

Action ID	Action Title	Action Type	Lead Agency	Why the action is important?	If/why the action is a priority for the agency	What community (human/ ecological) or asset the action will address	Co-benefits	Funding Available	Relevant Agencies/ Stakeholders	Status/ Progress	Anticipated challenges/ needs to implement, including data gaps	Time-frame	Next Steps for Implementation
EPR - 1	Expand and Support Hazard Mitigation Planning and Broad-based Education around Extreme Heat as a Climate-Related Hazard	Planning	NJOEM	Hazard mitigation plans (HMPs) are a primary tool for community officials to identify action strategies to protect people and property and to gain federal funding to do so. OEM is tasked with developing and broadening an understanding of natural hazards, as increased awareness of all climate hazards allows for risk-informed decision making.	Incorporation of climate change and health impacts from extreme heat into HMPs is necessary to understand and contextualize the hazard.	Human health and safety, built and natural environments	Promotes data sharing and enables a common operating environment for all involved in emergency preparedness and response. Promotes alignment between federal, state and local planning efforts. Improves effectiveness of hazard mitigation efforts.	NJOEM will continue to seek funding through FEMA’s Hazard Mitigation Assistance (HMA) grant program.	NJOEM, County and Local OEMs	Ongoing	Quality of available data, especially at the local level	Short-term	Extreme heat is incorporated into the 2024 SHMP and encouraged in the updates of local HMPs through the existing practice of preparing and disseminating guidance for use by regional and local planners.
EPR - 2	Continue Funding Rutgers for Development of HazAdapt Suite	Planning	NJOEM	HazAdapt is designed to help local and county officials engage in effective Hazard Mitigation Planning and allows for a more informed planning effort and vulnerability assessment. It provides easy access to a variety of pertinent data layers, downscaled to county, census tract and census block groups for planning purposes.	Hazard mitigation planning is a core function of OEM, and a requirement for communities to be able to access FEMA HMA funding. Supporting effective hazard mitigation planning for all hazards is a top priority for OEM.	Decision makers	NJ HazAdapt has broad-based utility as a tool for public education and increasing the general understanding of the impacts of climate change in New Jersey.	Yes (HMA Grants)	Rutgers University, NJOEM	Ongoing	Data about natural hazards is dynamic. NJOEM and Rutgers will incorporate the best available data as it comes online.	Short-term	Technical development is underway.
EPR - 3	Encourage County-Level Extreme Heat Planning Focused on the Needs of Seniors	Planning	DHS	Given the unique challenges posed by the needs of elders, a strategic and intentional extreme heat planning intervention is critical to the health of this population, who are especially likely to rely on assistance for daily living and to overcome limited mobility issues.	This action directly responds to an identified concern gathered through early public feedback on the Extreme Heat Resilience Action Plan relating to the specific vulnerabilities of older adults and people with disabilities.	Public health, with an intentional focus on the needs of seniors	Builds and strengthens partnerships between OEM, DHS, AAAs and other stakeholders. Builds capacity and community engagement amongst the aging population.	No	NJOEM and County OEMs, Area Agencies on Aging (AAAs)	Recommended	Capacity and funding	Medium-term	DHS and OEM will collaborate to research similar efforts from around the country, including identifying potential barriers. This will inform the efforts to draft a memo which DHS and OEM will send to AAAs and OEM offices in each county describing the requested extreme heat plan in more detail.

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EPR - 4	Apply for Federal Funds for Extreme Heat Resilience and Mitigation Projects	Funding	DCA	DCA can continue to promote and foster resilience in New Jersey by continuing to monitor opportunities, applying directly for opportunities that are a good fit for New Jersey and ensuring local communities are aware of funding opportunities and have the information and assistance needed, where practicable, to successfully win competitive grants.	Leverages opportunity available due to post-Ida hazard mitigation. Disaster recovery priorities are likely to shift depending on the status and availability of federal funding, as is the nature of disaster-specific funding channels which are time and geographically limited.	Community resilience	Familiarity with federal grant processes benefits municipalities and cities within the State	N/A	State Agencies and local communities	Ongoing	Identifying, applying and receiving federal grant funds to incentivize projects related to or eligible for extreme heat mitigation.	Short-term	DCA staff will continue to regularly scan federal opportunities, and review grant program requirements to determine opportunities to meet the needs of New Jersey communities most effectively.
