

chapter



ADAPT TO THRIVE: ENVIRONMENTAL STEWARDSHIP, DISASTER RISK REDUCTION, AND CLIMATE CHANGE

Goal	Policies for Decision Makers	For More Information, See Page:
<p>1</p> <p><i>A healthy, functioning coast that sustains communities, industries, and ecosystems while providing critical flood protection as part of a Multiple Lines of Defense strategy</i></p>	<p>1.A. Leverage critical resources for local and regional coastal protection</p> <p>1.B. 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.</p> <p>1.C. Coordinate with the private sector and advocate for the growth and development of a regional water management industry</p> <p>1.D. Become a model for the nonstructural urban adaptation component of the State’s Coastal Master Plan</p>	
<p>2</p> <p><i>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</i></p>	<p>2.A. Implement comprehensive stormwater management to complement the traditional drainage system of pipes and pumps with green infrastructure that delays and detains stormwater in landscaped features.</p> <p>2.B. Institutionalize comprehensive stormwater management planning and project delivery across city government</p>	
<p>3</p> <p><i>A population that has the ability and capacity to adapt to a changing environment and future threats</i></p>	<p>3.A. Incentivize property owners to invest in risk reduction</p> <p>3.B. Develop clear guidance on risk reduction measures in the built environment</p> <p>3.C. Promote community-based green infrastructure and capacity-building</p> <p>3.D. Develop the knowledge and capacity of emerging environmental stewards</p>	
<p>4</p> <p><i>A New Orleans that is prepared for future</i></p>	<p>4.A. Invest in pre-disaster planning for post-disaster recovery</p>	

	<i>disasters and ready to carry out an efficient, comprehensive, and equitable recovery</i>	4.B. Improve the redundancy and reliability of our critical infrastructure	
		4.C. Incorporate all perils, climate change impacts, and equity into Hazard Mitigation planning	
		4.D. Develop the preparedness of neighborhoods and businesses	
5	<i>Improved environmental quality, increased resource efficiency, and economic growth through the mitigation of our climate impact</i>	5.A. Adopt and implement a Climate Action Plan	
		5.B. Reduce waste and conserve resources	
		5.C. Encourage, incentivize, and expand low carbon transportation alternatives, including public transit, walking, and biking	
		5.D. Promote renewable energy and energy efficiency	
6	<i>Environmental quality and justice through targeted investments in natural resources and improved ecosystem services.</i>	6.A. 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.	
		6.B. Design projects that prioritize enhanced ecological function	
		6.C. Prevent illegal disposal of hazardous waste	
		6.D. Identify, remediate, and redevelop contaminated sites and buildings	
7	<i>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</i>	7.A. Increase public awareness and education, locally and international, of New Orleans' resilience challenges and its efforts to build urban resilience	
		7.B. Integrate resilience-driven decision making across public agencies	

FINDINGS

- New Orleans has always faced the risk of flooding from three sources: the Mississippi River, heavy rains, and hurricane storm surge.
- Hurricane storm surge poses the greatest threat of catastrophic flooding in New Orleans.
- Risk of flood damage has been modulated by several factors: increased structural flood protection in the form of flood gates and levees; increased development in low-lying, vulnerable areas; soil subsidence; and coastal erosion.
- Global sea level rise and the risk of stronger, more frequent hurricanes as a result of global warming may also be contributing to increased risk.
- The Dutch provide a 1-in-10,000-year level of protection for high-density urban areas, 1-in-4,000-year level of protection for medium-density areas, and 1-in-2,500-year level for rural areas.
- Significant funds have been appropriated to implement coastal restoration and urban mitigation projects, but more is required.

CHALLENGES

- Raising public awareness about the realities of environmental hazards, probability, risk and mitigation options after 50 years of reliance on external levees as a guarantee of protection.
- Securing additional funding for more robust storm surge protection beyond a 1-in-100-year level of protection.
- Securing adequate funding on an accelerated basis for further coastal restoration efforts.
- Implementing citywide flood elevation, land use, and building requirements appropriate to different parts of the city to establish a higher overall level of community resilience.
- Addressing the increased cost of retrofitting structures and building new structures to be more resilient to flooding.
- Balancing expedient building and re-building practices against the city's long term security.
- Retrofitting the city's drainage infrastructure to improve water management practices and to better incorporate water into the urban landscape.
- Coordination between local, state, and federal efforts to make the city more resilient.

