



Urban Waters Federal Partnership: Housing Webinar

Tuesday January 18, 2022

“Building Community Resiliency Through Partnerships & Collaboration in Camden, NJ”

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Building Community Resiliency thru Partnerships & Collaboration

Camden's Environmental Challenges: Flooding & Deteriorated Infrastructure

Camden, NJ: Combined Sewer System *(built 1880's)*

Distressed City owns sewer system

Regional utility serves 37 towns in 3 counties...

...all waste goes to Camden for treatment...

28 outfalls discharge into Delaware River & tributaries

**Cramer Hill residents ranked flooding as the #1 quality of life problem...*

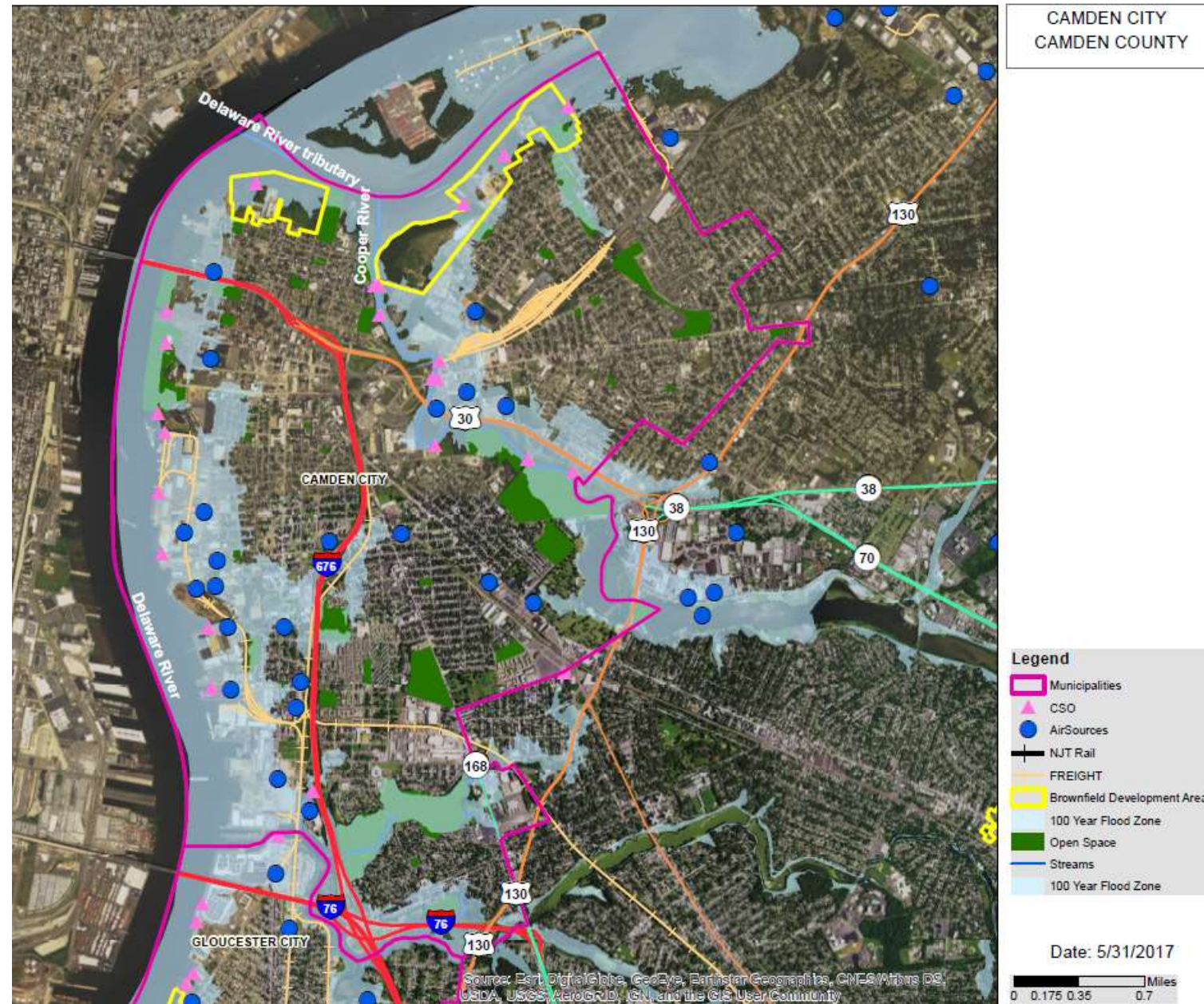


Combined sewage flooding in the Cramer Hill neighborhood of Camden, NJ *(photos courtesy of Camden Community Partnership).*



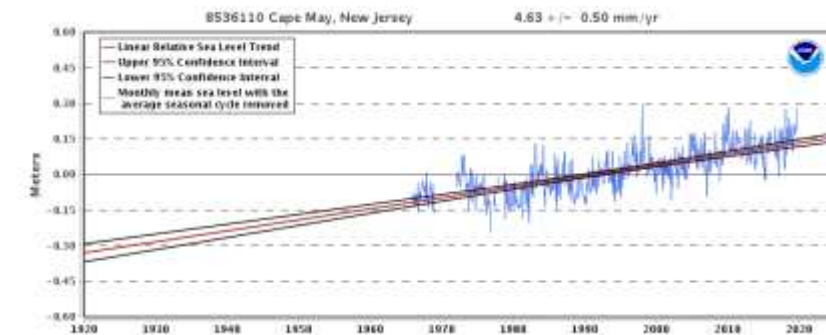
Building Community Resiliency thru Partnerships & Collaboration

Camden's Economic, Social & Environmental Challenges: Fluvial & Tidal Flooding



Camden, NJ:

- Waterfront-dependent industries & transportation network
- Loss of manufacturing 1950's-1970's drives economic & population declines
- Current Demographics:
 - Poverty Rate: 36.4% (2021)
 - Population: 73,236 (2021)
 - (124,555 in 1950)

