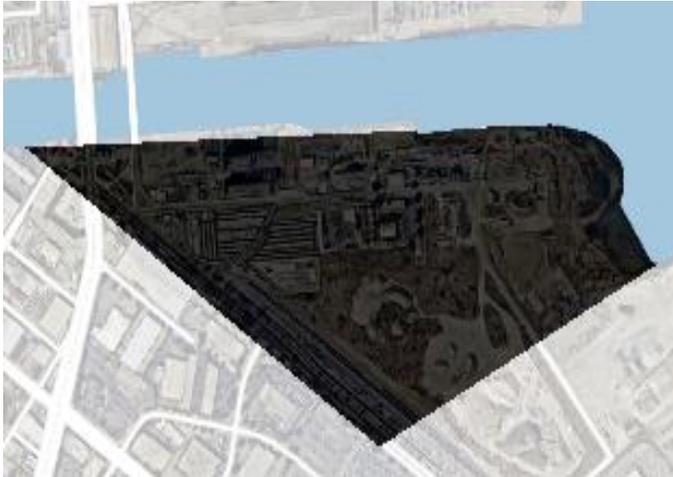


Cargo Way

Subarea 4-3



Subarea Description



Subarea 4-3: Cargo Way

Cargo Way (Subarea 4-3) is a mostly industrial area located on Bay fill that includes piers and seawall lots with a small wetland and adjacent upland area. Key infrastructure assets include the Intermodal Cargo Transfer Facility operated by the San Francisco Bay Railroad, harbor services operations, maritime terminal for dry bulk cargo ship loading, and two concrete batch plants that are the city's sole providers of concrete.

Piers 90-92 are part of the Port of San Francisco Piers 80–96 Maritime Eco-Industrial Center which is generally bounded by 25th Street on the north, Illinois Street on the west, and Cargo Way on the south sides. The Maritime Eco-Industrial Center co-locates 185-acres of maritime cargo terminals with industrial uses to optimize product exchange, incorporate green design and green technologies on-site, foster resource recovery and reuse, provide job opportunities for local

residents, minimize environmental impacts, and protect wildlife habitat. Piers 90-92 are Port Priority Use areas in BCDCs Seaport Plan.

The Pier 90-92 backlands (Seawall Lots 344 East and West) are at the southern entrance of the Islais Creek Third Street and Illinois Street Bridges. The area includes both pile-supported and bay fill contained behind a seawall. Pier 90 is used by the Port for maritime maintenance and home to San Francisco Fire Department Station 25, which hosts an Emergency Firefighting Water System manifold. Industrial and commercial tenants are also located at Pier 90.

Much of this subarea was recently improved by elevating them approximately 12 feet on the northern and eastern boundaries. The exception to this work was Darling Delaware, an industrial facility that repurposes meat byproducts and processes them to reclaim bio-nutrients, fats, oils, proteins, meals, and other by-products. Future tenants for the recently improved areas include construction laydown space. Laydown space provides temporary space for staging, fabrication, and storage of materials and equipment related to construction. Construction sites in San Francisco often have limited on-site space for such activities; therefore, off-site laydown space is critical.

Currently, the Pier 90-92 backlands have four primary uses: building material recycling at facilities located on the northwest corner under lease to the San Francisco Department of Environment; lease to Darling Delaware for industrial use; concrete crushing and recycling; and a self-storage facility. In the long-term, this site will likely become warehouse space to support cargo operations and help meet the City's demand for production, distribution, and repair uses.

The Port's railyard, San Francisco Bay Railroad operates the Intermodal Cargo Transfer Facility. The San Francisco Bay Railroad primarily transports contaminated soils and debris from large construction projects in San Francisco to a landfill in Utah. It connects to the Union Pacific Railroad via Caltrain. In providing this unique industrial service, the San Francisco Bay Railroad keeps thousands of trucks off city roads and regional freeways. It also provides an important emergency response service by hauling away debris and providing support for reconstruction following an earthquake or other disaster.