Acronyms

To aid in reading this section, below is a list of acronyms used within the text:

CAO	Chief Administrative Officer	NORA	New Orleans Redevelopment Authority
CPC	City Planning Commission	EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency	CZO	Comprehensive Zoning Ordinance
GIS	Geographic Information Systems	DFIRM	Digital Flood Insurance Rate Map
ACE	Army Corps of Engineers	DSP	Department of Safety and Permits
ORS	Office of Resilience and Sustainability	DNR	Louisiana Department of Natural Resources
CPRA	Louisiana Coastal Protection and Restoration Authority	BFE	Base Flood Elevation

A Introduction

The actions we take today will shape our future city for the coming generation. What must we do now to make the next generation more equitable, more adaptable, and more prosperous? How can we make their New Orleans a dynamic urban landscape—aligned with its natural environment? What leadership is needed—from individuals, communities, and the public and private sectors—to realize the city we envision?

For centuries, we have demonstrated our ability to innovate and adapt in the face of major challenges. While New Orleans has recovered from many shocks in the past, our future is threatened by rising seas and coastal erosion, crime and a lack of economic opportunity, income inequality and disparate health outcomes. New Orleans will continue to lead, serving as an urban laboratory for innovation and change, working to recognize and adapt to an unpredictable future, and remaining committed to the equitable adaptation and transformation of coastal cities worldwide. As a global leader, we have a responsibility to seek wisdom and guidance from around the world, to listen to the stories of our peers, and to share our progress toward shaping the future city—a Resilient New Orleans.

A Implementation Strategies

A recommendations **Summary** linking goals, strategies and actions appears below and is followed by one or more early-action items under the heading **Getting Started**. The **Narrative** follows, providing a detailed description of how the strategies and actions further the goals. Background and existing conditions discussion to inform understanding of the goals, policies, strategies and actions are included in Volume 3, Chapter 12.

Summary

ONGOING

FIRST FIVE YEARS: 2017–2021

MEDIUM TERM: 2022–2026

Goal	Recommended Strategy	Recommended Actions				
		How	Who	When	Resources	For More Information, See Page:
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	1.A. Leverage critical resources for local and regional coastal protection	1: Dedicate City resources as matching funds for the State's Coastal Master Plan projects in Orleans Parish	Mayor's Office, City Council, ORS	First Five Years	RESTORE Act, BP Settlement, NDR, HMGP	
		2: Advocate for increased state and federal resources for coastal protection and restoration projects	ORS, Mayor's Office	First Five Years	Staff time	
	1.B. Advocate and coordinate with neighboring parishes for the implementation of the state's Multiple	1: In Partnership with the CPRA, advocate for the implementation of coastal protection and restoration projects that benefit Greater New Orleans	ORS, Mayor's Office	First Five Years	Staff time	

ONGOING

FIRST FIVE YEARS: 2017–2021

MEDIUM TERM: 2022–2026

Goal	Recommended Strategy	Recommended Actions					
		How	Who	When	Resources	For More Information, See Page:	
	Lines of Defense vision and a flood protection system that can withstand a 500-year storm.	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	ORS, Mayor's Office	First Five Years	Staff time		
		3: Develop a comprehensive coastal land-loss and restoration awareness campaign	ORS; local community, philanthropic, nonprofit, and corporate partners	First Five Years	Philanthropy, staff time		
	1.C. Coordinate with the private sector and advocate for the growth and development of a regional water management industry	1: Promote workforce development opportunities for local residents in the emerging water management sector	Network for Economic Opportunity, ORS, City departments, private-sector and institutional partners	Ongoing	NDR, Staff time		
		2: Leverage private sector resources and interests to advance coastal protection and restoration projects	ORS, New Orleans Business Alliance, private-sector partners	Ongoing	Staff time		
	1.D. Become a model for the nonstructural urban adaptation component of the State's Coastal Master Plan	1: Ensure consistency between the State's Coastal Master Plan and the City's Resilience Strategy, Master Plan, and land use regulations	CPC, ORS	Ongoing	Staff time		
		2: Integrate risk mitigation into land use and other planning decisions	CPC	Ongoing	Staff time		
		3: Work with CPRA and other state and local partners to integrate urban water management and coastal management practices	ORS	First Five Years	Staff time		
		4: Pilot nonstructural recommendations from the 2017 Coastal Master Plan in New Orleans	SWBNO, DPW, ORS, NORA	First Five Years	CPRA, HMGP, staff time		
	2. A New Orleans that embodies the principle of living with water, managing urban	2.A. Implement comprehensive stormwater management to complement the traditional drainage system of pipes	1: Implement district-scale comprehensive water management plans through the retrofit of parks, playgrounds, neutral grounds, and other open spaces.	Capital Projects, DPW, SWBNO, Parks and Parkways, ORS, NORA, CPC	Medium-Term	NDR, HMGP, staff time	

