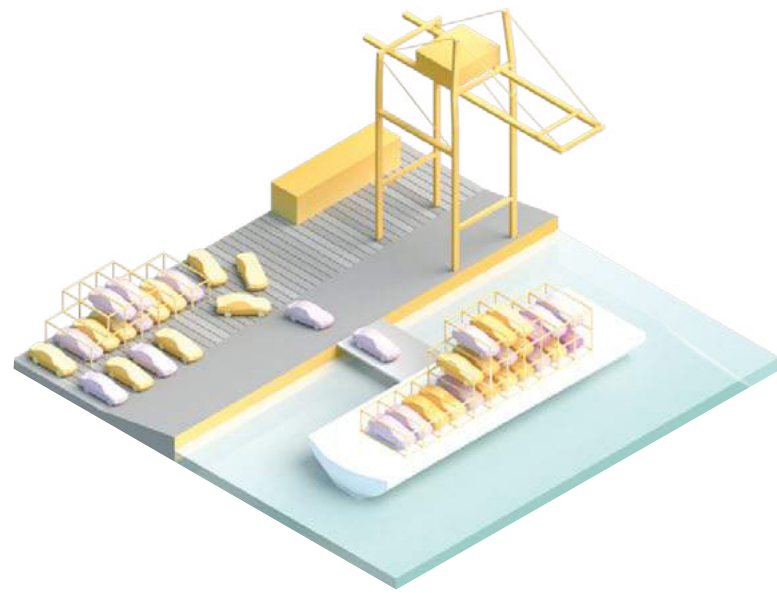
TORONTO WATERFRONT - CANADA



HAFENCITY TERRACE - HAMBURG, GERMANY



SANLIHE CORRIDOR - QIAN'AN CITY, CHINA



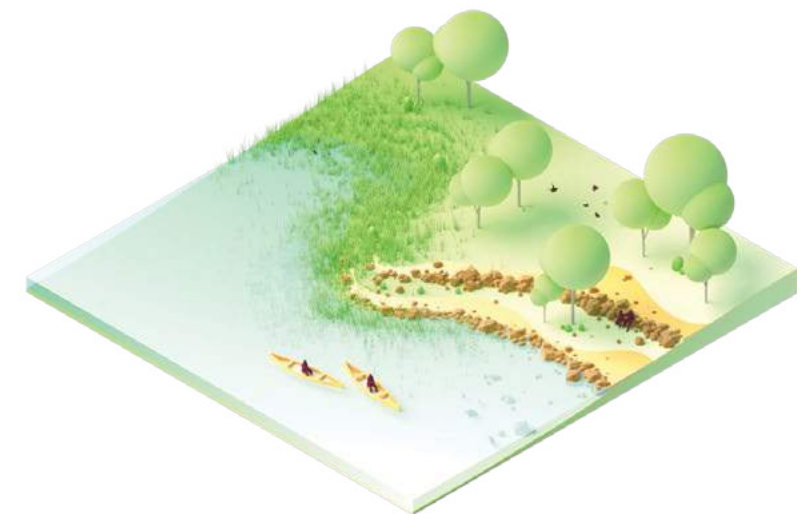
HARD SHORELINE: UTILITARIAN



SOFT SHORELINE: ACCESSIBLE



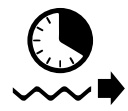
HARD SHORELINE: ACTIVATED



SOFT SHORELINE: NATURAL



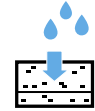
RESTORE



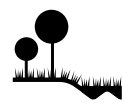
Slower Discharge



Storm Water Retention



Increased Infiltration



Riparian Corridors



Enhanced Biodiversity



Sedimentation

OBJECTIVE

The Islais creek basin is vulnerable to both coastal and riverine flooding in the areas where the historic creek meets the water of the Bay. The shallow groundwater and the low capacity of the underground creek to hold rainwater increase the frequency of riverine flooding in the low-lying areas and will be exacerbated as sea level rises. There is a need to take a closer look at ecological systems and the ways we can help restore and enhance their functions, in order to transition into nature-based systems in processing of water and waste.

In parallel, the practices of past decades have caused severe contamination of air and soil, calling for the need to restore a healthy environment and increase the creek's capacity and ecological function. We need to help restore the ecological capacity of the entire watershed, and use it as a resource for economic growth and community development. In addition, we need to restore the community's connection with the waterfront alongside local food production, to help revive local stewards and champions around the creek.

TOOLS

In our toolkit, we explore ideas range from ecological restoration to active green spaces and water retention. Wetlands can act as buffers and floodplains can help retain water during large storm events. The riparian vegetation will create green corridors that enhance biodiversity and improve water quality. Ensuring accessibility to areas of the restored creek is vital in order to connect the surrounding communities with their environment and educate future generations around the importance of having a variety of ecological habitats.

These strategies build on the success of the Port and Golden Gate Audubon Society's constructed wetlands project, which has restored about 5 acres of tidal marsh. A wider creek can reduce discharge velocities without burdening the current infrastructure. Opening up the creek mouth can provide space for tidal wetlands, habitats for the local flora and fauna, in addition to recreational spaces for a better access to a natural Bay edge.



BISHAN-ANG MO KIO PARK - SINGAPORE



TANGHE RIVER PARK - QINHUANGDAO CITY, CHINA



SANLIHE CORRIDOR - QIAN'AN CITY, CHINA



SANLIHE CORRIDOR - QIAN'AN CITY, CHINA



WALLER CREEK - AUSTIN, USA



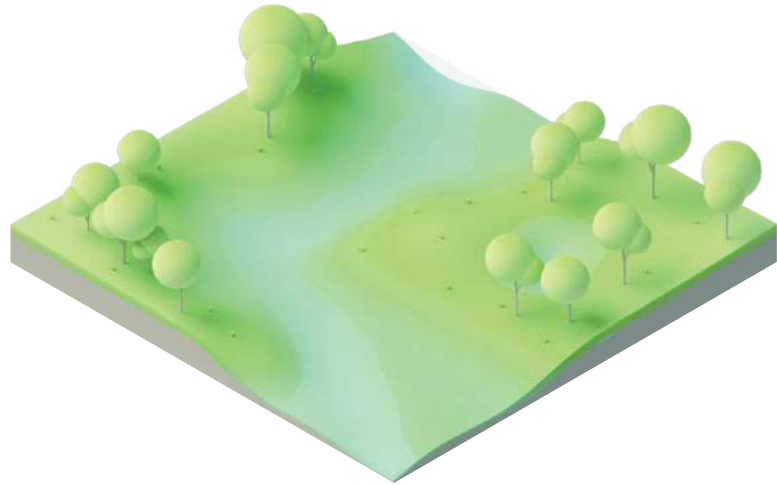
BENTHEMPEIN WATER SQUARE, ROTTERDAM



NANSEN PARK - OSLO, NORWAY



ECO DISTRICT BOTTIÈRE-CHÉNAIE - FRANCE



RESTORE CREEK: NATURAL



BUFFER WETLANDS



RESTORED CREEK: ACCESSIBLE



WATER PLAZAS & PONDS



CONNECT



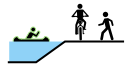
Enhanced Public Transit



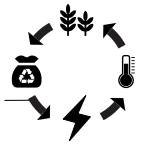
Safe Green Mobility



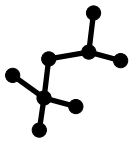
Open Space Accessibility



Waterfront Connection



Sustainable Resource Loop



Decentralized Infrastructure

OBJECTIVE

Traffic congestion on the highways, redundant truck routes, lack of accessibility in Bayview and decades of exclusion of the community in decision-making processes, call for the need to connect on multiple levels both physical and social. Years of disinvestment in improving sidewalks and crosswalks, as well as the lack of protected bike lanes and access to parks and amenities are inhibiting local residents and workers from engaging with the environment in the neighborhood and are posing potential risks in relation to traffic.

We can improve accessibility to the neighborhood by bringing the T-line to its fullest potential and by implementing new innovative modes of light transit, while we enhance access to amenities, activities, nature, and open spaces. At the same time, we need to connect resources and infrastructure into a more sustainable loop to help address some of the risks that the current combined and centralized infrastructure of wastewater and stormwater treatment is facing.

TOOLS

In order to increase connectivity for pedestrians and workers, our toolkit introduces e-bikes, light transit, green connective corridors with light rail, and resource recovery centers that enhance resource flows. Tools try to enhance circular economies, strengthen social, cultural, and religious bonds through community + training centers and intermodal stations. The tools included in the kit aim to promote a cleaner and future ready wastewater management system and better connect open spaces and the waterfront.

Tools include rethinking of the Highway I-280 as an aerial connector or a ground-level boulevard with enjoyable pedestrian connections and green habitat corridors. For the surrounding communities, the toolkit tries to re-imagine 3rd Street as an improved T-line green corridor, with E-bike stations, leading to a kayak launch point with intermodal stations of ferry, bike, bus and rail. In order to connect resource flows the toolkit includes waterways and habitat corridors, decentralized water management systems, energy efficient building stock, and resource recovery centers.



CYCLE HIGHWAY - COPENHAGEN, DENMARK



GREEN STREETS - BARCELONA, SPAIN



LIGHT RAIL - ANGERS, FRANCE



MADRID BIKE-SHARING SYSTEM - SPAIN



CROTON WATER FILTRATION PLANT - NEW YORK, USA



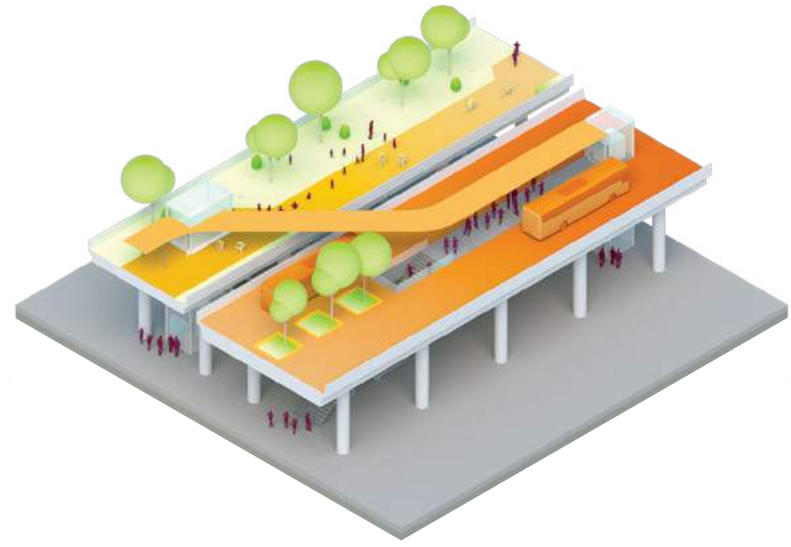
WATER REUSE - FLORIDA, USA



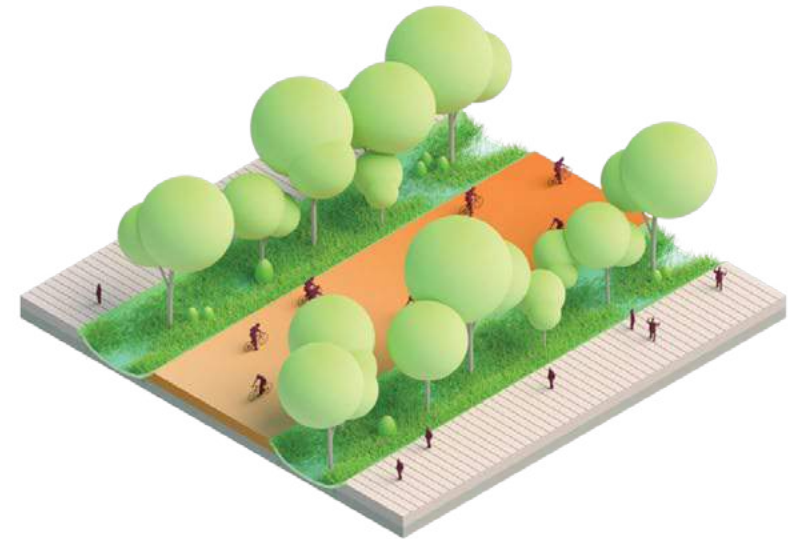
MARINA BAY DESALINATION PLANT - SINGAPORE



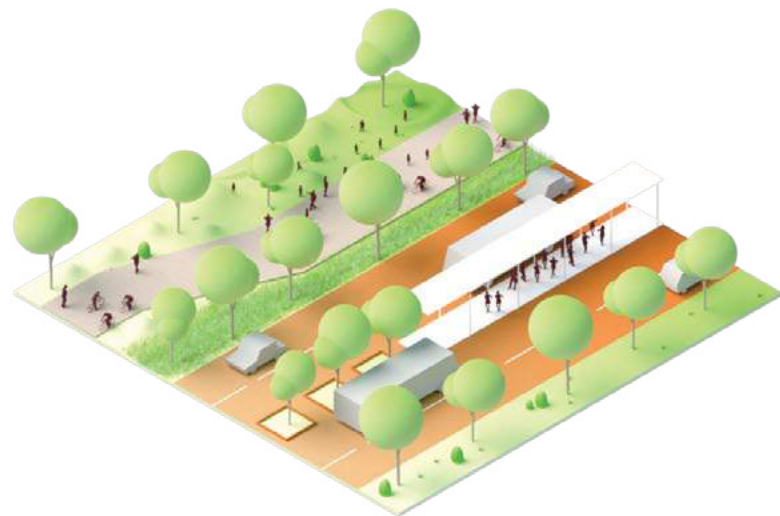
WASTE-TO-ENERGY PLANT - COPENHAGEN, DENMARK



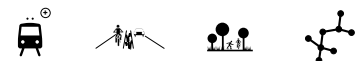
I-280 AERIAL CONNECTOR



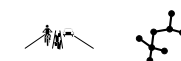
GREEN GRID: PEDESTRIAN CONNECTOR

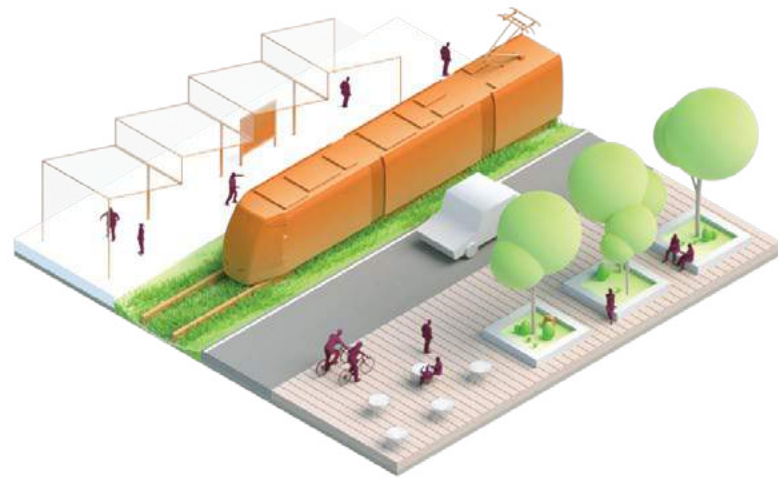


I-280 BOULEVARD

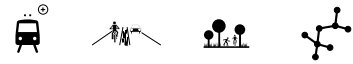


GREEN GRID: LOGISTIC CORRIDOR

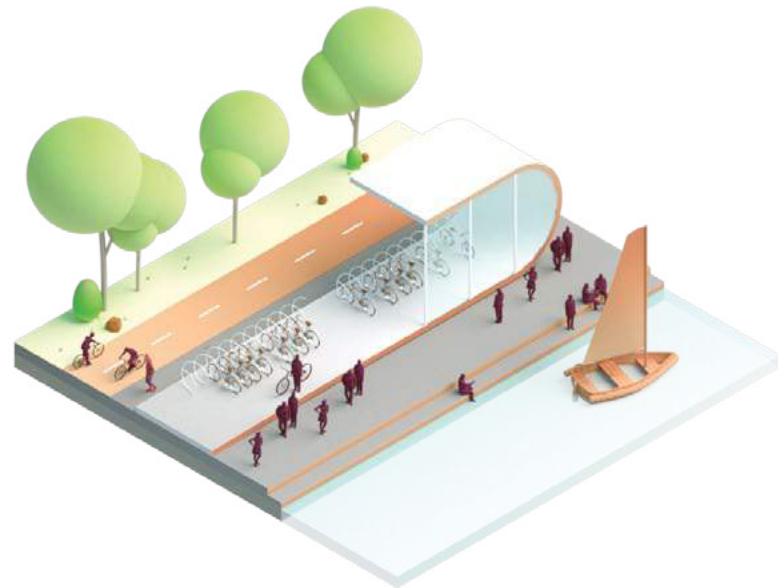




ENHANCED T-LINE



KAYAK LAUNCH

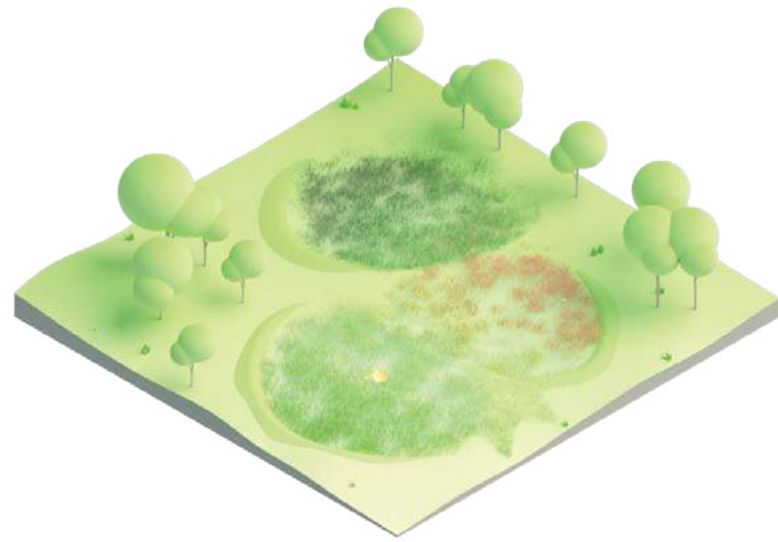


E-BIKE STATION

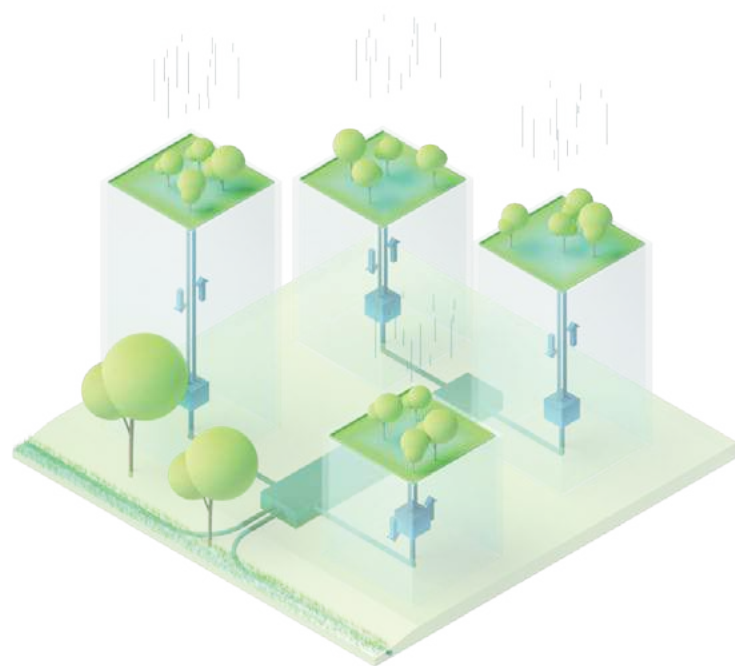


FERRY LANDING

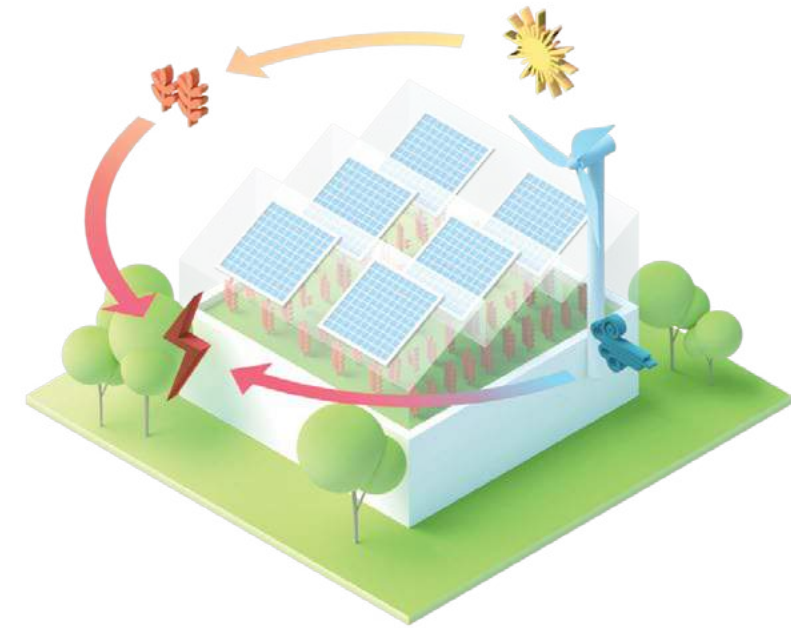




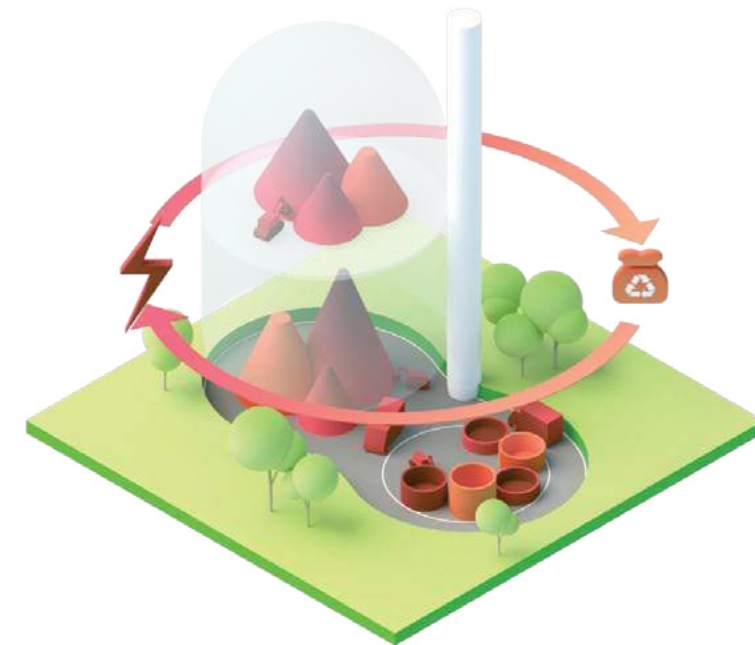
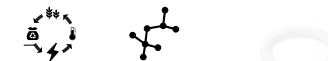
TREATMENT WETLAND



DECENTRALIZED WATER SYSTEM



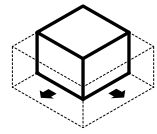
ENERGY EFFICIENT BUILDING STOCK



RESOURCE RECOVERY CENTER



GROW



Increased Working Space



Workforce Development



Local Business Support



Accessible Education



Empowered Local Identity



Preserved Affordability

OBJECTIVE

The importance of PDR as a place for local jobs and industrial operations for the city, the potential to rethink innovation in the Port areas, and years of disinvestment in the adjacent communities, pose the need to grow and modernize logistics and port operations to ultimately enhance and increase local job opportunities. Bringing Islais Creek area to its fullest potential as a place of work through clusters of local business and the creation incubator spaces could further enable development of the local workforce.

In addition, we need to help invest in local education training to help empower the community around its identity, economic development, and growth. Linking institutions, local schools, and organizations around local industries can help the community leverage the future potential of the place and become stewards of a thriving eco-industrial basin. Therefore, the focus of our team is to help grow neighborhood jobs, port operations, local food production, diverse opportunities for recreation as well as education and workforce training.

TOOLS

The toolkit helps explore ideas that will create local value, minimize industrial footprints, introduce technological advancements in the PDR area and in the port's operations, and create more jobs for the surrounding communities. The toolkit combines innovative ways of rethinking cargo operations, vertical warehousing, and local food production that allows industrial and logistical areas to take advantage of the current allowable FAR and densify their activities.

In addition, the toolkit includes ideas for a maker's village, arts district, workforce training centers, youth educational centers, community activities, and active recreation - all with a sensitive eye towards preserving affordability of working and living spaces. Additionally, the team is interested in exploring the possibilities of enhancing Islais Creek as a food center for the city of SF that would support local produce markets, and increase local jobs.