Pier 92 is leased by Hansen Aggregates, Cemex, and Central Concrete. Like Pier 90, Pier 92 is both pile-supported and includes filled land behind a seawall. It provides maritime services through dry bulk cargo ship loading and includes two concrete batch plants that are the City's sole providers of concrete. These concrete plants supply a significant amount of concrete to the city and are essential for both new commercial development and critical city infrastructure construction and

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maintenance. Disruption of concrete batching due to flooding could cascade across the construction industry. Additionally, the distribution of concrete to project sites could be hindered if access roads flooded.

Both Cemex and Central Concrete bring products over the Pier 92 docks for batching into concrete. Pier 92 could provide emergency response services with its large vessel berth. Though the pier has not been evaluated for contaminants, it likely contains creosote-treated piles like other piers do.

The southern waterfront also includes several commercial tenants. A significant number of local jobs and businesses rely on the facilities and functions of this subarea. Loss of these facilities or the Port’s inability to provide the industrial, maritime, and commercial uses of this subarea would have significant impacts on jobs from a local to regional scale. Most of its operations could continue with minor flooding of 12 inches or less. However, flooding could hinder some of the sustainability practices at the site, such as rainwater harvesting and concrete recycling.

Seawall Lot 352 is leased by Hanson Aggregates, which provides sand import and processing. Future development plans include the addition of an asphalt batch plant or expanding Hanson Aggregates bulk cargo import operations. The site also has the Pier 94 wetlands, a tidal wetland and buffer area that provides open space and upland habitat.

The wetlands at Pier 94 naturally developed when a small salt marsh formed along the northeast shore of the pier after a portion of the pier’s fill material subsided and became inundated by the bay tides. Although small, these wetlands are home to over 168 species of birds and wildlife. The Port completed the Pier 94 wetland enhancement project in 2006 to improve the physical, hydrologic, and aesthetic features of the wetland to strengthen its ecosystem.

Today, these small wetlands provide rare and valuable salt marsh habitat for a variety of plant and animal species, including migratory birds. In 2002, the Golden Gate Audubon Society initiated a coastal habitat enhancement project, removing invasive species and planting native transition zone and coastal scrub species over approximately 5 acres. The Golden Gate Audubon Society continues to bring students and volunteers to maintain the wetland and upland habitat value of this area. If these wetlands are not able to keep pace with sea level rise by increasing in elevation by naturally adding sediment and organic matter, they could be lost with only 12 inches of sea level rise.

Since 2017, the Port has connected with tens of thousands of community members through the Waterfront Resilience Program. Public feedback collected about Cargo Way underscores the importance of maintaining industrial jobs available in the neighborhood through such facilities as the cement plants while protecting nearby wetlands. Additional community feedback highlighted housing as a top priority.

Further feedback highlights additional community priorities, including opportunities to address sea level rise and enhance shoreline access. Community feedback related to this subarea is included in the Community-Identified section as part of the Review of Landmarks, Assets, and Services listed below and incorporated in the overall POOCC analysis.

Landmarks, Assets, and Services

Land Use

This subarea is zoned as M-2 District: Heavy Industrial and controlled is by the Port. In addition to the Port’s Maritime Maintenance Facility, facilities include Cemex construction materials Amador Plant, Central Concrete company, and additional construction material storage and processing facilities

Community-Identified



- Pier 94 Wetlands
- Fire Station 25
- Muni T-Line (transit connections)

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Historic and Cultural



- While there are no current historic assets located within Cargo Way, Fire Station 25 and Piers 90 and 92 could be eligible for historic designation

Maritime



- Intermodal Cargo Transfer Facility (also in Subarea 4-4)
- Maritime Maintenance Facility and Maritime Industrial Terminal (Pier 90)
- Industrial and Cargo Ship Loading (dry bulk marine terminal and concrete batch plants, Pier 92)
- Seawall Lot 344 East
- Seawall Lot 344 West
- Seawall Lot 352
- 3rd Street / Cargo Way Triangle