ONGOING

FIRST FIVE YEARS: 2017–2021

MEDIUM TERM: 2022–2026

Goal	Recommended Strategy	Recommended Actions					For More Information, See Page:
		How	Who	When	Resources		
stormwater and groundwater carefully to align with natural processes and support economic growth	and pumps with green infrastructure that delays and detains stormwater in landscaped features.	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.	ORS, SWBNO	Ongoing	NDR, philanthropy, staff time		
		3: Prioritize the long-term financing and operations and maintenance of green infrastructure projects in the design phase	ORS, Capital Projects, DPW, design and engineering consultants	First Five Years	NDR, staff time		
		4: Establish a publicly accessible, citywide ground and surface water monitoring network to allow for active management of groundwater which will reduce subsidence, and inform siting and design of new green infrastructure facilities	SWBNO, ORS	First Five Years	NDR, philanthropy, staff time		
	2.B. Institutionalize comprehensive stormwater management planning and project delivery across city government	1: Support the enforcement of the CZO's stormwater regulations by establishing a Stormwater Enforcement Division within the Department of Safety and Permits	CPC, ORS, CAO, DSP	First Five Years	Staff time		
		2: Formalize a cross-agency stormwater project delivery team	ORS, CPC, SWBNO, DPW, Parks and Parkways, NORA, Capital Projects, Place-Based Planning	First Five Years	Staff time		
		3: Develop the capacity of the Resilience Project Design Review Committee	ORS, City Departments	First Five Years	Staff time		
		4: Establish hazard mitigation and stormwater management best practices in design and construction of public facilities, including freeboard, the use of pervious paving, and building elements that detain and retain stormwater runoff	ORS, DPW, Capital Projects	Ongoing	Staff time		
	3. A population that has the ability and capacity to adapt to a changing environment and future threats	3.A. Incentivize property owners to invest in risk reduction	1: Secure funds and implement a grant program to support risk reduction measures such as home elevation, hardening, and energy efficiency/generation projects on private properties for low- and moderate-income homeowners	NORA	First Five Years	NDR, staff time	

ONGOING

FIRST FIVE YEARS: 2017–2021

MEDIUM TERM: 2022–2026

Goal	Recommended Strategy	Recommended Actions					
		How	Who	When	Resources	For More Information, See Page:	
	3.B. Develop clear guidance on risk reduction measures in the built environment	1: Establish stormwater management best practices for public infrastructure and residential, commercial, and public buildings	SWBNO, DPW, ORS, Capital Projects	First Five Years	NDR, HMGP, philanthropy, staff time		
		2: Incorporate green infrastructure and resilient design measures into general specifications for streets and public rights-of-way	DPW	First Five Years	Staff time		
		3: Develop-storm hardening and structural adaptation design standards for residential, commercial, and public buildings.	ORS, City Departments, local designers and developers	First Five Years	Philanthropy, staff time		
		4: Pursue floodplain management policy changes that are more protective of life and property; and that increase the City's standing in FEMA's Community Rating System.	ORS, DSP	Ongoing	Staff time		
	3.C. Promote community-based green infrastructure and capacity-building	1: Support and implement small scale demonstration projects to promote environmental education and stewardship	City Departments, local community and advocacy groups	First Five Years	Philanthropy, staff time		
		2: Incorporate creative community engagement and educational components into the design of green infrastructure projects	ORS, City Departments	First Five Years	NDR, philanthropy, staff time		
	3.D. Develop the knowledge and capacity of emerging environmental stewards	1: Support and promote the work of community-based organizations focused on youth development and education	ORS	Ongoing	Staff time		
	4. A New Orleans that is prepared for future disasters and ready to carry out an efficient, comprehensive, and equitable recovery	4.A. Invest in pre-disaster planning for post-disaster recovery	1: Develop a comprehensive plan for post-disaster recovery that incorporates critical infrastructure systems, land use, housing, economic development, and public health services	Office of Homeland Security, ORS, City Departments	First Five Years	Staff time	
			2: Implement and regularly maintain a citywide parcel and building survey that can be quickly updated after a disaster	ITI	First Five Years	Staff time	
			3: Establish a disaster recovery fund for the City of New Orleans	CAO	First Five Years	Staff time, private investment	