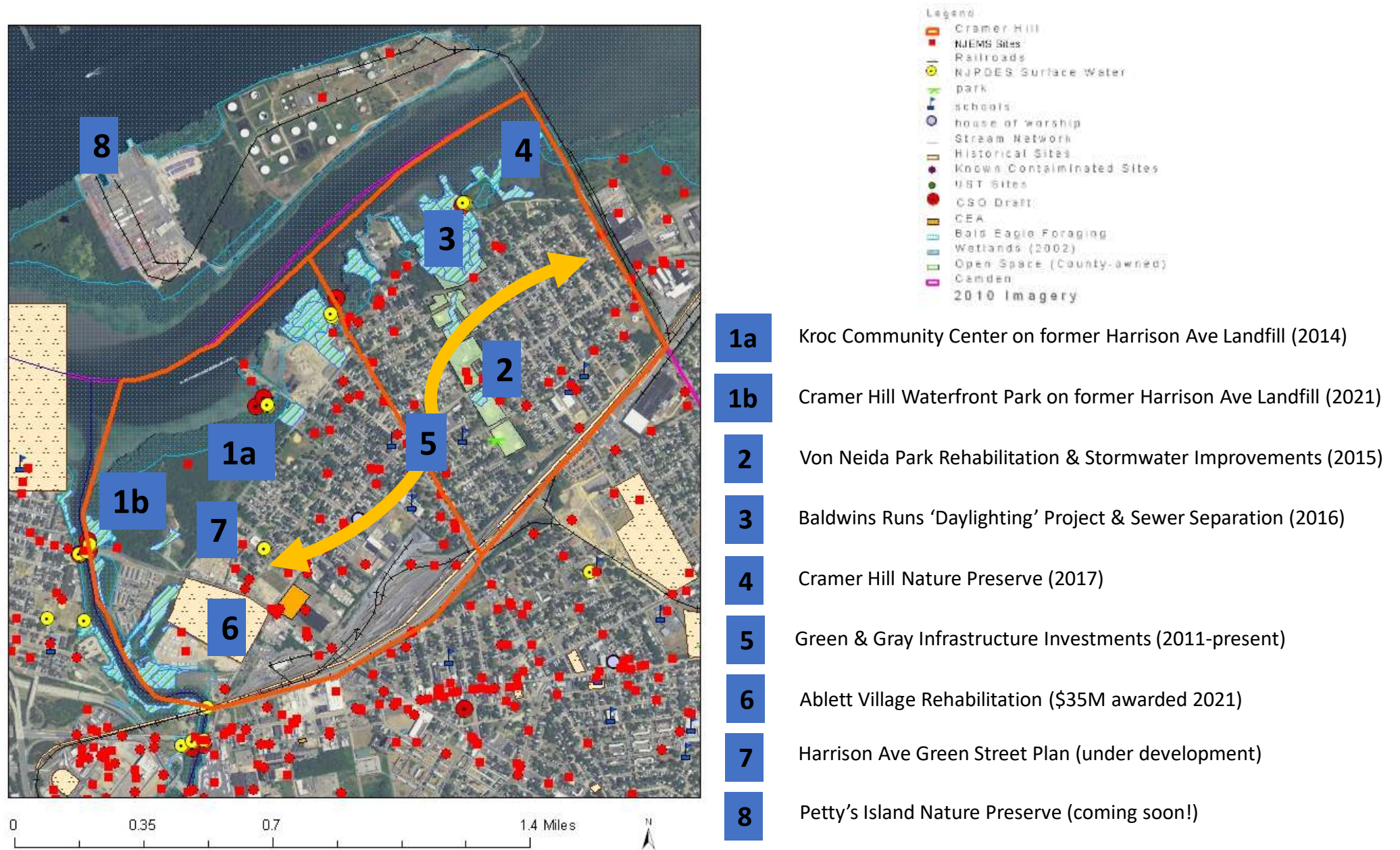


NOAA sea level measurements at Cape May, NJ



Building Community Resiliency thru Partnerships & Collaboration

Environmental, Social, Economic & Housing Investments in Cramer Hill, Camden





Building Community Equity through essential services, enrichment & jobs

Harrison Ave Landfill: Transformation into Kroc Community Center



Aerial view toward southwest of Harrison Ave Landfill after remediation and construction into the Kroc Center, showing stormwater management features (2014).



Building Resilient Shorelines to Protect from Sea Level Rise

Harrison Ave Landfill: Transformation into Cramer Hill Waterfront Park



Aerial View toward north during remediation for Cramer Hill Waterfront Park (October, 2019), showing many of the resilient elements & community assets. Kroc Community Center is in the far upper right of aerial photo (courtesy of NJDEP Office of Natural Resource Restoration).



Building Resilient Shorelines to Protect from Sea Level Rise

Harrison Ave Landfill: Transformation into Cramer Hill Waterfront Park

Delaware River shoreline stabilization



View south along Harrison Ave Landfill shoreline, showing solid waste at water's edge (right, 2018) and the stabilized shoreline (left, 2020), after solid waste relocation, with riprap and plantings (courtesy of NJDEP Office of Natural Resource Restoration).



Building Resilient Shorelines to Protect from Sea Level Rise

Harrison Ave Landfill: Transformation into Cramer Hill Waterfront Park



New Jersey Governor Phil Murphy speaking at the Cramer Hill Waterfront Park entry plaza at the grand opening on November 30, 2021. Kites and dog walkers enjoying the summit vista, with access to and views of the Delaware River (to right), Cooper River (to left), with the Ben Franklin Bridge & city of Philadelphia in the background.