Disaster Response



- Fire Station 25
- Emergency Fire Water System fireboat manifold
- Emergency Fire Water System suction connections (2)
- Large Vessel Berth (Pier 92)
- Debris Removal Staging Area (Seawall Lot 344/352)
- San Francisco Bay Railroad
- Illinois Street (major arterial, heavy truck route)

Utilities



Water

- Booster pump station

Wastewater

- Combined sewer discharge outfall (1)
- Buried wastewater and stormwater sewer pipes
- Natural low impact development stormwater treatment throughout subarea
- Buried water supply pipes

Power

- Buried electric power infrastructure

Communications

- Several telecommunication cell sites (e.g. cells on top of buildings or small cell towers on streetlights) are likely distributed throughout the subarea, but specific locations are unknown

Natural Gas

- No buried natural gas supply line infrastructure

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Transportation



- 3rd Street (major arterial)
- Illinois Street (major arterial, heavy truck route)
- Muni T-Line
- Muni Station (Backlands)
- San Francisco Bay Railroad

Open Space and Ecology

Open Space



- Bay Trail / Blue Greenway
- Fireman's Park
- Islais Creek Park
- Islais Plaza / Upland Park
- Bayview Gateway Park
- Pier 94 Wetlands (and adjacent upland habitat)
- Rosa Parks Skate Plaza

Ecology

- San Francisco Bay
- Bay Habitat
- Islais Creek

Problems, Opportunities, Objectives, Constraints, and Considerations

Problems

- Bay water flooding from rising sea levels could cause extensive damage to public infrastructure, private property, industrial processes, and disaster response. This could lead to adverse changes to the social, economic, and environmental character of the subarea.
- This subarea's assets are entirely located on Bay fill making them vulnerable to strong seismic activity.
- Important maritime cargo, harbor services, industrial, and disaster response services are highly vulnerable to both temporary and permanent flooding. Pier 92 dry bulk terminal and materials storage susceptible to flooding and cargo damage, creating a regional shortfall in dry bulk terminals for a commodity that is expected to be imported in larger quantities over the next 30 years.
- Rail is particularly sensitive to flooding because it cannot operate with even minimal flooding since flooding on one section of the rail disrupts the entire network. Rail in San Francisco is critical for connecting the city to the region and beyond, especially with respect to the construction industry. For example, rail is critical to the Cemex and Central concrete batch plants on Pier 92, one of the major construction material suppliers for San Francisco.
- As flooding becomes more frequent and widespread, access to the area would become unreliable, thus increasing maintenance, operations, disruption, and damage costs.
- Bay water flooding from rising sea levels could cause fringe wetland erosion and loss.

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Opportunities

- Enhance and adapt former and current industrial spaces for city and community uses, including potential disaster response abilities.
- Increase public access and public spaces to the waterfront and improved public views and experience connecting to the Bay and Islais Creek.
- Identify co-benefits such as more jobs, and a wider variety of work opportunities, in the subarea.
- Improve natural environment by using nature-based features and improve soil and water quality, where possible.
- Improve fostering of rare salt marsh wetlands and bird habitat.

Objectives

- Reduce the risk to disaster response function and public safety (including loss of life) and public health from Bay storms and rising water levels.
- Reduce the risk to critical public infrastructure and private property damage from strong seismic activity and rising bay water levels.
- Using blue-green approaches, retain and improve public access and enhance ecology of the Bay when developing project features.
- Remove environmental risks and improve the natural environment (water quality/soil) and ecological value.
- Protect ecological value of existing wetlands and upland.
- Support a sustainable economy that benefits residents, workers, and industries.
- Retain and protect Pier 90 maritime industrial berth for harbor support functions.
- Retain and protect Pier 92 dry bulk cargo berths and terminal storage functions.
- Preserve maritime cargo functions and co-located industrial uses.