ONGOING

FIRST FIVE YEARS: 2017–2021

MEDIUM TERM: 2022–2026

Goal	Recommended Strategy	Recommended Actions					
		How	Who	When	Resources	For More Information, See Page:	
	4.B. Improve the redundancy and reliability of our critical infrastructure	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	ORS, SWBNO, DPW	First Five Years	Staff time, private investment		
		2: Implement a microgrid pilot project	ORS, SWBNO, Entergy, other federal and private partners	First Five Years	USDOE, NDR, philanthropy, staff time		
	4.C. Incorporate all perils, climate change impacts, and equity into Hazard Mitigation planning	1: Support and strengthen the city's professional Hazard Mitigation Unit	Mayor's Office, CAO, Office of Homeland Security	First Five Years	Staff time		
		2: Continue to update the Hazard Mitigation Plan to reflect latest projections and scenarios	Office of Homeland Security	Ongoing	Staff time		
		3: Utilize the "Orleans Parish 2015 Hazard Mitigation Plan Update" and all future updates in concert with the Master Plan	CPC, Office of Homeland Security	Ongoing	Staff time		
		4: Work with FEMA, the Army Corps of Engineers and regional stakeholders to evaluate storm frequency and probability based on actual risk and future risk due to climate change.	Mayor's Office, ORS, Office of Homeland Security	First Five Years	Staff time		
	4.D. Develop the preparedness of neighborhoods and businesses	1: Launch a Neighborhood Resilience program	NORA, ORS	First Five Years	Philanthropy, staff time		
		2: Develop a Small Business Preparedness program	Office of Resilience, City Departments, local business community, neighborhood and business improvement associations	First Five Years	Philanthropy, staff time		
	5. Improved environmental quality, increased resource efficiency, and economic growth through the mitigation of our climate impact	5.A. Adopt and implement a Climate Action Plan	1: Set ambitious greenhouse gas emissions reductions targets for the short- and long-term	ORS, City Departments, Mayor's Office	First Five Years	Staff time	
			2: Complete an annual community-wide and municipal greenhouse gas inventory	ORS, City Departments	Ongoing	Philanthropy, staff time	
3: Build the city's capacity to conduct climate mitigation planning and implementation			Mayor's Office, CAO	First Five Years	Philanthropy, staff time		

ONGOING

FIRST FIVE YEARS: 2017–2021

MEDIUM TERM: 2022–2026

Goal	Recommended Strategy	Recommended Actions				
		How	Who	When	Resources	For More Information, See Page:
	5.B. Reduce waste and conserve resources	1: Develop a communication and education campaign to increase participation in the city's recycling program	Department of Sanitation	First Five Years	Staff time	
		2: Complete a feasibility analysis of creating a public composting program	Department of Sanitation	First Five Years	Staff time	
		3: Create a long-term strategic plan to address waste management and reduction in the city	Department of Sanitation	First Five Years	Staff time	
	5.C. Encourage, incentivize, and expand low carbon transportation alternatives, including public transit, walking, and biking	1: Develop a multimodal regional transit vision	Mayor's Office, RTA, City Departments	First Five Years	Staff time	
		2: Encourage mixed uses in land use and zoning in strategic locations such as transit corridors and nodes	CPC	First Five Years	Staff time	
		3: Develop and adopt a "Vision Zero" policy with the goal of no pedestrian or bicycle fatalities on city streets	DPW, Mayor's Office, RTA, transit advocates	Ongoing	Staff time	
		4: Implement an equitable bike share program	Mayor's Office, outside partners	Ongoing	Staff time, private investment	
		5: Plan for the transition of the city fleet to low-carbon and electric vehicles	5: Plan for the transition of the city fleet to low-carbon and electric vehicles	First Five Years	Staff time	
		6: Adopt zoning and building regulations to accommodate and encourage the location of electric vehicle charging stations at residential, commercial, and industrial properties	CPC, DSP, Property Management	First Five Years	Staff time	
		7: Develop strategy and program for installation of public electric vehicle charging stations to encourage the use of electric vehicles	DPW, Mayor's Office, Property Management	Medium-Term	Staff time	
	5.D. Promote renewable energy and energy efficiency	1: Implement ambitious energy efficiency measure in municipal buildings	CAO	First Five Years	Philanthropy, staff time	
		2: Incentivize the adoption of energy benchmarking and energy efficiency measures in large commercial and institutional buildings	ORS, Mayor's Office, Downtown Development District, corporate and philanthropic partners	First Five Years	Staff time	

ONGOING

FIRST FIVE YEARS: 2017–2021

MEDIUM TERM: 2022–2026

Goal	Recommended Strategy	Recommended Actions				
		How	Who	When	Resources	For More Information, See Page:
		3: Seek energy efficiency financing mechanisms in partnership with banks and lenders	ORS	First Five Years	Staff time, private investment	
		5: Work with Entergy and the City Council's Utility Regulatory Office to implement a decoupling ordinance to promote energy efficiency	ORS, City Council, Mayor's Office, Entergy	First Five Years	Staff time	
		6: Work with Entergy and the City Council's Utility Regulatory Office to advance energy efficiency	ORS, City Council, Mayor's Office, Entergy	First Five Years	Staff time	
6. Environmental quality and justice through targeted investments in natural resources and improved ecosystem services.	6.A. 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.	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	Parks and Parkways, ORS, City Departments, nonprofit and philanthropic partners	Medium-Term	NDR, philanthropy, staff time	
		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	Medium-Term	NDR, philanthropy, staff time	
		3: Increase access to parks and recreational corridors to improve public health outcomes in underserved and vulnerable areas	Parks and Parkways, NORDC, ORS, City Departments, nonprofit and philanthropic partners	Ongoing	NDR, HMGP, philanthropy, staff time	
		4: Incentivize protection of the existing tree canopy through development and adoption of a no net loss tree canopy strategy.	Parks and Parkways, CPC	Medium-Term	Philanthropy, NDR, Staff time	
		5: Analyze potential resilience project uses prior to disposition of City land, including for stormwater management, recreation, or other community use.	CPC	First Five Years	Staff time	
		6.B. Design projects that prioritize enhanced ecological function	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	Parks and Parkways, DPW, ORS	Ongoing	Staff time, EPA