Building Community Resiliency thru Partnerships & Collaboration

Camden SMART Initiative (2011): Community-Based Green & Gray Infrastructure



>60
Green Infrastructure
Projects



>2,000
Trees Planted



>100 Million
Gallons of Stormwater
Captured

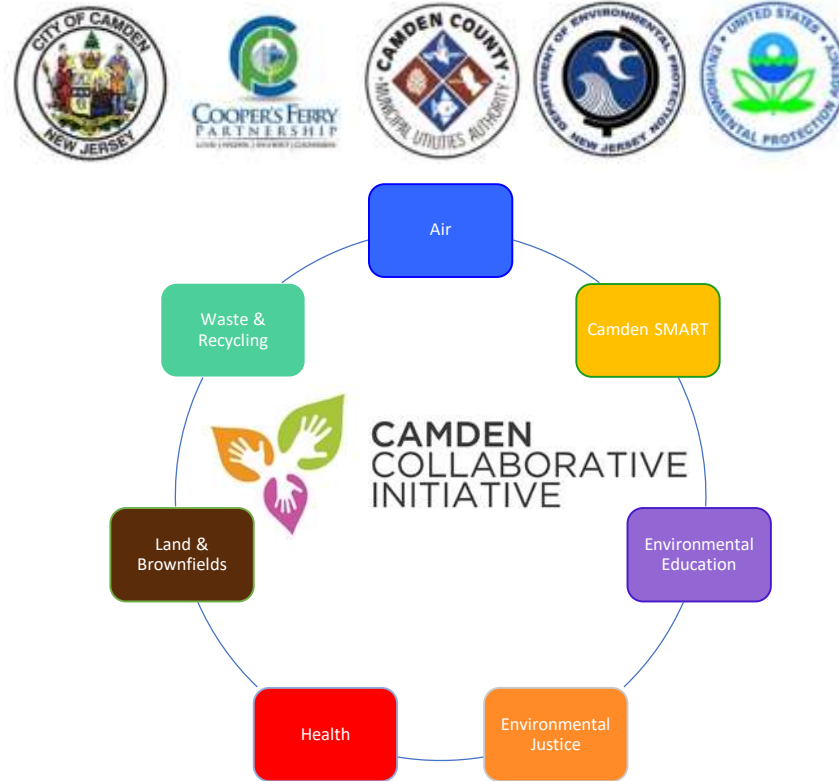
****US Water Alliance (2019):
Nation's Best public-private
water initiative***

****NJ Future (2015): NJ's Best
community-based green
infrastructure***



Building Community Resiliency thru Partnerships & Collaboration

Camden Collaborative Initiative (2013): Place-Based Collaborative Partnership



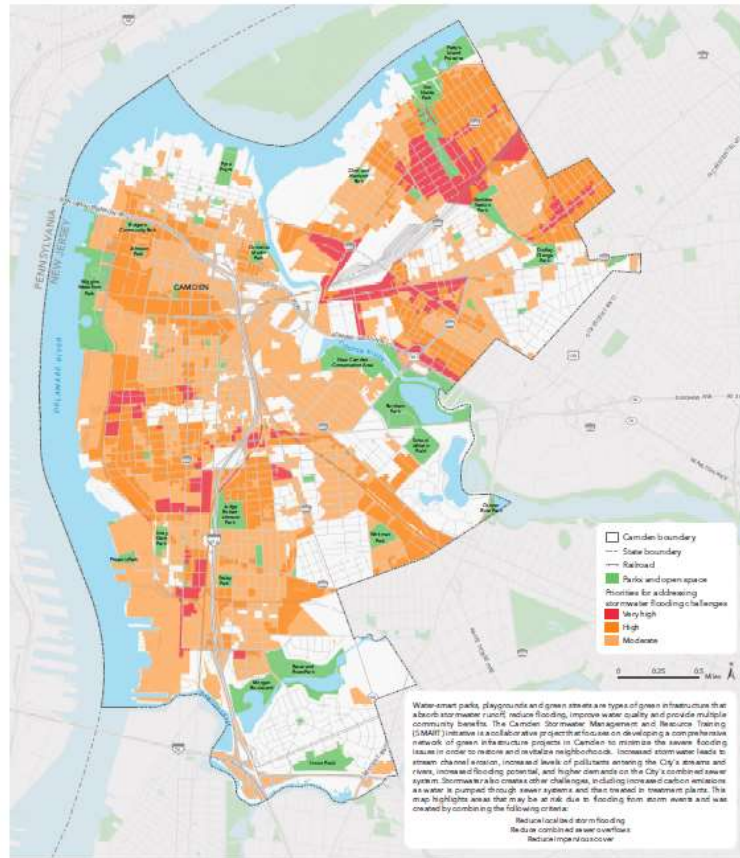
The **Camden Collaborative Initiative** (CCI) is a solutions-oriented partnership between governmental, non-profit, private, and community-based agencies formed to plan and implement innovative strategies to improve the environment and the quality of life for Camden's residents.