Constraints

- Must not increase the unmitigated risk of flooding from any source (bay, creek, or surface waters) outside of the subarea.
- Must protect disaster response functionality of the subarea.
- Must comply with all applicable federal, state, and local laws and policies.
- Must not impact function of cargo terminal operations, including efficient truck and rail access.
- Must not cause an increase in response time for emergency responders, nor cause an increase in flood risk to critical facilities such as police stations, fire departments, hospitals, schools, or other key structures.
- Must prioritize maritime cargo and related functions in Port Priority Use areas regulated by BCDC Seaport Plan.

Considerations:

- **Tenants:** The Port leases land to tenants including private companies, City agencies, and the U.S. military. Coordination with all tenants will be important. While the Port owns these lands, many are operated by tenants that invest private capital for infrastructure improvements to the facilities. Management decisions related to addressing the consequences of flooding and planning for future sea level rise adaptation could complicate lease terms and will require additional coordination with tenants.
- **Stakeholder engagement:** Ongoing public outreach by the Port and additional efforts, including that conducted by the Islais Creek Southeast Mobility Adaptation Strategy, have generated many location specific comments from the community. Feedback highlights the importance of maintaining industrial jobs available in the neighborhood and enhancements to shoreline access as community priorities.
- **Equity:** The neighborhood has been subjected to significant historical and environmental injustices,



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- **Flooding or seismic events:** These events could potentially impact maritime and industrial uses that generate Port revenues used for capital repair and maintenance of Port assets and services, including piers, historic buildings and districts, shoreline flood and seismic risk reduction, open space, public assets, parks, maritime berths and other maritime infrastructure, the Embarcadero Promenade and other utilities and infrastructure.
 - **USACE Environmental Operating Principles:** Incorporate as part of the planning process.
 - **Environmental challenges:** Hazardous waste, solid waste, and impaired water are environmental concerns.
- and has high social vulnerability, with high poverty, crime, unemployment, and hospitalization rates relative to San Francisco. Most of the area is included within MTC’s communities of concern analysis. It also has strong economic and cultural life, with high rates of women- and minority-owned businesses, numerous community benefit organizations, worship centers, and arts and culture organizations.
- **Special status of industrial area:** Several key infrastructure assets (deep water berths, railroad connection, staging areas, cargo facilities and concrete batch plants) that serve the entire city are in the subarea.

Seismic Summary

The seismic hazard and vulnerability within Cargo Way (Subarea 4-3) is currently being evaluated through the Initial Southern Waterfront Seismic Study, therefore comprehensive accounting of liquefaction and lateral spreading hazards cannot currently be provided.

From a regional perspective, USGS provides a high level rating of seismic hazard in Cargo Way (Subarea 4-3) as an VIII on the Modified Mercalli intensity (MMI) scale. The intensity scale consists of a series of certain key responses such as people awakening, movement of furniture, damage to chimneys, and finally – total destruction – on a scale of I (not felt) to X (extreme).

An MMI of VIII (severe) could cause slight damage in specially designed structures, considerable damage in ordinary substantial buildings including partial building collapse, and major damage in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, and walls are likely, and heavy furniture may be overturned.

Subarea 4-3 is built almost entirely on bay fill (i.e., artificial fill placed over open bay waters, wetlands, and the former Islais Creek floodplain) and has a Very High susceptibility to liquefaction. The scale considers historical liquefaction occurrences, geotechnical analyses of limited borehole data, and the estimated depth to the shallow groundwater table. The susceptibility ratings are based on existing conditions and do not consider potential increases to the groundwater table that may occur with sea level rise and climate change.

Our understanding of seismic hazard and vulnerability in this subarea will continue to be refined with the completion of the Initial Southern Waterfront Seismic Study and used to develop appropriate risk mitigation measures as part of the Waterfront Resilience Program.



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community