ONGOING

FIRST FIVE YEARS: 2017–2021

MEDIUM TERM: 2022–2026

Goal	Recommended Strategy	Recommended Actions				
		How	Who	When	Resources	For More Information, See Page:
		2: Design and implement green infrastructure interventions to improve water quality	SWBNO, City Departments	Ongoing	Staff time, EPA	
	6.C. Prevent illegal disposal of hazardous waste	1: Provide proper and convenient disposal services for household hazardous waste items	Department of Sanitation	Ongoing	Staff time, EPA	
		2: Provide adequate code enforcement of environmental health hazard protections	Health Department, Mosquito and Termite Control	Ongoing	Staff time	
		3: Support compliance with the MS4 permit by strengthening policies and enforcement mechanisms to reduce litter, pet waste, excess nutrients, sediment, and other pollutants in the storm drainage network	SWBNO, ORS, DPW	Ongoing	Staff time	
		4: Explore creative environmental design methods to deter illegal waste and contaminant disposal	NORA, Code Enforcement, nonprofit partners	First Five Years	Staff time, Private investment	
		5: Work with the private sector to develop local reuse and recycling markets for common illegally disposed waste items like scrap tires	Sanitation, City Departments	First Five Years	Staff time, Private investment	
		6.D. Identify, remediate, and redevelop contaminated sites and buildings	1: Identify and apply for federal, state, and other funding to remediate brownfields and other contaminated sites	ORS	Ongoing	Staff time, EPA
	2: Provide increased funding and support for lead remediation initiatives for homes, schools, and gardens		Health Department, ORS, academic partners	First Five Years	Staff time, EPA, HUD	
	3: Pursue public engagement and education around environmental contamination and lead remediation		Health Department, Louisiana Department of Environmental Quality	First Five Years	Staff time, DEQ, EPA	
	4: Develop an inventory and map of all inactive, abandoned, or closed waste disposal and waste incineration sites		Sanitation, ITI	First Five Years	Staff time	

ONGOING

FIRST FIVE YEARS: 2017–2021

MEDIUM TERM: 2022–2026

Goal	Recommended Strategy	Recommended Actions				
		How	Who	When	Resources	For More Information, See Page:
		5: Develop and establish standards for the use of sites formerly used for waste disposal or incineration and preventing new construction of residential, educational, or institutional facilities.	CPC, DSP	First Five Years	Staff time	
		6: Identify funding and resources to assist and support residents living in or near designated brownfields, superfund sites, or other areas with documented environmental justice issues	ORS, Mayor's Office, OCD	Medium Term	Staff time	
		7. Identify and apply for Federal, State, and other funding or resources to relocate residents of the Gordon Plaza Subdivision that was built on the Agriculture Street Landfill, a Superfund site.	Mayor's Office	First Five Years	Staff time, EPA, LDEQ	
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	7.A. Increase public awareness and education, locally and international, of New Orleans' resilience challenges and its efforts to build urban resilience	1: Establish a resilience center	ORS; philanthropic, academic, private, and community partners	First Five Years	Philanthropy, staff time	
		2: Maintain New Orleans' participation in peer-to-peer best practices sharing networks (C40, Compact of Mayors, etc)	Mayor's Office, ORS	Ongoing	Philanthropy, staff time	
	7.B. Integrate resilience-driven decision making across public agencies	1: Develop the capacity of the Office of Resilience and Sustainability	Mayor's Office, CAO	First Five Years	NDR, philanthropy, staff time	
		2: Formalize a cross-agency resilience-building team	Mayor's Office, ORS, City Departments	First Five Years	Staff time	
		3: Develop the capacity of cross-agency resilience design review	ORS, City Departments	First Five Years	Staff time	

Narrative

Below is a more detailed narrative of the various goals, strategies and actions highlighted in the "Summary" chart.

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

1A: Leverage critical resources for local and regional coastal protection

1: Dedicate City resources as matching funds for the State's Coastal Master Plan projects in Orleans Parish

- **Who:** Mayor's Office, City Council, ORS
- **When:** First Five Years
- **Resources:** RESTORE Act, BP Settlement, NDR, HMGP

2: Advocate for increased state and federal resources for coastal protection and restoration projects

- **Who:** ORS, Mayor's Office
- **When:** First five years
- **Resources:** Staff time

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.