EPR - 5	Coordinate Heat Awareness and Risk Communication Across Agencies	Communications	NJOEM	Ensuring timely and widespread awareness of emergency situations is critical to protecting the health and safety of our communities. In the case of extreme heat, it is vital to ensure that at-risk individuals take the threat of extreme heat seriously and act accordingly.	It is a core function of OEM to coordinate emergency warnings and response amongst all relevant State/Federal agencies.	Human health and safety infrastructure and property	Improved disaster response and community health outcomes	Yes	NJOEM State, county and local partners and their public health and communication agency partners	Ongoing	Tailoring messaging to “hard to reach” populations	Short-term	This action is already being implemented.
EPR - 6	Expand Register Ready Sheltering Support	Communications	DHS	People with Disabilities and Access and Functional Needs (DAFN) may be at a heightened level of risk during extreme heat events. By increasing the extent to which people with DAFN are aware of and utilize the Register Ready database, emergency responders will have access to readily available information they can refer to when responding to emergency calls from people with DAFN.	Register Ready’s existing infrastructure creates a simple way to enhance extreme heat preparedness among these New Jerseyans who pre-identify as having mobility limitations and/or other special needs.	Public health, especially as it relates to individuals with disabilities and access and functional needs	Improved disaster response and community health outcomes	No	DHS, and its network of service providers, NJOEM and network of emergency response agencies and first responders	Underway	Many individuals are skeptical or wary of providing personal, private medical information. Alignment with other more localized registry systems	Medium-Term	The DHS Director of Emergency Management will be tasked with engaging network of providers to advertise/promote/encourage dissemination of Register Ready marketing materials.
EPR - 7	Strategically Deploy Back-Up Power Support at Community Lifeline Facilities	Funding, Programmatic	NJOEM	Extreme heat may cause power outages that can threaten the operations of critical facilities during emergencies. This action will help reduce the down time of critical facilities and facilities that aid in lessening exposure.	This action aligns with the core mission of OEM to protect life and property. OEM has spent over \$50 million on generators for critical facilities since 2013.	Community lifelines, healthy and safety, underserved or vulnerable populations	Operational redundancy built into critical systems, Resilience beyond extreme heat	FEMA HMA funds and other sources	NJOEM – stakeholders and facilities operators	Ongoing	Competition for limited resources, creation of methodology to determine greatest impact.	Short-term	This action is already being implemented.
EPR - 8	Ensure Grid Resilience at NJ DMAVA Facilities	Programmatic	NJ DMAVA Construction, Facilities, Management Office (CFMO)	Repairing and electrifying buildings reduces energy usage and costs, while increasing site operational capacity under extreme heat conditions.	Operations facilities are important for training, and, in many cases, vital for mission completion.	Human health and safety	Reduced utility costs, reduced strain on local utilities	NJARNG competes for funding with other ARNG Sites. Additional federal and state funding sources are sought.	NJDMAVA CFMO	Underway	Funding, construction costs, environmental concerns at existing building, site limitations.	Short-term	Continuing process of completing building energy assessments and project conception, which generate related funding requests and multi-year design and construction processes.

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CC - 1	“Chill Out NJ” Mapping of Places to Beat the Heat	Communications	DEP	Cooling centers are an important tool for preventing morbidity and mortality during extreme heat events. In communities where cooling centers are not widely available, Chill Out NJ can help residents in need identify places they can seek relief from extreme heat.	This action aligns with the DEP’s stated priorities to reduce and respond to climate change and to revitalize our communities and protect public health.	Public health and safety, vulnerable populations	Sense of community and community support, addresses heat related air quality conditions	No	DEP, DHS, NJOEM, County/local OEMs, NJ 211	Complete	Connecting with hard-to-reach populations	Short-term	Continue to work across agencies to improve information listed on "Chill Out NJ" and leverage email inbox to add crowdsourced locations to verify for inclusion on the platform.