Camden Collaborative Initiative received EPA's Environmental Champion Award (2016) for more innovative & effective public-private partnership.

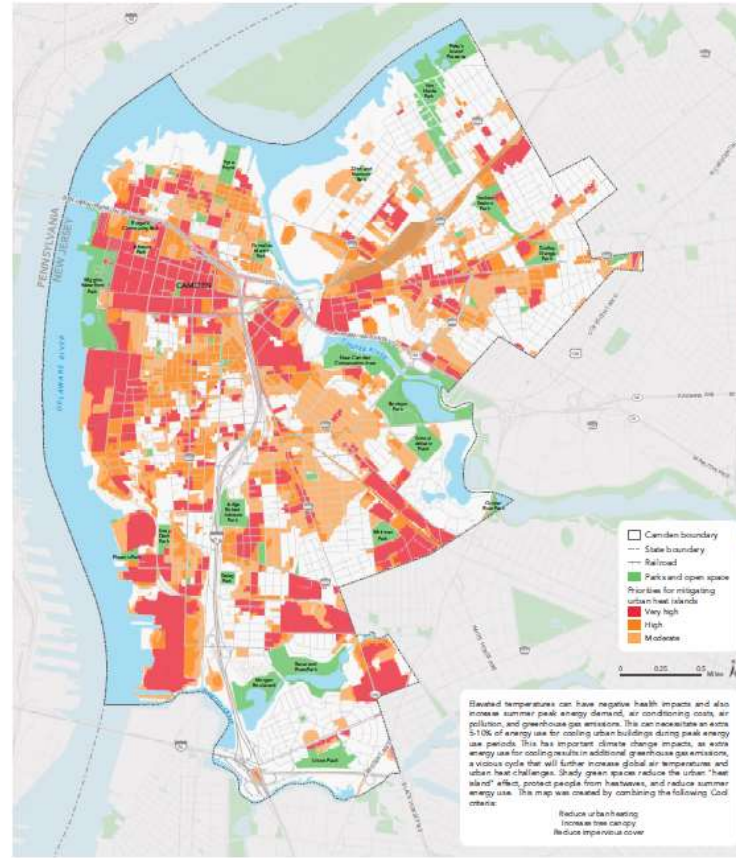


Building Community Resiliency thru partnerships & collaboration

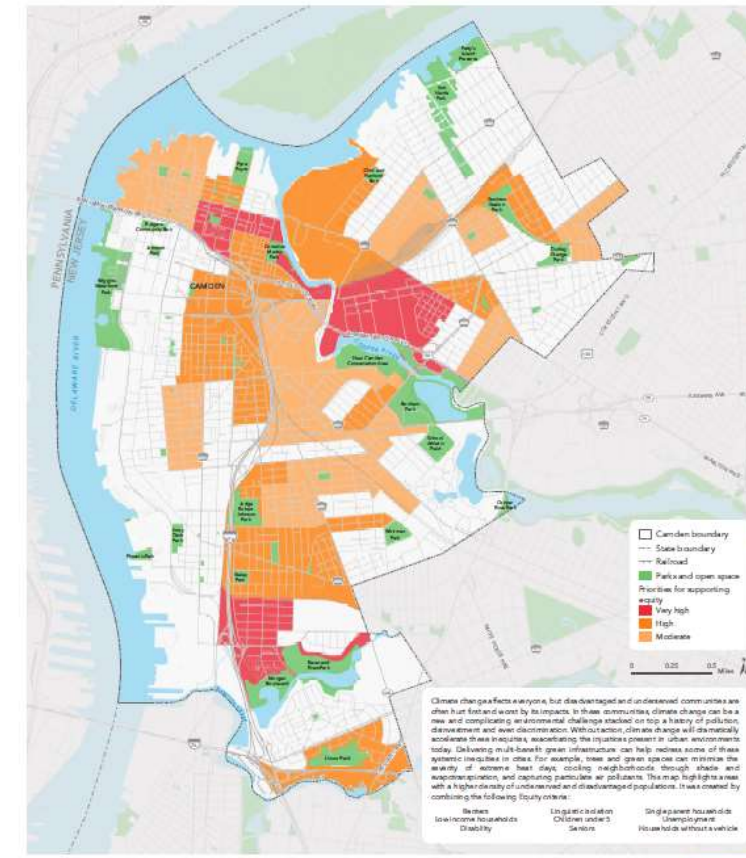
Camden Green & Healthy Tool & Climate-Smart Cities