AMAZON HIGH-TECH WAREHOUSE - NEW JERSEY, USA



LOCAL RESIDENTS PARK STEWARDSHIP - NEW YORK, USA



BAYVIEW POP-UP MARKET - SAN FRANCISCO, USA



GREEN LAB EDUCATIONAL CENTER - NEW YORK, USA



RDM INNOVATION DOCK - ROTTERDAM, THE NETHERLANDS



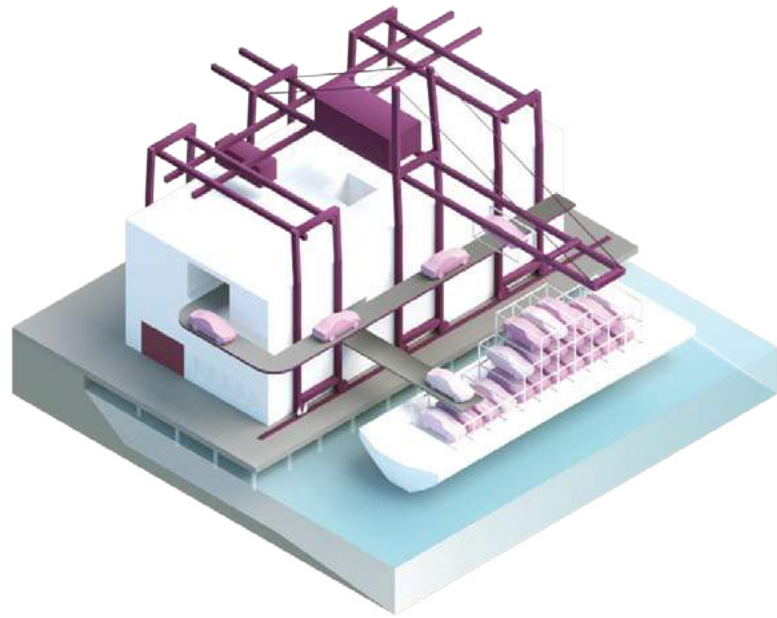
FENIX FOOD FACTORY PIER - ROTTERDAM, THE NETHERLANDS



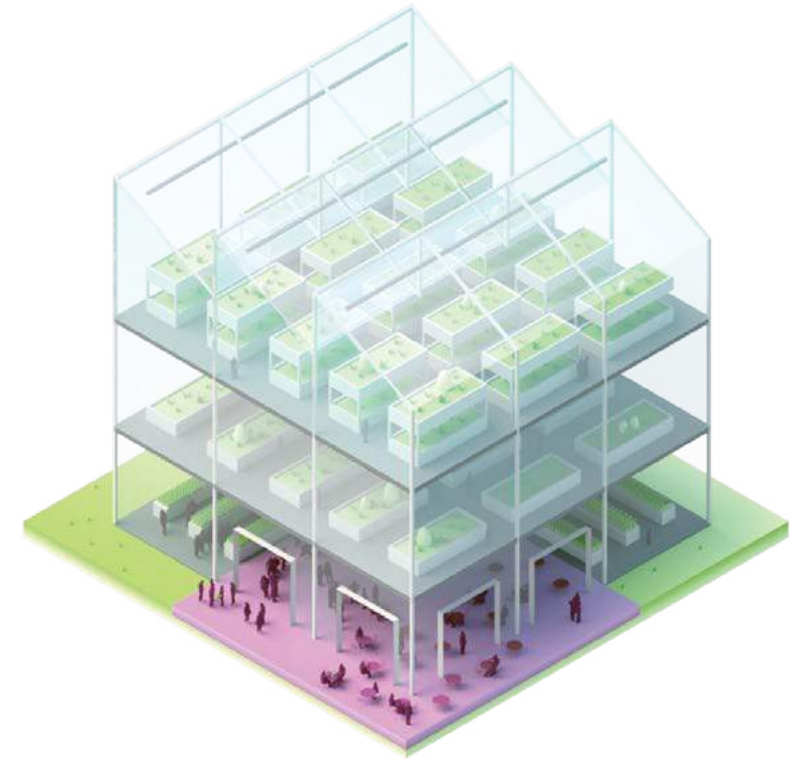
SKY GREENS VERTICAL FARMING, SINGAPORE



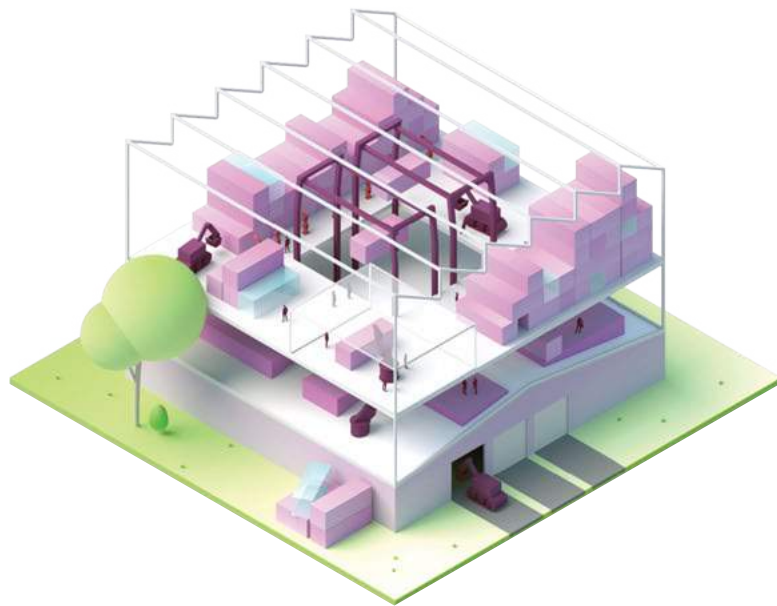
TRAINING CENTER - RDM ROTTERDAM, THE NETHERLANDS



CARGO OPERATIONS



LOCAL FOOD PRODUCTION



VERTICAL WAREHOUSE



LOCAL MARIJUANA PRODUCTION

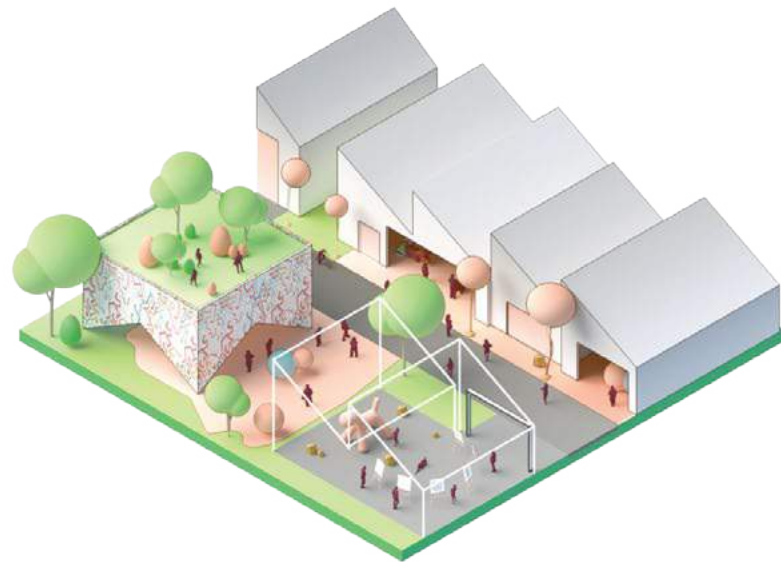




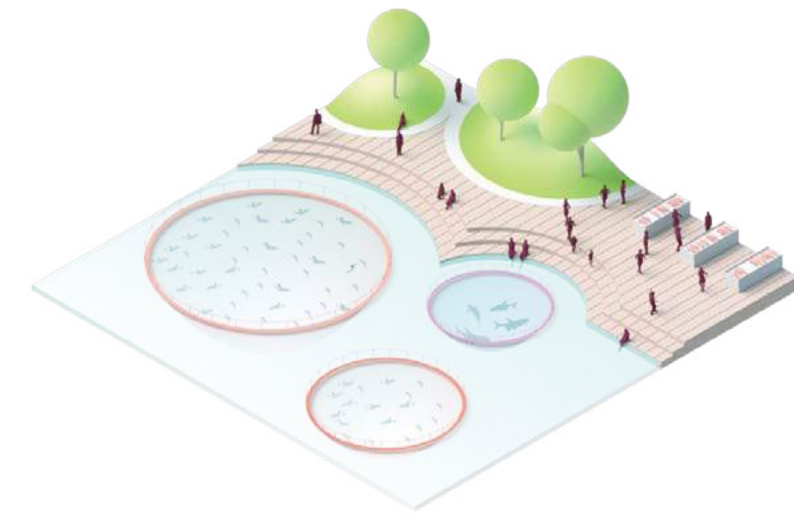
MAKERS VILLAGE



TRAINING CENTER

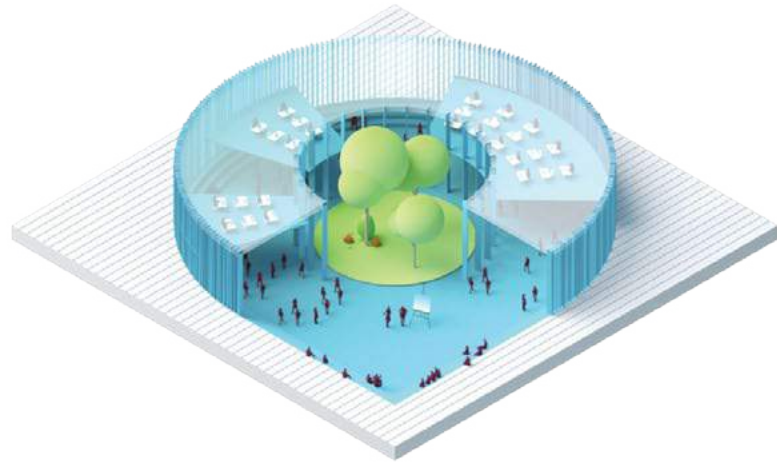


ARTS DISTRICT



AQUACULTURE

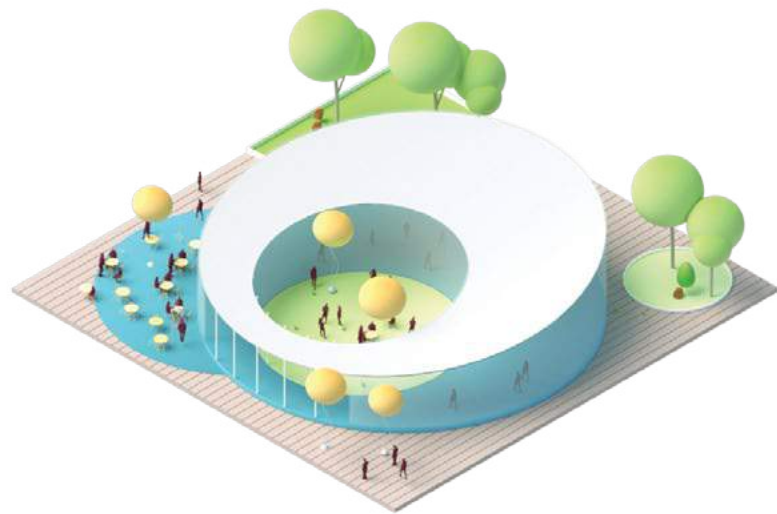




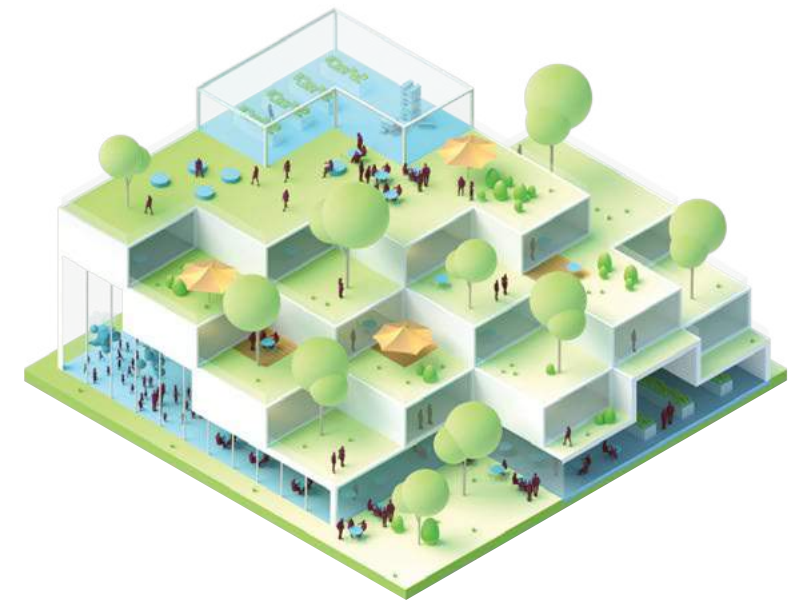
EDUCATIONAL CENTER



ACTIVE RECREATION



COMMUNITY CENTER



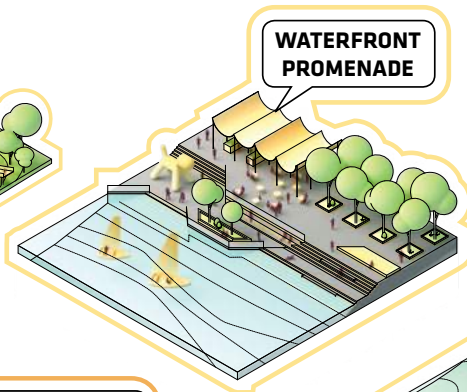
AFFORDABLE HOUSING



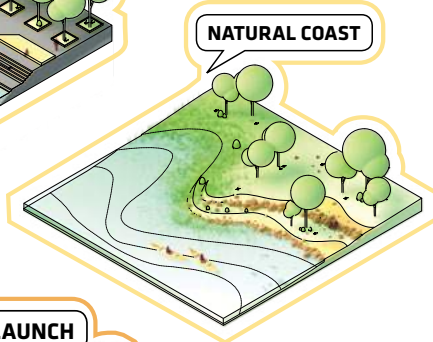
PROTECT
WATERFRONT & PORT



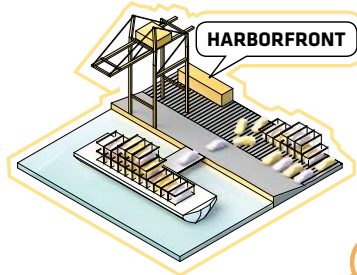
SHORELINE PARK



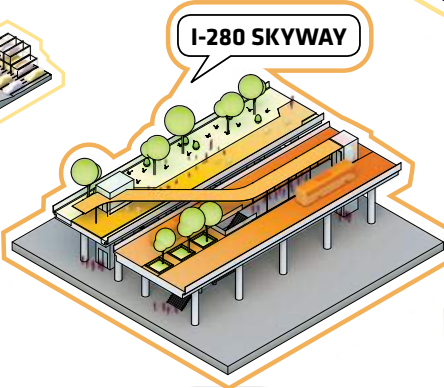
WATERFRONT PROMENADE



NATURAL COAST



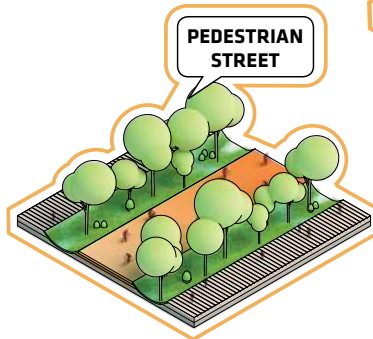
HARBORFRONT



I-280 SKYWAY



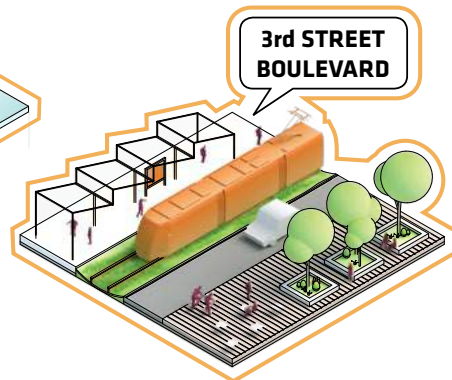
KAYAK LAUNCH



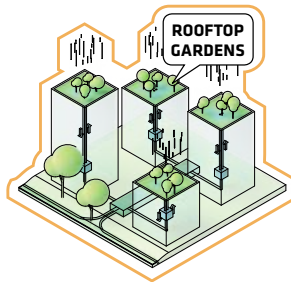
PEDESTRIAN STREET



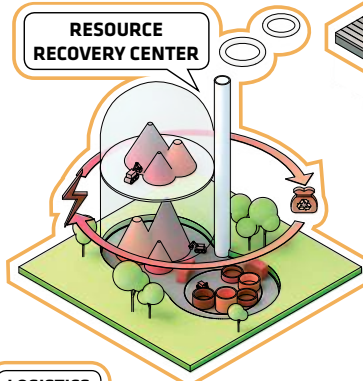
FERRY LANDING



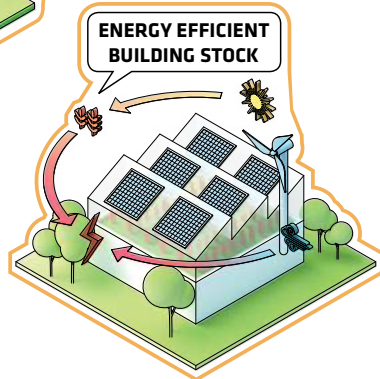
3rd STREET BOULEVARD



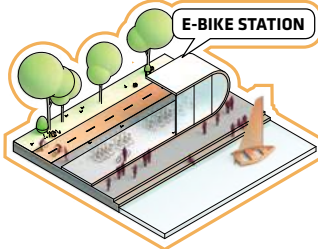
ROOFTOP GARDENS



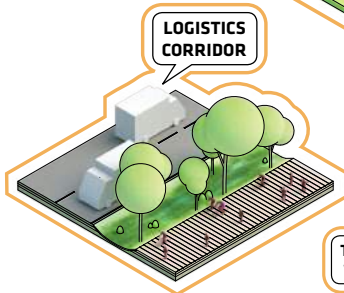
RESOURCE RECOVERY CENTER



ENERGY EFFICIENT BUILDING STOCK



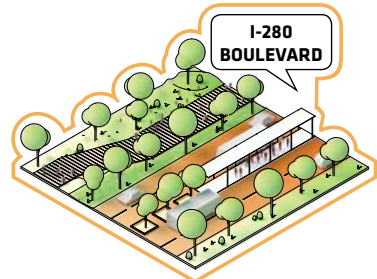
E-BIKE STATION



LOGISTICS CORRIDOR



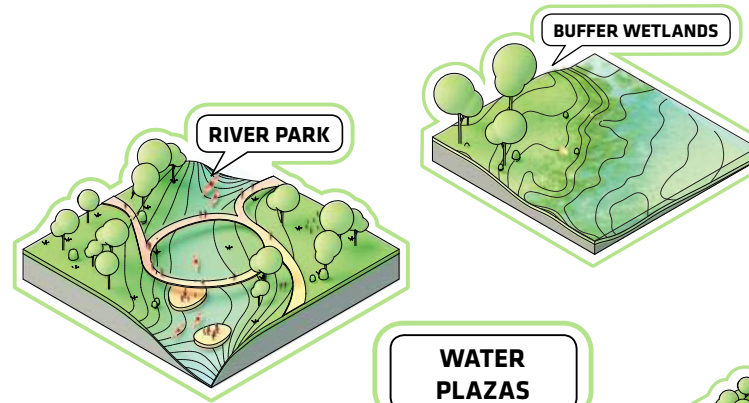
TREATMENT WETLANDS



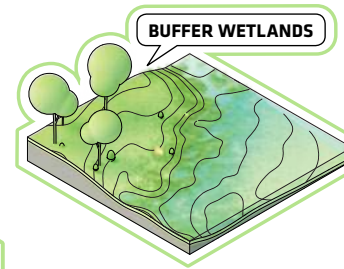
I-280 BOULEVARD

CONNECT
PEOPLE, SOURCES & FLOWS

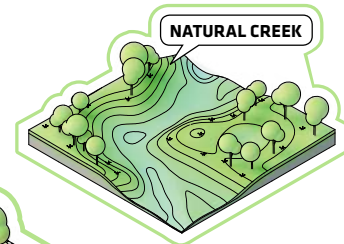
RESTORE
A CLEAN ENVIRONMENT



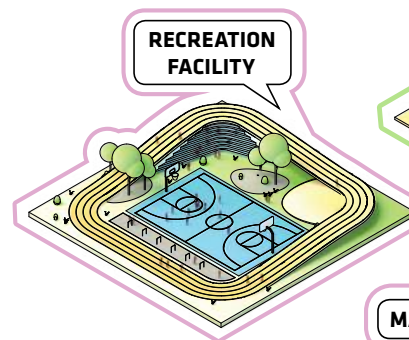
RIVER PARK



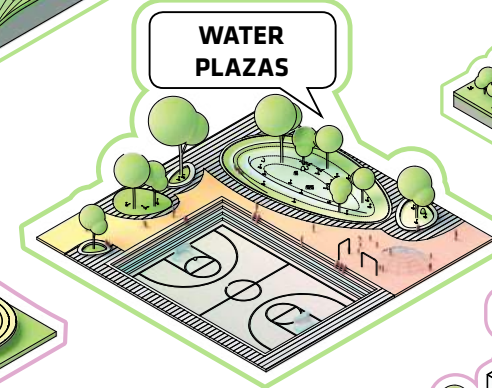
BUFFER WETLANDS



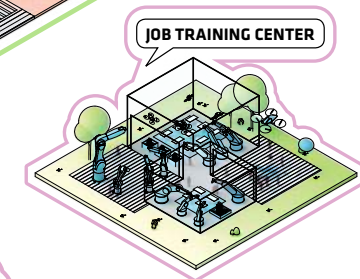
NATURAL CREEK



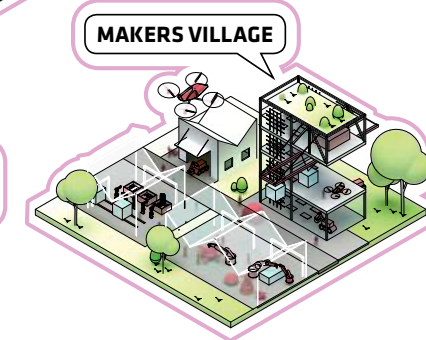
RECREATION FACILITY



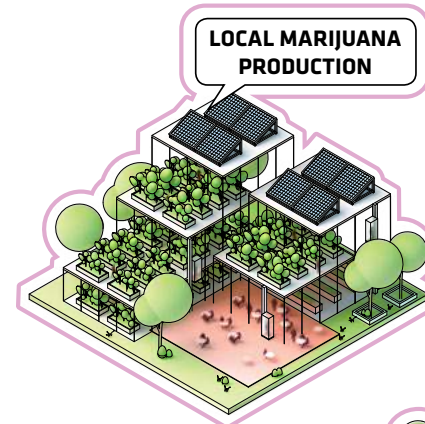
WATER PLAZAS



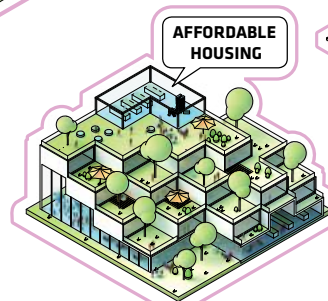
JOB TRAINING CENTER



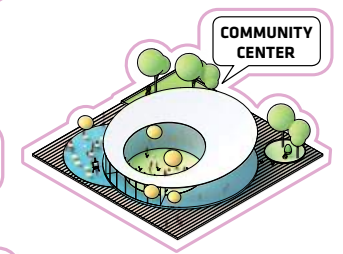
MAKERS VILLAGE



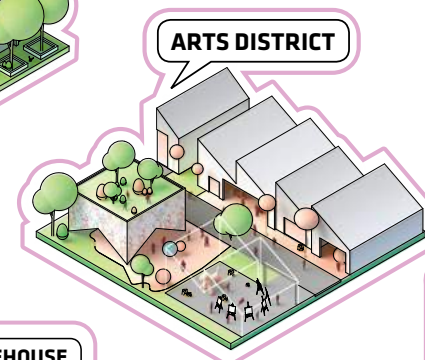
LOCAL MARIJUANA PRODUCTION



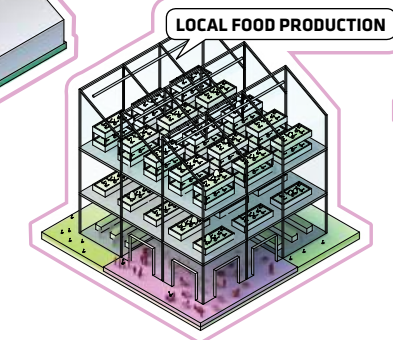
AFFORDABLE HOUSING



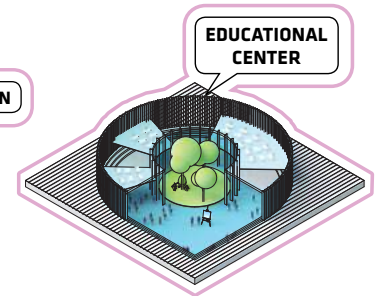
COMMUNITY CENTER



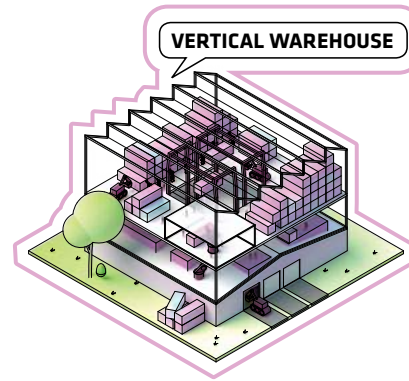
ARTS DISTRICT



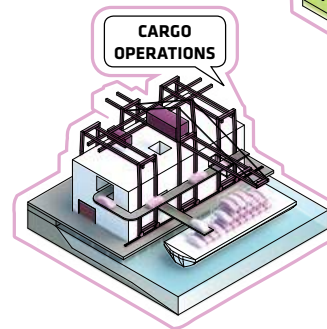
LOCAL FOOD PRODUCTION



EDUCATIONAL CENTER



VERTICAL WAREHOUSE



CARGO OPERATIONS

GROW
BUSINESSES & IDENTITIES

COMMUNITY ENGAGEMENT

GOALS

After multiple rounds of one-to-one meetings with local and regional stakeholders, which included local property owners, City Agencies such as SF Port and SFPUC with assets at risk, our team gathered important insights and information that allowed us to structure a meaningful community engagement process. The goal of our process was to provide the most adequate tools and activities to the community in order to allow them to express how they could directly benefit from achieving both a long-term vision and near-term pilots.

Our community partners—including APRI, Resilient Bayview and RDJ Enterprises—helped us identify disadvantaged communities associated with the site, and helped prioritize focus areas and key topics for our public engagement process. As we learned, it was important to include adaptation strategies and near-term projects that could improve current local issues and priorities such as parks and open space, job and education opportunities, and improved housing / transit options in order to arrive at a resilient long-term vision through meaningful for the community first steps with co-benefits.

PROCESS

To achieve both goals, our team structured the public engagement process in two rounds of activities: one at the end of March and one at the end of April. The goal of the first round of activities was to co-create a shared vision for the Islais Creek Watershed and discuss in depth local issues and priorities. This round of activities included a youth event, and two public workshops in Bayview and Dogpatch. APRI has been instrumental in helping us structure the events and narrate risks and outcomes in a way that the community can relate to. The flyers for the events were translated in Spanish and Cantonese, and catering and event locations were sourced from the local communities.

The goal of the second round of activities was to discuss in a more intimate setting ideas for pilots and how these could kick-start a long-term vision. This round of activities included a second youth event and three community sessions with a selected group of stakeholders and leaders, focused around three topics:

1. Parks & Open Space
2. Environmental Justice, Infrastructure & Health
3. Affordability, Economics & Workforce Development



MARCH 28TH - YOUTH EVENT - STICKER MAP ACTIVITY



MARCH 28TH - YOUTH EVENT - STICKER MAP ACTIVITY



APRIL 5TH - DOGPATCH PUBLIC WORKSHOP - PIER 90-96 TABLE



APRIL 26TH - COMMUNITY ROUND TABLES



APRIL 4TH - BAYVIEW PUBLIC WORKSHOP - PDR / CREEK TABLE



APRIL 5TH - DOGPATCH PUBLIC WORKSHOP - BREAK-OUT TABLES



MARCH 28TH - YOUTH EVENT - STICKER MAP ACTIVITY



MARCH 28TH - YOUTH EVENT

ROUND 1 TOOLS & IDEAS

ROUND 1 FORMAT

At the end of March and beginning of April, our team held a first round of public engagement through a series of events open to the public. The events included a charrette with high school students to learn about our changing climate, and two public workshops, one in Bayview and one in the Dogpatch. The goal of this round of activities was to utilize our research findings and tools to form a shared vision for Islais Creek Watershed based on the community's hopes and fears. To achieve that, our team prepared two workshop activities: 1. A sticker map activity utilizing toolkit elements and building on the ideas of Protect - Restore - Connect - Grow, and 2. A table activity with physical models, each focusing on different sites (five in total), to explore localized risks and spatial opportunities through exploration and evaluation of alternative design ideas.

LEARNING ABOUT OUR CHANGING CLIMATE

On March 28, the ONE+BIG+Sherwood team led a youth workshop at the offices of our community partner, APRI. Students aged 13 to 19 participated in the event, largely from Bayview, Hunters point, and Potrero Hill. According to our initial survey, few students had ever actually visited Islais Creek in advance of the

APRI tour on March 27, but all of them had ideas about potential fates of the industrialized waterfront. Through a series of exercises including participatory map-making, students focused on an express interest in fortified cultural spaces throughout the Islais Creek area, particularly linking inland communities to a revitalized, naturalized waterfront area.

Bringing increased job opportunity through community-wide services to the water's edge and improving pedestrian and bike access between districts (especially in the area of highway interchanges) also played a central role. The main outcome of this event was the two-way learning opportunity: young students were able to learn about our changing climate, and the team was able to hear the youth's ideas and hopes for their communities.

KEY FINDINGS

- Bolstering existing cultural and community-wide services
- Desire for public recreational spaces along the waterfront
- Increased job opportunities along the waterfront
- Better pedestrian / bike access between adjacent districts
- Environmental remediation: a restored and open waterfront



APRIL 5TH - DOGPATCH PUBLIC WORKSHOP - PIER 90-96 TABLE



MARCH 28TH - YOUTH EVENT - STICKER MAP ACTIVITY



APRIL 4TH - BAYVIEW PUBLIC WORKSHOP - MOBILITY TABLE



MARCH 28TH - YOUTH EVENT - STICKER MAP ACTIVITY



APRIL 4TH - BAYVIEW PUBLIC WORKSHOP - WWTP TABLE



APRIL 5TH - DOGPATCH PUBLIC WORKSHOP - PIER 90-96 TABLE



APRIL 4TH - BAYVIEW PUBLIC WORKSHOP - PDR / CREEK TABLE



APRIL 5TH - DOGPATCH PUBLIC WORKSHOP - HOPES & FEARS BOARDS

ACTIVITY 1

PHYSICAL MODELS

PIER 80

FORMAT

On April 4th and 5th, the team held two public community workshops in Bayview and the Dogpatch. At these meetings, we sought to collect feedback and open conversations on conceptions of the creek's future as well as desired amenities, centering community voices in the process. The team prepared physical models for five focus areas as identified through the numerous one-to-one stakeholder meetings and background research. These areas included:

1. Pier 80
2. Pier 90-96
3. Wastewater Treatment Plant
4. PDR / Mobility
5. PDR / Creek

The public was able to test and evaluate ideas on the model and talk about trade-offs between solutions.

KEY FINDINGS

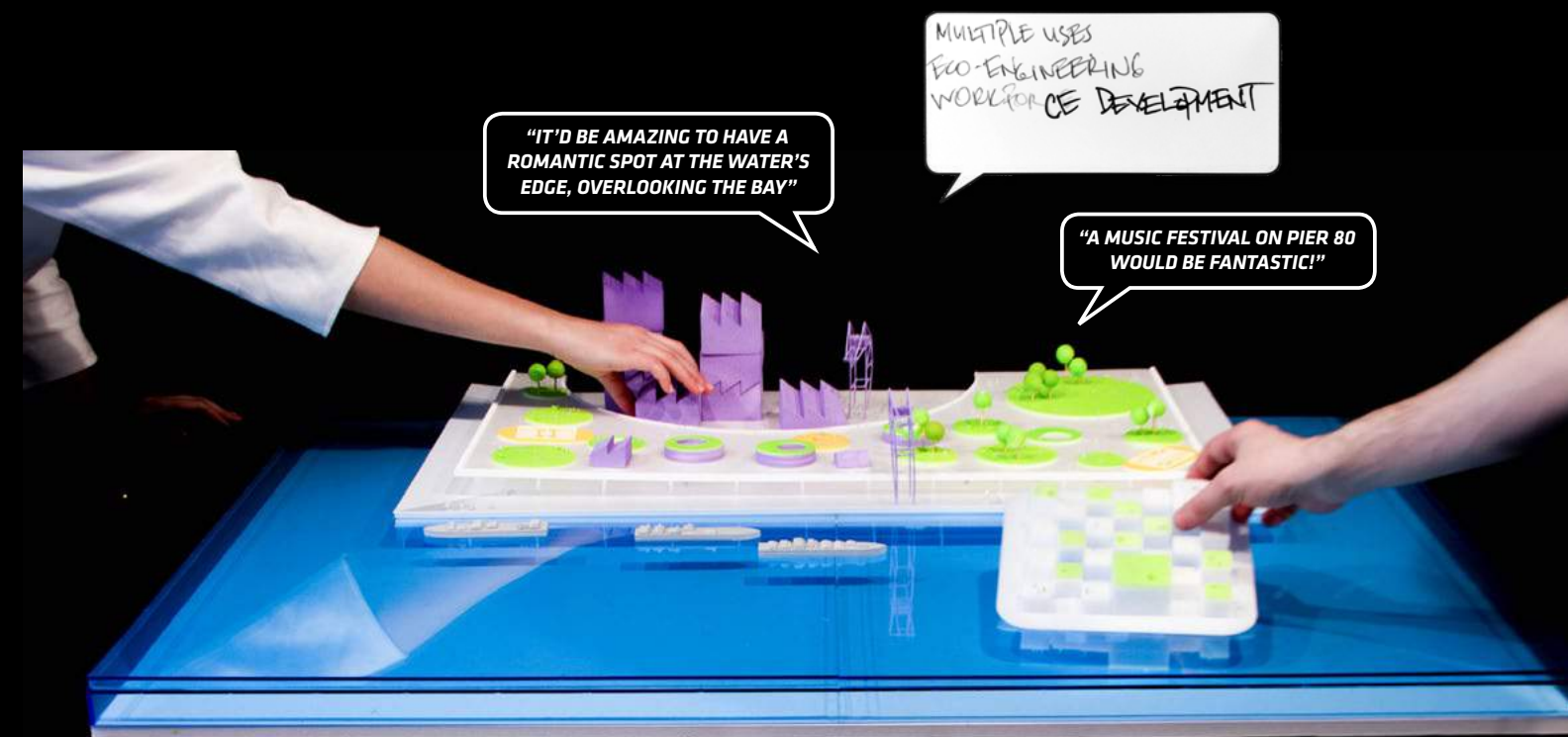
The primary concerns voiced by community members from both neighborhoods included the potential for displacement and accelerated gentrification fueled by the production of green spaces bringing in high-end development followed by overpriced food and

cultural programming. Any added housing as part of a zoning plan for the district should include strict requirements on affordability. Additional concerns focused on enhancing community services (indoor and outdoor) for the community in the form of public green spaces adaptable to different kinds of cultural programming, targeting sites limiting pedestrian, bike, and auto mobility (especially highway interchanges and highly industrialized street corridors). Discussion continued to address the possibility of daylighting the creek's upstream portion and incorporating waterfront naturalization (soft edges), stormwater management infrastructure, and waterfront space dedicated to public space serving locals above all.

- Clear concerns about affordability and the potential for gentrification and future development pushing out existing residents or creating public spaces hostile to them
- Food access – present food desertification presents few options for groceries and eating out
- Enhanced community services, outdoor and indoor programming – community kitchens, gathering spaces, and passive green space
- Mobility – highways create dividers making access difficult
- Targeted upstream efforts in Islais Creek toward water management, creek daylighting, expanding public services, etc.

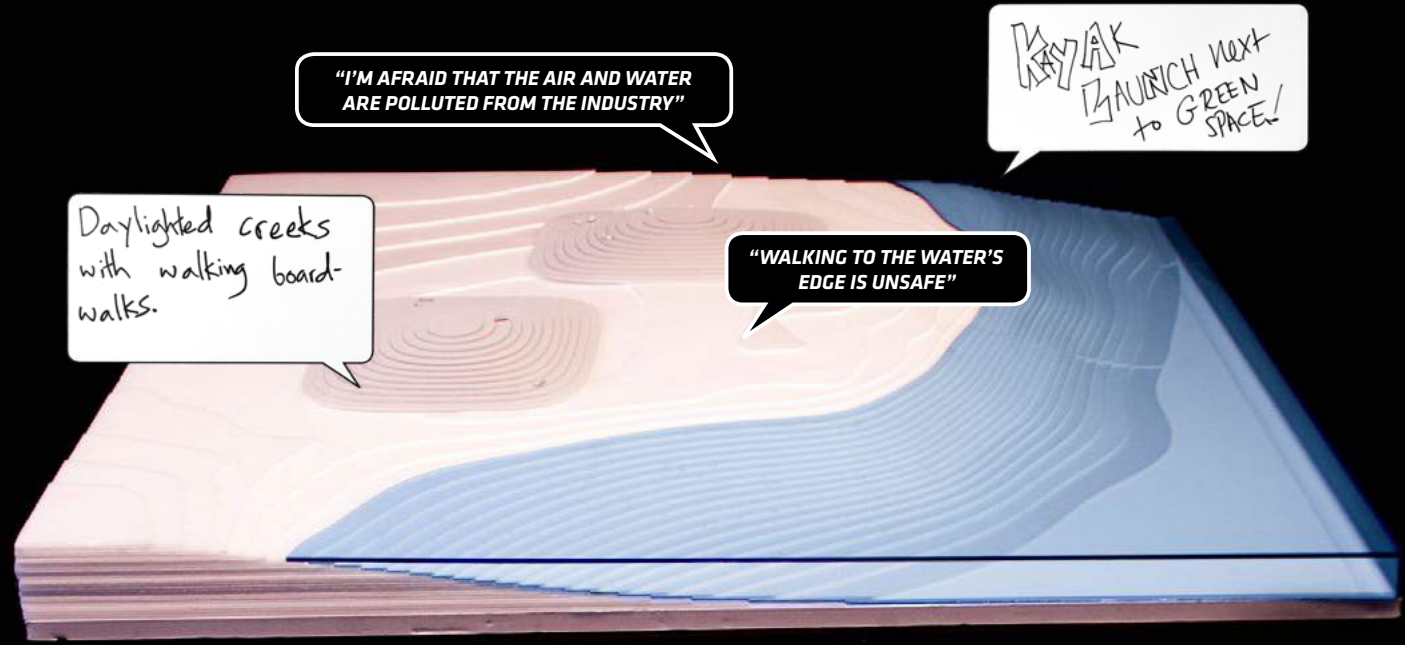


EXISTING SITUATION



POTENTIAL SOLUTIONS

PIERS 90-96



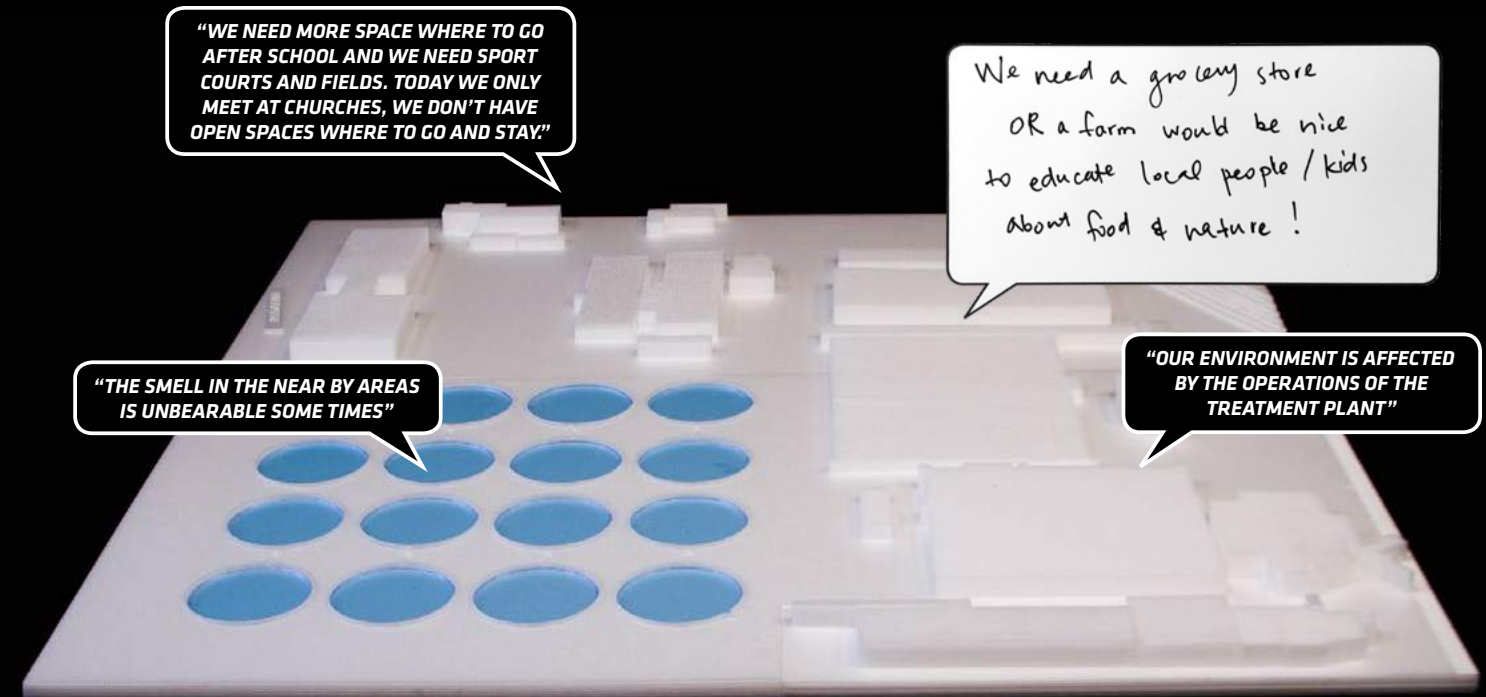
"I'M AFRAID THAT THE AIR AND WATER ARE POLLUTED FROM THE INDUSTRY"

DAYLIGHT
LAUNCH NEXT
to GREEN
SPACES!