CC - 2	Cooling Center Locator & Awareness Building Campaign	Communications	DEP	It is imperative that NJ centralize information regarding locations and hours of operation of cooling centers during extreme heat events. Currently, information on cooling centers can be hard to find, especially because it is only made available during an event, resulting in limited ability for an impacted community to plan ahead.	This action advances DEP’s climate justice imperative; and aligns with the administration’s focus on environmental justice.	Public Health and safety, vulnerable populations	Sense of community and community support, addresses heat related air quality conditions	No	State Emergency Operations Center, county and local OEM coordinators, NJ211	Recommended	Funding, county and local support for project	Short-term	Continue coordination with OEM, DHS and NJ211. DEP is working to compiled information related to cooling sites. The goal is to launch the cooling site locator application on Heat Hub NJ as a pilot in spring 2024 and gather public feedback during summer 2024 season to continually build improvements.
CC - 3	Expand Network of Local Cooling Sites and Provide Support to Operators	Programmatic, Funding	DEP Offices of Climate Resilience and Env. and Public Health Analysis, NJOEM, BPU Division of Reliability and Security, BPU Office of Clean Energy Equity	A coordinated government approach to building resilience and adaptive capacity of communities to mitigate the impacts of extreme heat is important. Vulnerable individuals must have an opportunity to escape the heat and maintain health and safety during times of extreme heat. There is also a need for intentionally and strategically working to fill gaps in the availability of places people can seek refuge from extreme heat if cooling centers are not available or not activated.	This multiagency action is an important step to prevent heat-related illnesses. This effort would ensure that vulnerable residents have access to a safe place to cool down through a network of willing cooling site operators that expand beyond the reach of officially activated cooling centers.	Public health and safety, vulnerable populations	Sites engaged in this effort would build capacity to serve as resources during other extreme weather events, thereby increasing overall statewide resilience. Increased visitation and usage of facilities during non-emergency events as a result of improved good will and perception among local community.	No	OEM, BPU, DCA, the Department of Human Services, the Department of Health, NJ 211, Sustainable Jersey, first responders, municipalities	Ongoing/ Underway	Funding, community input throughout process	Medium-term	Work with the correct partners to identify if they are databases and assess potential for collaboration with partner agencies and need with existing programming.
CC - 4	Develop Code Red Legislation	Legislative	TBD, pending legislation	Extreme heat exposure is a serious threat to human health and can exacerbate numerous underlying illnesses. Code Red alerts are a demonstrably effective way to trigger critical services and messaging that could save lives during extreme heat events.	With climate change, New Jersey is already seeing an increasing frequency and duration of extreme heat events. All levels of government must prepare to respond effectively.	The whole community, including other vulnerable populations, such as pregnant people, the elderly, and those without reliable access to indoor air conditioning	The availability of cooling centers also provides respite from poor air quality, particularly ground-level ozone which forms in the presence of heat and sunlight.	N/A	State, County, and local Offices of Emergency Management; municipal governments; social service agencies; and community-based organizations and non-profits that work with populations at-risk to extreme heat impacts	TBD, pending legislation	Cooling centers are currently operated by a large network of local and county offices of emergency management. All affected entities would need to be engaged to ensure effective statewide implementation of a new Code Red program.	TBD, pending legislation	The New Jersey State Legislature has introduced legislation that would establish a pilot Code Red Program.

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HRCS - 1	Conduct Study on Air Conditioning Access in NJ	Research	DEP Office of Environment & Public Health Analysis	This action directly addresses several concerns identified during public outreach around extreme heat including the recognition that many buildings have ineffective or no cooling systems.	This action is a priority for DEP as it is very well aligned with the state’s climate action efforts to reduce greenhouse gas emissions.	Public health and safety vulnerable populations	Having a better understanding of the locations of residential areas lacking air conditioning access will help broad-based state agency efforts around emergency preparedness, education and customized communications.	No	DEP Division of Climate & Clean Energy, NJ investor-owned utilities, BPU	Recommended	Data availability, especially in areas outside of Metropolitan Statistical Areas	Short-term	Identify a source of data that can approximate for residences without air conditioning if this cannot be accessed directly through NJ’s energy providers.
