

Proposed Amendments to Volume 2, Chapter 12: Resilience: Living with Water and Natural Hazards and Chapter 13: Environmental Quality

The Office of Resilience and Sustainability recommends significant revisions to Volume 2, Chapter 12: Resilience: Living with water and natural hazards and Chapter 13: Environmental Quality. Since the writing of the Master Plan in 2010, the City of New Orleans and the Southeast Louisiana region have made significant strides towards planning for a safer, more equitable, and more resilient city and region. These planning efforts have been documented in the 2012 Louisiana Coastal Master Plan (and draft 2017 update), the New Orleans Hazard Mitigation Plan 2015 Update, the Greater New Orleans Urban Water Plan (2013), and the City's first ever resilience strategy, *Resilient New Orleans: Strategic actions to shape our future city* released in August 2015. The following proposed amendments to Volume 2, Chapters 12 and 13 reflect the research and recommendations of these documents.

EQUITY

Equity is integral to any credible resilience strategy. The enhancement of environmental quality and justice through targeted investments in natural resources and improved ecosystem services is a cornerstone of the Master Plan element for resilience. To ensure citizen guidance, the resilience strategy will also empower our community to adapt to a changing environment and future threats. This element will work toward ensuring that New Orleans is prepared for future disasters and ready to carry out an efficient, comprehensive, and equitable recovery. Moreover, it will advance improving environmental quality, increasing resource efficiency, and spurring economic growth through the mitigation of our climate impact.

RESILIENCE

This principle must link existing inequities in the distribution of environmental benefits and burdens in the city and reducing risk for the most vulnerable populations who have the fewest resources available to mitigate the impacts of disasters and climate change. This Master Plan element will also encourage retrofitting existing building stock to increase energy efficiency and use of renewable energy sources, and prioritize these sources for new development and the reduction of greenhouse emissions.

Recommended amendments to Chapters 12 and 13:

- Delete Chapter 13: Environmental Quality
- Change the title of Chapter 12 to Adapt to thrive: Environmental stewardship, disaster risk reduction, and climate change
- In order to align with the visions and actions outlined in the City's resilience strategy, *Resilient New Orleans*, replace all of the goals, strategies, and actions in Chapter 12 with the following goals, strategies, and actions:

GOAL 1: A healthy, functioning coast that sustains communities, industries, and ecosystems while providing critical flood protection as part of a Multiple Lines of Defense strategy

TARGET: increase in protection level [ask CPRA to advise]

- **Strategy 1A:** Leverage critical resources for local and regional coastal protection
 - **Action 1:** Dedicate City resources as matching funds for the State’s Coastal Master Plan projects in Orleans Parish
 - **Who:** Mayor’s Office, City Council, Office of Resilience and Sustainability
 - **When:** First Five Years
 - **Action 2:** Advocate for increased state and federal resources for coastal protection and restoration projects
 - - **Who:** Office of Resilience and Sustainability, Mayor’s Office
 - **When:** First five years
- **Strategy 1B:** Advocate and coordinate with neighboring parishes for the implementation of the state’s Multiple Lines of Defense vision and a flood protection system that can withstand a 500 year storm.
 - **Action 1:** In Partnership with the CPRA, advocate for the implementation of coastal protection and restoration projects that benefit Greater New Orleans
 - **Who:** Office of Resilience and Sustainability, Mayor’s Office
 - **When:** First five years
 - **Action 2:** Improve coordination in coastal restoration between New Orleans and other local, state, and federal agencies, such as through participation in the Governor’s Coastal Advisory Committee
 - **Who:** Office of Resilience and Sustainability, Mayor’s Office
 - **When:** First five years
 - **Action 3:** Develop a coastal awareness campaign
 - **Who:** Office of Resilience and Sustainability; local community, philanthropic, nonprofit, and corporate partners
 - **When:** First five years
- **Strategy 1C:** Advocate and coordinate with the private sector to support the growth and development of a regional water management industry
 - **Action 1:** Promote workforce development opportunities for local residents in the emerging water management sector
 - **Who:** Network for Economic Opportunity, Office of Resilience and Sustainability, City departments, private-sector partners
 - **When:** Ongoing
 - **Action 2:** Leverage private sector resources and interests to advance coastal protection projects
 - **Who:** Office of Resilience and Sustainability, New Orleans Business Alliance, private-sector partners