Daylighted creeks with walking boardwalks.

"WALKING TO THE WATER'S EDGE IS UNSAFE"

SOUTHEAST PLANT



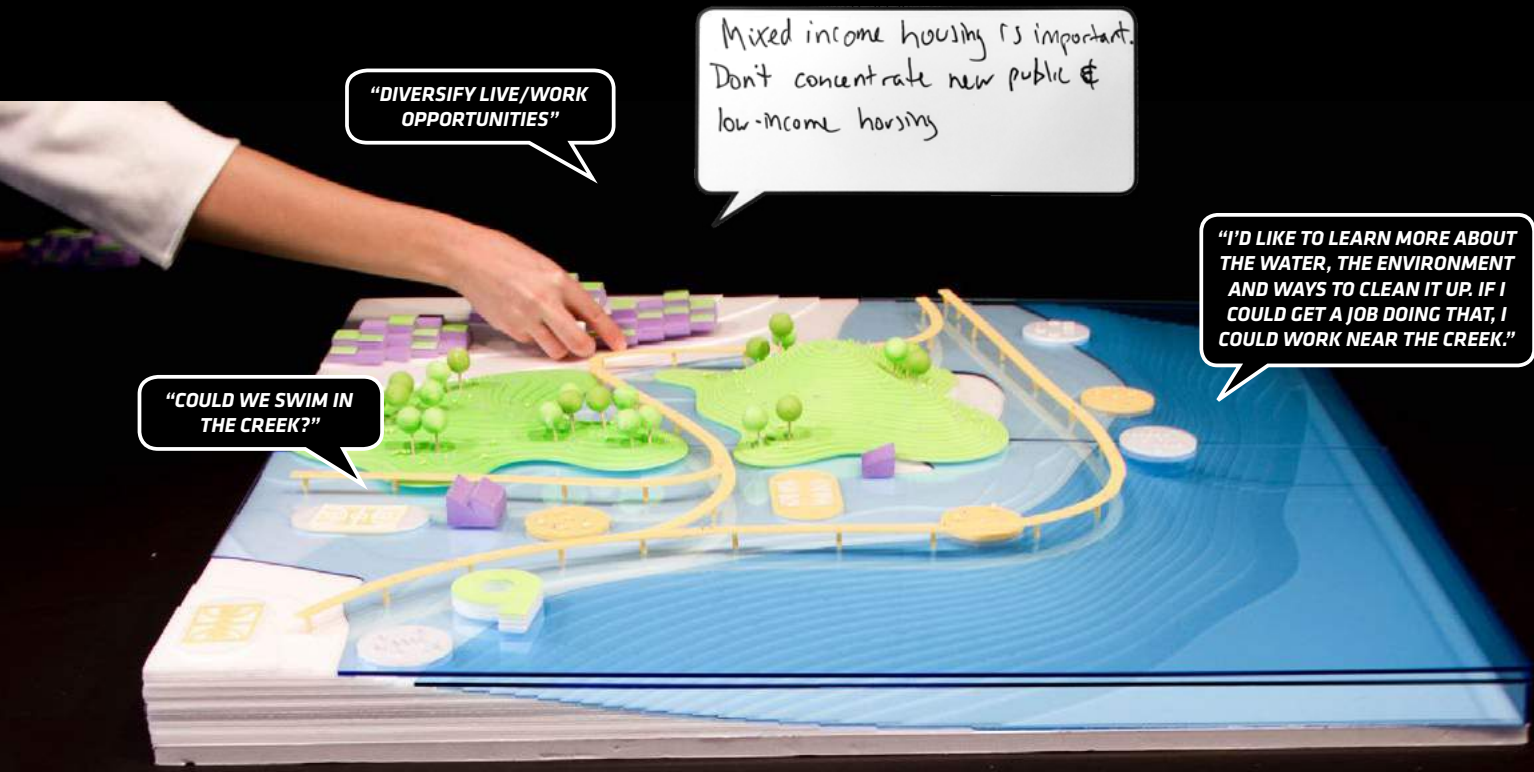
"WE NEED MORE SPACE WHERE TO GO AFTER SCHOOL. AND WE NEED SPORT COURTS AND FIELDS. TODAY WE ONLY MEET AT CHURCHES, WE DON'T HAVE OPEN SPACES WHERE TO GO AND STAY."

We need a grocery store OR a farm would be nice to educate local people / kids about food & nature!

"THE SMELL IN THE NEAR BY AREAS IS UNBEARABLE SOME TIMES"

"OUR ENVIRONMENT IS AFFECTED BY THE OPERATIONS OF THE TREATMENT PLANT"

EXISTING SITUATION



"DIVERSIFY LIVE/WORK OPPORTUNITIES"

Mixed income housing is important. Don't concentrate new public & low-income housing

"COULD WE SWIM IN THE CREEK?"

"I'D LIKE TO LEARN MORE ABOUT THE WATER, THE ENVIRONMENT AND WAYS TO CLEAN IT UP. IF I COULD GET A JOB DOING THAT, I COULD WORK NEAR THE CREEK."

EXISTING SITUATION



"WILL THE COST AFFECT THE NEAR BY COMMUNITIES?"

TREATMENT WETLANDS

"COULD WE RELOCATE THE TANKS AWAY FROM HOUSES?"

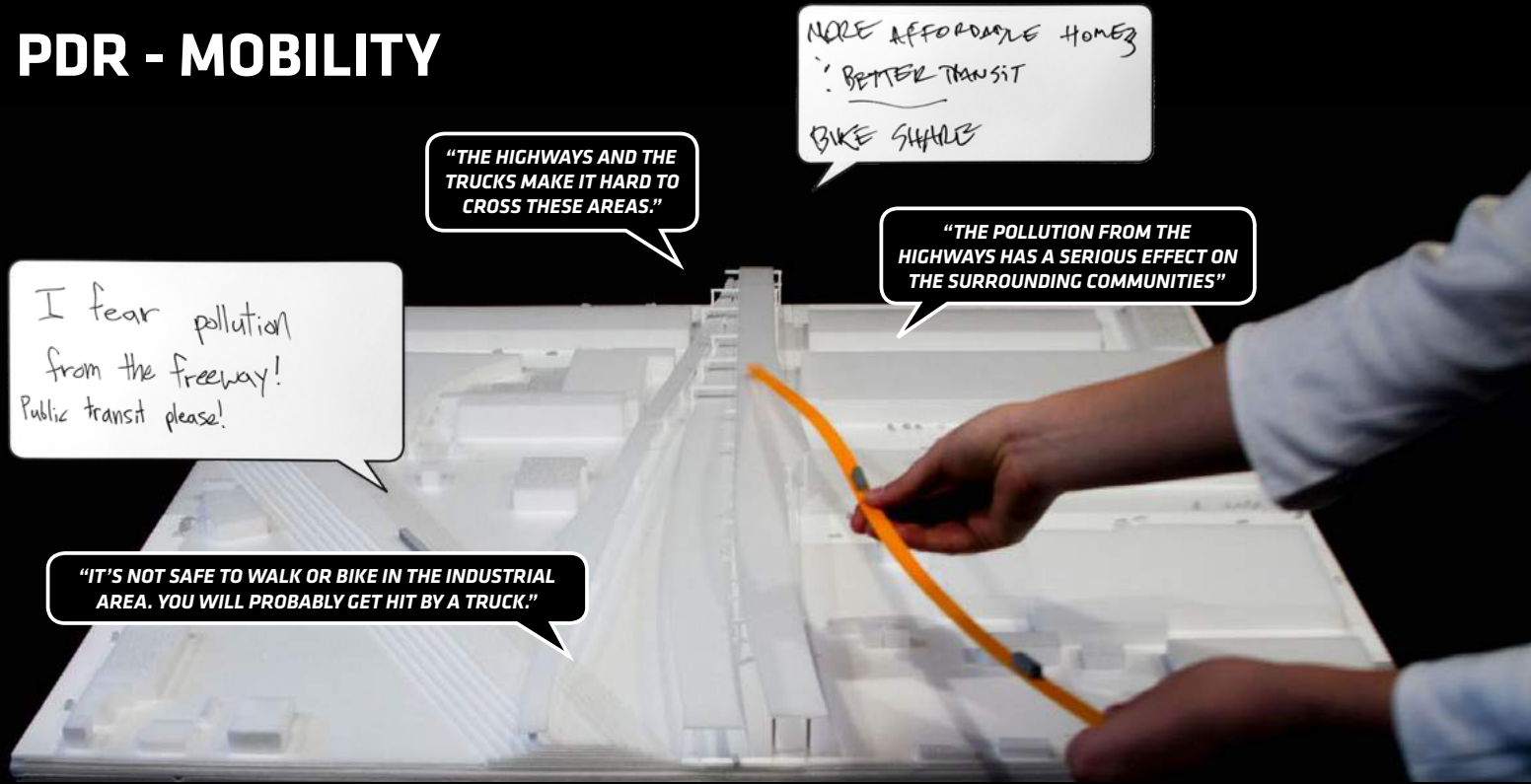
"WE'D LIKE MORE OUTDOOR AND INDOOR SPORTS AREAS"

"WHY DON'T WE COVER THE TANKS WITH A PARK?"

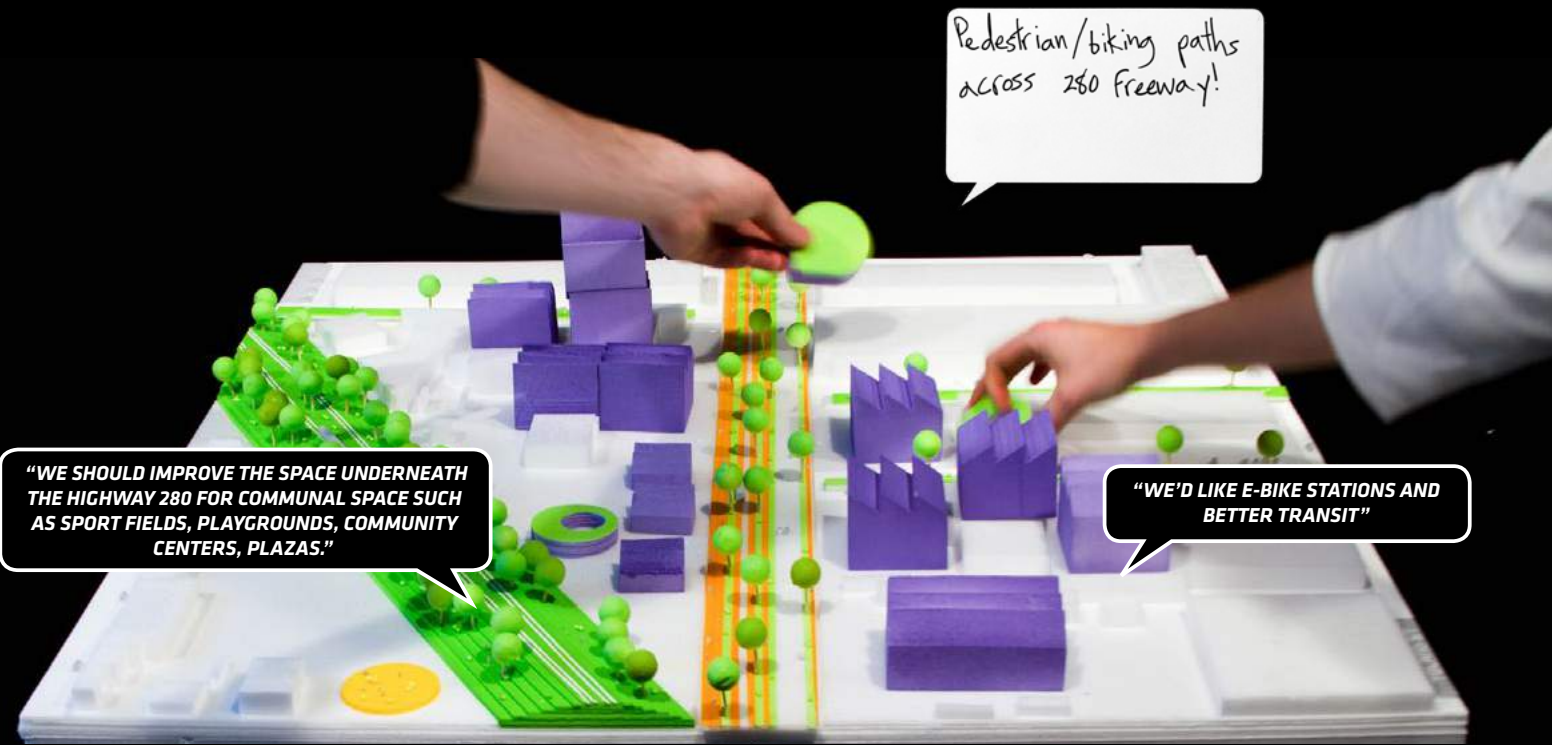
POTENTIAL SOLUTIONS

POTENTIAL SOLUTIONS

PDR - MOBILITY



EXISTING SITUATION



POTENTIAL SOLUTIONS

PDR - CREEK



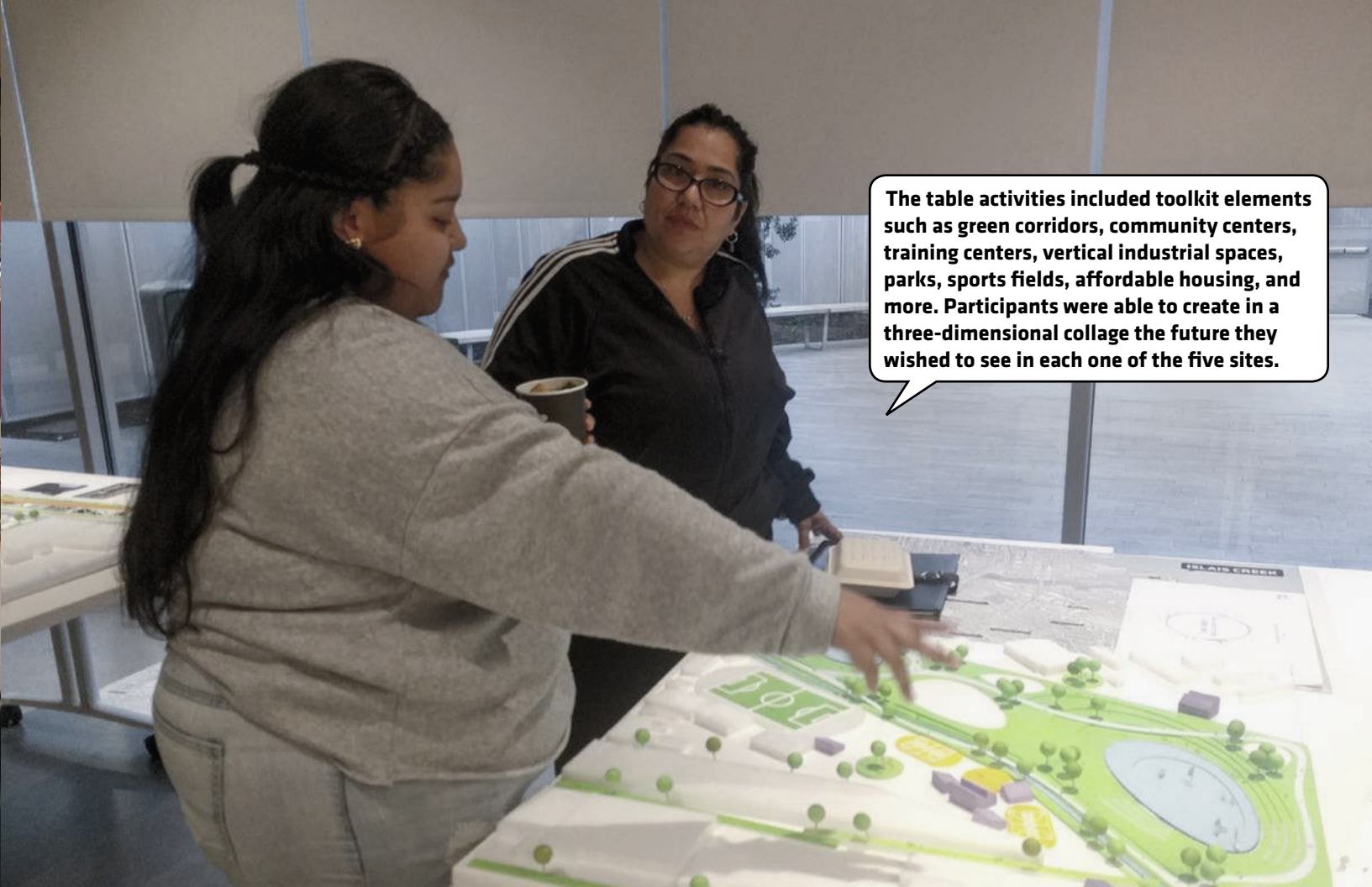
EXISTING SITUATION



POTENTIAL SOLUTIONS



The models were showcasing various options for each site: Starting from the existing conditions, the participants were able to build and transform each site in various configurations.



The table activities included toolkit elements such as green corridors, community centers, training centers, vertical industrial spaces, parks, sports fields, affordable housing, and more. Participants were able to create in a three-dimensional collage the future they wished to see in each one of the five sites.



Each table was equipped with maps showing climate and urban risks in the area and relevant information for each site. In addition, boards with photos for each site were used to familiarize the participants with locations they might have not visited in the past.



In addition to the five break-out tables with the physical model activity, the team prepared boards to communicate the history of the site, existing conditions, and future risks. The participants were able to give their input through expressing in writing their 'Hopes & Fears' on the boards.

ACTIVITY 2

TOOLKIT STICKERS

FORMAT

For the second activity, the team prepared large maps of the site which include some of the key landmarks of the area to help participants orient themselves. Our community partners, including APRI, RDJ Enterprises and Resilient Bayview, helped us define the key landmarks and the content of the map. The participants were asked to place toolkit elements on the site to mitigate both environmental and urban stresses and to improve everyday life in Islais Creek Watershed. This exercise sparked conversations and ideas between groups, that were encouraged to draw and sketch directly on the map.

During the Youth Event on March 28th the maps were looking at the entire Islais Creek basin, while during the workshops on April 4th and 5th the maps were focused around specific sites that corresponded to the physical models. These areas included:

1. Pier 80
2. Pier 90-96
3. Waste Water Treatment Plant
4. PDR / Mobility
5. PDR / Creek

KEY FINDINGS

At the end of the first round of activities, the team reviewed all the notes that have been collected and analyzed maps to document input and suggestions. The team focused on identifying the areas of interest for each group and the locations where each group has placed strategies to Protect, Restore, Connect, or Grow. The analysis of the maps and the documentation of each suggestion helped the team distill some of the key findings of this round and carry forward some of the most inspiring ideas such as an Islais Creek shuttle, marine biology museum, and fish market!

Some of the recommendations included:

- Aquarium
- Marine Biology Museum
- Fish Market
- Creek Shuttle
- Homeless Centers
- Skate Park
- Community Centers
- Green areas on the waterfront
- Indoor and Outdoor Sports Facilities



APRIL 5TH - DOGPATCH PUBLIC WORKSHOP - PIER 90-96 TABLE



APRIL 5TH - DOGPATCH PUBLIC WORKSHOP - WWTP TABLE



APRIL 5TH - DOGPATCH PUBLIC WORKSHOP - PIER 80 TABLE



MARCH 28TH - YOUTH EVENT -STUDENT GROUP 1



APRIL 5TH - DOGPATCH PUBLIC WORKSHOP - MOBILITY TABLE



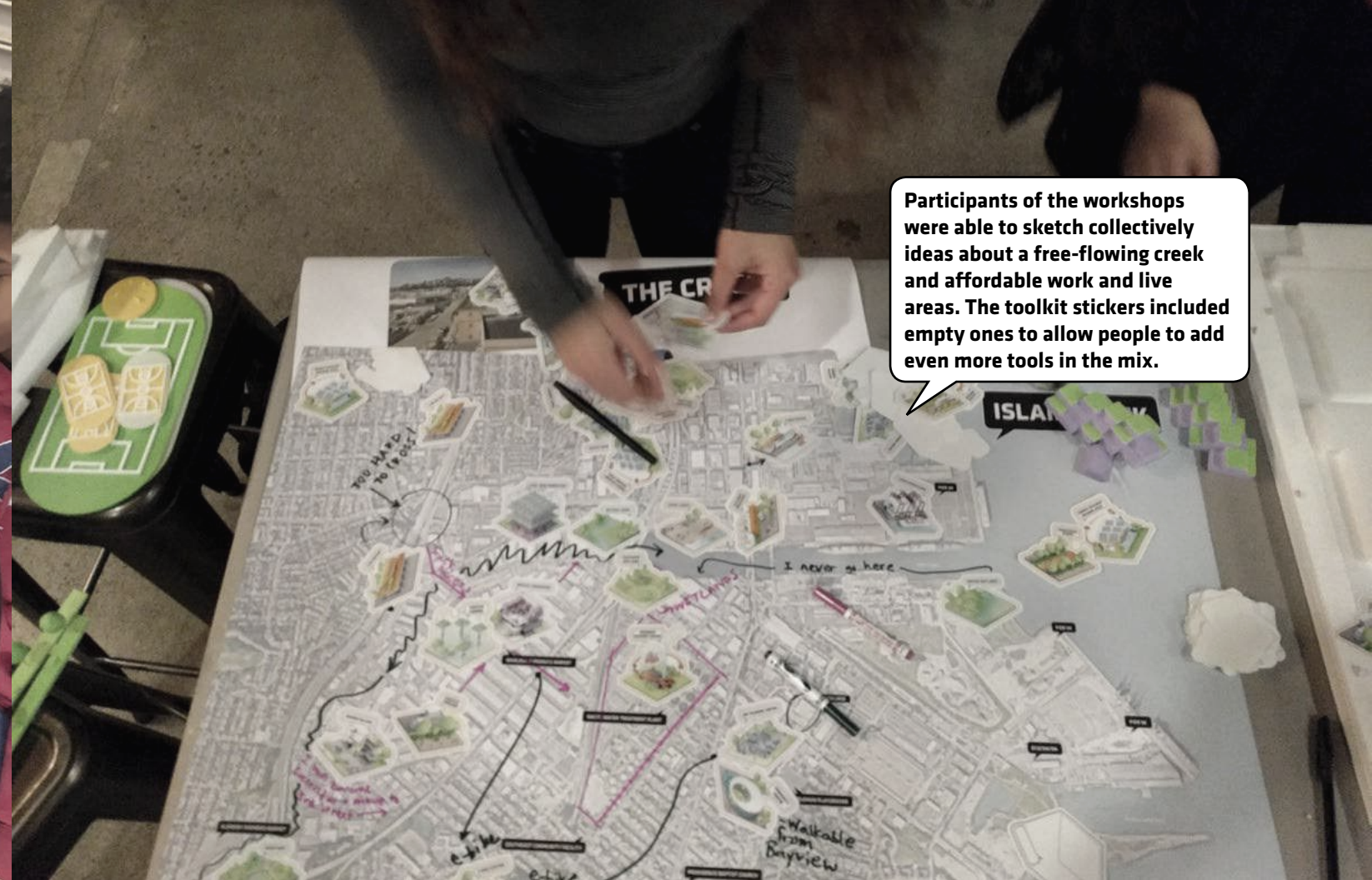
MARCH 28TH - YOUTH EVENT -STUDENT GROUP 2



APRIL 5TH - DOGPATCH PUBLIC WORKSHOP - PDR / CREEK TABLE



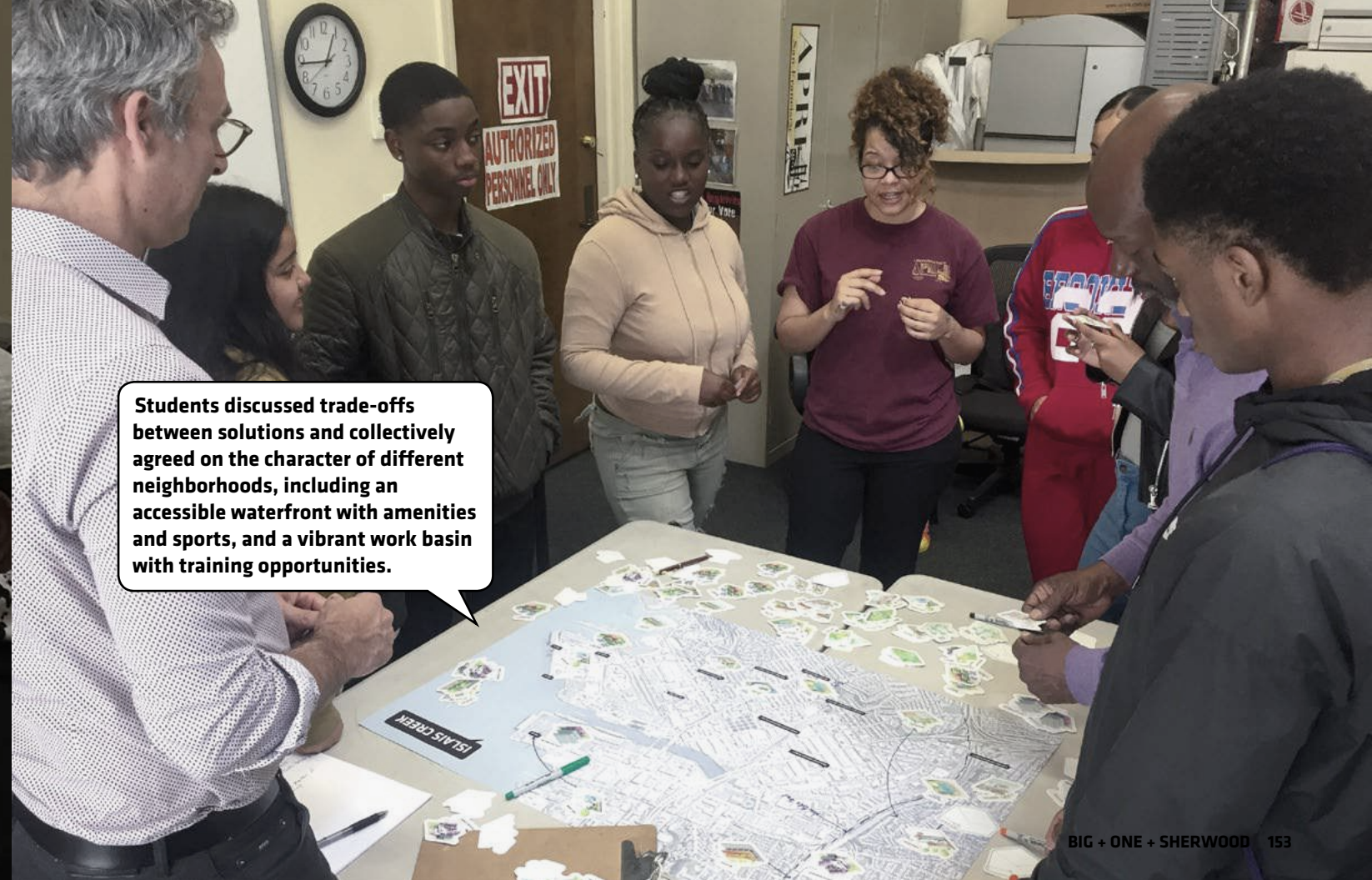
MARCH 28TH - YOUTH EVENT -STUDENT GROUP 2



Participants of the workshops were able to sketch collectively ideas about a free-flowing creek and affordable work and live areas. The toolkit stickers included empty ones to allow people to add even more tools in the mix.



At the end of the Sticker Map activity each student group presented to the rest of the participants their vision for the area, helping spark even more great ideas in the larger group.



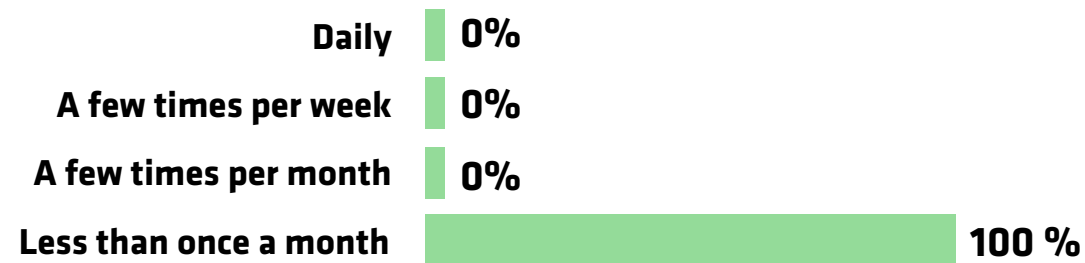
Students discussed trade-offs between solutions and collectively agreed on the character of different neighborhoods, including an accessible waterfront with amenities and sports, and a vibrant work basin with training opportunities.

DO YOU VISIT ISLAIS CREEK?

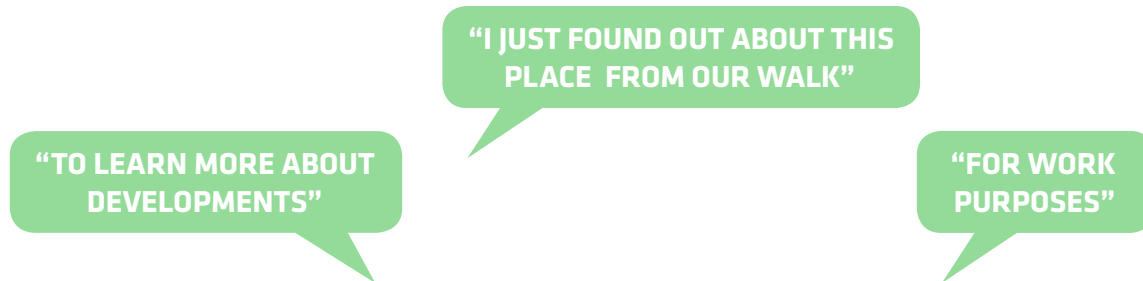
✓ 37.5 %

✗ 62.5 %

IF YES, HOW OFTEN?



IF YES, WHY?



IF NO, WHY?



MARCH 28TH
LEARNING ABOUT OUR CHANGING CLIMATE WITH HIGH SCHOOL STUDENTS: 16 STUDENTS, AGES 13-19

WHAT SHOULD WE PROTECT, RESTORE, CONNECT OR GROW IN THE AREAS AROUND ISLAIS CREEK?

PROTECT

Fish and Community From Water
Natives
From garbage and waste.
Art, Park, Aquariums
Skate Parks
People from dying
Natural Coast
The Bayview
Recreation Centers, Youth Learning Centers, Music, Marine Biology
Art Centers, Music, Rec Centers
Job Training, Housing
Art Centers
The people
Community
History
Employment

RESTORE

Parks and Community Center
The Water Plant
Old Buildings
Waterfronts
Housing
Location
Food, the creek
River Park
Islais Creek
Restoring Natural Habitats
Natural Habitats
Community Buildings
Natural Habitats
The world
Habitats
Daylighted Creek
Economy
Public space
Trust
Social Conflict

CONNECT

More Space
Everybody's life
T-train and E-bikes
Roads
Community
Tourists
Community
Bikes
Community
The downtown area with centers / shelters
Youth and Transportation
Transportation
Youth with programs and each other
Transportation
Each other
Pedestrian / Bike Paths
People

GROW

Food and Plants
APRI
More plants
Green Areas
Plants
People / Visitors
More plants
Arts District
Environment, such as plants
The connection with people in the community
Recycle Plant
Recycle Plant
Gardens
Recycle Plant
In yourself.
Job Training
Denser (vertical) Industry
Trees
Knowledge

WHAT ACTIVITIES, SPACES, OR SERVICES, WOULD YOU LIKE TO SEE IN OR NEAR ISLAIS CREEK?