Addressing stormwater flooding challenges
CLIMATE-SMART CITIES CAMDEN: ABSORB PRIORITIES



Mitigating urban heat islands
CLIMATE-SMART CITIES CAMDEN: COOL PRIORITIES



Supporting equity
CLIMATE-SMART CITIES CAMDEN: EQUITY PRIORITIES

Green + Healthy Camden is a multi-partner initiative to support climate preparedness, equity, health, and park and open space planning throughout Camden, New Jersey. The Trust for Public Land led this collaborative effort, along with its Climate-Smart Cities Camden information is helping Camden plan for climate adaptation & community resiliency.

https://web.tplgis.org/camden_csc/



Building Resilient Shorelines to Protect from Sea Level Rise Camden County Municipal Utilities Authority Plant, Waterfront South Camden

Camden County Municipal Utilities Authority (CCMUA)

- 185 million gallons/day wastewater treatment plant serving 37 municipalities (3rd largest in NJ) – waste treated in Camden...

CCMUA Institutional leader in Waterfront South, poorest neighborhood in Camden.

Camden Collaborative Initiative partnership to address environmental issues and community resiliency thru engagement.

- Solar panels (10% of total plant energy)
- Biogas recovery (50% of total) with combined heat & power (90% of total incl. natural gas) [*\$35M NJ Water Bank*]
- Phoenix Park – first meaningful waterfront access since 1880's [*\$2.7M NJ Water Bank*]
- **Living shoreline (awaiting construction)**



View of Camden County Municipal Utilities Authority (CCMUA) Plant and former American Minerals Site (now Phoenix Park) from west toward Waterfront South neighborhood, Camden (concept of Living Resilient Shoreline Plan superimposed).



Building Resilient Shorelines to Protect from Sea Level Rise

Camden County Municipal Utilities Authority Plant, Waterfront South Camden

CCMUA Living Shoreline Plan:

- Core partners: CCMUA, NJDEP, Partnership for Delaware Estuary, Stantec

...properly designed Living Shorelines adapt to sea-level rise

- Vegetated marshland improves water quality, enhances habitat, and reduces wave energy and storm surge
- Freshwater mussels: foundation species in freshwater tidal systems
 - provide food, shelter & resiliency
 - mussels treat 10 gallons/day ($X = 92.6 \text{ tons ha}^{-1} \text{ y}^{-1}$ Removal of Suspended Matter)

CURRENT CONDITIONS



PROPOSED CONDITIONS





“Building Community Resiliency Through Partnerships & Collaboration in Camden, NJ”

CLOSING THOUGHTS & CONCLUSIONS:

Public-private partnerships are necessary to address complex environmental, social & economic challenges in distressed communities - Camden is a national leader in collaborative partnerships (e.g., Camden SMART, Camden Collaborative Initiative)

Investments in the environment support Social, Economic, Health & Housing initiatives

Following environmental investments, Camden is ready for housing & economic development

Resiliency investments are underway in Camden & climate adaptation will be necessary



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Thank you!