- **When:** Ongoing
- **Strategy 1D:** Become a model for the nonstructural urban adaptation component of the State’s Coastal Master Plan
 - **Action 1:** Ensure consistency between the State’s Coastal Master Plan and the City’s Resilience Strategy, Master Plan, and land use regulations
 - **Who:** City Planning Commission, Office of Resilience and Sustainability
 - **When:** Ongoing
 - **Action 2:** Integrate risk mitigation into land use and other planning decisions
 - **Who:** City Planning Commission
 - **When:** Ongoing
 - **Action 3:** Work with CPRA and other state and local partners to integrate urban water management and coastal management practices
 - **Who:** Office of Resilience an Sustainability
 - **When:** First five years
 - **Action 4:** Pilot nonstructural recommendations from the 2017 Coastal Master Plan in New Orleans
 - **Who:** Sewerage and Water Board, DPW, Office of Resilience and Sustainability, NORA
 - **When:** First Five years

Goal 2: A New Orleans that **embodies the principle of *living with water***, managing urban stormwater and groundwater carefully to align with natural processes and support economic growth

TARGET: *reduce impact of a ten-year storm to a five-year storm*

- **Strategy 2A:** Implement comprehensive water management to complement the traditional drainage system of pipes and pumps with green infrastructure that delays and detains stormwater in landscaped spaces.
 - **Action 1:** Implement district-scale comprehensive water management planning plans through the retrofit of parks, playgrounds, neutral grounds, and other open spaces.
 - **Who:** Capital Projects, DPW, SWBNO, Parks and Parkways, Office of Resilience and Sustainability, NORA
 - **When:** Medium-term
 - **Action 2:** Utilize data-driven tools to support the strategic prioritization and design of projects in order to enhance performance and achieve resilience goals such as social equity and economic development.
 - **Who:** Office of Resilience and Sustainability, City Departments
 - **When:** Ongoing
 - **Action 3:** Prioritize the long-term financing and operations and maintenance of projects in the design phase
 - **Who:** City Departments, design and engineering consultants
 - **When:** First five years
 - **Action 4:** Monitor ground and surface water levels and quality
 - **Who:** SWBNO
 - **When:** First five years

- **Strategy 2B:** Institutionalize comprehensive stormwater management planning and project delivery across city government
 - **Action 1:** Support the enforcement of the CZO's stormwater regulations with [CPC add specific language]
 - **Who:** CPC, ORS
 - **When:** First Five Years
 - **Action 2:** Formalize a cross-agency stormwater project delivery team
 - **Who:** ORS, CPC, SWBNO, DPW, Parks and Parkways, NORA, Capital Projects, Place-Based Planning
 - **When:** First Five Years
 - **Action 3:** Develop the capacity of the cross-agency resilience design review
 - **Who:** ORS, City Departments
 - **When:** First five years

Goal 3: A population that has the ability and capacity to adapt to a changing environment and future threats

TARGET: increase awareness and participation in adaptation programs [by x metric]

- **Strategy 3A:** Incentivize property owners to invest in risk reduction
 - **Action 1:** Implement a grant program to support risk reduction measures to private properties for low- and moderate- income homeowners
 - **Who:** NORA
 - **When:** First five years
- **Strategy 3B:** Develop clear guidance on risk reduction measures in the built environment
 - **Action 1:** Establish stormwater management best practices for public infrastructure and residential, commercial, and public buildings
 - **Who:** SWBNO, DPW, ORS, Capital Projects
 - **When:** First five years
 - **Action 2:** Incorporate green infrastructure and resilient design measures into general specifications for streets and public rights-of-way
 - **Who:** DPW
 - **When:** First five years
 - **Action 3:** Develop-storm hardening and structural adaptation design standards for residential, commercial, and public buildings.
 - **Who:** ORS, City Departments, local designers and developers
 - **When:** First five years
- **Strategy 3C:** Promote community-based green infrastructure and capacity-building
 - **Action 1:** Support and implement small scale demonstration projects to promote environmental education and stewardship
 - **Who:** City Departments, local community and advocacy groups
 - **When:** First five years
 - **Action 2:** Incorporate creative community engagement and education into the design of infrastructure projects
 - **Who:** ORS, City Departments
 - **When:** First five years
- **Strategy 3D:** Develop the knowledge and capacity of emerging environmental stewards

- **Action 1:** Support and promote the work of community-based organizations focused on youth development and education
 - **Who:** ORS
 - **When:** Ongoing

Goal 4: A New Orleans that is **prepared for future disasters** and ready to carry out an efficient, comprehensive, and equitable recovery