Affordable Housing
and a gym/playground

move sports to distract them from dangerous decision

swimming pool, community centers & malls

MUSIC FESTIVALS
Aquariums

plaza (movies, bowling etc).
ROLLER SKATING

Pedestrian/bike access, public transit.
Wetland restoration
habitat, habitat, habitat!

I'D LOVE TO SEE
AN AQUARIUM

I would like to see Recreation centers near my neighborhood

ROUND 1

KEY FINDINGS

TOOLKIT IDEAS

- Protect ●
- Restore ●
- Connect ●
- Grow ●
- Areas of Interest □
- Suggestions ●

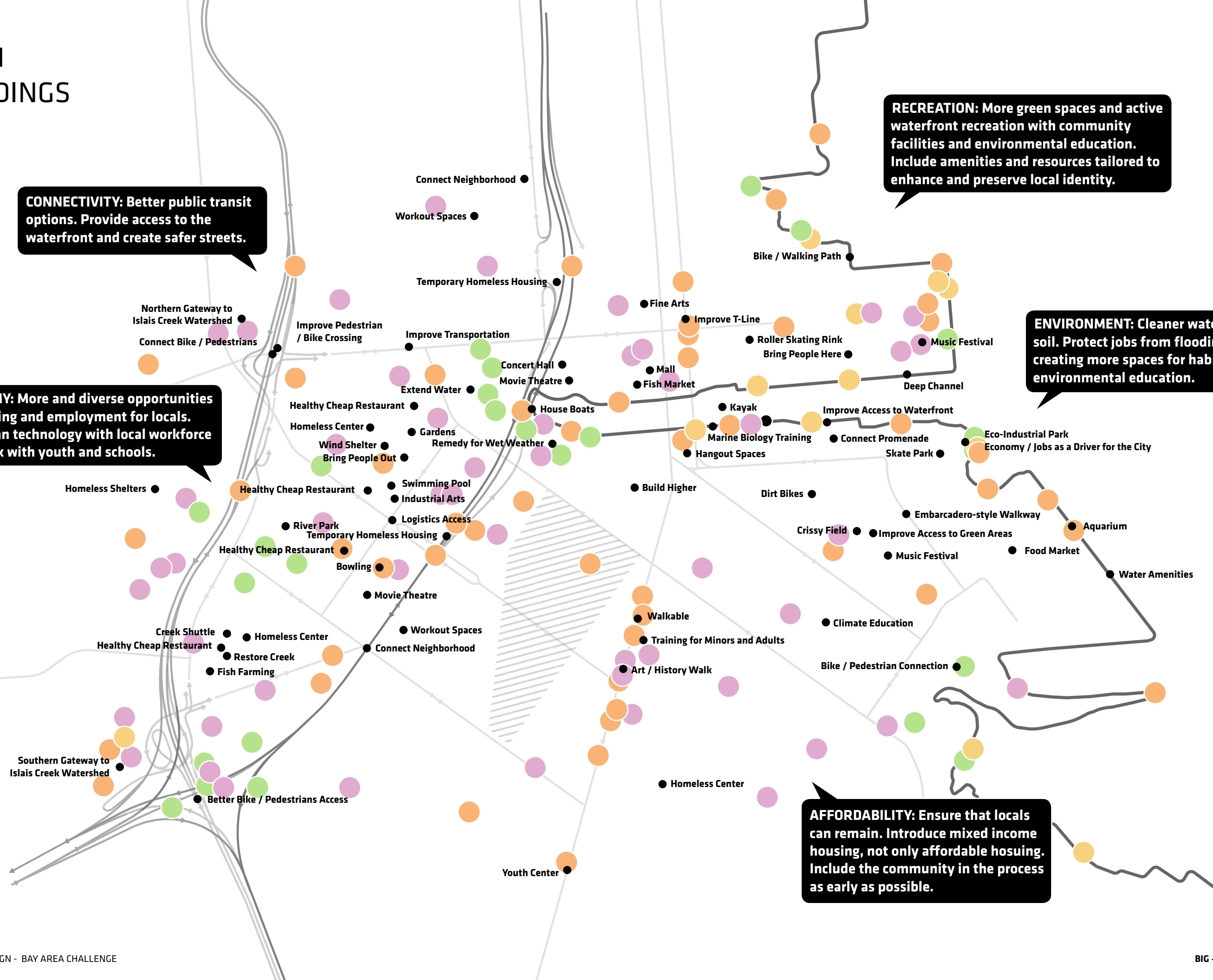
CONNECTIVITY: Better public transit options. Provide access to the waterfront and create safer streets.

RECREATION: More green spaces and active waterfront recreation with community facilities and environmental education. Include amenities and resources tailored to enhance and preserve local identity.

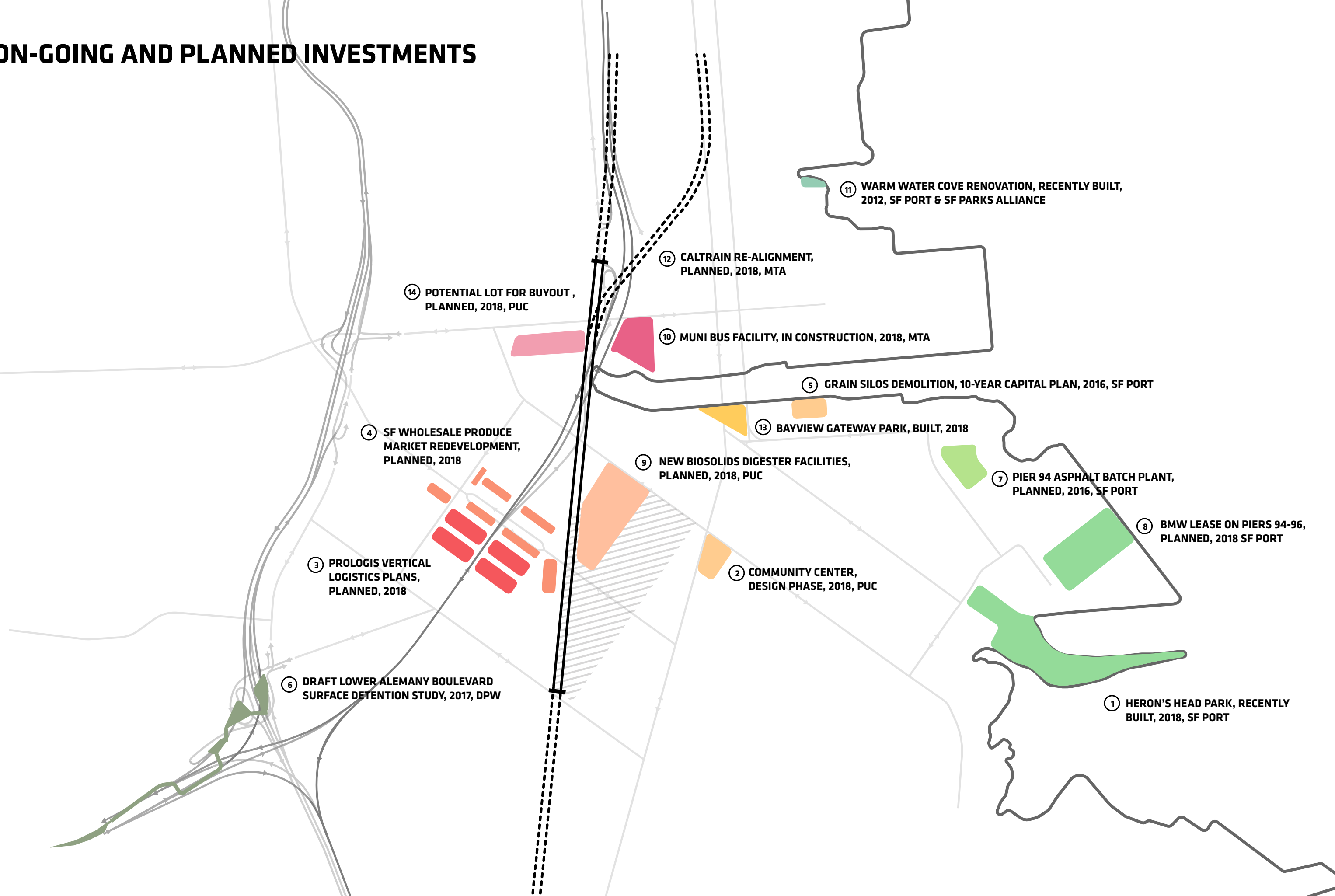
ECONOMY: More and diverse opportunities for training and employment for locals. Link clean technology with local workforce and work with youth and schools.

ENVIRONMENT: Cleaner water, air and soil. Protect jobs from flooding, while creating more spaces for habitat and environmental education.

AFFORDABILITY: Ensure that locals can remain. Introduce mixed income housing, not only affordable housing. Include the community in the process as early as possible.



ON-GOING AND PLANNED INVESTMENTS

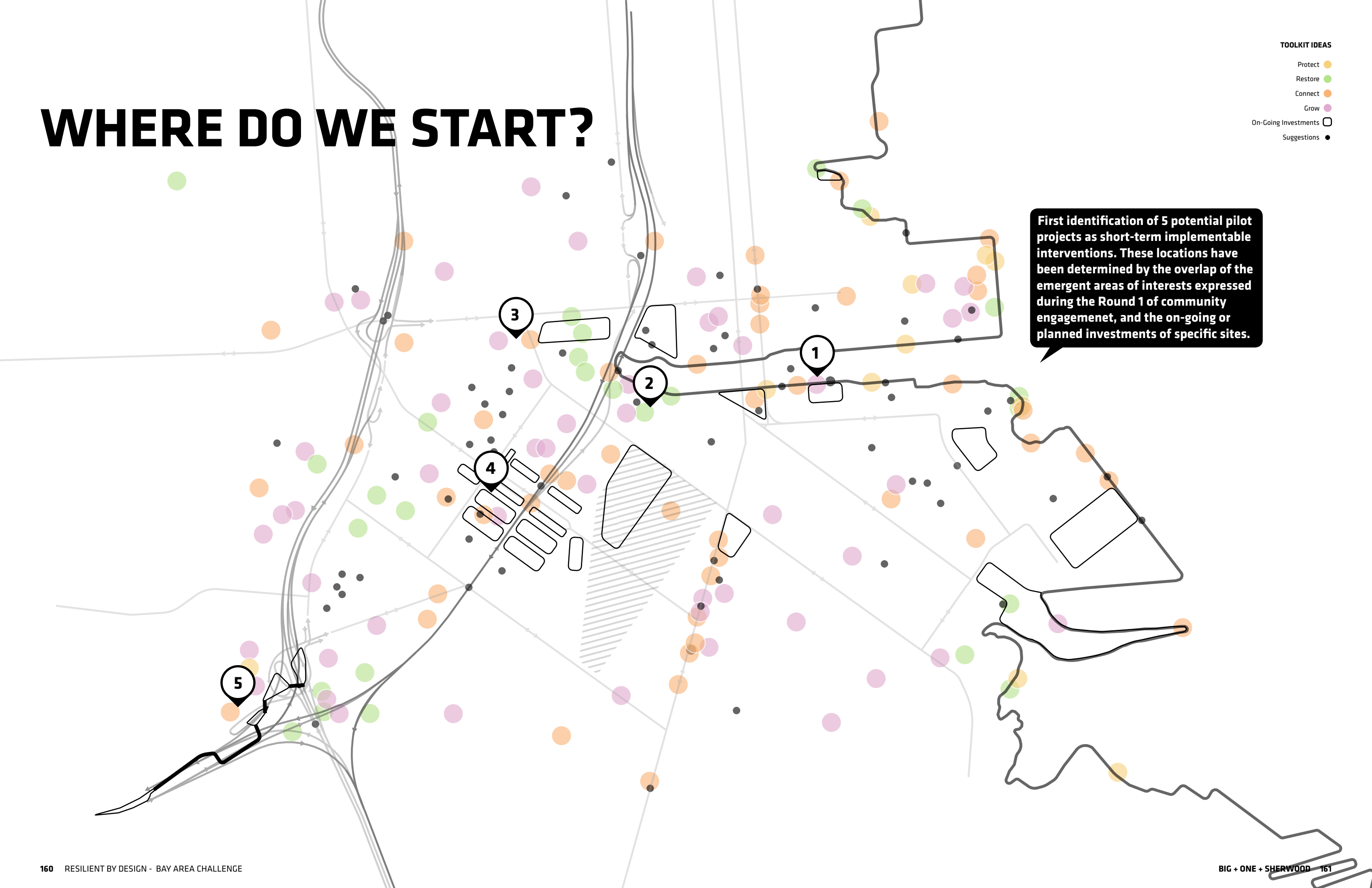


WHERE DO WE START?

TOOLKIT IDEAS

- Protect ●
- Restore ●
- Connect ●
- Grow ●
- On-Going Investments □
- Suggestions ●

First identification of 5 potential pilot projects as short-term implementable interventions. These locations have been determined by the overlap of the emergent areas of interests expressed during the Round 1 of community engagement, and the on-going or planned investments of specific sites.



ROUND 2

COMMUNITY ROUNDTABLES

ROUND 2 GOALS

The second round of engagement aimed to gather feedback and suggestions from local stakeholders, business owners and community leaders regarding potential pilot locations. The team has prepared print material, such as sections, photographs and sketches of potential locations, as they arise from our previous conversations and planned and on-going projects in the area. The goal of the activity was also to identify potential champions and sponsors for each pilot that would have the capacity to be responsible for overseeing, guiding, and advancing the proposal. This round included a second youth event and three charrettes, each focused on one of the three key topics that were identified in the previous round.

YOUTH EVENT

On April 25th, the team with the help of APRI, organized a second event with the students to discuss possibilities for projects and ideas about programming and education within those pilots. The students were able to comment on the proposed areas and ideas in a more informal setting, conducive to a more in-depth discussion.

COMMUNITY ROUNDTABLES

On April 25th and 26th, the team held three public charrettes, hosted at Laughing Monk Brewing in Bayview-Hunters Point, focusing on three different topics. The charrettes were held in an informal setting to allow guests the chance to unwind and enjoy some food after their work-days. The format included a presentation of the site and its challenges, in addition to the research and community engagement thus far.

Six pilot concepts were then presented to the groups to gather feedback and discuss in an open dialogue. Each charrette was approximately two hours and yielded forthcoming and valuable information that the team has synthesized into the evolution of the pilot projects. The discussion and feedback were supplemented by survey cards handed out at the end. Members from the BVHP, Dogpatch, Potrero Hill, and India Basin communities, in addition to some from public agencies such as DPW and non-profits such as Sierra Club and Audubon Society, joined our design team to discuss the challenges of building resilience into the Islais Creek watershed as well as capturing and communicating the community's desires and concerns.

PARKS & OPEN SPACE

Through a mediated discussion and data gathered from the attendees through survey cards, community members were able to address their wishes and concerns for the future of Islais Creek. These included, primarily, a focus on disentangling existing transportation systems to be friendlier to cyclists and pedestrians, and naturalizing the waterfront of the existing creek to create public spaces and parks. Participants also discussed concerns about impacting existing and future wildlife habitats through introduced ecologies, expressing a desire for biodiversity and a variety of ecosystems to boost the health of the waterbody. There was also a strong sentiment to make public spaces inclusive through a sense of ownership. The feedback was overwhelmingly in support of shoreline retreat, creek daylighting, habitat restoration, and access to open space.

ENVIRONMENTAL JUSTICE, INFRASTRUCTURE, & HEALTH

The participants of this charrette had a clear wish to center conversations around affordability, gentrification, and the potential for displacement with uncontrolled new development brought in by attractive, property value-raising public spaces like waterfront

parks (affordability of potential commercial development included). A poignant and important question arose that the team is still grappling with concerning gentrification and community culture: How does one retain the culture and community in the face of increased attractiveness? Attendees also raised common concerns regarding the accessibility and ease of transportation, from the 3rd Street corridor to the highway interchanges where traffic accidents including with cyclists often occur.

AFFORDABILITY, ECONOMICS, & WORKFORCE DEVELOPMENT

Participants raised concerns about external environmental factors that should inform a potential park's design, including overflowing waste infrastructure, flooding as a result of highway runoff, necessary cleanup for a revitalized creek-bed, the potential for earthquakes, and more. They also wondered what corridors to new public spaces would look like, and how adjacent neighborhoods, presently disconnected, could be joined together in a more networked system while preserving the overall cultural identity of the Port and PDR. The discussion involved encouragement to take the vision further when imagining and designing for future growth and connectivity.

WHAT ACTIVITIES, SPACES, OR SERVICES, SHOULD WE PROTECT ON THE PROPOSED PILOT SITES?

CREATE ACCESS FOR PEOPLE OF COLOR & THOSE WITH ECONOMIC CHALLENGES. SPACE NEEDS TO RECOGNIZE THE CULTURAL DIVERSITY OF BAYVIEW HUNTERS POINT & PROTECT

Habitat, wetlands, mudflats for wildlife

When designing adaptation it would be very useful to seek the greatest ecological services that can be achieved in your designs. *

Important Bird habitat already being restored by the Audobon - Waterfront Access, - build off of by adding land in future

WHAT ACTIVITIES, SPACES, OR SERVICES, WOULD YOU LIKE TO SEE START AND GROW FROM THERE?

Floodable ball fields, Bball courts → streets blog has precedents (Ask Roger!)

REPLICATE PARKS & OPEN SPACES THAT PROTECT CULTURAL IDENTITY & DIVERSITY OF PEOPLE OF COLOR

Awareness, piloting/building on marshland restoration to then utilize strategies w/ rest of waterfront property

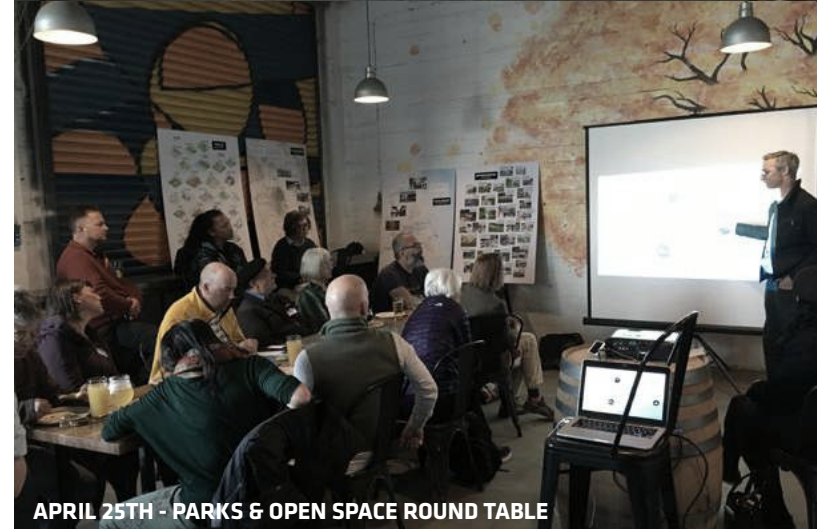
preserve some wild places where there is diminished human presence. The Bay used to be wild wetlands



APRIL 25TH - YOUTH EVENT



APRIL 25TH - PARKS & OPEN SPACE ROUND TABLE



APRIL 25TH - PARKS & OPEN SPACE ROUND TABLE



APRIL 25TH - YOUTH EVENT



APRIL 26TH - AFFORDABILITY, ECONOMICS, & WORKFORCE ROUND TABLE



APRIL 26TH - EJ, INFRASTRUCTURE, & HEALTH ROUND TABLE



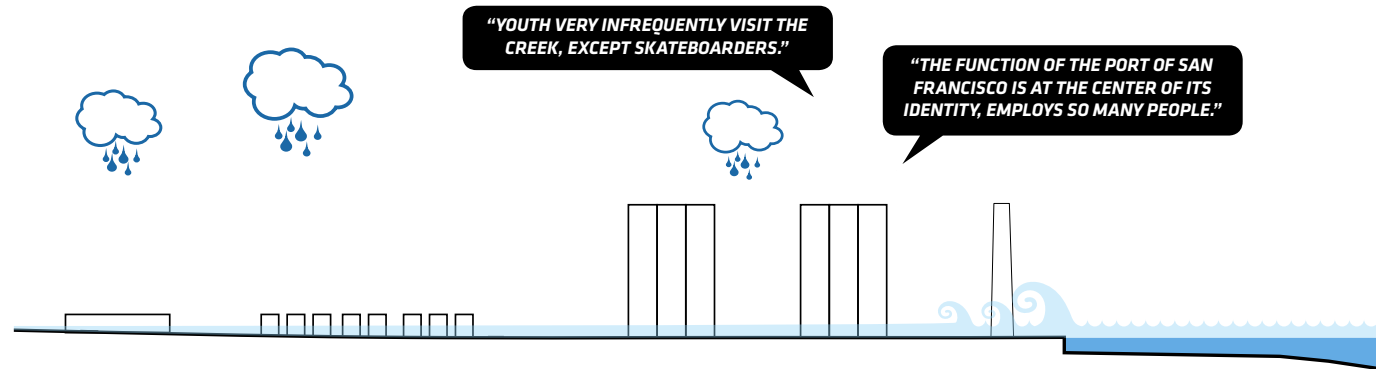
APRIL 26TH - AFFORDABILITY, ECONOMICS, & WORKFORCE ROUND TABLE



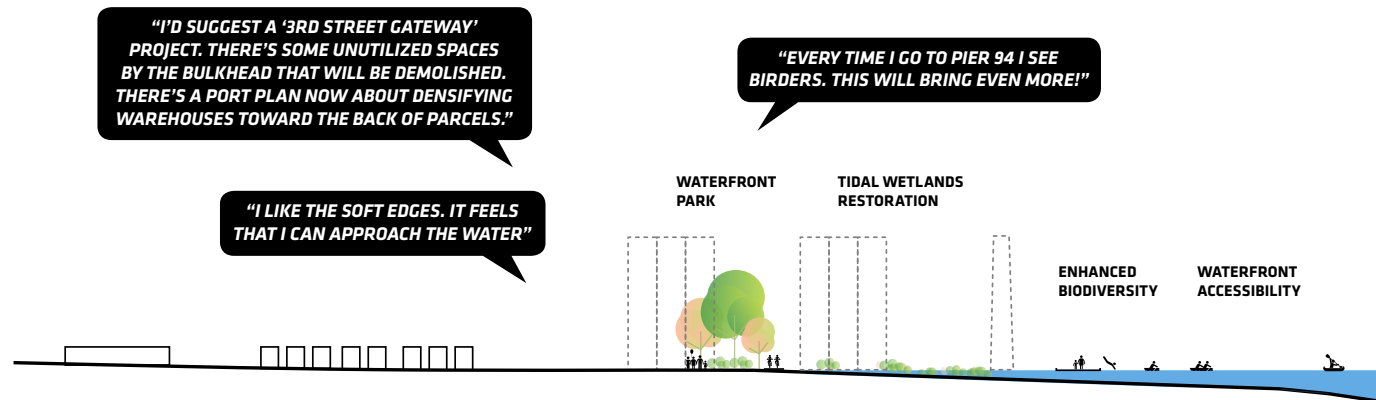
APRIL 26TH - EJ, INFRASTRUCTURE, & HEALTH ROUND TABLE

POTENTIAL PILOT 1

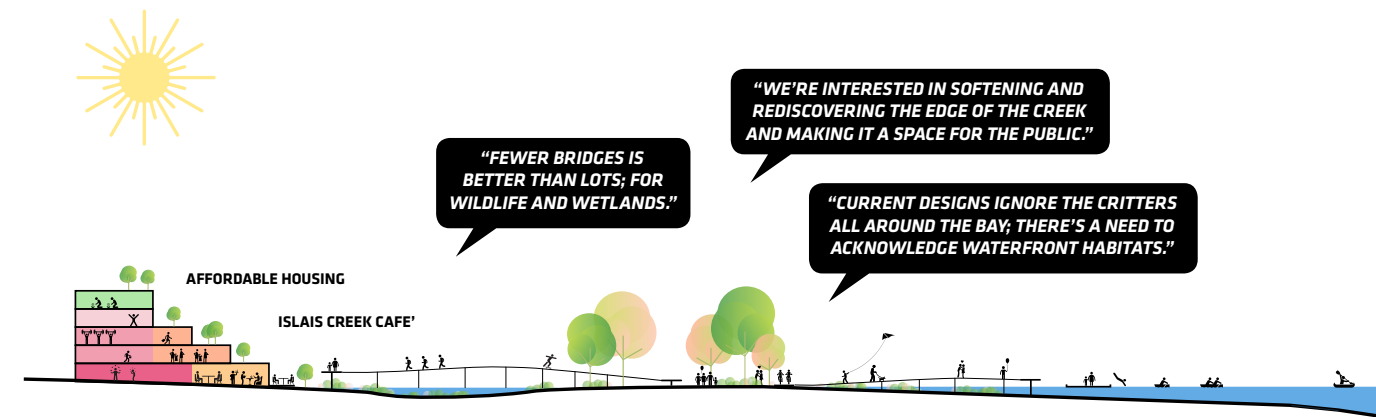
PIER 90



CLIMATE CHALLENGES



LANDSCAPE INTERVENTION



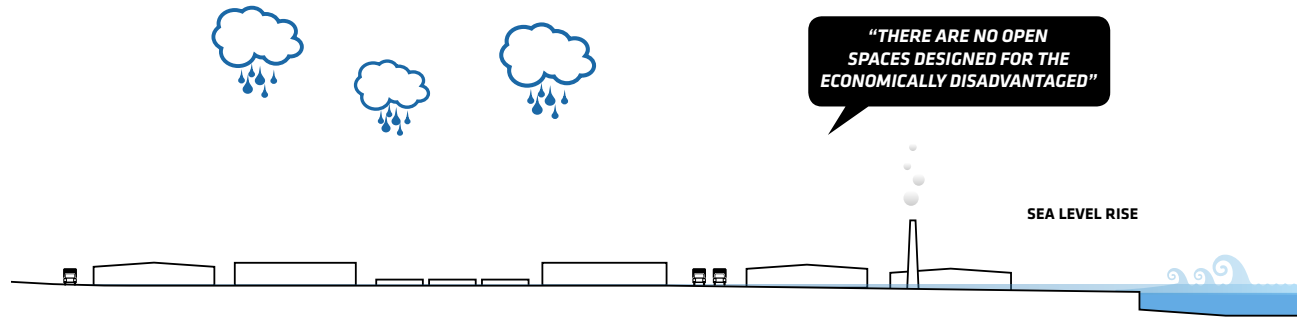
GROWTH

For a pilot project on Pier 90, participants suggested as potential driver the SF Port. A project here could help improve ecology, resource recovery, public realm, and adaptability.

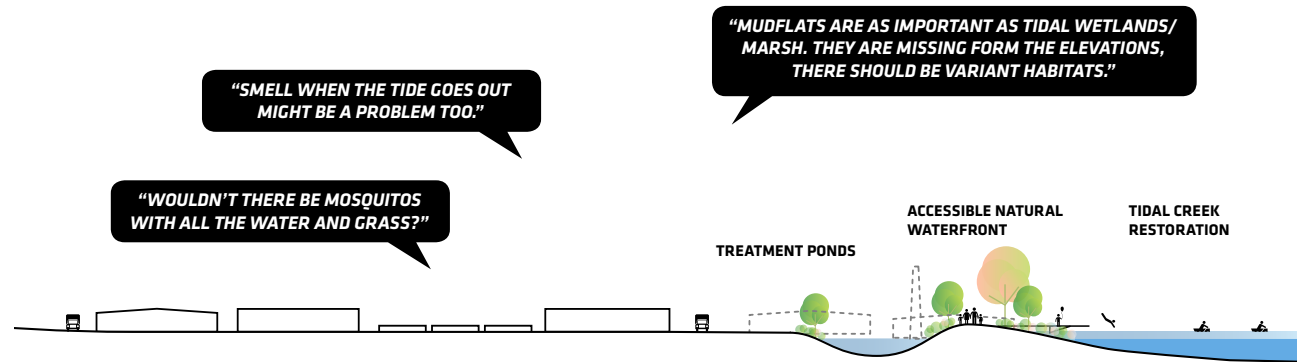


POTENTIAL PILOT 2

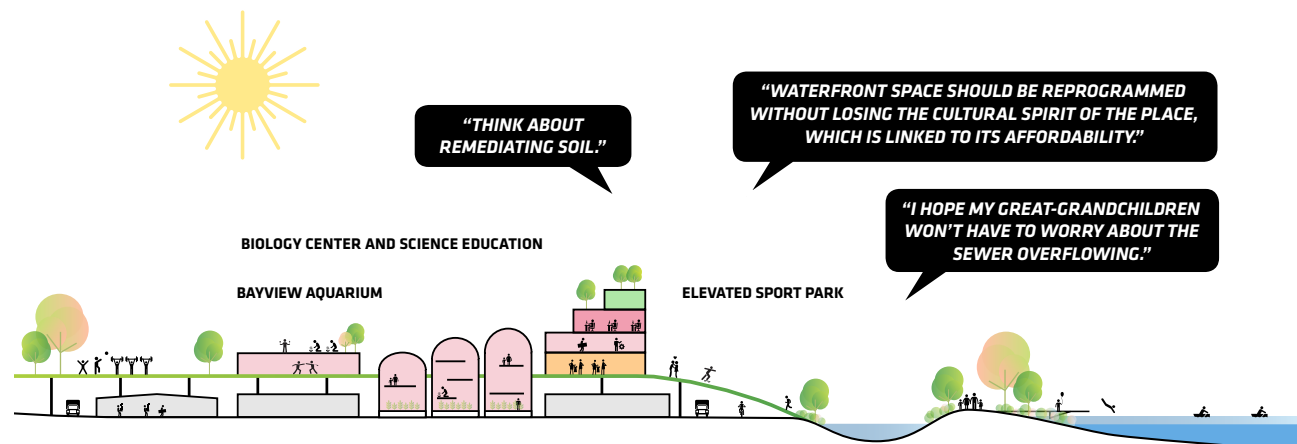
SOUTHEAST PLANT



CLIMATE CHALLENGES



LANDSCAPE INTERVENTION



GROWTH



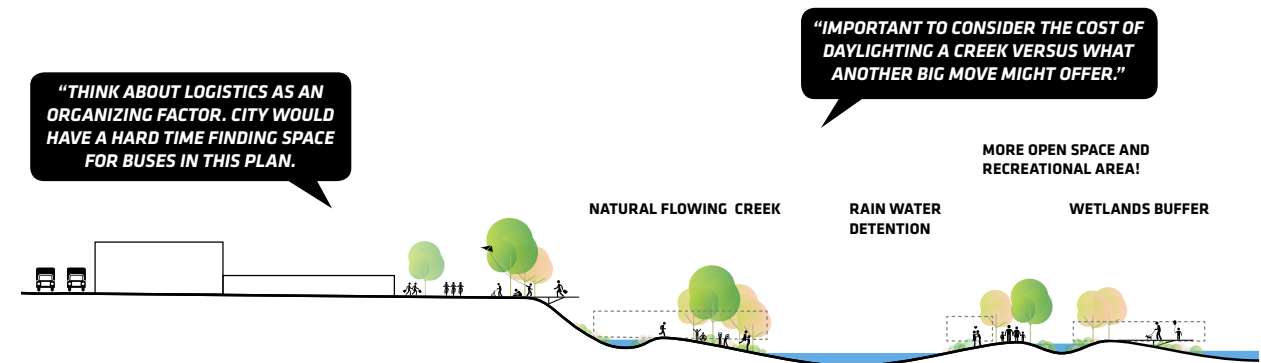
For a pilot project near the Treatment Plant, participants suggested as potential driver the SFPUC. A project here could help pilot a living levee to help with coastal infrastructure, storm water infrastructure, waste water infrastructure, jobs, identity.