HRCS - 2	Ensure Ratepayers Are Informed of Cost-Saving Programs	Communications	BPU Division of Customer Assistance, NJ Clean Energy Program	A resounding theme of feedback sessions was to address public concerns related to the ability to pay for energy bills. While a variety of energy affordability and service disruption prevention programs exist, it is vital that ratepayers know that help is available to those that may need it.	The Board oversees all regulated utilities, and works to ensure safe, adequate, and proper utility services are provided at reasonable, non-discriminatory rates.	Low-income households	Generate additional interest in other clean energy program offerings which could support the state’s efforts around emissions reductions	Yes	Investor- Owned Utilities, DCA, Community-based organizations, including DCA’s network of Local Community Action Agencies	Ongoing	Communication to hard-to-reach populations	Short-term	Continue working with utility and community-based partners, communications contractors, and appropriate state agencies to promote affordability options to ensure ratepayers are aware of cost-saving programs.
HRCS - 3	Promote Energy Efficiency and Decarbonization Improvements for Low-Income Households Programs	Programmatic	BPU Division of Clean Energy	The New Jersey Clean Energy Program features a wide range of programs, including energy efficiency programs and incentives that can directly benefit low-income households, who are among the most likely to suffer from energy burden, as defined by spending 2-3 times more of their disposable income for heating and cooling costs as compared to non-low-income neighbors.	The Board is the primary agency responsible for overseeing or administering the State’s energy efficiency programs. As such, it is a critical priority for the Board to invest in housing energy efficiency and decarbonization improvements, particularly for low-income households.	Low-income households	Reduced energy use, reduced emissions improved indoor air quality yielding improved health outcomes	Yes	Investor-Owned Utilities, community-based organizations, Comfort Partners program managers, DCA	Ongoing/ Underway	Program design and implementation takes time and capacity	Medium-term	Coordination with and approval of DOT Local Aid Division on new program priorities.
HRCS - 4	Implement Whole House Initiative	Programmatic	BPU Office of Clean Energy Equity	The Whole House initiative focuses on low- to moderate-income residents and could potentially make significant contributions to making homes safer, cooler, and more energy efficient in the areas of the state experiencing the greatest energy burden and disparate health outcomes due to home health issues.	The ‘Whole House’ pilot is designed as a strategic programmatic response to challenges with implementation of other BPU programs such as Comfort Partners.	Low-income households, public health and safety	Positive public health outcomes due to the reduction in individuals exposed to indoor contaminants and other health hazards	Yes	NJ Clean Energy Program, DCA, Investor-Owned Utilities, municipalities, local not-for-profit and community-based organizations	Ongoing	Data gaps, new effort	Medium-term	The Board will continue to evaluate options for securing consistent, dedicated funding. Additionally, the Board will evaluate performance and the scope and scale of the pilot program, looking for opportunities to optimize service delivery and program implementation.

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HRCS - 5	Continue Implementation of the Winter Termination Program	Programmatic	NJBPU Division of Customer Assistance/ Department of Community Affairs, Utility service providers	The “Winter Termination Program” prohibits a local authority, municipal utility or rural electric cooperative from discontinuing service to eligible residential customers from November 15 to March 15.	The purpose of this program aligns directly with the Board’s core mission to provide safe, adequate and proper utility services.	Low-income households	Generate additional interest in other clean energy program offerings which could support the state’s efforts around emissions reductions	Yes	Community Organizations, DCA, Investor-Owned Utilities	Completed	Increasing awareness	Short-term	Work with utility partners to inform qualifying residents before the program starts again to ensure no service disruptions occur in the event of extreme cold.
HRCS - 6	Low-Income Home Energy Assistance Program – Medically Necessary Cooling	Grant Program	NJDCA Division of Housing and Community Resources	Low-income individuals with a medical need for cooling during summer months are at particular risk for heat related issues.	Currently the medically necessary cooling segment is only a small part of the larger LIHEAP program, which primarily assists low-income families with winter heating needs.	Low-income families with a documented medical need for cooling services.	The cooling assistance can benefit the entire family at the location, not only the individual with a medical condition that necessitates access to cooling.	Yes	US Department of Health and Human Services, low-income families in New Jersey	Ongoing	N/A	Short-term	Action is already being implemented.
HRCS - 7	Ensure Efficient and Cool New Affordable Housing	Building Standard	The DCA Division of Housing and Community Resources (DHCR)	By requiring higher standards for new affordable housing developed with the use of state housing assistance and/or investment funds, DHCR helps to advance a variety of statewide goals related to ensuring that new affordable homes meet the latest building codes, demand less energy (and therefore produce less carbon emissions) for heating and cooling, and help to reduce energy burden and affordability concerns for future tenants.	Modern standards are important to DHCR, as the agency is intent on providing affordable housing that is high quality and efficient.	Low- and moderate-income households	Reduced utilities costs, lower emissions	N/A	Residents, local government units	Ongoing	Land that is both available for development and outside threatened areas is at a premium, making affordable developments a significant challenge.	Short-term	Action is already being implemented.