TARGET: *reduce projected recovery time of critical services*

- **Strategy 4A:** Invest in pre-disaster planning for post-disaster recovery
 - **Action 1:** Develop a comprehensive plan for post-disaster recovery that incorporates critical infrastructure systems, land use, housing, economic development, and public health services
 - **Who:** Office of Homeland Security, ORS, City Departments
 - **When:** First five years
 - **Action 2:** Implement and regularly maintain a citywide parcel and building survey that can be quickly updated after a disaster
 - **Who:** ITI
 - **When:** First five years
 - **Action 3:** Establish a disaster recovery fund for the City of New Orleans
 - **Who:** CAO
 - **When:** First five years
- **Strategy 4B:** Improve the redundancy and reliability of our critical infrastructure
 - **Action 1:** Implement resilient infrastructure recovery and risk transfer for critical assets that pre-funds catastrophic losses through the transfer of risk to the private market
 - **Who:** ORS, SWBNO, DPW
 - **When:** First five years
 - **Action 2:** Implement a microgrid pilot project
 - **Who:** ORS, SWBNO, Entergy, other federal and private partners
 - **When:** First five years
- **Strategy 4C:** Incorporate all perils, climate change impacts, and equity into Hazard Mitigation planning
 - **Action 1:** Support and strengthen the city’s professional Hazard Mitigation Unit
 - **Who:** Mayor’s Office, CAO, Office of Homeland Security
 - **When:** First five years
 - **Action 2:** Continue to update the Hazard Mitigation Plan to reflect latest projections and scenarios
 - **Who:** Office of Homeland Security
 - **When:** Ongoing
 - **Action 3:** Utilize the “Orleans Parish 2015 Hazard Mitigation Plan Update” and all future updates in concert with the Master Plan
 - **Who:** CPC, Office of Homeland Security
 - **When:** Ongoing
- **Strategy 4D:** Develop the preparedness of neighborhoods and businesses
 - **Action 1:** Launch a Neighborhood Resilience program
 - **Who:** NORA, Office of Resilience
 - **When:** First Five Years
 - **Action 2:** Develop a Small Business Preparedness program

- **Who:** Office of Resilience, City Departments, local business community, neighborhood and business improvement associations
- **When:** First five years

Goal 5: Improved environmental quality, increased resource efficiency, and economic growth through the **mitigation of our climate impact**

TARGET: *reduce greenhouse gas emission by X in X year*

- **Strategy 5A:** Develop and implement a Climate Action Plan
 - **Action 1:** Set ambitious greenhouse gas emissions reductions targets for the short- and long-term
 - **Who:** ORS, City Departments, Mayor’s Office
 - **When:** First five years
 - **Action 2:** Complete an annual community-wide and municipal greenhouse gas inventory
 - **Who:** ORS, City Departments
 - **When:** Ongoing
 - **Action 3:** Build the city’s capacity to conduct climate mitigation planning and implementation
 - **Who:** Mayor’s Office, CAO
 - **When:** First Five Years
- **Strategy 5B:** Reduce waste and conserve resources
 - **Action 1:** Develop a communication and education campaign to increase participation in the city’s recycling program
 - **Who:** Department of Sanitation
 - **When:** First Five Years
 - **Action 2:** Explore the possibility of creating a public composting program
 - **Who:** Department of Sanitation
 - **When:** First five years
 - **Action 3:** Create a long-term strategic plan to address waste management and reduction in the city
 - **Who:** Department of Sanitation
 - **When:** First five Years
- **Strategy 5C:** Encourage, incentivize, and expand low carbon transportation alternatives, including public transit, walking, and biking
 - **Action 1:** Develop a multimodal regional transit vision
 - **Who:** Mayor’s Office, RTA, City Departments
 - **When:** First five years
 - **Action 2:** Allow mixed uses in land use and zoning in strategic locations such as transit corridors and nodes
 - **Who:** CPC
 - **When:** First five years
 - **Action 3:** Improve bicycle and pedestrian networks and safety with a “Vision Zero” goal of no pedestrian or bicycle fatalities on city streets
 - **Who:** DPW, Mayor’s Office, RTA, transit advocates
 - **When:** Ongoing
 - **Action 4:** Implement an equitable bike share program
 - **Who:** Mayor’s Office, outside partners
 - **When:** First Five years
 - **Action 5:** Plan for the transition of the city fleet to low-carbon and electric vehicles
 - **Who:** CAO

- **When:** First five years
 - **Action 6:** Adopt zoning and building regulations to accommodate the location of electric vehicle charging stations at residential, commercial, and industrial properties
 - **Who:** CPC
 - **When:** First five years
 - [Cross-reference TOD actions from other chapter]
 - [Cross-reference transit access/planning actions from other chapter]
- **Strategy 5D:** Promote renewable energy and energy efficiency
 - **Action 1:** Implement ambitious energy efficiency measure in municipal buildings
 - **Who:** CAO
 - **When:** First five years
 - **Action 2:** Incentivize the adoption of energy benchmarking and energy efficiency measures in large commercial and institutional buildings
 - **Who:** ORS, Mayor's Office, Downtown Development District, corporate and philanthropic partners
 - **When:** First five years
 - **Action 3:** Seek energy efficiency financing mechanisms in partnership with banks and lenders
 - **Who:** ORS
 - **When:** First five years
 - **Action 5:** Work with Entergy and the City Council's Utility Regulatory Office to implement the decoupling ordinance
 - **Who:** ORS, City Council, Mayor's Office, Entergy
 - **When:** First five years
 - **Action 6:** Work with Entergy and the City Council's Utility Regulatory Office to advance energy efficiency
 - **Who:** ORS, City Council, Mayor's Office, Entergy
 - **When:** First five years
 - **Action 7:** Work with Entergy and the City Council's Utility Regulatory Office to increase the share of renewable energy in the Integrated Resource Plan
 - **Who:** ORS, City Council, Mayor's Office, Entergy
 - **When:** First five years

Goal 6: Environmental quality and justice through targeted investments in natural resources and improved ecosystem services.