POTENTIAL PILOT 3

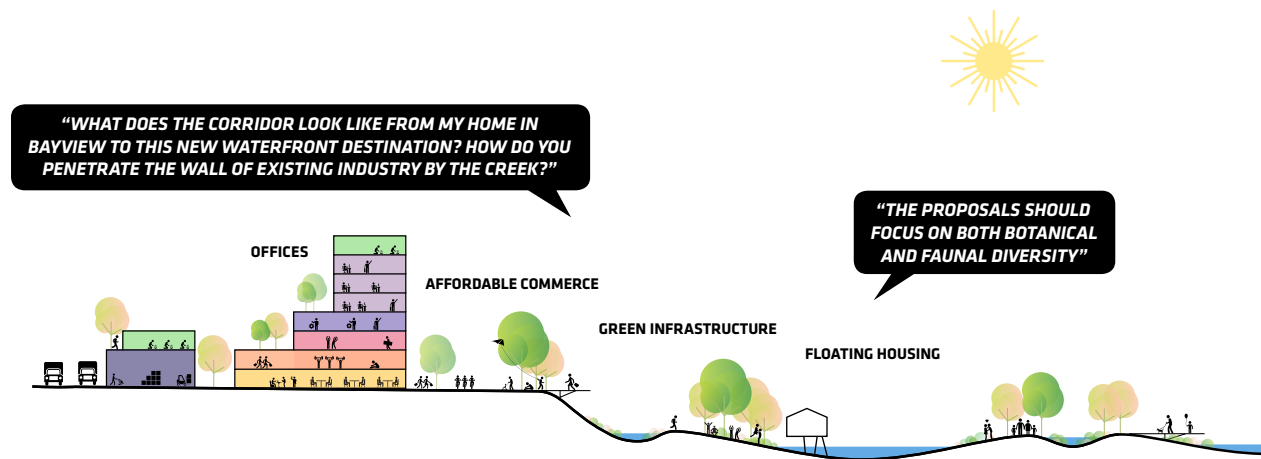
CESAR CHAVEZ CORRIDOR



CLIMATE CHALLENGES

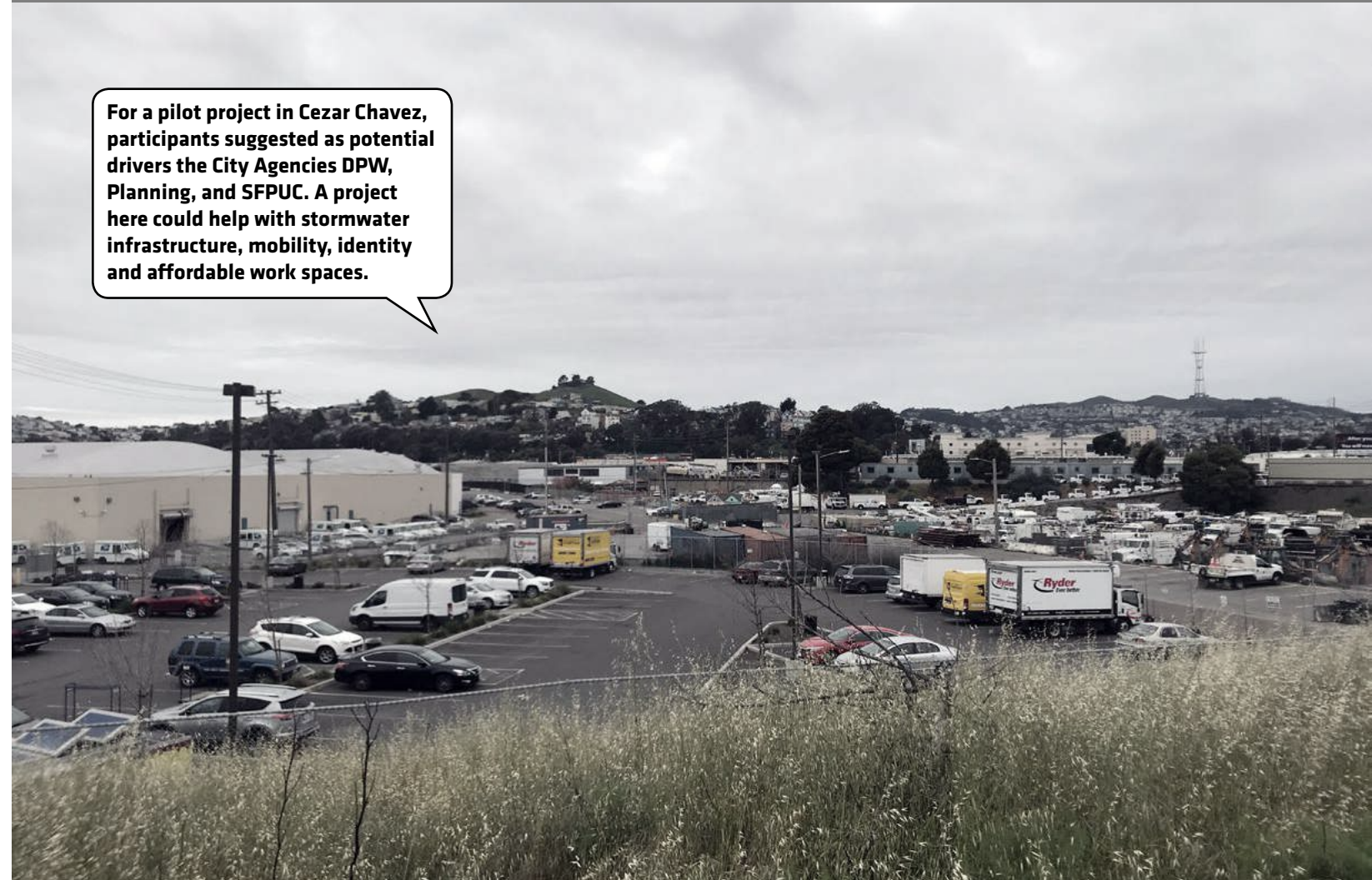


LANDSCAPE INTERVENTION



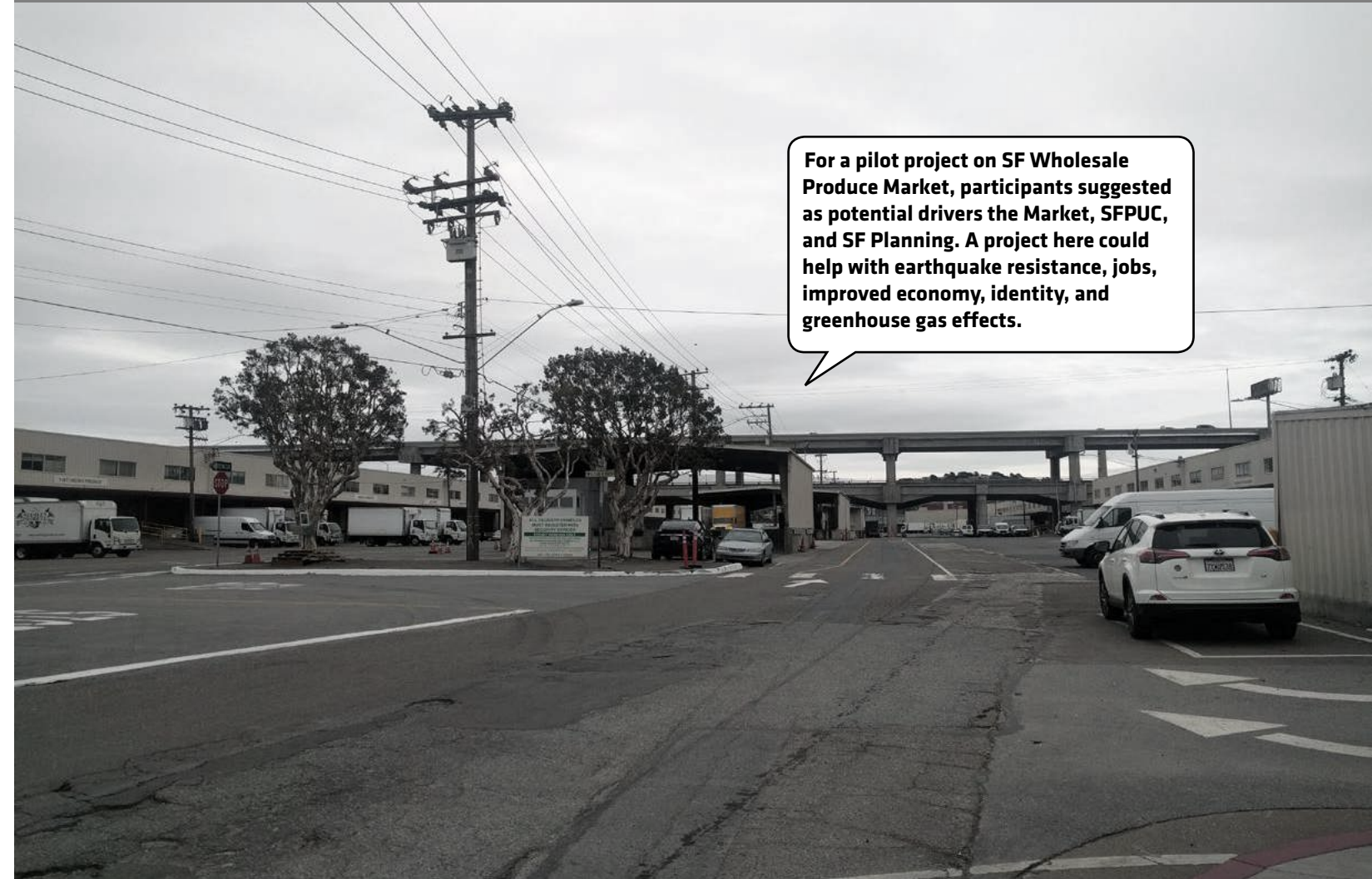
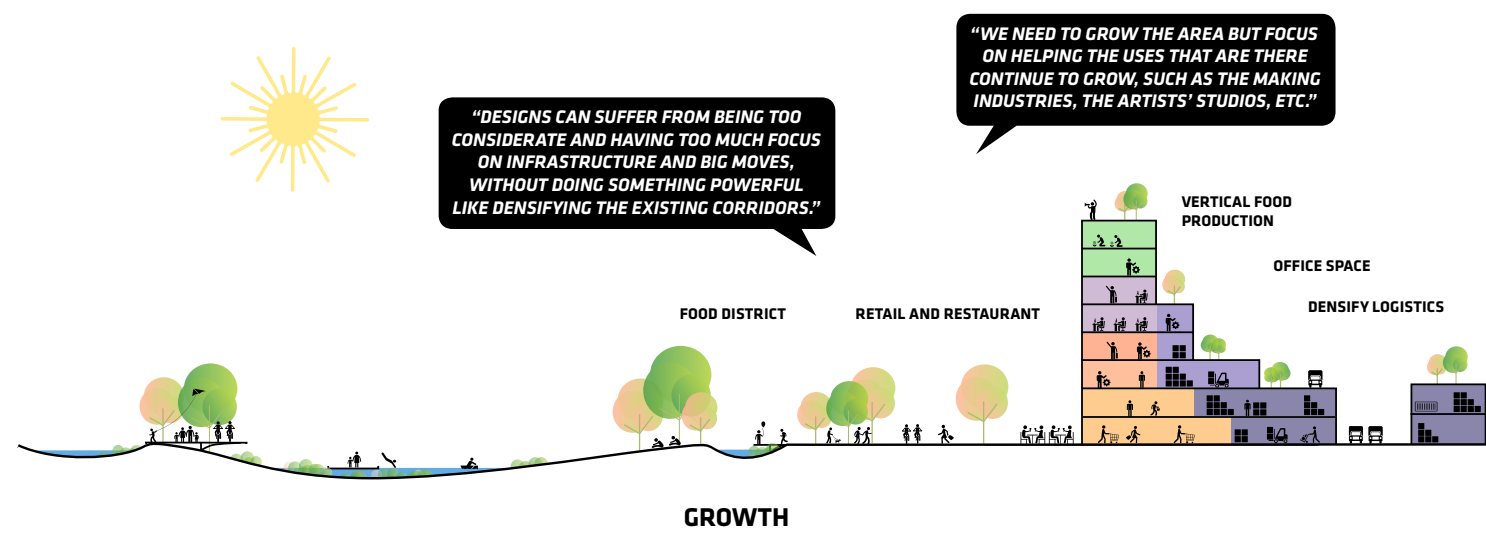
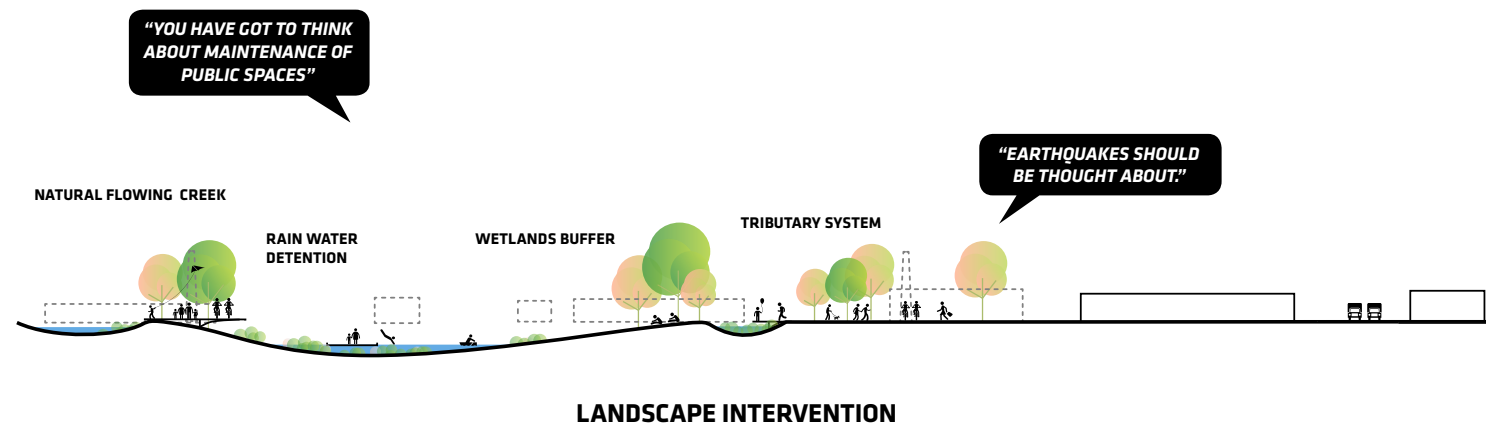
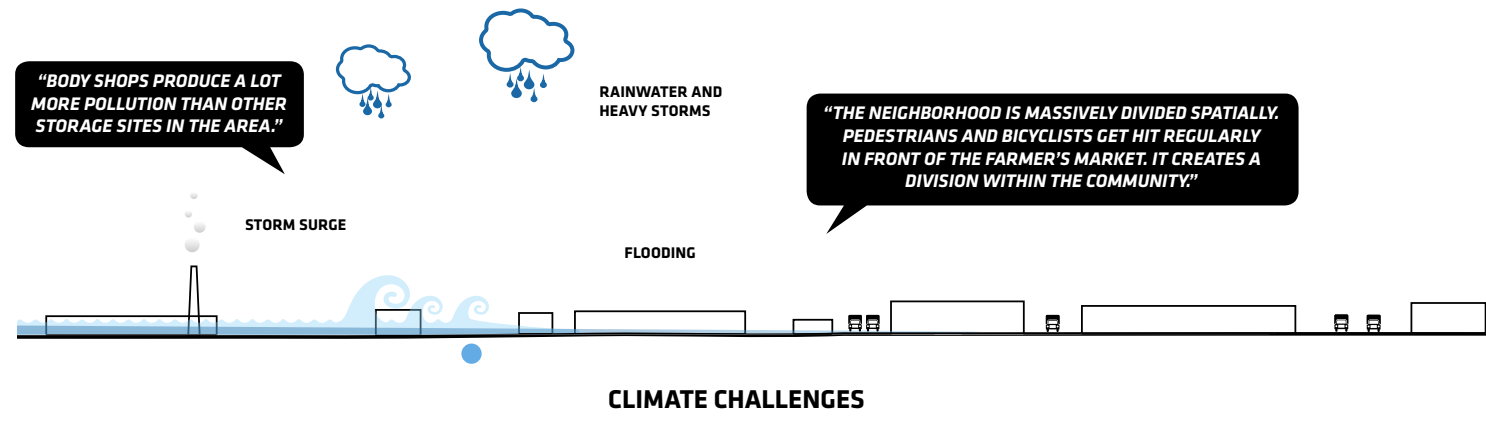
GROWTH

For a pilot project in Cesar Chavez, participants suggested as potential drivers the City Agencies DPW, Planning, and SFPUC. A project here could help with stormwater infrastructure, mobility, identity and affordable work spaces.



POTENTIAL PILOT 4

SF WHOLESAL PRODUCE MARKET

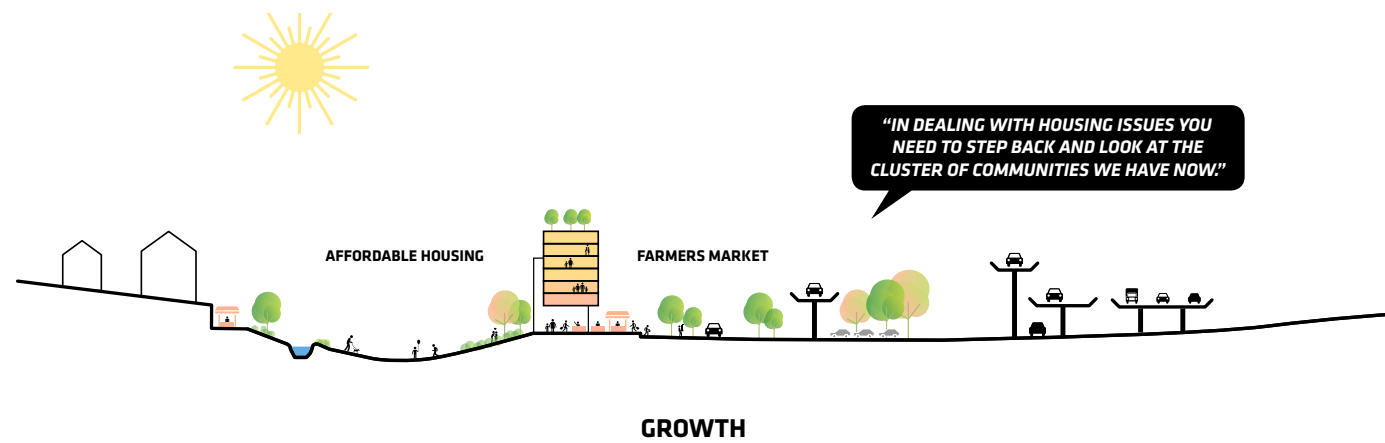
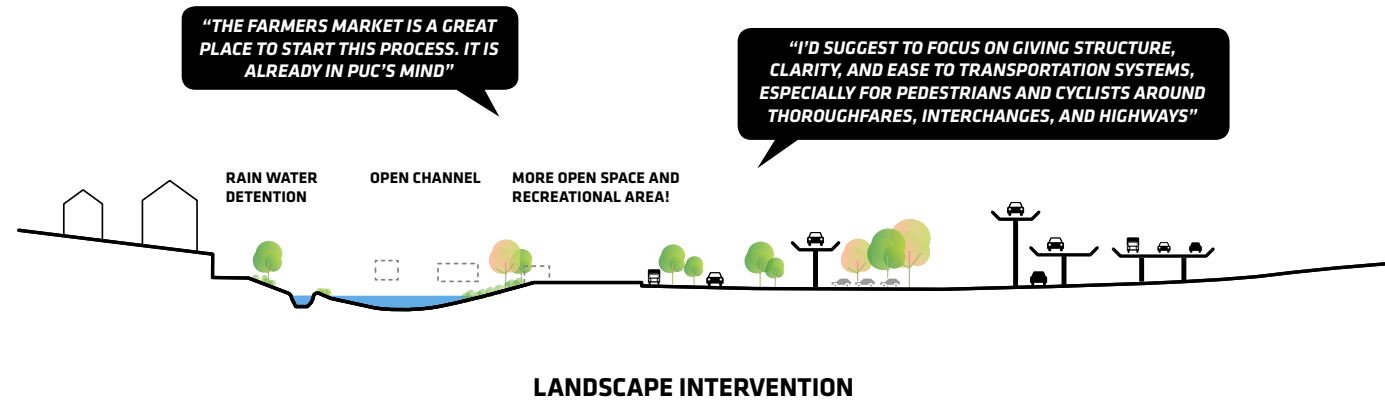
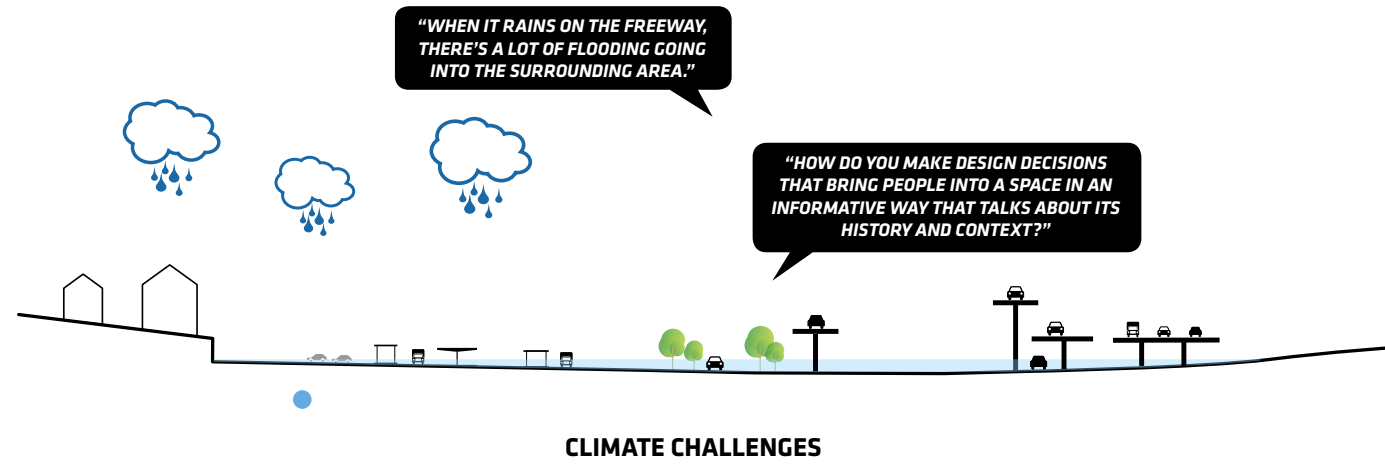


For a pilot project on SF Wholesale Produce Market, participants suggested as potential drivers the Market, SFPUC, and SF Planning. A project here could help with earthquake resistance, jobs, improved economy, identity, and greenhouse gas effects.



POTENTIAL PILOT 5

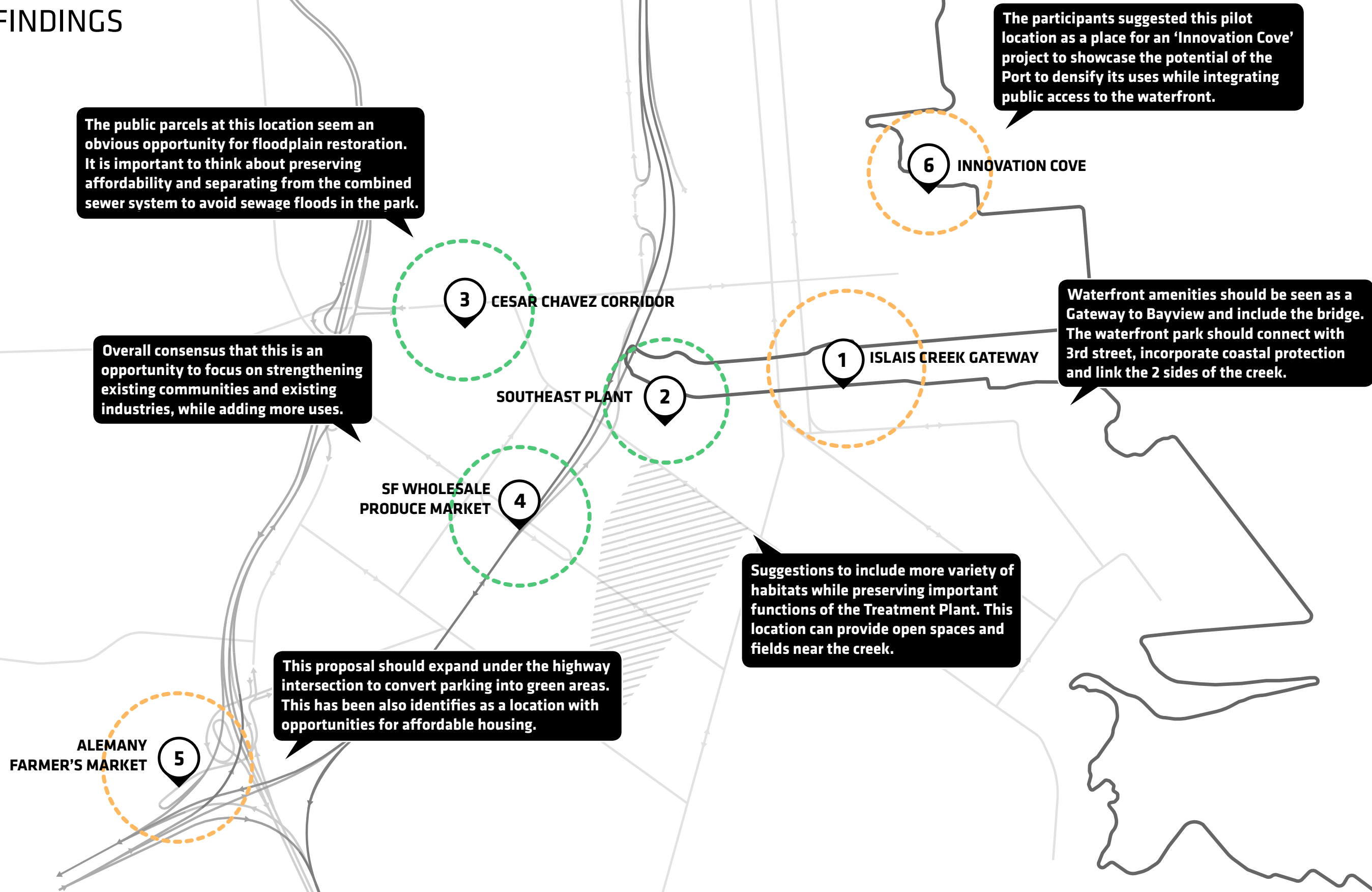
ALEMANY FARMERS MARKET



For a pilot project in Alemany Farmers Market, participants suggested as potential drivers the District 9 Supervisor, Caltrans, and SFPUC. A project here could help with stormwater capture/flood reduction, traffic safety, housing.

ROUND 2 KEY FINDINGS

LEGEND
 Areas of Interest [dashed box]
 Suggestions [black dot]
 Positive Feedback [green square]
 Suggestions [orange square]



6 PILOT PROJECTS

SHORT-TERM IMPLEMENTATION

LIVING WITH WATER
AT ALEMANY FARMERS MARKET 5

SF FOOD DISTRICT
AT PDR BASIN 4

RIVER PARK
AT CESAR CHAVEZ CORRIDOR 3

LIVING LEVEE
AT SEP 2

ISLAIS CREEK GATEWAY
AT PIER 90 1

INNOVATION COVE
AT PIER 80 6

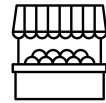
ISLAIS CREEK GATEWAY

AT PIER 90



GOAL

- FLOOD MANAGEMENT
- COASTAL PROTECTION
- TIDAL MARSH RESTORATION
- ACCESSIBLE WATERFRONT
- RESOURCE RECOVERY



PROGRAM

- RECYCLE WATER USES
- WETLANDS BUFFER
- SHORELINE PARK
- STORMWATER DETENTION
- OUTDOOR FACILITIES
- 3RD STREET BRIDGE



CHAMPIONS

- SF PORT
- DPW



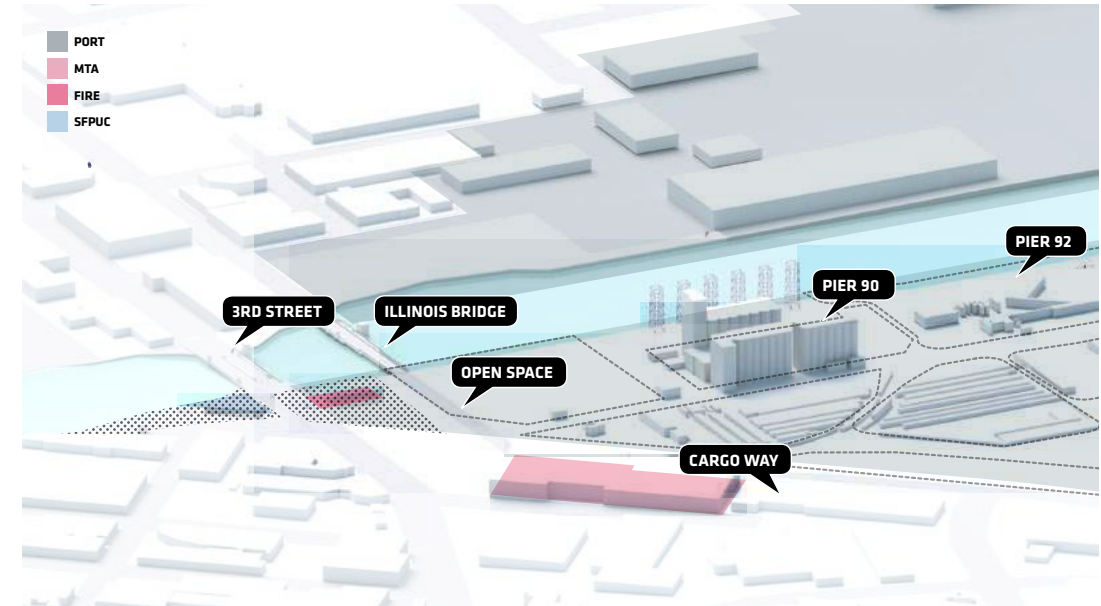
FUNDING OPPORTUNITY

- MEASURE AA
- DPW CAPITAL PLANNING

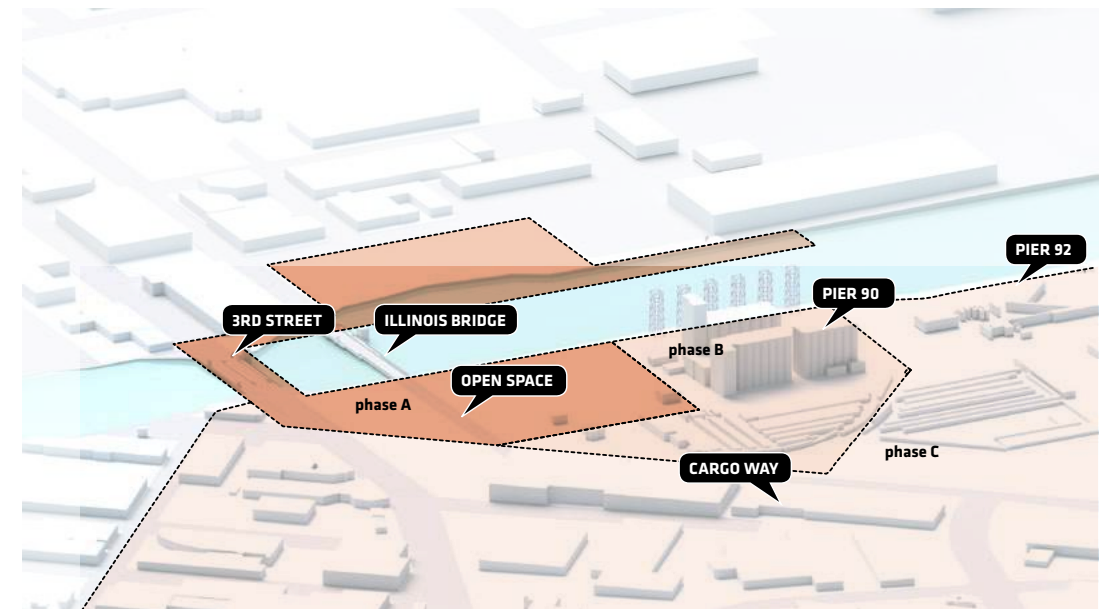
At Pier 90, underutilized lands can be naturalized into a soft-shoreline to adapt to rising sea levels and to better handle storm flows throughout the area. This pilot will create an expanded Gateway park to the Bayview and space for stacked vertical industry alongside working spaces near the iconic grain silos, kicking off a longer-term naturalization of the creek's southern edge. Building on the recent improvements on the southern side of Islais Creek's crossing with 3rd Street, such as the skatepark and the kayak launch, the Port and its partners can develop the underutilized areas east of 3rd street, on Pier 90, into a substantial park with shoreline access, restored wetlands, neighborhood amenities, and a ferry station.

Islais Creek Gateway will play an important role in strengthening the cultural and functional connections along 3rd Street, which we imagine to be further developed by positioning important program along it. Nearby, for instance, one-story storage facilities can be verticalized so that space is created for other programs, such as clean industrial jobs. The two bridges over the channel should be reassessed for sea level rise adaptability.

Improvements for Islais Creek Gateway will provide an entryway to future developments on the Port's properties. The consolidation of water-related Port functions on Pier 94 and 96 will reduce the amount of shoreline that needs to be protected by hard infrastructure, and it will generate space for a soft shoreline park. Habitat connections between the park spaces and the soft shorelines will increase the ecological benefits in the area. While the future use of the 'Backlands' can include, in the nearer term, a stormwater basin that can double as festival grounds while still providing emergency staging area, future developments along Cargo Way can be extended further into the Port areas.