HRCS - 8	Meet Green and Resilient Building Standards During Disaster Recovery	Building Standard	DCA Division of Recovery and Mitigation	Energy efficient building standards address heat resilience through requirements related to insulation, energy efficiency and temperature control, allowing new and substantially improved homes to be more effectively climate controlled in the event of extreme temperatures.	The DCA’s Division of Disaster Recovery and Mitigation (DRM) promotes the long-term resilience of New Jersey’s communities by supporting initiatives to fortify housing, businesses and infrastructure against severe weather events and flooding damage.	Post-disaster communities	Energy efficient construction helps reduce energy costs for residents, as well as reducing the overall draw on the power grid in extreme temperature events.	Yes	Homeowners, local government units, DCA and partners in building/ recovery programs	Ongoing	N/A	Short-term	Action is already being implemented.
HRCS - 9	Incentivize Extreme Heat Assessments and Heat-Resilient Building Criteria in National Building Programs	Research, Policy	NJHMFA Division of Tax Credits	Enhancing the “Green Points” policy and scoring systems in new affordable housing construction which uses funds from national building programs to embed extreme heat resilience directly into the selection process is a compelling means of centering public health, climate resilience and equity in affordable housing public policy.	NJHMFA is committed to financing quality housing that promotes resident well-being.	Low- and moderate-income households	The “Green Points” policy and incentives program helps improve indoor air quality, and promote dehumidification, reduced energy demand and costs for tenants.	Yes, through existing Low Income Housing Tax Credit (LIHTC) and multifamily financing	NJHMFA Technical Services and Tax Credit Divisions, multifamily housing developers and affordable housing providers.	Underway	N/A	Short-term	A Risk Assessment Report requirement is pending final publication in the New Jersey register. Future refinement will be considered. NJHMFA will evaluate extreme heat resilience programs and incentives and incorporate these options into NJHMFA project review. Staff will also continue to field technical questions from project sponsors and design teams, promoting resilient outcomes, as needed.

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HRCS - 10	Identify Design Enhancements to Qualified Allocation Plan “Green Points” to Combat Extreme Heat	Programmatic	NJHMFA Divisions of Technical Services and Multifamily and Supportive Housing	As the state incentivizes new high-quality affordable housing developments and community investments, advising developers on heat resilience building design interventions early in the project development process will facilitate successful implementation of green and resilience building solutions, helping the affordable units of the future avoid the issues of the past.	NJHMFA is committed to financing quality housing that promotes resident well-being.	Low- and moderate-income households, senior population, populations with special needs	Improved air quality, carbon sequestration and greenhouse gas reductions, as well as resident energy cost-savings	Yes, through Energy Star and other BPU or utility incentive programs	BPU, DHS Division of Developmental Disabilities, Special Needs Housing Providers Project Sponsors and their design teams	Recommended	Additional research on best practices for incorporating resilience and green building standards into affordable housing will be needed, ongoing education and professional development for architectural staff implementing the enhanced design review.	Medium-term	Upon adoption of the QAP Green Points Requirements, technical review staff will evaluate applications in alignment with that document. The Division of Technical Services staff will need to develop and finalize pertinent Standard Operating Procedures for reference during project design review.
HRCS - 11	Identify Heat Exposure and Disseminate Cooling Strategies to HMFA-Financed Portfolio Projects	Portfolio Audit, Outreach	NJHMFA Asset Management, Policy and External Affairs	Many of the residents and communities NJHMFA directly serves are most susceptible to extreme heat exposure. As the most densely populated and third most urbanized state in the country, the urban heat island effect—a phenomenon by which cityscapes are considerably warmer than their more suburban and rural neighbors—puts New Jersey’s poorest neighborhoods at the greatest risk of extreme heat impacts.	NJHMFA is committed to financing quality housing that promotes resident well-being.	Low- and moderate-income households, senior population, populations with special needs	Enhanced community awareness and improved resident quality of life	Yes	NJHMFA Divisions of Asset Management, Policy and External Affairs, Technical Services, urban heat island data providers, property managers, property owners and tenants	Underway	To determine extreme heat exposure of housing units within NJHMFA’s portfolio, the Agency will need to leverage existing data from the Division of Asset Management and urban heat island GIS data.	Short-term	Coordination between multiple NJHFMA Divisions, including Asset Management, Policy, and External Affairs, as well as Technical Services, which is leading the effort to compile desktop research regarding extreme heat mitigation interventions in low-income housing.