1: In Partnership with the CPRA, advocate for the implementation of coastal protection and restoration projects that benefit Greater New Orleans

- **Who:** ORS, Mayor's Office
- **When:** First five years
- **Resources:** Staff time

2: Improve coordination in coastal restoration between New Orleans and other local, state, and federal agencies, such as participation in the Governor's Coastal Advisory Committee

- **Who:** ORS, Mayor's Office
- **When:** First five years
- **Resources:** Staff time

3: Develop a comprehensive coastal land-loss and restoration awareness campaign

- **Who:** ORS; local community, philanthropic, nonprofit, and corporate partners
- **When:** First five years
- **Resources:** Philanthropy, Staff time

1C: Coordinate with the private sector and advocate for the growth and development of a regional water management industry

1: Promote workforce development opportunities for local residents in the emerging water management sector

- **Who:** Network for Economic Opportunity, ORS, City departments, private-sector and institutional partners
- **When:** Ongoing

- **Resources:** Staff time, NDR

2: Leverage private sector resources and interests to advance coastal protection and restoration projects

- **Who:** ORS, New Orleans Business Alliance, private-sector partners
- **When:** Ongoing
- **Resources:** Staff time

1D: Become a model for the nonstructural urban adaptation component of the State's Coastal Master Plan

1: Ensure consistency between the State's Coastal Master Plan and the City's Resilience Strategy, Master Plan, and land use regulations

- **Who:** CPC, ORS
- **When:** Ongoing
- **Resources:** Staff time

2: Integrate risk mitigation into land use and other planning decisions

- **Who:** CPC
- **When:** Ongoing
- **Resources:** Staff time

3: Work with CPRA and other state and local partners to integrate urban water management and coastal management practices

- **Who:** ORS
- **When:** First five years
- **Resources:** Staff time

4: Pilot nonstructural recommendations from the 2017 Coastal Master Plan in New Orleans

- **Who:** SWBNO, DPW, ORS, NORA
- **When:** First Five years
- **Resources:** CPRA, HMPG, Staff time

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

2A: Implement comprehensive stormwater management to complement the traditional drainage system of pipes and pumps with green infrastructure that delays and detains stormwater in landscaped features.

1: Implement district-scale comprehensive water management plans through the retrofit of parks, playgrounds, neutral grounds, and other open spaces.

- **Who:** Capital Projects, DPW, SWBNO, Parks and Parkways, ORS, NORA, CPC
- **When:** Medium-term
- **Resources:** NDR, HMGP, Staff time

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:** ORS, SWBNO

- **When:** Ongoing
- **Resources:** NDR, Philanthropy, Staff time

3: Prioritize the long-term financing and operations and maintenance of green infrastructure projects in the design phase

- **Who:** ORS, Capital Projects, DPW, design and engineering consultants
- **When:** First five years
- **Resources:** NDR, Staff time

4: Establish a publicly accessible, citywide ground and surface water monitoring network to allow for active management of groundwater which will reduce subsidence, and inform siting and design of new green infrastructure facilities

- **Who:** SWBNO, ORS
- **When:** First five years
- **Resources:** NDR, Philanthropy, Staff time

2B: Institutionalize comprehensive stormwater management planning and project delivery across city government

1: Support the enforcement of the CZO's stormwater regulations by establishing a Stormwater Enforcement Division within the Department of Safety and Permits

- **Who:** CPC, ORS, CAO, DSP
- **When:** First Five Years
- **Resources:** Staff time

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
- **Resources:** Staff time

3: Develop the capacity of the cross-agency Resilience Project Design Review Committee

- **Who:** ORS, City Departments
- **When:** First five years
- **Resources:** Staff time

4: Establish hazard mitigation and stormwater management best practices in design and construction of public facilities, including freeboard, the use of pervious paving, and building elements that detain and retain stormwater runoff

- **Who:** ORS, DPW, Capital Projects
- **When:** Ongoing
- **Resources:** Staff time

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

3A: Incentivize property owners to invest in risk reduction

1: Secure funds and implement a grant program to support risk reduction measures such as home elevation, hardening, and energy efficiency/generation projects on private properties for low- and moderate- income homeowners

- **Who:** NORA
- **When:** First five years
- **Resources:** NDR, Staff time

3B: Develop clear guidance on risk reduction measures in the built environment

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
- **Resources:** NDR, HMGP, Philanthropy, Staff time

2: Incorporate green infrastructure and resilient design measures into general specifications for streets and public rights-of-way

- **Who:** DPW
- **When:** First five years
- **Resources:** Staff time

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
- **Resources:** Philanthropy, Staff time

4: Pursue floodplain management policy changes that are more protective of life and property; and that increase the City's standing in FEMA's Community Rating System.