LAND OWNERSHIP



PROPOSED PROJECT PHASING



A. POTENTIAL SHORT-TERM PROJECT



C. POTENTIAL MID-TERM PROJECTS



B. POTENTIAL MID-TERM PROJECTS



D. LONG-TERM VISION



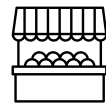
LIVING LEVEE

AT SOUTHEAST PLANT



GOAL

- FLOOD MANAGEMENT
- COASTAL PROTECTION
- ENHANCED WATER QUALITY
- NUTRIENT RECOVERY
- ACCESSIBLE WATERFRONT



PROGRAM

- TREATMENT WETLANDS
- TERTIARY EFFLUENT
- LIVING LEVEE
- PUBLIC SPACE
- URBAN FARMING
- SPORT CENTER
- EDUCATIONAL PROGRAMS



CHAMPIONS

SF PUC



FUNDING OPPORTUNITY

SFPUC 10-YEAR CAPITAL PLAN

At the South-East Plant, natural treatment systems can be piloted along the creek, along with sea level rise adaptation using wetlands to process wastewater, accomplish resource recovery, and tie into a future decking of the plant itself. These interventions can create space for much needed recreation, open space, and educational opportunities for the neighborhood.

On the lots just north of the wastewater treatment plant, the SFPUC can combine community benefits and educational programs with a number of interventions focused on flood protection, water treatment, resource recovery, and urban farming. Successful pilots and greater community acceptance can form the basis of the future integration of the Southeast Plant in Islais Hyper-Creek through nature-based systems. Evolution in treatment efficiency could reduce the footprint of the current plant, build on current and on-going improvements, and help free up space for other functions.

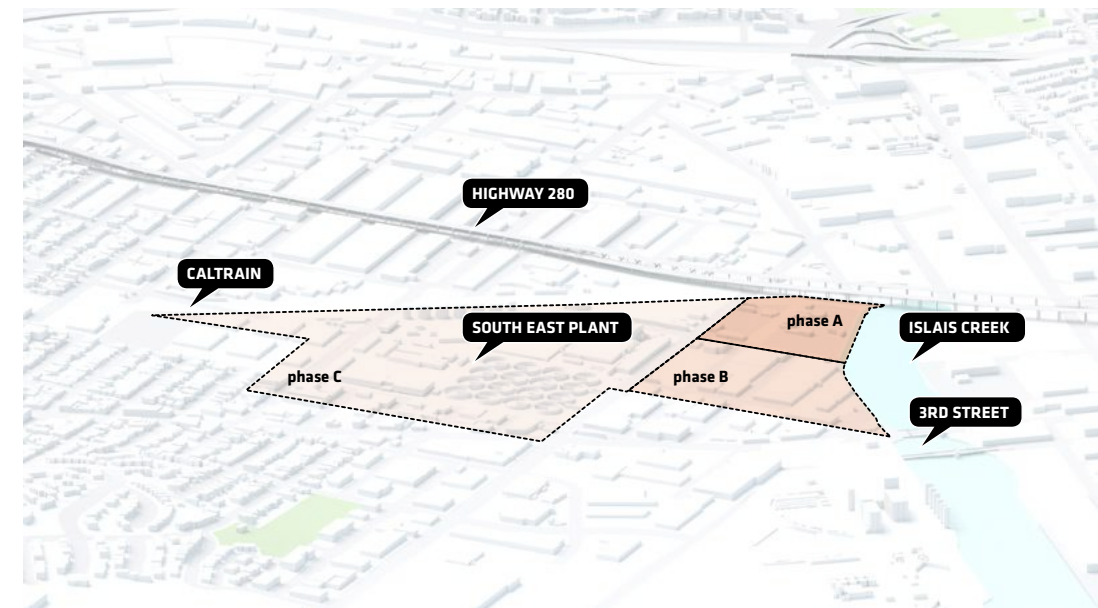
In the longer term, capping over the Southeast Plant (as we now see happening in other cities and at the Oceanside Water Pollution Control Plant in western San Francisco) would remove the treatment plant as an obstacle between the community and the park, reduce its impacts, and allow for new functions like athletic programs to be co-located.



LAND OWNERSHIP



FUTURE PLANS



PROPOSED PROJECT PHASING



A. POTENTIAL SHORT-TERM PROJECT



C. POTENTIAL MID-TERM PROJECTS



B. POTENTIAL MID-TERM PROJECTS



D. LONG-TERM VISION



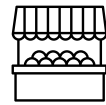
RIVER PARK

AT CESAR CHAVEZ CORRIDOR



GOAL

- FLOOD MANAGEMENT
- COASTAL PROTECTION
- CREEK DAYLIGHTING
- PUBLIC ACCESS
- LOCAL COMMUNIT GROWTH



PROGRAM

- ACCESSIBLE RIVER PARK
- SPORT FACILITIES
- OUTDOOR AMENITIES
- URBAN FARMING



CHAMPIONS

- SF PUC
- DPW



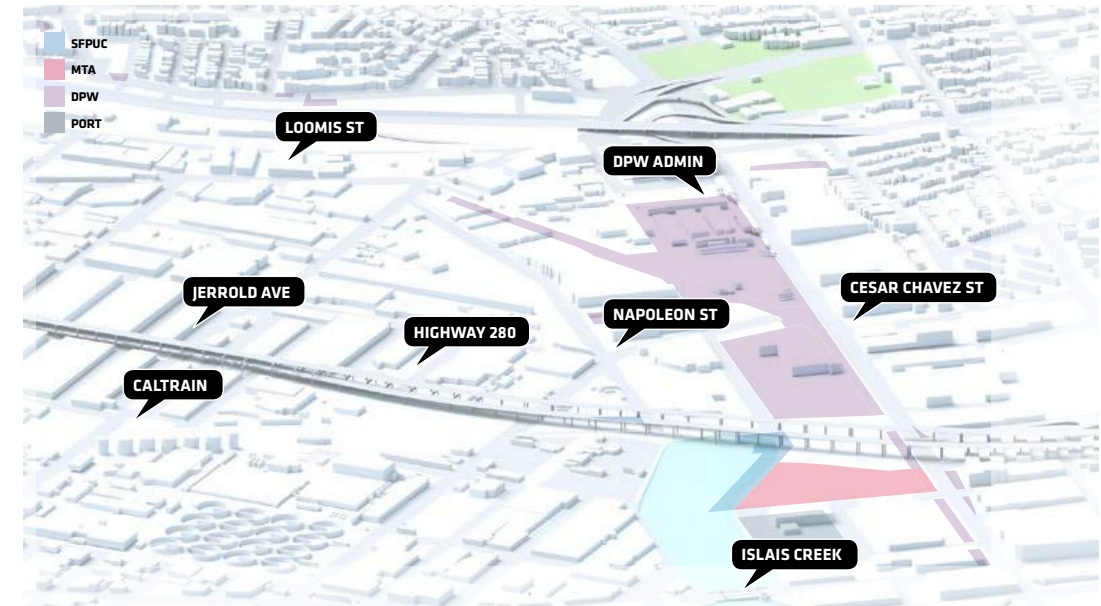
FUNDING OPPORTUNITY

- SFPUC 10-YEAR CAPITAL PLAN

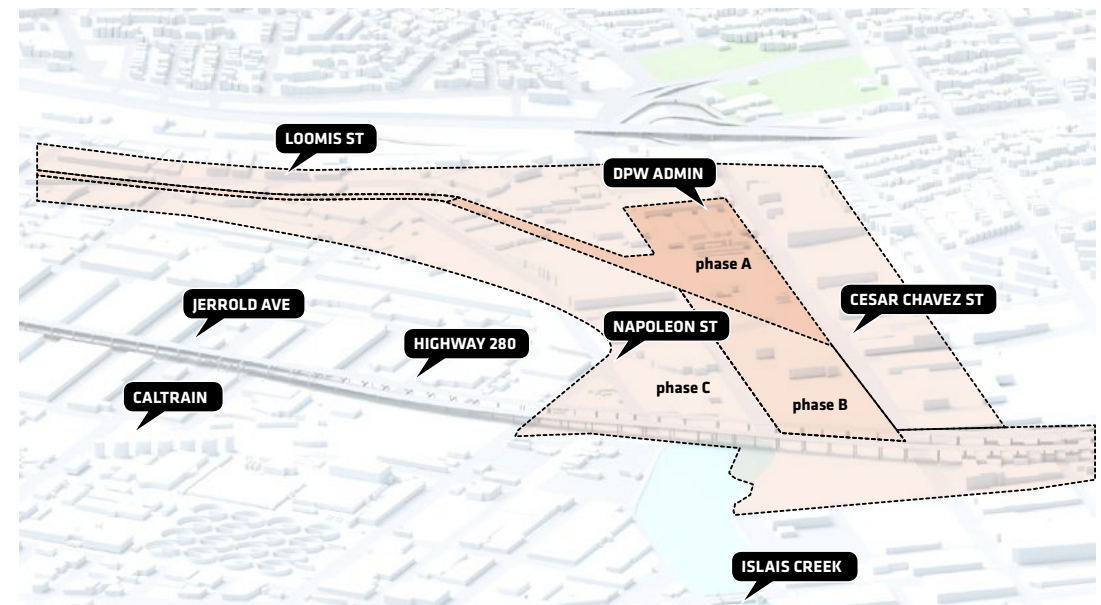
Building upon green infrastructure improvements along Cesar Chavez itself, areas of bio-diverse habitat and water detention can be reintroduced to the neighborhood. This will be the start of a continuous alignment that eventually becomes a restored Islais Creek integrated with significant areas of storage volume to intercept peak flows and spaces for living along its banks.

The predominantly municipally-owned areas south of Cesar Chavez Street, the main east-west connection in the basin, can be re-organized so that space is freed for water management. This pilot could be catalyzed by building upon the temporary SF flower market placement at 2000 Marin Street. Combined with green infrastructure and transportation improvements on Cesar Chavez Street new buildings along Cesar Chavez can have increased density and creek access allowing both space for water and space to grow local industry and identity.

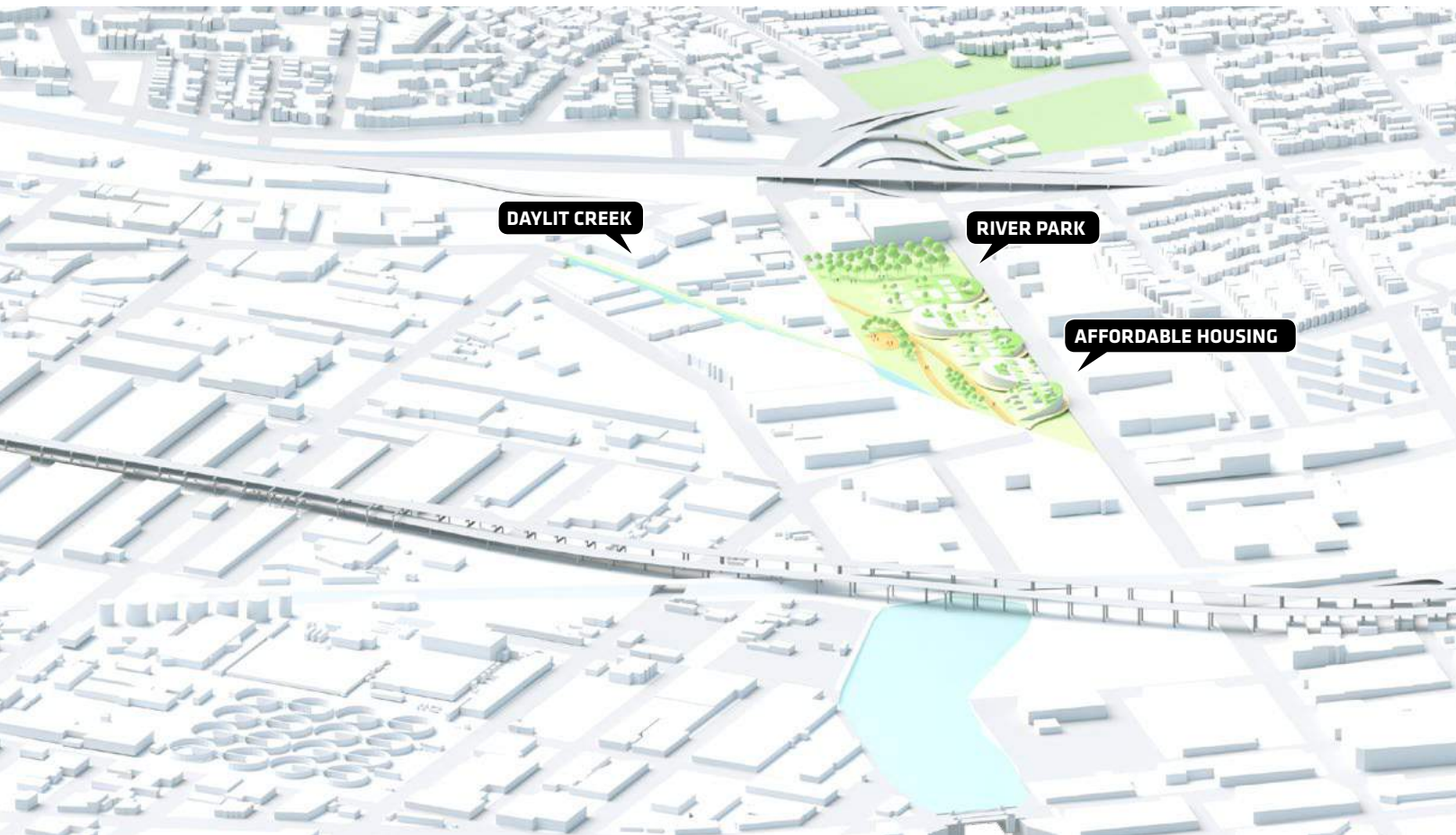
In the longer term, land acquisitions along the alignment of the former creek, combined with consolidations of PDR program in the basin, will make it possible to develop significant parts of Islais Hyper-Creek for water retention, treatment, and conveyance. Integrated in the park will be a trail that links the ridge to the Bay, as well as connections for pedestrians and bikes to the surrounding neighborhoods and workplaces.



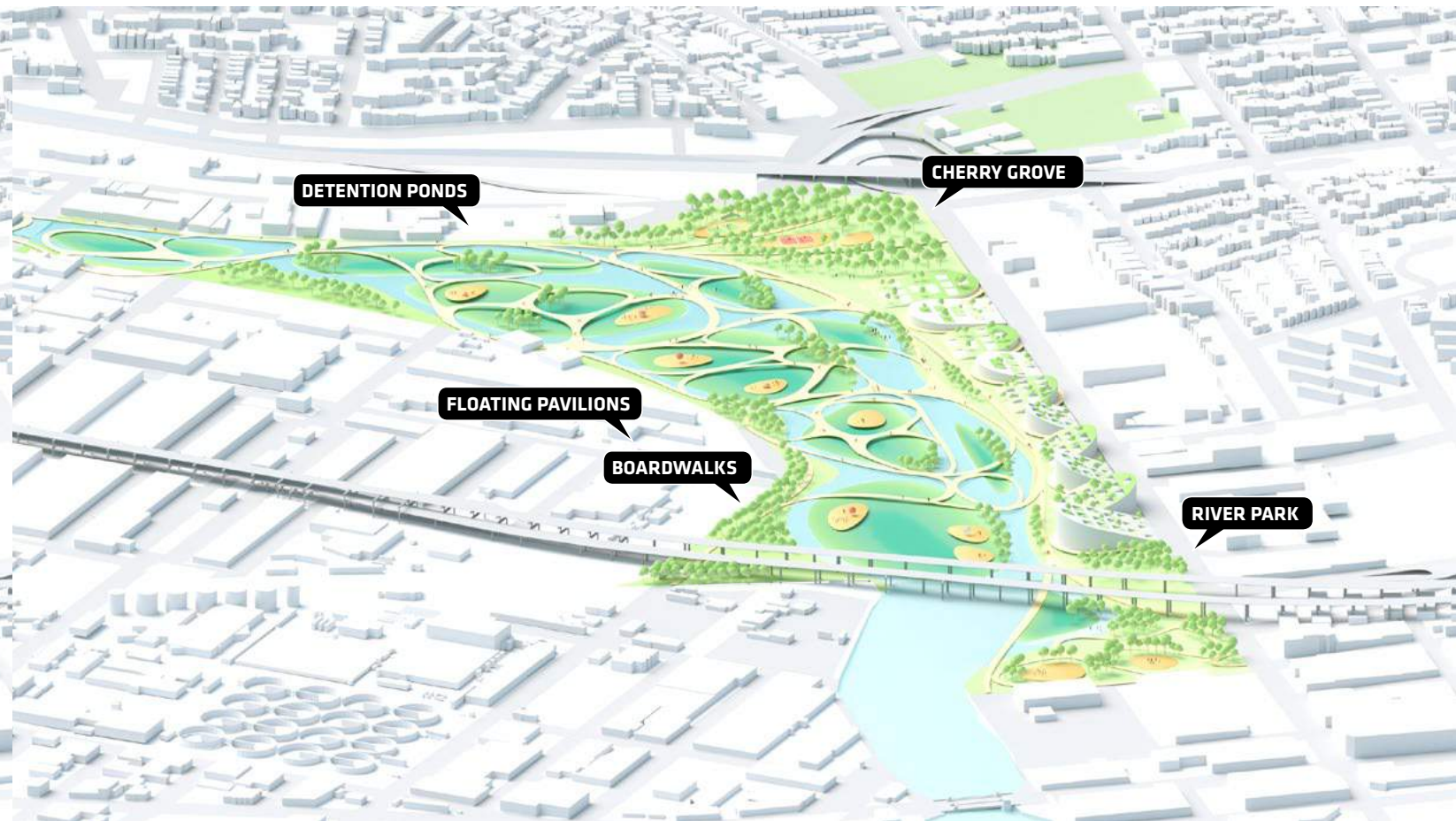
LAND OWNERSHIP



PROPOSED PROJECT PHASING



A. POTENTIAL SHORT-TERM PROJECT



C. POTENTIAL MID-TERM PROJECTS



B. POTENTIAL MID-TERM PROJECTS



D. LONG-TERM VISION



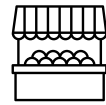
SF FOOD DISTRICT

AT PDR BASIN



GOAL

DENSIFIED LOGISTICS
INCREASE NUMBER OF JOBS
MIXED-USE INDUSTRIAL
SEISMIC MITIGATION
GREEN INFRASTRUCTURE
TRAFFIC SEPARATION



PROGRAM

WHOLESALE MARKET
FOOD RELATED EDUCATION
VERTICAL FARMING
OFFICES & RETAIL
GREEN STREETS
POCKET PARKS



CHAMPIONS

WHOLESALE PRODUCE MARKET



FUNDING OPPORTUNITY

SF WHOLESALE PRODUCE MARKET
POSSIBILITY TO BOND (LEVERAGING FUTURE DEVELOPMENT)

The San Francisco Wholesale Produce Market has begun a process of modernization. By stacking additional functions in this part of the district, this pilot can be a catalyst for a food and high-tech logistics district in the heart of the basin. This could be a place where production, storage, goods exchange, and visitors come together as a new destination in the Bayview.

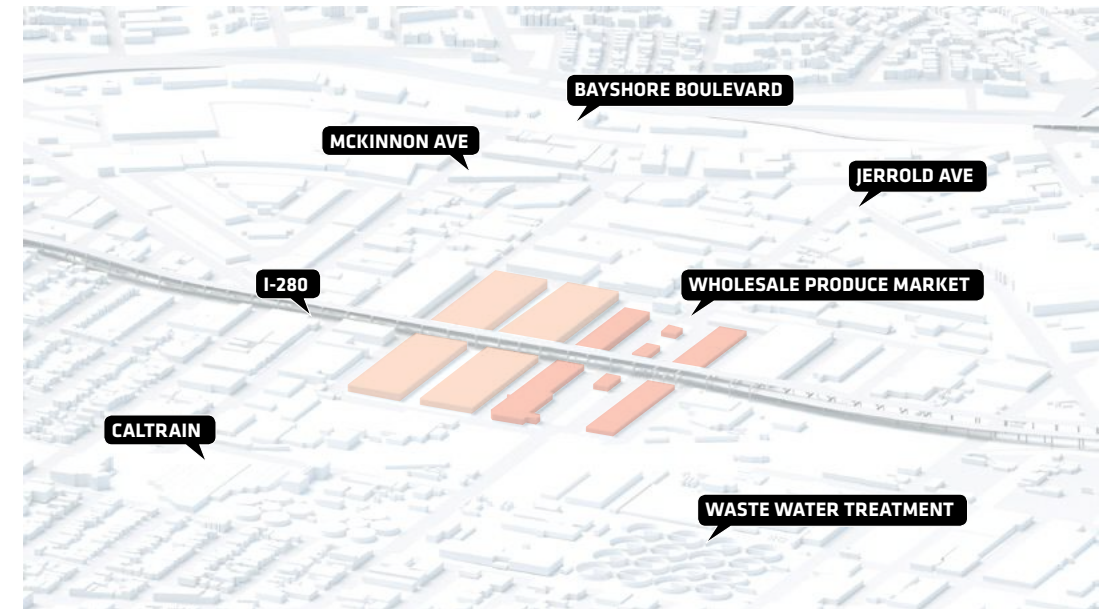
In the next series of capital investments in the SF Wholesale Produce Market, complementary functions such as food production, food processing, food distribution, a culinary school, and even food consumption could be stacked on top of the market. By introducing separated truck and pedestrian network, traffic safety will improve while the food district can link to the creek. Such a proof-of-concept can be replicated with other complementary programs in the PDR area, creating space for water retention and creek restoration. This investment will add jobs while allowing the low-revenue generating programs to stay in San Francisco, and as better building stock is introduced will increase the area's resistance to earthquakes.

The clustering of complementary functions can develop, over time, into a number of distinct districts, each with their own identity, such as an arts district, a production/light industrial district, a home improvement and construction district, and a logistics district. Most of these high-density clusters will be located close to the new CalTrain station, facilitating transit access for workers and visitors, and will offer seamless connections to Islais Hyper-Creek.

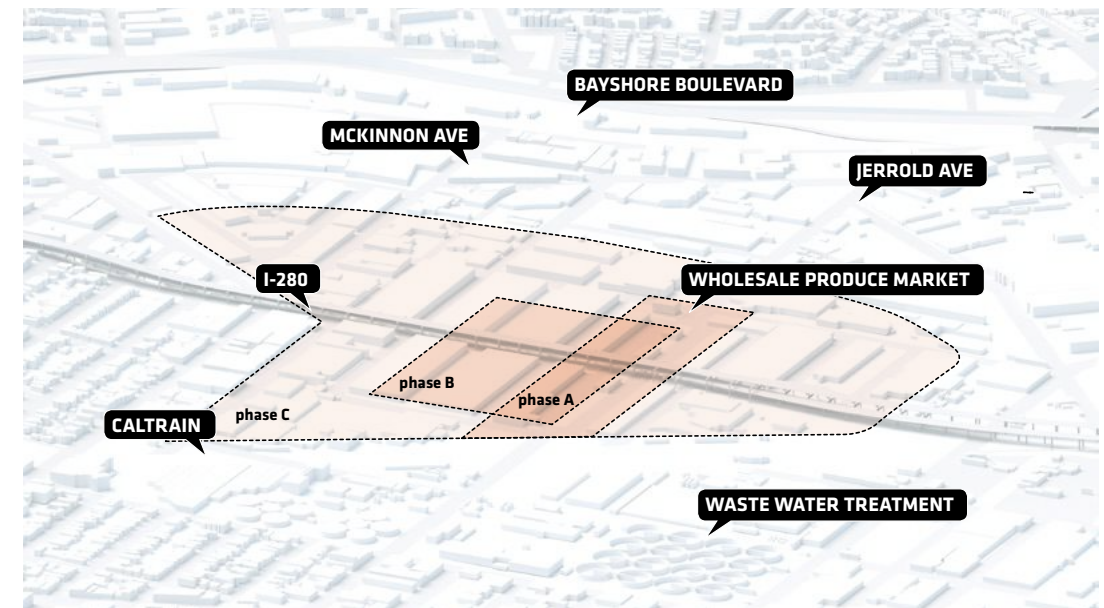
For each of these districts, public access and logistics can be optimized for their specific function, resource flows linked, and workforce development integrated. New technologies such as automated, electric and shareable vehicles, decentralized renewable energy and storage, blue/green roofs and smart logistics systems will be integrated in the flexible developments in order to reduce greenhouse gases and optimize efficiency.