HRCS - 12	Mitigate Extreme Heat Conditions in Juvenile Justice Facilities	Programmatic	LPS Juvenile Justice Commission (JJC)	Providing upgrades to minimize the impact of heat on the JJC residents and their visitors is critical for climate resilience and helps to advance the mission of the JJC.	The JJC is committed to implementing and promoting policies and practices that improve outcomes for young people involved with the juvenile justice system, their families and their communities.	Youth population, incarcerated population	Improve the longevity of facility infrastructure	Yes	Board of Public Utilities, Treasury, JJC residents and visitors	Underway	Funding shortfalls required adjustment to project implementation schedule. Securing backordered products in a timely manner has also been a challenge.	Short- to medium-term	The JJC will continue soliciting contracts for project implementation and purchasing and installing equipment as products become available.

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WS - 1	Development of Interagency Guidance & Resource Compilation for Workplace Heat Illness Prevention	Guidance	Interagency Council on Climate Resilience	New Jersey’s public sector agencies are all governed by the same overarching set of worker protection and workplace safety regulations, the Public Employees Occupational Safety and Health Act. Unfortunately, there is no standards or guidance adopted by the U.S. Department of Labor that specified what employers are required to provide to ensure that any given workplace is free from the health hazards posed by extreme heat events. As such, the framework guidance and resource compilation will help to achieve consistency and unity among all New Jersey executive branch agencies.	All workers deserve adequate protection against the impacts of extreme heat. This interagency action will ensure ease of implementation of a variety of workplace safety measures across all New Jersey agencies, in keeping with the vision of the state as a model employer.	Workers across New Jersey state agencies, and the human resources and health and safety units preparing documentation for dissemination across state agencies and departments	None identified	N/A	All members of the IAC and their employees and workforce sectors	Recommended	Consistency with emerging guidance especially Occupational Safety and Health Administrati on (OSHA) guidance	Short-term	A working group or subcommittee of the IAC should be formed to compile, review and vet existing guidance issued by New Jersey agencies and departments. These data, feedback and insights will be organized into a framework and resource compendium designed to guide internal agency decision making. A presentation of findings will be provided to the IAC and made widely available to fellow New Jersey sister agencies upon request.
WS – 2	Protect Military Personnel from Extreme Heat Exposure	Programmatic	NJ Army and National Guard (ARNG) Unit Commander	Protecting soldiers from extreme heat health risks is important for training continuity and mission completion.	Readiness and the health of personnel are mission-critical activities.	Workers	Morale increases when care is shown about individual well-being.	Yes	NJ ARNG and receivers of guard assistance during extreme heat events.	Underway	Reduction in training days and scheduling changes provide challenges to complete missions.	Short-term	Training policies are in place and new uniforms and boots are being phased in over several years.
WS-3	Develop Workplace Standards to Protect Workers in Extreme Heat Conditions	Legislative, Regulatory, Programmatic	TBD, pending legislation	Reducing workers' exposure to extreme heat conditions and providing adequate rest and water breaks during periods of extreme heat can minimize the risk of heat-related illness, injury, or even death.	All workers deserve adequate protection against the impacts of extreme heat.	Workers, particularly those working outdoors or those working in spaces without reliable climate control	None Identified	N/A	DOL Workforce Development; DOH, workers, employers	TBD, pending legislation	New Jersey must ensure that its regulations meet the needs of workers while also assuaging the needs and concerns of business owner.	TBD, pending legislation	The New Jersey State Legislature has introduced Assembly Bill 3521 that would establish an occupational heat stress standard and heat-related illness and injury prevention program.