- **Who:** ORS, DSP
- **When:** Ongoing
- **Resources:** Staff time

3C: Promote community-based green infrastructure and capacity-building

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
- **Resources:** Philanthropy, Staff time

2: Incorporate creative community engagement and educational components into the design of green infrastructure projects

- **Who:** ORS, City Departments
- **When:** First five years
- **Resources:** NDR, Philanthropy, Staff time

3D: Develop the knowledge and capacity of emerging environmental stewards

1: Support and promote the work of community-based organizations focused on youth development and education

- **Who:** ORS
- **When:** Ongoing
- **Resources:** Staff time

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

4A: Invest in pre-disaster planning for post-disaster recovery

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
- **Resources:** Staff time

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
- **Resources:** Staff time

3: Establish a disaster recovery fund for the City of New Orleans

- **Who:** CAO
- **When:** First five years
- **Resources:** Staff time, Private investment

4B: Improve the redundancy and reliability of our critical infrastructure

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
- **Resources:** Staff time, Private investment

2: Implement a microgrid pilot project

- **Who:** ORS, SWBNO, Entergy, other federal and private partners
- **When:** First five years
- **Resources:** USDOE, NDR, Philanthropy, Staff time

4C: Incorporate all perils, climate change impacts, and equity into Hazard Mitigation planning

1: Support and strengthen the city's professional Hazard Mitigation Unit

- **Who:** Mayor's Office, CAO, Office of Homeland Security
- **When:** First five years
- **Resources:** Staff time

2: Continue to update the Hazard Mitigation Plan to reflect latest projections and scenarios

- **Who:** Office of Homeland Security
- **When:** Ongoing

- **Resources:** Staff time

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
- **Resources:** Staff time

4: Work with FEMA, the Army Corps of Engineers and regional stakeholders to evaluate storm frequency and probability based on actual risk and future risk due to climate change.

- **Who:** Mayor’s Office, ORS, Office of Homeland Security
- **When:** First five years
- **Resources:** Staff time

4D: Develop the preparedness of neighborhoods and businesses

1: Launch a Neighborhood Resilience program

- **Who:** NORA, ORS
- **When:** First Five Years
- **Resources:** Philanthropy, Staff time

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
- **Resources:** Philanthropy, Staff time

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

5A: Adopt and implement a Climate Action Plan

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
- **Resources:** Staff time

2: Complete an annual community-wide and municipal greenhouse gas inventory

- **Who:** ORS, City Departments
- **When:** Ongoing
- **Resources:** Philanthropy, Staff time

3: Build the city’s capacity to conduct climate mitigation planning and implementation

- **Who:** Mayor’s Office, CAO
- **When:** First Five Years
- **Resources:** Philanthropy, Staff time

5B: Reduce waste and conserve resources

1: Develop a communication and education campaign to increase participation in the city's recycling program

- **Who:** Department of Sanitation
- **When:** First Five Years
- **Resources:** Staff time

2: Complete a feasibility analysis of creating a public composting program

- **Who:** Department of Sanitation
- **When:** First five years
- **Resources:** Staff time

3: Create a long-term strategic plan to address waste management and reduction in the city

- **Who:** Department of Sanitation
- **When:** First five Years
- **Resources:** Staff time

5C: Encourage, incentivize, and expand low carbon transportation alternatives, including public transit, walking, and biking

1: Develop a multimodal regional transit vision

- **Who:** Mayor's Office, RTA, City Departments
- **When:** First five years
- **Resources:** Staff time

2: Encourage mixed uses in land use and zoning in strategic locations such as transit corridors and nodes

- **Who:** CPC
- **When:** First five years
- **Resources:** Staff time

3: Develop and adopt a "Vision Zero" policy with the goal of no pedestrian or bicycle fatalities on city streets

- **Who:** DPW, Mayor's Office, RTA, transit advocates
- **When:** Ongoing
- **Resources:** Staff time

4: Implement an equitable bike share program

- **Who:** Mayor's Office, outside partners
- **When:** Ongoing
- **Resources:** Staff time, Private investment

5: Plan for the transition of the city fleet to low-carbon and electric vehicles

- **Who:** CAO
- **When:** First five years
- **Resources:** Staff time

6: Adopt zoning and building regulations to accommodate and encourage the location of electric vehicle charging stations at residential, commercial, and industrial properties

- **Who:** CPC, DSP, Property Management
- **When:** First five years
- **Resources:** Staff time

7: Develop strategy and program for installation of public electric vehicle charging stations to encourage the use of electric vehicles

- **Who:** DPW, Mayor's Office, Property Management
- **When:** Medium-term
- **Resources:** Staff time

5D: Promote renewable energy and energy efficiency

1: Implement ambitious energy efficiency measure in municipal buildings

- **Who:** CAO
- **When:** First five years
- **Resources:** Philanthropy, Staff time

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
- **Resources:** Staff time

3: Seek energy efficiency financing mechanisms in partnership with banks and lenders

- **Who:** ORS
- **When:** First five years
- **Resources:** Staff time, Private investment

4: Work with Entergy and the City Council's Utility Regulatory Office to implement a decoupling ordinance to promote energy efficiency

- **Who:** ORS, City Council, Mayor's Office, Entergy
- **When:** First five years
- **Resources:** Staff time

5: 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
- **Resources:** Staff time

6: Work with Entergy New Orleans 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
- **Resources:** Staff time

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

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.