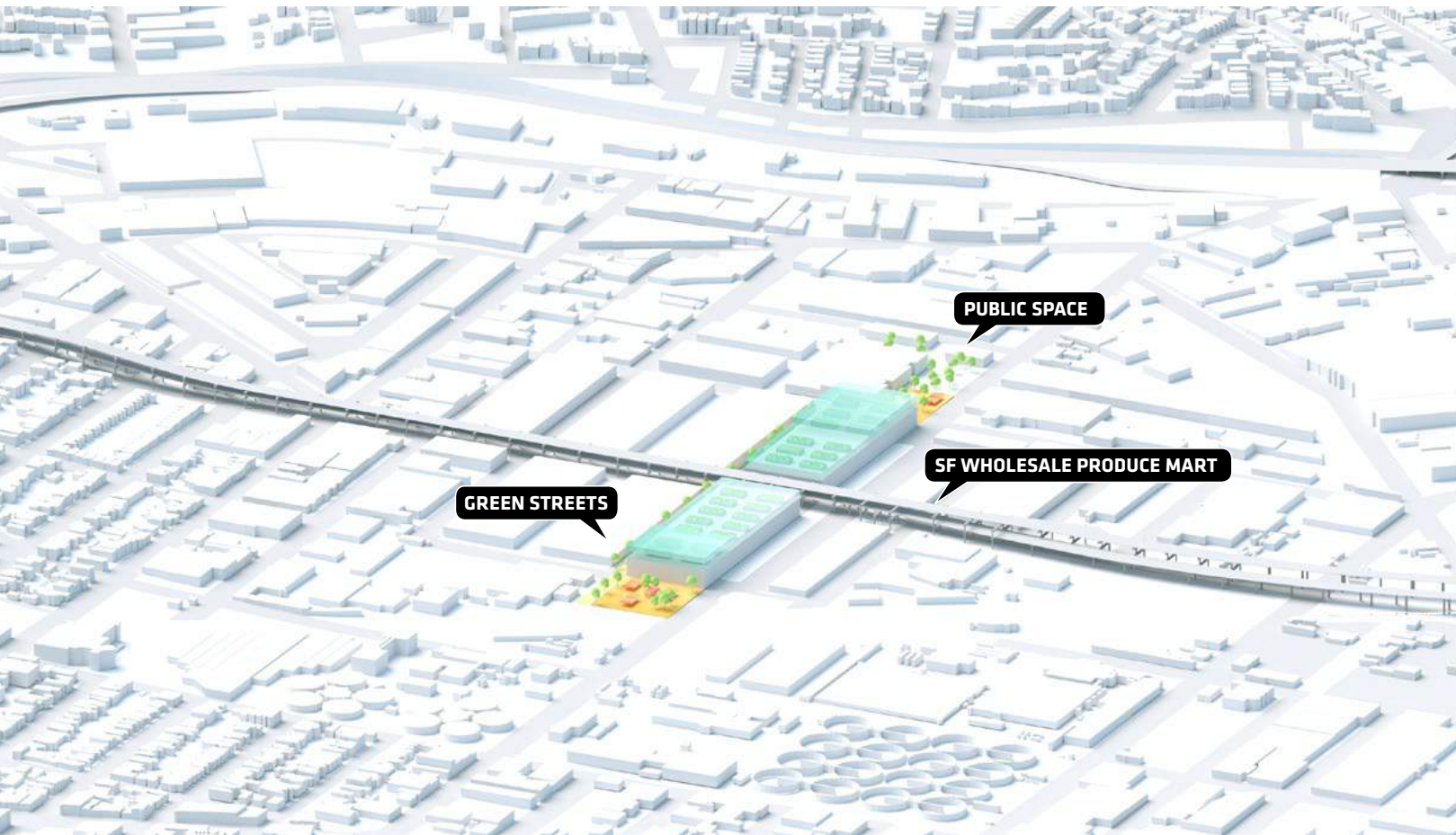
LAND OWNERSHIP



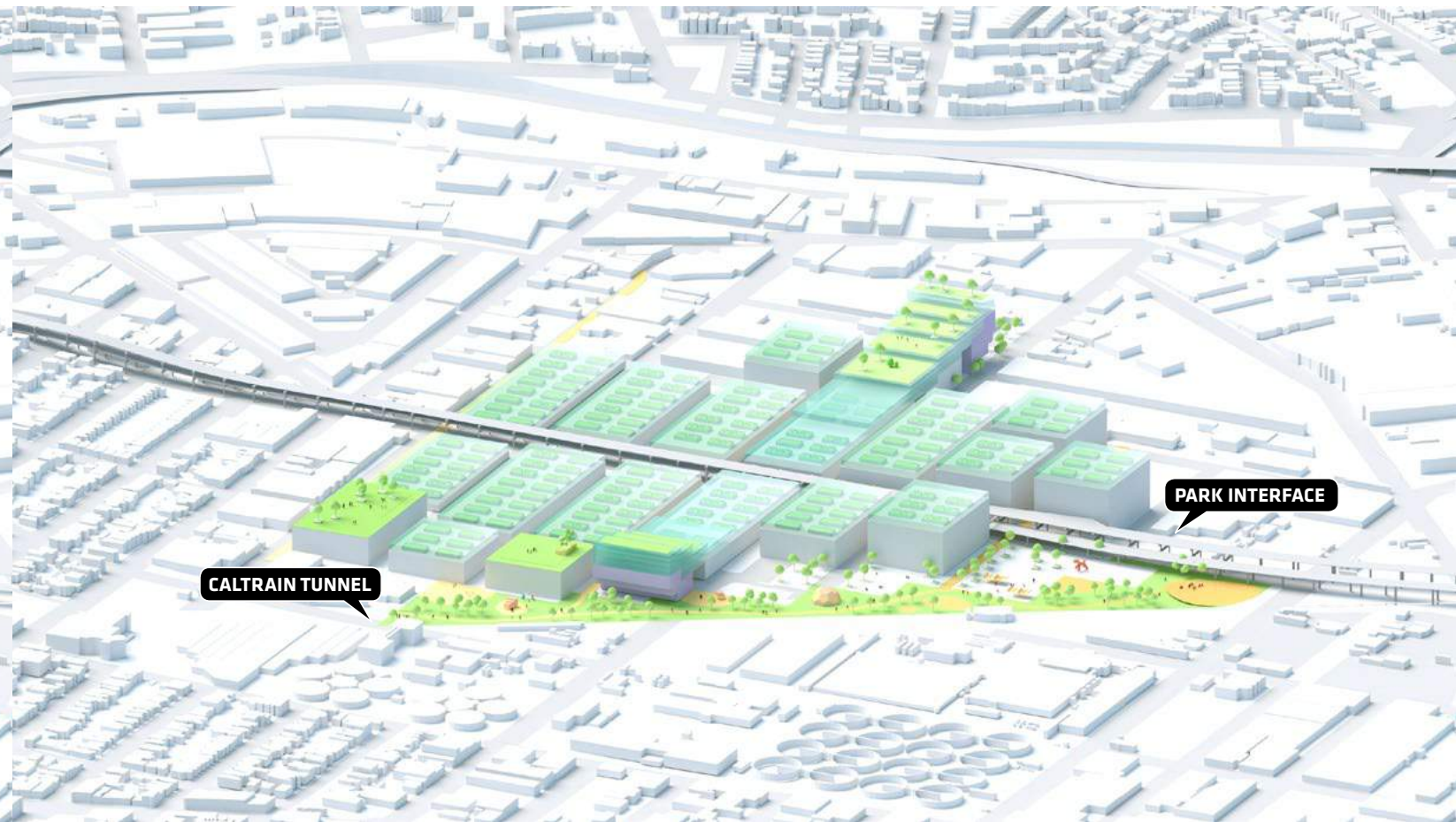
FUTURE PLANS



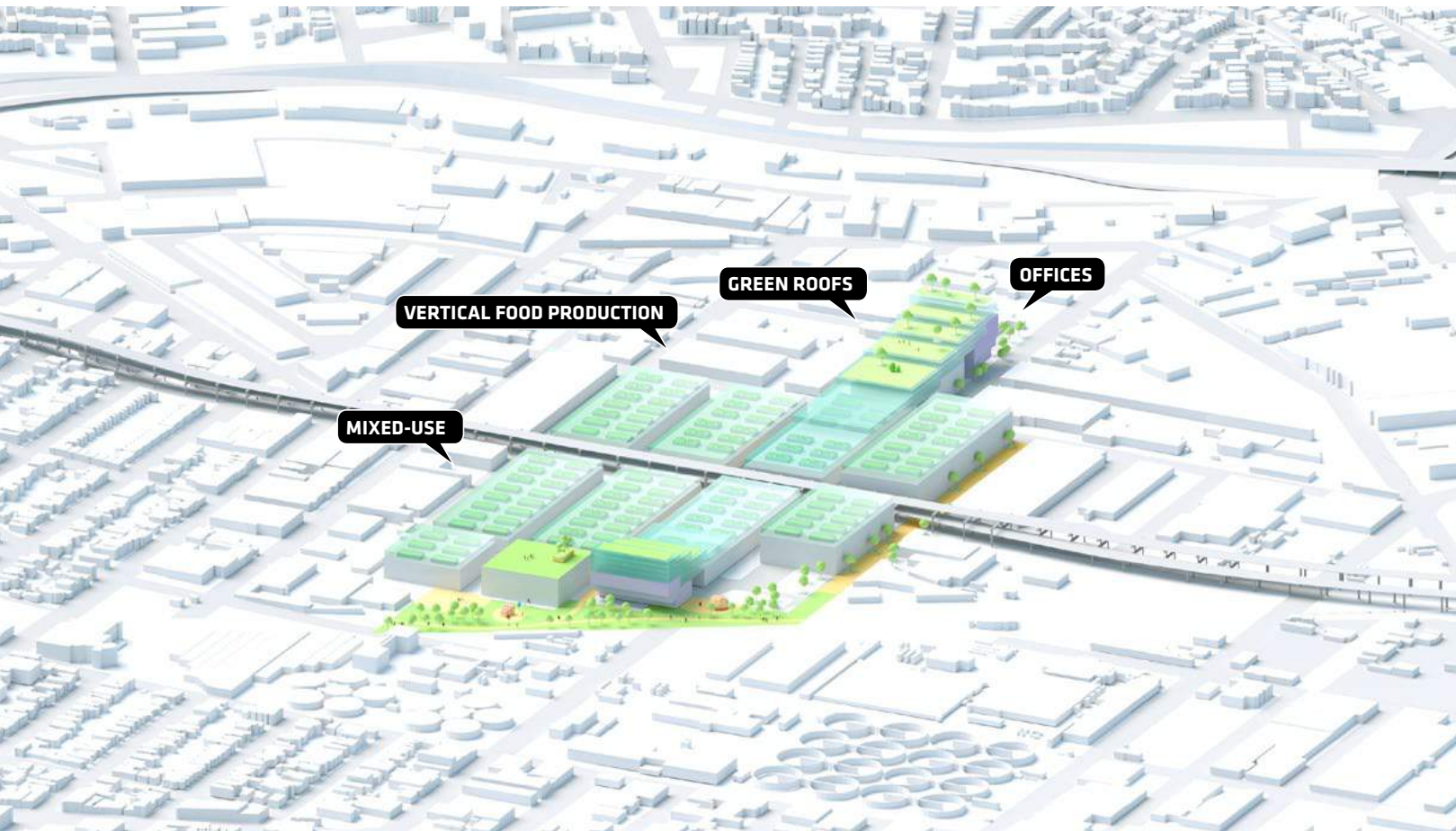
PROPOSED PROJECT PHASING



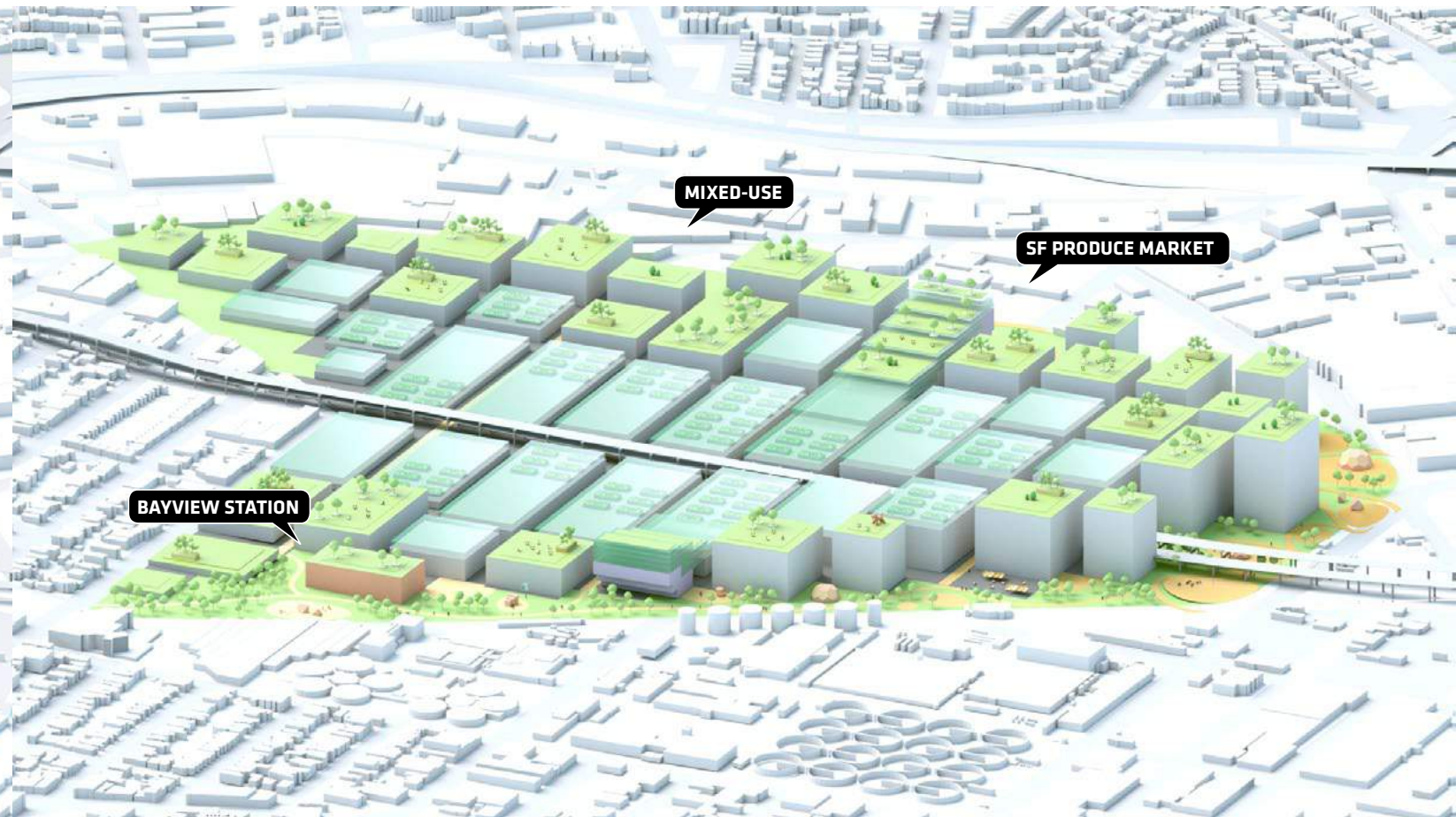
A. POTENTIAL SHORT-TERM PROJECT



C. POTENTIAL MID-TERM PROJECTS



B. POTENTIAL MID-TERM PROJECTS
200 RESILIENT BY DESIGN - BAY AREA CHALLENGE



D. LONG-TERM VISION



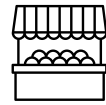
LIVING WITH WATER

AT ALEMANY FARMERS MARKET



GOAL

FLOOD MANAGEMENT
AFFORDABLE HOUSING
INFRASTRUCTURE MITIGATION



PROGRAM

AFFORDABLE HOUSING
RIVER PARK
FARMERS MARKET



CHAMPIONS

SF PUC
DPW
SUPERVISOR RONEN



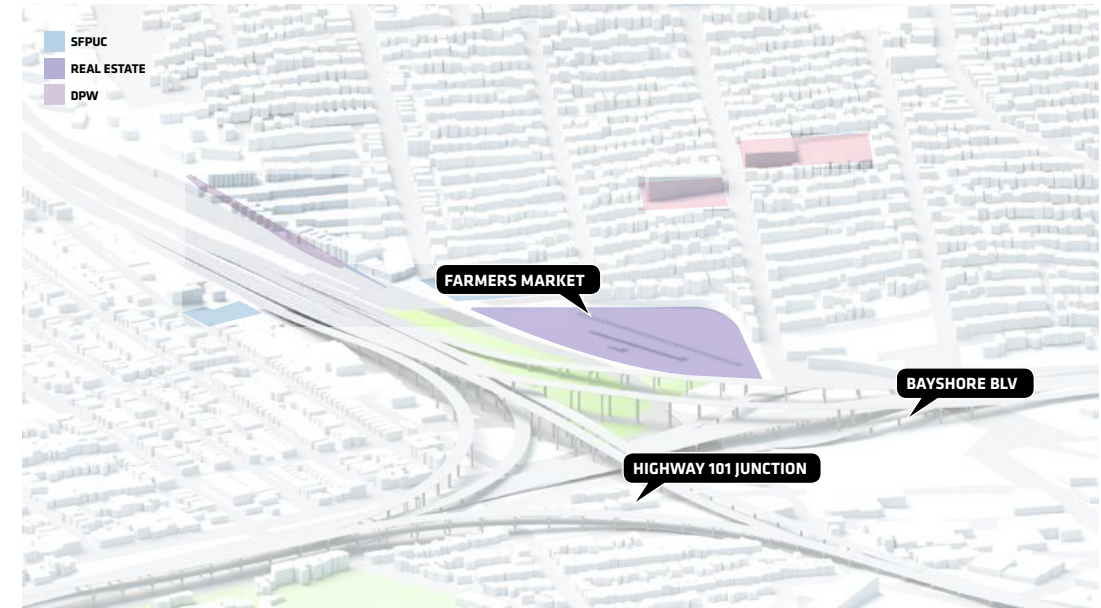
FUNDING OPPORTUNITY

SFPUC 10-YEAR CAPITAL PLAN

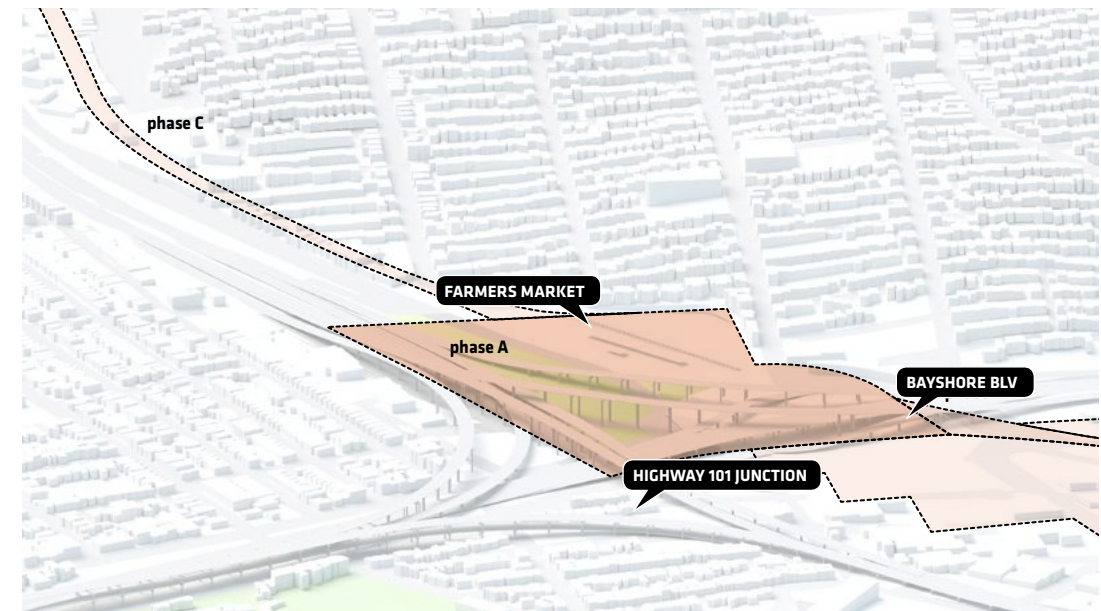
Alemny Farmers Market sits at a critical reach in the creek's naturalization plan. With a multi-functional site design, this area can accommodate space for water, a new market, and housing. Adjacent parcels under the freeways can double as parking and water storage.

In this area, creek daylighting will be combined with improvements in traffic circulation, parking efficiency, pedestrian circulation, and bike connectivity. Rainwater gardens in underutilized right-of-way will alleviate the recurring stormwater flooding. These public realm improvements can link to the redevelopment of the Alemny Farmers Market.

Extending the daylighting under the I-280 (and capturing its runoff in the process) creates a connection between the hills and the basin, and will allow the conveyance of water to the basin. These investments will improve both the hydrological and cultural connections between the neighborhoods on either side.



LAND OWNERSHIP



PROPOSED PROJECT PHASING



PERMEABLE AREAS

POCKET PARK

DETENTION PONDS

TEMPORARY GREEN PARKING

AFFORDABLE HOUSING

A. POTENTIAL SHORT-TERM PROJECT

C. POTENTIAL MID-TERM PROJECTS



DETENTION BASINS

ALEMANY FARMERS MARKET

PARKING RESEVOIR

PUBLIC SPACE

ISLAIS CREEK DAYLIGHTING

DETENTION BASINS

AFFORDABLE HOUSING

ALEMANY MAZE

B. POTENTIAL MID-TERM PROJECTS

D. LONG-TERM VISION





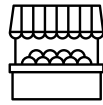
INNOVATION COVE

AT PIER 80



GOAL

- DENSIFIED PORT OPERATIONS
- INCREASE NUMBER OF JOBS
- MIXED-USE INDUSTRIAL
- SEISMIC MITIGATION



PROGRAM

- ECO-ENGINEERING
- RESEARCH & DEVELOPMENT
- OFFICES & RETAIL
- ACCESSIBLE SHORELINE PARK



CHAMPIONS

SF PORT



FUNDING OPPORTUNITY

- CA DEPT OF PARKS AND REC LAND AND WATER
- CONSERVATION FUND SBS,
- MEASURE AA

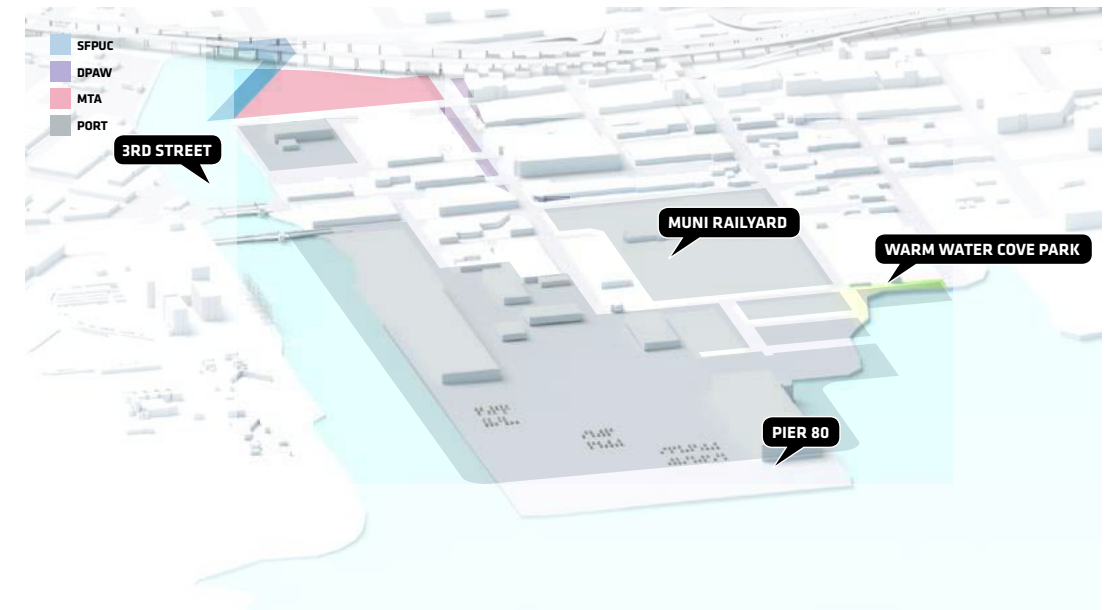
At the Bay shore, lands ringing Warm Water Cove can help extend the city's waterfront network into the south-east, providing a platform for a new Innovation Dock where local business incubators, research facilities, and experiments in resilient floating architecture will form a hub of innovation for the city. The extension of Warm Water Cove to the south with additional shoreline park improvements will provide ecological and public realm benefits for many of the new residents.

Improved access can link the new developments to the start of SF Port's Innovation District, starting with the repurposing of the land at the end of 25th street for cleantech incubators integrated with research and development facilities. As part of this development, experimental floating buildings can be moored along the cove's southern shoreline.

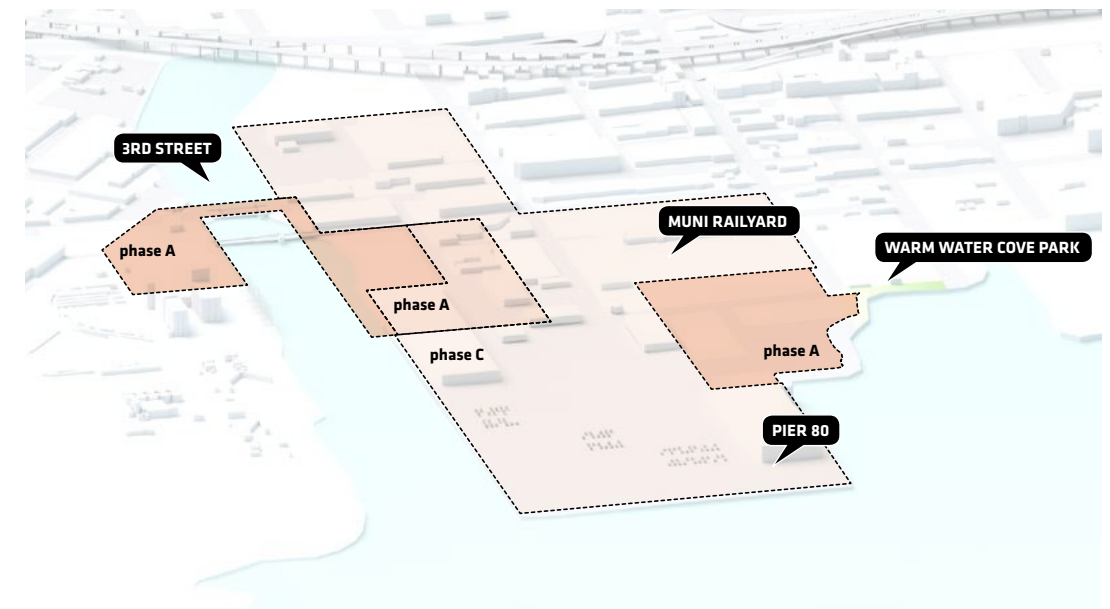
In the longer term, the Innovation Cove and related mixed program can be expanded south and west, on either side of 3rd Street, underlining the significance of this corridor. The vertical expansion of the MUNI light rail yard for additional

MUNI functions will free space along the creek shore for the construction of living levees.

Pier 80 will remain a functional port and an emergency staging area. Depending on the type of coastal flood protection on Pier 80 (either through an elevation of the pier or through a shoreline protection system), it might be possible to provide increased public access on an expanded Blue Greenway trail network.



LAND OWNERSHIP



PROPOSED PROJECT PHASING



A. POTENTIAL SHORT-TERM PROJECT



C. POTENTIAL MID-TERM PROJECTS



B. POTENTIAL MID-TERM PROJECTS



D. LONG-TERM VISION





ISLAIS CREEK GATEWAY AT PIER 90



SF FOOD DISTRICT AT POTRERO BASIN



LIVING LEVEE AT SOUTHEAST PLANT



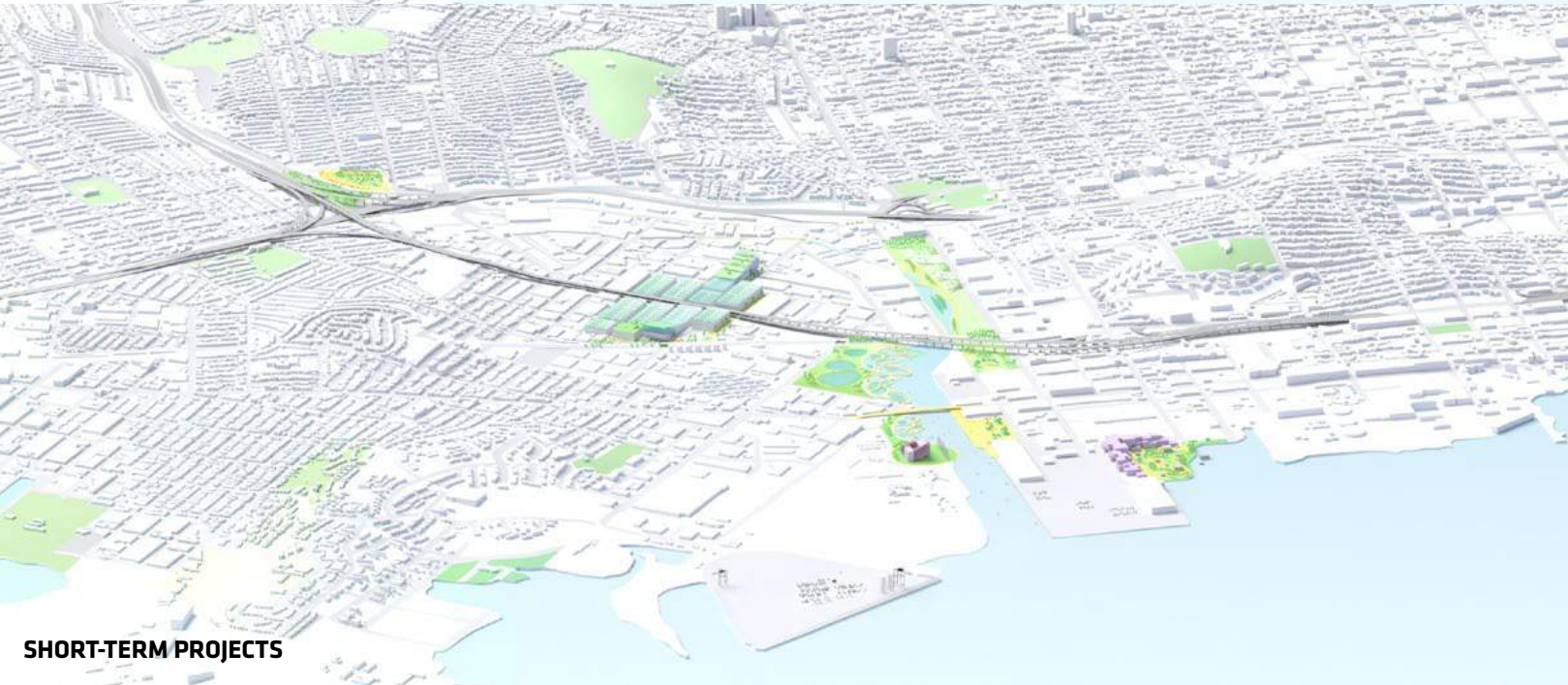
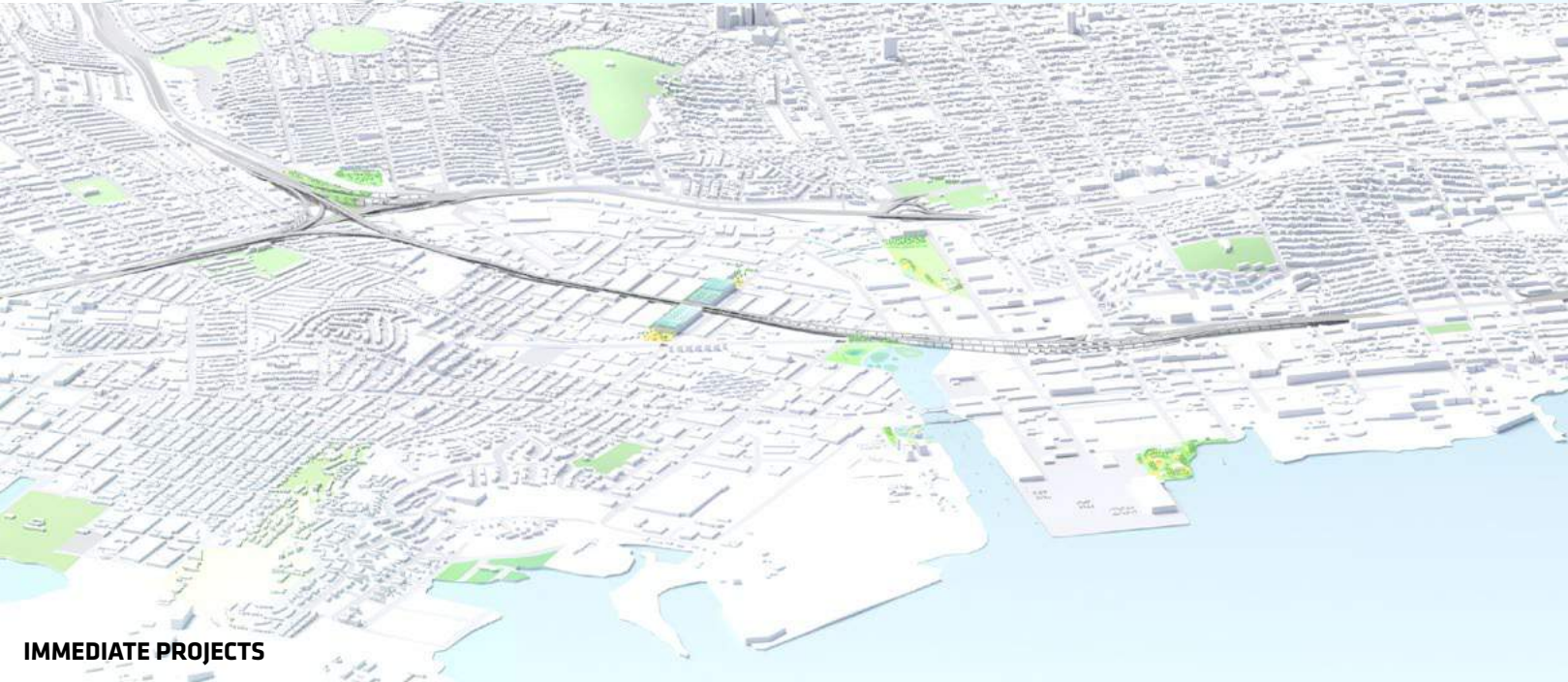
LIVING WITH WATER AT ALEMANY FARMERS MARKET



RIVER PARK AT CESAR CHAVEZ CORRIDOR

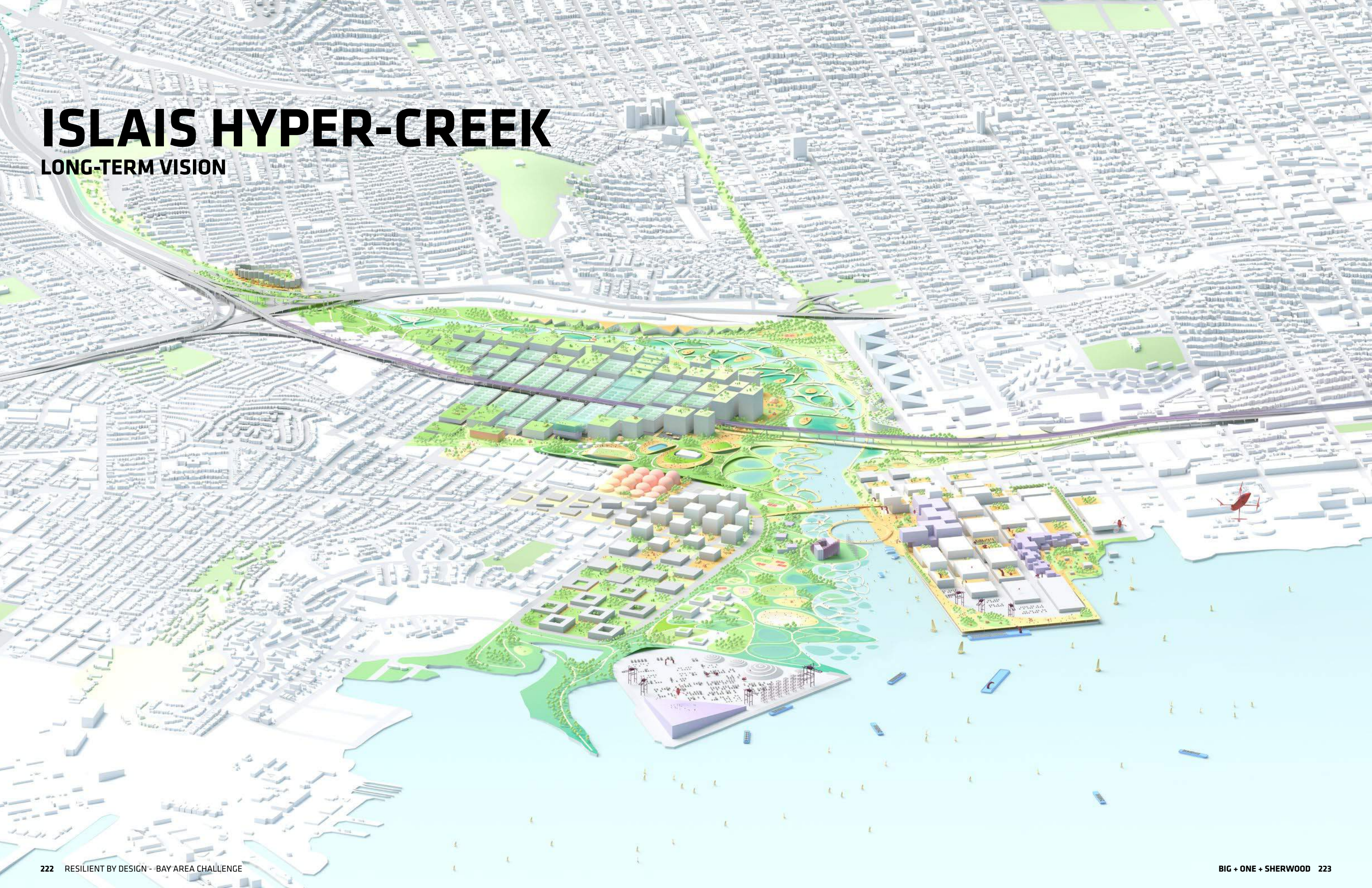


INNOVATION COVE AT PIER 80

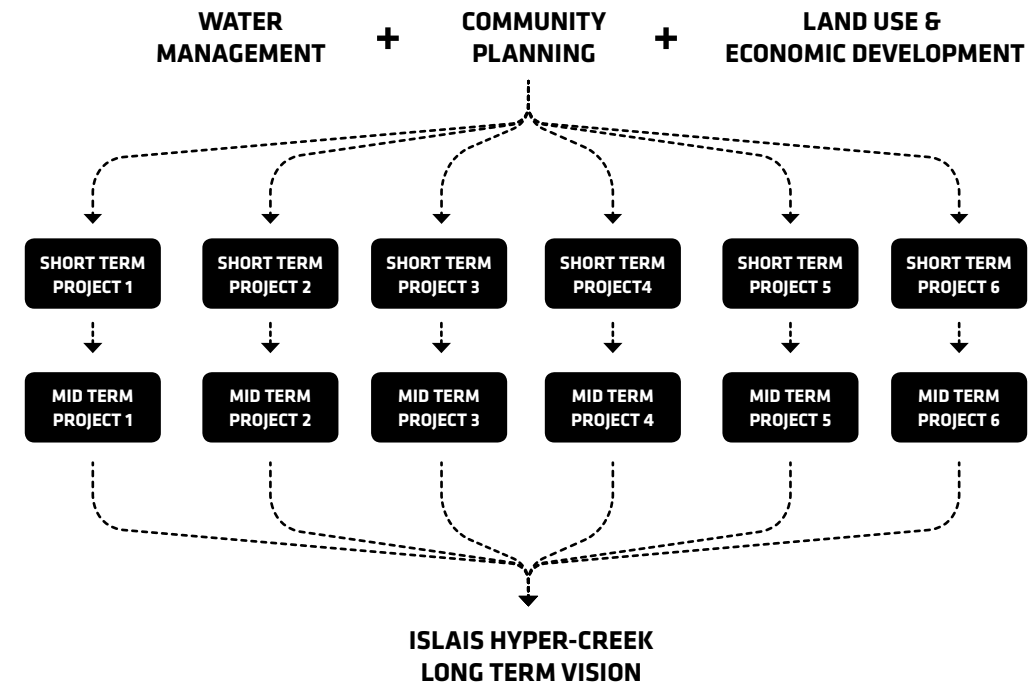


ISLAIS HYPER-CREEK

LONG-TERM VISION



IMPLEMENTATION ROADMAP



APPROACH

This vision for the Hyper-Creek is accompanied by a set of proposed pilot projects that will set the area on course towards realizing this a lasting transformation. City-making in the era of a changing climate adds an additional level of uncertainty to already unpredictable developments in the economy, politics, culture or technology. Long-term planning necessarily avoids the blueprint. The vision helps grow and inspire new projects that are driven by opportunities such as the ending of a lease or a planned capital investment, triggered by a technological development or a new regulation, or necessitated by tipping points such as a certain level of sea level rise. Using pilot projects makes it possible to establish a trajectory for the longer process, and to make follow on projects more resilient and to allow room for the framework to adapt. Pilot projects are sized such that the proposed integration between different aspects of the vision becomes manageable. Pilot projects allow for quick wins, helping build the necessary capacity for coordination and collaboration, and to allow the stakeholders to learn what works (and what does not), thus providing input for the long-term studies, planning and funding processes. Pilot projects will be central to engage the community and the stakeholders in the process and get the feedback needed for active stewardship and adaptation.