- **Strategy 6A:** Target investments in new and enhanced green spaces in areas of highest risk with the most vulnerable populations, underserved and low-income neighborhoods, and communities of color.
 - **Action 1:** Mitigate urban heat island through the targeted planting of trees and other enhancements in underserved areas, particularly where the most vulnerable populations (elderly, youth, low-income) live
 - **Who:** Parks and Parkways, ORS, City Departments, nonprofit and philanthropic partners
 - **When:** Medium-term
 - **Action 2:** Mitigate air quality by planting trees to reduce contaminants and buffer transit corridors.
 - **Who:** Parks and Parkways, ORS, City Departments, nonprofit and philanthropic partners
 - **When:** Medium-term
 - **Action 3:** Increase access to parks and recreational corridors to improve public health outcomes in underserved and vulnerable areas
 - **Who:** Parks and Parkways, NORDC, ORS, City Departments, nonprofit and philanthropic partners
 - **When:** Ongoing
- **Strategy 6B:** Design projects that prioritize enhanced ecological function

- **Action 1:** Prioritize the expansion of the tree canopy and the use of planting materials that serve a positive ecological function in green infrastructure and other enhanced green spaces
 - **Who:** Parks and Parkways, City Departments
 - **When:** Ongoing
- **Action 2:** Design and implement green infrastructure interventions to improve water quality
 - **Who:** SWB, City Departments
 - **When:** Ongoing
- **Strategy 6C: Prevent illegal disposal of hazardous waste**
 - **Action 1:** Provide proper and convenient disposal services for hazardous waste items
 - **Who:** Sanitation Department
 - **When:** First five years
 - **Action 2:** Provide adequate code enforcement of environmental health hazard protections
 - **Who:** Health Department, Mosquito and Termite Control
 - **When:** Ongoing
 - **Action 3:** Explore creative environmental design methods to deter illegal waste and contaminant disposal
 - **Who:** NORA, Code Enforcement, nonprofit partners
 - **When:** First five years
 - **Action 4:** Work with the private sector to develop local reuse and recycling markets for common illegally disposed waste items like scrap tires.
 - **Who:** Sanitation, City Departments
 - **When:** First five years
- **Strategy 6D: Identify, remediate, and redevelop contaminated sites and buildings**
 - **Action 1:** Identify and apply for federal, state, and other funding to remediate brownfields and other contaminated sites
 - **Who:** ORS
 - **When:** Ongoing
 - **Action 2:** Provide increased funding and support for lead remediation initiatives for homes, schools, and gardens
 - **Who:** Health Department, ORS, academic partners
 - **When:** First five years
 - **Action 3:** Pursue public engagement and education around environmental contamination
 - **Who:** Health Department, Louisiana Department of Environmental Quality
 - **When:** First five years

Goal 7: Global leadership in urban resilience and sustainability, with the facilities and resources to share our experiences while continuing to learn from the daily realities of a complex urban condition

- **Strategy 7A: Increase public awareness and education, locally and international, of New Orleans' resilience challenges and its efforts to build urban resilience**
 - **Action 1:** Establish a resilience center
 - **Who:** ORS; philanthropic, academic, private, and community partners
 - **When:** First five years
 - **Action 2:** Maintain New Orleans' participation in peer-to-peer best practices sharing networks (C40, Compact of Mayors, etc)
 - **Who:** Mayor's Office, ORS

- **When:** Ongoing
- **Strategy 7B:** Integrate resilience-driven decision making across public agencies
 - **Action 1:** Develop the capacity of the Office of Resilience and Sustainability
 - **Who:** Mayor's Office, CAO
 - **When:** First five years
 - **Action 2:** Formalize a cross-agency resilience-building team
 - **Who:** Mayor's Office, ORS, City Departments
 - **When:** First five years
 - **Action 3:** Develop the capacity of cross-agency resilience design review
 - **Who:** ORS, City Departments
 - **When:** First five years

Additional recommendations:

- For increased usefulness across the Master Plan document, include metric targets for each goal wherever possible (some placeholder examples have been included in the revisions to Chapter 12 above).