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
- **Resources:** NDR, Philanthropy, Staff time

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
- **Resources:** NDR, Philanthropy, Staff time

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
- **Resources:** NDR, HMGP, Philanthropy, Staff time

4: Incentivize protection of the existing tree canopy through development and adoption of a no net loss tree canopy strategy.

- **Who:** Parks and Parkways, CPC
- **When:** Medium-term
- **Resources:** Philanthropy, NDR, Staff time

5: Analyze potential resilience project uses prior to disposition of City land, including for stormwater management, recreation, or other community use.

- **Who:** CPC
- **When:** First five years
- **Resources:** Staff time

6B: Design projects that prioritize enhanced ecological function

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, DPW, ORS
- **When:** Ongoing
- **Resources:** Staff time, EPA

2: Design and implement green infrastructure interventions to improve water quality

- **Who:** SWBNO, City Departments
- **When:** Ongoing
- **Resources:** Staff time, EPA

6C: Prevent illegal disposal of hazardous waste

1: Provide proper and convenient disposal services for household hazardous waste items

- **Who:** Sanitation Department
- **When:** Ongoing
- **Resources:** Staff time, EPA

2: Provide adequate code enforcement of environmental health hazard protections

- **Who:** Health Department, Mosquito and Termite Control
- **When:** Ongoing
- **Resources:** Staff time

3: Support compliance with the MS4 permit by strengthening policies and enforcement mechanisms to reduce litter, pet waste, excess nutrients, sediment, and other pollutants in the storm drainage network

- **Who:** SWBNO, ORS, DPW
- **When:** Ongoing
- **Resources:** Staff time

4: Explore creative environmental design methods to deter illegal waste and contaminant disposal

- **Who:** NORA, Code Enforcement, nonprofit partners
- **When:** First five years
- **Resources:** Staff time, Private investment

5: 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
- **Resources:** Staff time, Private investment

6D: Identify, remediate, and redevelop contaminated sites and buildings

1: Identify and apply for federal, state, and other funding to remediate brownfields and other contaminated sites

- **Who:** ORS
- **When:** Ongoing
- **Resources:** Staff time, EPA

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
- **Resources:** Staff time, EPA, HUD

3: Pursue public engagement and education around environmental contamination and lead remediation

- **Who:** Health Department, Louisiana Department of Environmental Quality
- **When:** First five years
- **Resources:** Staff time, LADEQ, EPA

4: Develop an inventory and map of all inactive, abandoned, or closed waste disposal and waste incineration sites

- **Who:** Sanitation, ITI
- **When:** First five years
- **Resources:** Staff time

5: Develop and establish standards for the use of sites formerly used for waste disposal or incineration and preventing new construction of residential, educational, or institutional facilities.

- **Who:** CPC, DSP
- **When:** First five years
- **Resources:** Staff time

6: Identify funding and resources to assist and support residents living in or near designated brownfields, superfund sites, or other areas with documented environmental justice issues

- **Who:** ORS, Mayor's Office, OCD
- **When:** Medium-Term
- **Resources:** Staff time

7: Identify and apply for Federal, State, and other funding or resources to relocate consenting residents of the Gordon Plaza Subdivision that was built on the Agriculture Street Landfill, a Superfund site.

- **Who:** Mayor's Office
- **When:** First five years
- **Resources:** Staff time, LADEQ, EPA

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

7A: Increase public awareness and education, locally and international, of New Orleans' resilience challenges and its efforts to build urban resilience

1: Establish a resilience center

- **Who:** ORS; philanthropic, academic, private, and community partners
- **When:** First five years
- **Resources:** Philanthropy, Staff time

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
- **Resources:** Philanthropy, Staff time

7B: Integrate resilience-driven decision making across public agencies

1: Develop the capacity of the Office of Resilience and Sustainability

- **Who:** Mayor's Office, CAO
- **When:** First five years
- **Resources:** NDR, Philanthropy, Staff time

2: Formalize a cross-agency resilience-building team

- **Who:** Mayor's Office, ORS, City Departments
- **When:** First five years
- **Resources:** Staff time

3: Develop the capacity of cross-agency resilience design review

- **Who:** ORS, City Departments
- **When:** First five years
- **Resources:** Staff time