OVERARCHING PLANNING FRAMEWORK

Certain issues that have been identified as risks or opportunities cannot be addressed at the scale of the pilot project alone and need to be studied cross-jurisdictionally, at a large scale such as the watershed or city. The following three macro-focus areas have been identified as appropriate for this wider view:

1. COMMUNITY PLANNING

The community planning process is central in order to develop Islais Hyper-Creek as a civic infrastructure. To enable the community to build social resilience and develop long-term stewardship over the process and the area, the community needs to be a full partner in the planning process and be engaged throughout. As the process moved forward, there will be a focus on expectations, roles, responsibilities, and a clear outline for moving the process forward. The central aim of future planning processes be to explore the program and designs of the public places and amenities, as well as evaluate public access and infrastructure. Bringing these public elements in relation to the private developments such that the development of Islais Hyper-Creek builds on the earlier planning efforts, community needs and -aspirations towards a new, resilient future and identity.

2. WATER MANAGEMENT

Analysis shows that coastal flooding, sea level rise and stormwater flooding are intimately related in the Islais Creek watershed. Similarly, stormwater and wastewater are linked because the combined sewer system is outdated and does not have the capacity to deal with increased volumes and delayed drainage. In a water- and sewer shed wide study, these risks, the possible management strategies and their phasing need to be explored integrally. A clear formulation of adaptation pathways and tipping points, combined with a holistic approach to benefits and costs, will help SFPUC, SF Port and other actors in the basin make sound decisions and be able to anticipate future resiliency measures.

Of particular need is establishing the long-term balance between green and grey infrastructure, in part dictated by the possibilities of land-acquisition and retention needs, the possibility for the re-introduction of tidal flows in the creek (related to a possible surge barrier), as well as the alignment, and types, of coastal protection. This study needs to align with SFPUC's Triple Bottom Line Assessment and provide input for its Sewer Improvement Program, as well as with the next phases of SF Port's Seawall program.

3. LAND USE AND ECONOMIC DEVELOPMENT

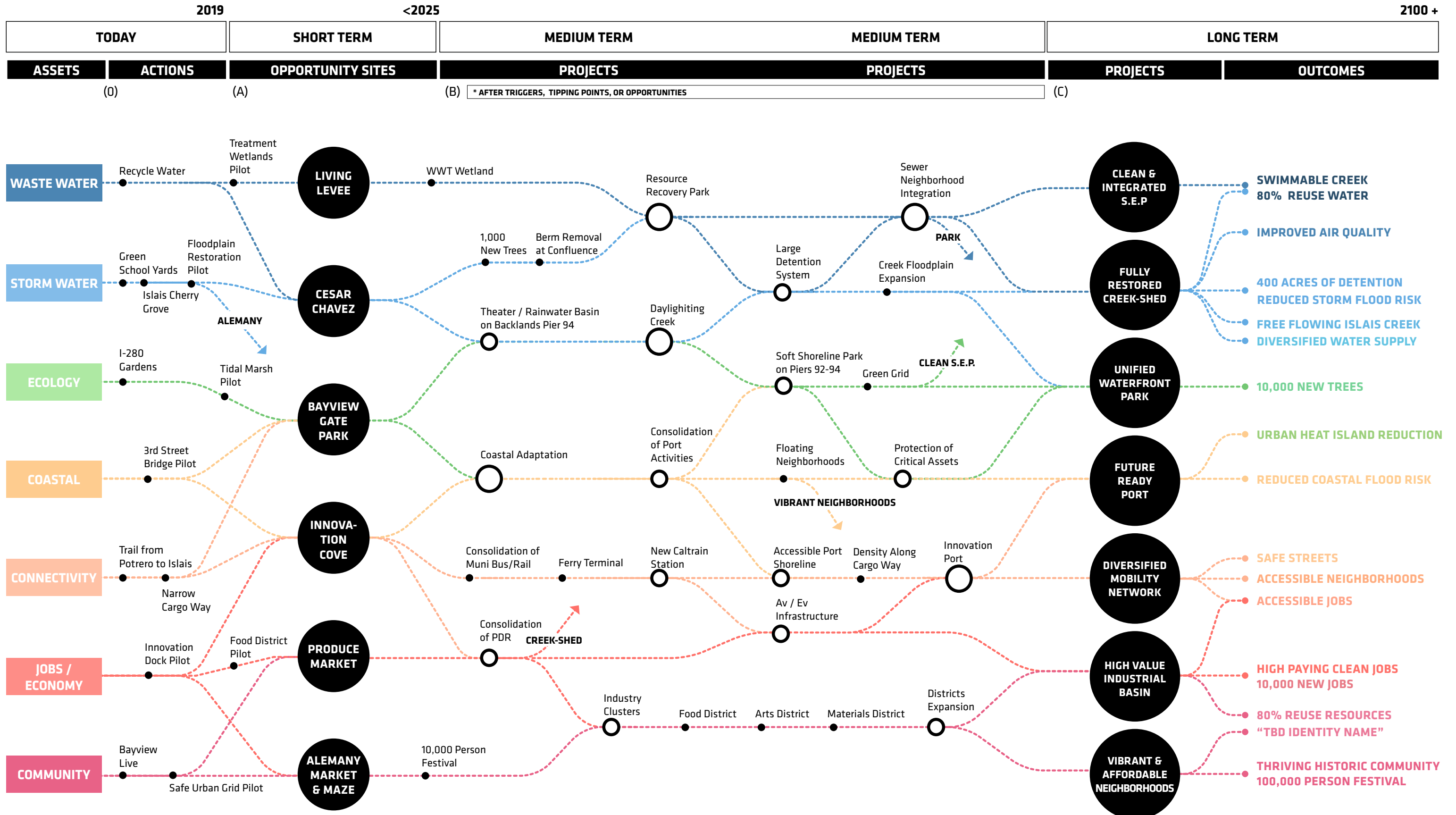
Changing land-use for the creation of space for water as well as for economic development is a critical element of the vision. Achieving this on a substantial scale will necessitate:

- Mechanism and governance of land acquisition
- Possibilities for zoning changes (program/density)
- Economic- and workforce development/innovation strategies
- Opportunities for resource- and flow management/sustainability
- Financing models

This strategy will need to be developed in close concert with current landowners and market actors, through a consultative process.

FEEDBACK, METRICS AND OUTCOMES

A roadmap is developed that identifies pilots, medium- and long-term projects and overall outcomes. It shows which different assets and issues are addressed in the pilots and the projects, and how the pilots and subsequent projects can grow into the vision. The exact way in which this will happen is to be determined. It will depend on the feedback from pilots, projects and overall planning efforts, as well as on triggers, opportunities and climate change necessities. Strong program management and clear metrics will help the decision-making process.



GOVERNANCE AND FUNDING STRATEGY

The Islais Creek Basin is home to critical industrial and infrastructure functions and is bordered by the Bayview-Hunters Point, Potrero, and Dogpatch communities, each with a complicated history of a disconnection between planning and investment. This incongruence has left the area at best disconnected from the same levels of valuation, transportation connectivity, and attention from planners and city programs. At worst, this disconnection between planning and investment has driven a series of broken promises that have led to classic environmental justice scenarios, including the siting of the Southeast Wastewater Treatment Plant, lack of connected transportation, lack of greenspace and waterfront access, and zoning limited strictly to Production, Distribution, and Repair (PDR) businesses. Compounding these now structural challenges are climate-related risks of increased flooding, sea level rise, and liquefaction, alongside manmade risks like gentrification, uncertain affordability, and stress on the housing market.

In order for our design proposal to adequately address this history, current reality, and foreseeable future risks, we co-created a plan of action from the bottom up. By firmly rooting a collaborative design process in the Islais Creek community, we have been

able to organically iterate with people who live, stay, and play in the area and reflect up-to-date community realities and desires with city bodies. This community driven design process has been well received in both the community and government spheres, proving a mutually beneficial process to quickly charrette ideas and limitations with these at times disconnected groups. Most promising, we have discovered that this honest style of design has really aided intergovernmental bodies and regulatory agencies to quickly familiarize, galvanize, and deputize City and Regulatory officials in support of this project.

RBD DESIGN PHASE APPROACH: BRIDGING CITY AND COMMUNITY

Our framework of community driven conversations and design are inherent for a holistic design process. Similar to the approach taken with the Islais Creek community - whereby we brought together disparate groups in order to facilitate an interdisciplinary discussion with multiple benefit design outcomes - we have strived during the design phase to bridge connection and conversation between traditionally siloed intergovernmental bodies. The direct City stakeholders that our project would affect are the Port of San Francisco, the San

Francisco Public Utilities Commission (PUC), the San Francisco Department of Public Works (DPW), San Francisco Municipal Transportation Agency (SFMTA), and other public entities; and by extension the San Francisco Planning Department and the Office of Capital Planning. These bodies regularly interact on cyclical and oftentimes reactionary bases, but rarely if ever on occasion of planning for resilient, community-directed project planning, complete with funding schemes, champions, and proof of concept pilots. This is what the RBD process has afforded our team: the opportunity to gather together these intergovernmental bodies for a community-informed conversation on pre-emptive planning with realistic and achievable pilot projects and champions identified.

For the entirety of our project, we sought out and brought on leaders from the Port, Planning, and Capital Planning to act as close advisors at every stage of design and community engagement. This city working group has enabled us not only to test out our most wild and aspirational ideas with knowledgeable and seasoned perspectives, but has opened doors for our design team to continue to grow the web of influence and briefings. Our

design updates have become a recurring agenda item at the San Francisco Mayoral Task Force on Sea Level Rise - a group that brings together City leaders from a diverse set of departments to problem solve for sea level rise across departments and foci. We have solicited and incorporated feedback from technical advisors at mid, senior, and executive levels of the PUC, DPW, Port, and City Administrator, ensuring that governing bodies have a chance to share critical concerns ahead of our final design proposal. Through a deep city advisory and involvement program, we are ensuring that connectivity and a city-advised design are inherent in the design as it has been developed.

In tandem with our effort to incorporate and integrate intergovernmental perspectives into the design process, we understand that elected officials are a fundamental channel for the voice of the communities that we are working with. Therefore, we have taken a similar approach to integrate the viewpoints of San Francisco's representatives (and their constituents) at various levels of government. By taking a watershed approach to defining our project area, San Francisco's District 9 and District 10 Supervisors districts are central to the conversation. These

Supervisors have deep rooted connections to the communities we are working with, in addition to being able to serve as a conduit from residents to the San Francisco Mayor's office and beyond. We have held multiple briefing and feedback sessions not only with the Supervisors' offices for District 9 and District 10, but also with several of the top campaigning candidates for the District 10 seat that is up for re-election this year. Beyond the positive feedback, we believe that this approach is the best way for our project to be best broadcast to the thousands of residents that we simply could not hope to reach during the RBD process, in addition to the weaving of this project into the platforms of these important elected officials. .

It is this attention to the community, to the intergovernmental stakeholders, and to San Francisco's political future that we are recommending the following governance structure and funding and financing approach.

**EMERGING FUTURE GOVERNANCE STRUCTURE:
THE ISLAIS CREEK AUTHORITY (ICA)**

Our approach during the design phase has helped set up a robust structure for the next phase of this project. Our team has identified five funding and financing principles that can best be delivered by a single entity which is empowered to marshal multiple resources and direct these resources towards a unified purpose across an extended time span and by delivering multiple projects. We propose establishing a new entity: the Islais Creek Authority (ICA) based on the many joint powers authorities already operating in the Bay Area, including the Transbay Joint Powers Authority which was formed in 2001 to deliver a new Transbay Transit Terminal in San Francisco; and using the Place Made model established by SF Made to deliver mission driven projects by combining market-based tools with other funding sources.

The ICA's key members could include the City of San Francisco Public Utilities Commission, the Port of San Francisco, the San Francisco Planning Department, and potentially, the Peninsula Corridor Joint Powers Board, the California Department of Transportation (CalTrans) and other state agencies. Except for the Planning Department, all of these agencies own essential assets in the area and will require long-term investments to protect these facilities from the increasing threats associated with flooding and sea level rise, including increased vulnerability to liquefaction and major damage from seismic hazard.

Establishing a single entity to manage and implement the long-term vision for the Islais Creek watershed will accomplish multiple objectives:

- Create a single entity to direct implementation projects and ensure that 20 to 30 years from now, the sum is greater than the whole of its parts;
- Allows for a single fiscal agent who can apply for and manage grant funding directed to project implementation as funds from these sources become available;
- Establishes a bonding authority that can incur debt and therefore deliver large-scale projects;
- Can assemble land on behalf of member entities;
- Can maximize the value capture potential created by acquiring and managing land for multiple purposes, including flood control and intensification;
- Can access capital at lower interest rates than the private sector;
- Can carry out necessary predevelopment activities including but not limited to research and development related to project delivery;
- Manage and leverage risk through life-cycle costing, and balanced risk sharing;
- Sustain ongoing community input and maintain ongoing project transparency.

Although this proposed governance structure suggests initial participation from at least four key public entities, three of whom are accountable to San Francisco's Mayor under the City's Charter, ICA members could be expanded over time as other potential partners are identified, such as the San Francisco Department of Recreation and Parks, the San Francisco Office of Community Investment and Infrastructure, the San Francisco Department of Public Works, and/or the San Francisco Municipal Transportation Agency.

In addition, there should be a policy or advisory committee that represents community stakeholder interests to ensure that even as projects are being identified, designed, and funded, that every project delivers the triple bottom line promise. Additionally, this framework will help projects, like parks without dedicated revenue streams get funded in a timely manner; rather than the more common outcome where community facilities are only delivered as the last phase of a redevelopment process because only then do value capture funds reach sufficient levels as to be able to pay for these improvements.

The Planning Department would be tasked, at least in the initial years or "start-up" phase as the lead agency, responsible for convening regular meetings, holding members accountable, and managing the staff necessary to take projects from vision to execution. These responsibilities line up well with the Planning Department's responsibility for leading strategic long-range planning in San Francisco. However, over time, it is likely that the ICA will have its own staff, including an Executive Director, much like the Transbay JPA.

One key role that the ICA will need to perform is to purchase and hold properties using a buyout mechanism. To some extent, the SFPUC is already positioned to buy out properties that are subject to increasing flooding and where it is cheaper to buy out properties and allow them to flood, rather than to pay for cleanup following every major flood or SLR event.

However, unlike other "retreat" scenarios where property acquired to manage and contain flood waters are typically left as some form of open space when not needed for flood retention, it is possible that over time, PDR and residential buildings could be designed and built over or adjacent to the flood prone areas. These more intensive buildings would allow San Francisco to both protect and grow two critical assets: PDR businesses and affordable housing.

In today's market, this approach seems infeasible in that multi-story PDR buildings are not well suited for all types of PDR businesses; and affordable housing requires deep subsidies to build, even without potential increases in construction costs necessary to make buildings flood resistant. But, with a significant land resource and the necessary policy framework, the ICA would have the ability to test and experiment with multiple models for delivering the desired housing and commercial space working with, but not fully relying on the private sector.

LETTERS OF SUPPORT



inspiring people to protect
Bay Area birds since 1917

May 15, 2018

Supervisor Malia Cohen
1 Dr. Carlton B. Goodlett Place, #244
San Francisco, CA, 94102

LETTER OF SUPPORT: A RESILIENT ISLAIS CREEK

Dear Supervisor Malia Cohen,

Golden Gate Audubon has been advocating on behalf of protecting birds and bird habitat, and connecting people with birds for 101 years. Founded in 1917, Golden Gate Audubon Society engages people to experience the wonder of birds and translate that wonder into actions, which protect Bay Area native bird populations and their habitats.

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This proposed project establishes an opportunity to protect birds, bird habitat and to continue to connect people with our local environment.

We are writing you to urge you to support the resilient project known as "Islais Hyper Creek", an endeavor spearheaded by the design team BIG+ONE+SHERWOOD. We support the continuation of planning for this process, as the Islais Creek is a critical component for the South East Neighborhoods.

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We have reviewed the emerging pilot projects that will serve as important first steps for the overall plan. We support the continued development of these Pilot Projects, and believe that this is the right starting model.

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Again, we support this project and the design team BIG+ONE+SHERWOOD continued research and planning for these pilot projects!

Sincerely,

Cindy Margulis
Executive Director



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May 15, 2018

Supervisor Jane Kim
1 Dr. Carlton B. Goodlett Place, #244
San Francisco, CA, 94102

LETTER OF SUPPORT: A RESILIENT ISLAIS CREEK

Dear Supervisor Jane Kim,

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Sincerely,

Cindy Margulis
Executive Director



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May 15, 2018

Supervisor London Breed
1 Dr. Carlton B. Goodlett Place, #244
San Francisco, CA, 94102

LETTER OF SUPPORT: A RESILIENT ISLAIS CREEK

Dear Supervisor London Breed,

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Sincerely,

Cindy Margulis
Executive Director



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May 15, 2018

Supervisor Aaron Peskin
1 Dr. Carlton B. Goodlett Place, #244
San Francisco, CA, 94102

LETTER OF SUPPORT: A RESILIENT ISLAIS CREEK

Dear Supervisor Aaron Peskin,

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Cindy Margulis
Executive Director



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May 15, 2018

Supervisor Jeff Sheehy
1 Dr. Carlton B. Goodlett Place, #244
San Francisco, CA, 94102

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Executive Director



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May 15, 2018

Supervisor Hillary Ronen
1 Dr. Carlton B. Goodlett Place, #244
San Francisco, CA, 94102

LETTER OF SUPPORT: A RESILIENT ISLAIS CREEK

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Sincerely,

Cindy Margulis
Executive Director

Arthur Feinstein
590 Texas Street
San Francisco, 94107

May 10, 2018

TO: The Next Mayor of San Francisco
1 Dr. Carlton B. Goodlett Place, #200
San Francisco, CA, 94102

RE: LETTER OF SUPPORT: A RESILIENT ISLAIS CREEK

Dear Next Mayor of San Francisco,

I am writing this letter as an individual, although I am on the Executive Committee of the San Francisco Bay Chapter of the Sierra Club and I am also the Chair of the Sierra Club's California Conservation Committee. Due to the rapid time constraints of this project I was not able to bring this issue to the Club for consideration before the deadline for support letters.

I have been working on San Francisco's Bay shoreline issues for several decades. I helped establish Heron's Head Park in my then role as Executive Director of the Golden Gate Audubon Society. For two years (2003-2004) I led a wildlife census performed by Bayview community high school students in Candlestick Point State Recreation Area, and, again as Executive Director of the Golden Gate Audubon Society I played a key role in helping to initiate the Pier 94 wetland restoration project.

I relate all this in order to establish some personal credentials when I state that I have some knowledge of the ecological values of this part of the San Francisco shoreline that includes Islais Creek. They are significant! The wetlands and shallow waters of this shoreline provide rich habitats for the many thousands of shorebirds and waterfowl that are found here, including the endangered Ridgway's rail. Harbor seals, leopard sharks and many fish species all can be found in these waters.

The threat of sea level rise to these habitats, and thus these species, is very real and we can anticipate the drowning and disappearance of our tidal marshes and mudflats unless adaptation actions are taken.

The increased number and intensity of extreme storms, in conjunction with sea level rise, will result in severe flooding along the developed area immediately surrounding Islais Creek as well as areas along the upper reaches of Islais Creek.

Seeking solutions to these threats is an essential exercise. Naturalistic solutions will provide a more stable and reliable solution than the hard-edged solutions that have often failed over the long term. And, of course, the preservation of the natural resources of the shoreline is essential if we are to have a healthy and productive Bay in the future.

The resilient "Islais Hyper-Creek" design, an endeavor spearheaded by the design team BIG+ONE+SHERWOOD, provides a potential answer to many of these threats.

Allowing for "managed retreat" along the immediate southern shoreline of Islais Creek provides the rising Bay waters a place to go and provides an important opportunity to maintain the wetlands and mudflats and shallow waters that are essential to a healthy Bay ecosystem. At the same time it provides an opportunity to create parks that allow the community to enjoy the natural beauty of our bay. It also will ensure the continuing ability to fish along the Bay for the many people who enjoy and may even depend upon that activity.

Providing, to the extent practicable, new floodplains along historic Islais Creek will help address the increased flooding for areas that even now tend to flood intermittently. These areas will face significant inundation in the future.

Addressing the threats to the Southeast Water Treatment Plant through a living levee continues the theme of seeking solutions that do not depend on seawalls.

For these reasons I urge you to support the continuation of planning for this Resilient Islais Creek process and I urge you to support the development of the Pilot Project proposed by the Resilient Islais Creek Team.

Sincerely,

Arthur Feinstein

May 11, 2018

Future Mayor of San Francisco
1 Dr Carlton B Goodlett Pl, #200
San Francisco, CA, 94102

RE: LETTER OF SUPPORT: A RESILIENT ISLAIS CREEK

Dear Future Mayor of San Francisco,

I am writing you to urge you support for the project known as the resilient "Islais Hyper Creek", an endeavor spearheaded by the design team BIG+ONE+SHERWOOD.

As a San Francisco organization dedicated to improving Parks & Open Spaces, we support the continuation of planning for this process, as Islais Creek is a critical component for the Bayview-Hunters Point, Potrero, and Dogpatch Neighborhoods.

This project helps address the mounting natural risks of sea level rise, flooding, and liquefaction, as well as man-made risks of gentrification, displacement, and economic vibrancy. We believe that, through this community driven design process, the team has crafted designs that reflect careful planning and grassroots community support.

In particular, I am in support of the idea that this project will bring:

- Much-needed open park space on a large scale to the Southeast of San Francisco. With large parks like Golden Gate Park, the Presidio, and Crissy Field in the north and west parts of the city, the Bayview-Hunters point / Dogpatch neighborhoods are in desperate need for more than just another disconnected pocket park. The Islais Park project would bring one of the city's largest parks to an area that needs it, both to mitigate climate challenges like flooding, and for the folks who have to travel 30+ minutes to find open green space. In this fashion, the project will **restore** a natural landscape to promote a healthier and more desirable environment. This park concept plans for and embodies resilience, for the landscape and the people who would use it. While the Bayview-Hunters Point and Dogpatch communities lie on the western edge of the San Francisco bay, there are few access points to the water.
- Waterfront Access at Pier 90: While the hard edge at pier 90 is currently at risk of riverine flooding, storm surge flooding, sea-level rise, and liquefaction, intervening on this publicly-owned waterfront site with green infrastructure+space would allow residents access to the water while

mitigating these risks. In addition to creating a desirable space, this nature-based pilot project would help enhance biodiversity, help restore once natural tidal wetlands, and reconnect residents to their bayside identity.

Thank you for your consideration, I hope you can join the citizens of San Francisco in support of this important project!

Sincerely,



Drew Becher
CEO
San Francisco Parks Alliance

May 11th, 2018

FROM: Bo Barnes
Kayaks Unlimited
199 Winchester st. Daly City, Ca 94014
Bobo3@astound.net

TO: The Next Mayor of San Francisco
1 Dr Carlton B Goodlett Pl, #200
San Francisco, CA, 94102

RE: LETTER OF SUPPORT: A RESILIENT ISLAIS CREEK

Dear Next Mayor of San Francisco,

I am writing you to urge you support the project known as the resilient "Islais Hyper Creek", an endeavor spearheaded by the design team BIG+ONE+SHERWOOD.

As a San Francisco resident and voter, I support the continuation of planning for this process, as the Islais Creek is a critical component for the Bayview-Hunters Point, Potrero, and Dogpatch Neighborhoods.

I have reviewed the planning and vision that the design team has taken and am supportive of the emerging Islais Creek Vision. I believe that, through this community driven design process, the team has crafted designs that reflect careful planning and grassroots community support.

In particular, I am in support of the idea that this project will bring:

- A) Both **protection** of existing PDR and local area jobs, and a revitalization of the 3rd street economic corridor to the Islais Creek area. Through maximizing optimal FAR and densifying ~22,000 jobs that are within flood/SLR/liquefaction risk, this project can protect the jobs that are already in the area.
- B) much-needed open park space on a large scale to the Southeast of San Francisco. With large parks like Golden Gate Park, the Presidio, and Crissy Field in the north and west parts of the city, the Bayview-Hunters point / Dogpatch neighborhoods are in desperate need for more than just another disconnected pocket park. The Islais Park project would bring one of the city's largest parks to an area that needs it, both to mitigate climate challenges like flooding, and for the folks who have to travel 30+ minutes to find open green space. In this fashion, the project will **restore** a natural landscape to promote a healthier and more desirable environment. This park concept plans for and

embodies resilience, for the landscape and the people who would use it. I believe that developing Islais Landing for human powered craft use as well as a composting toilet in the area will benefit the SF Bay Water Trail. Developing a walking tour with pieces of the Copra Crane located on land will commemorate the Labor movement in this area

- C) **Connection** from the disenfranchised Bayview-Hunters Point neighborhood to the economic downtown heart of San Francisco, from both a logistics standpoint and a residential-jobs standpoint. Currently, the Bayview is home to alarming rates of automobile pollution, from the overburdened 280 highway, inefficient truck transportation of goods, and over-reliance on cars for transportation for lack of good public transit. This project aims to better connect resource flows through well-planned logistic corridors, enhancing the T-line, exploring a new ferry terminal, and questioning how to enhance highway 280.
- D) **Growth** to the Bayview-Hunters Point and Dogpatch neighborhoods. Through design interventions that preemptively address natural and manmade risks, this project is designing for a new era of local workforce development connected to local employment, local food production, and growing local industry that connects production and distribution. In addition to economic growth, the project strives to grow local green space and to grow the capacity for an overburdened combined SF sewer system with treatment wetlands.

With a community-informed framework to protect, restore, connect, and grow the Islais Creek area and community, I strongly believe that this project will continue to foster creative solutions to climate and cultural challenges.

Thank you for your consideration, I hope you can join the citizens of San Francisco in support of this important project!

Sincerely,

Bo Barnes,
President of Kayaks Unlimited at Islais Landing



The Wild Oyster Project

May 10, 2018

FROM: Linda Hunter, Founder and Director, The Wild Oyster Project
TO: The Next Mayor of San Francisco
RE: Letter of Support: A RESILIENT ISLAIS CREEK

Dear Next Mayor of San Francisco,

I am writing you express my fervent support for the project known as the resilient “Islais Hyper Creek”, an endeavor spearheaded by the design team BIG+ONE+SHERWOOD.

As a San Francisco resident and voter, I support the continuation of planning for this process, as the Islais Creek is a critical component for the Bayview-Hunters Point, Potrero, and Dogpatch Neighborhoods. The vision of this project is to protect neighborhoods from nature-based risks of sea level rise, flooding, and liquefaction and societal risks of gentrification, economic uncertainty, and displacement through a large-scale green infrastructure intervention. Daylighting Islais Creek and creating a new Islais Park can create much needed green space, provide jobs to Bayview residents, help to treat water, and preserve both the history of our City and the culture of the neighborhood. This project strives to enrich an area that is resilient by design.

Some of the pilot projects included in this grand vision that The Wild Oyster Project is most excited about are:

Waterfront Access at Pier 90

While the Bayview-Hunters Point and Dogpatch communities lie on the western edge of the San Francisco bay, there are few access points to the water. The hard edge at pier 90 is currently at risk of riverine flooding, storm surge flooding, sea-level rise, and liquefaction. Intervening on this publicly owned waterfront site with green infrastructure+space would allow residents access to the water while mitigating these risks. In addition to creating a great space, this nature-based pilot project would help enhance biodiversity, help restore once natural tidal wetlands and subtidal habitats, and reconnect residents to their bayside identity.

Living Levee

The land just north of the Southeast Wastewater Treatment plant is currently at risk of riverine flooding, storm surge flooding, sea-level rise, and liquefaction. Similar to waterfront access at Pier 90, one way to address these climate risks is with green infrastructure interventions that promote waterfront access, education, and house publicly desired amenities. Piloted through feasible land acquisitions, a Living Levee at the SEP waterfront could feature naturalized treatment ponds that also serve as public green space. Over time, the pilot site could grow to increasing green space through capping certain SEP facilities with open space oriented for community facilities, urban farming, and education.

Resource Recovery Park at Piers 92-94

Along with creek access at Pier 90, there is currently underutilized land at Piers 92-94 that could be made into a resource recovery park. The current land use of the Pier 92-94 backlands features open paved space susceptible to risks of riverine flooding, storm surge flooding, sea-level rise, and liquefaction. But, there is an opportunity to re-naturalize these publicly-owned parcels with open space and green infrastructure, with the eventual goal of creating a resilient combination of a resilient resource recovery park featuring treatment wetlands and native oyster reefs, as well as a connective parks bridge from Heron’s Head park to Islais Creek.

Creek Restoration at Cesar Chavez

Islais Creek once flowed freely and was daylighted from Glen Canyon Park all the way to the mouth of the San Francisco Bay. Today, that creek is largely culverted and piped, and coincidentally almost identically follows the 100-year flood zone. When the area floods, it doesn’t easily drain due to an overburdened combined sewer system and a lack of access to space for the water to infiltrate green space. In order to increase flooding resilience, a buffer for wetlands, rainwater detention area, and connect community members with a natural creekside, a logical place to start would be to daylight the Islais Creek at Cesar Chavez Avenue. For homes and businesses that lie in this flood zone in the pathway of the natural Islais Creek, there is great potential for building up, exploring floating housing options, and preemptively addressing climate risks before they take the greatest possible tolls.

These pilot projects are derived from and matched with sound goals for resilience and community backing, champions, funding sources, and drive the vision for a resilient Islais Hyper Creek that will help protect, restore, connect, and grow the region. The assault on the environment from Washington is deafening. Our next mayor must show that here in our beloved City, we will do everything possible to ensure a viable future for the generations who inherit the challenges that our lack of foresight has produced.

I hope you will join me in my support of this project and the team - starting with these pilot projects!

Sincerely,

Linda Hunter

Linda Hunter, Founder & Director
The Wild Oyster Project

224 Noe Street San Francisco, California 94114



May 11, 2018

Mayor of San Francisco
1 Dr Carlton B Goodlett Pl, #200
San Francisco, CA, 94102

RE: LETTER OF SUPPORT: A RESILIENT ISLAIS CREEK

Dear Mayor of San Francisco,

I am writing you to urge you support the project known as the resilient “Islais Hyper Creek”, an endeavor spearheaded by the design team BIG+ONE+SHERWOOD.

As a San Francisco resident and voter, I support the continuation of planning for this process, as the Islais Creek is a critical component for the Bayview-Hunters Point, Potrero, and Dogpatch Neighborhoods.

I have reviewed the planning and vision that the design team has taken and am supportive of the emerging Islais Creek Vision. I believe that, through this community driven design process, the team has crafted designs that reflect careful planning and grassroots community support.

In particular, I am in support of the idea that this project will bring:

- A) **Much-needed open park space** on a large scale to the Southeast of San Francisco. With large parks like Golden Gate Park, the Presidio, and Crissy Field in the north and west parts of the city, the Bayview-Hunters point / Dogpatch neighborhoods are in desperate need for more than just another disconnected pocket park. The Islais Park project would bring one of the city’s largest parks to an area that needs it, both to mitigate climate challenges like flooding, and for the folks who have to travel 30+ minutes to find open green space. In this fashion, the project will **restore** a natural landscape to promote a healthier and more desirable environment. This park concept plans for and embodies resilience, for the landscape and the people who would use it.
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lack of good public transit. This project aims to better connect resource flows through well-planned logistic corridors, enhancing the T-line, exploring a new ferry terminal, and questioning how to enhance highway 280.

- C) **Growth** to the Bayview-Hunters Point and Dogpatch neighborhoods. Through design interventions that preemptively address natural and manmade risks, this project is designing for a new era of local workforce development connected to local employment, local food production, and growing local industry that connects production and distribution. In addition to economic growth, the project strives to grow local green space and to grow the capacity for an overburdened combined SF sewer system with treatment wetlands.

With a community-informed framework to protect, restore, connect, and grow the Islais Creek area and community, I strongly believe that this project will continue to foster creative solutions to climate and cultural challenges.

Thank you for your consideration, I hope you can join the citizens of San Francisco in support of this important project!

Sincerely,

Lyslynn Lacoste
BMAGIC Director

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Dogpatch & Northwest Potrero Hill Green Benefit District
San Francisco Wholesale Produce Market

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Sierra Club
Audubon Society
Friends of Islais Creek
Wild Oyster Project
EcoCenter @ Heron's Head
SF Parks Alliance
SF Conservation Corps
A Living Library
Trust for Public Land
Livable Cities
Blue Greenways
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San Francisco Department of Public Health
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... and the People of South-East San Francisco!

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