WS - 4	Coordinate Outreach and Education Improve Outdoor Worker Safety in the Agriculture Sector	Legislative, Programmatic	NJDA	Agricultural laborer safety and welfare is vital to the continued success of the agriculture industry in the state. Extreme heat and the effects of heat exhaustion have a major impact on the overall agricultural laborer’s safety and health.	This action will advance NJDA priorities in agricultural labor safety and welfare, continued economy and on-farm productivity.	Agricultural workers	Continued farm production	N/A	NJDOL, NJDOH	Recommended	Determining each farm’s specific need	Long-term	NJDOH is creating and disseminating educational materials for agricultural workers regarding preventing heat-related illness in English and Spanish.

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PH - 1	Expand Participation in the New Jersey Air Quality Flag Program	Programmatic	DEP Bureau of Evaluation and Planning, Division of Air Quality & Radiation Protection	By improving the public’s awareness of elevated levels of ozone and fine particulate matter air pollution, New Jersey residents will know when to modify their activities to reduce their exposure to unhealthy air quality and avoid potential health risks. This is especially important during extreme heat events as an informed public can reduce their exposure by modifying outside activities on days with unhealthy air quality conditions.	DEP’s core mission is to protect our environmental and public health. One of the Department’s five priority pillars is to “Revitalize Our Communities and Protect Public Health.”	Public health and safety	Increases awareness of air quality and may decrease exacerbations of asthma and other respiratory diseases	Yes	USEPA, NJDOH Participating Organizations.	Ongoing	Resources (staff, flags, outreach materials, etc.), outreach to non- English speakers	Medium-term	Program staff will continue outreach efforts to implement program more widely, especially in areas with reported higher concentrations of ozone and PM2.5, and environmental justice communities.
PH - 2	Support Medium- and Heavy-Duty Vehicle Electrification	Programmatic	DEP Bureau of Mobile Sources/BPU Division of Clean Energy	During the summer months, sunlight interacts with certain pollutants, like nitrogen oxides, creating smog and poor air quality conditions that are especially concerning in communities near heavy traffic corridors. Particle matter emitted from medium and heavy-duty vehicles is an especially salient public health matter as particle matter is small enough to be inhaled, getting into the lungs or even the bloodstream.	Protecting air quality is at the core of the DEP’s mission to protect public health and the environment.	Public health and safety, environmental justice communities	Transportation electrification is also a key environmental justice priority	Yes	DEP, BPU, Medium and Heavy-Duty Vehicle (MHDV) manufacturers, Investor-Owned Utilities (for grid reliability), NJDOT, NJEDA	Underway	Drayage trucks operating in and around NJ ports are an active area of discussion and deliberation among New Jersey stakeholders.	Short-term	DEP and the Board will continue supporting the robust programming already available for electrified transportation, especially within the medium- and heavy-duty sectors.
PH - 3	Characterize Risk of Increased Pathogens, Shellfish Harvesting, and Recreational Water Conditions	Research	DEP Division of Water Monitoring, Standards and Pesticide Control	Warming weather can drive pathogen growth impacting water quality in various ways. While shellfish beds and beaches may be closed due to decreased water quality following rain events, it is important to develop systems to help DEP understand trends around how conditions are likely to change as climate change increases ambient temperatures in the coming decades.	DEP analyzes relevant water supply and water quality data to identify and evaluate risks and provide recommendations on how these should be addressed.	Environmental health, public health and safety	Increased water quality, recreational and economic benefits	Partially	DEP Division of Water Monitoring Standards and Pesticide Control (DWMSPC); Water Land Management (WLM), Division of Water Enforcement (DWE); municipalities; shellfish industry; recreational bathers	Underway	Will require increased staffing and budget as well as improved coordination across DEP	Short-term	Need additional resources to correlate increased surface water temperatures with water temperatures, water quality and then impacts on shellfish harvesting areas and beaches.
PH - 4	Encourage Individual and Community Resilience	Programmatic	NJDOH	Resilience is often considered a protective factor that can reduce the negative effect of acute or long-term adversity on individual or community health and well-being. In the context of preparing for and addressing the impact of natural hazards, such as extreme heat, resilience is imperative for recovery. Following a personal traumatic event or community disaster, resilience plays a significant role in an individual’s, a family’s and a community’s ability to cope with uncertainty, access needed resources and transition from adversity to adaptation.	The New Jersey Department of Health coordinates an ongoing collaborative process to identify and address issues related to statewide health and wellbeing.	Public health and safety	Increases overall well-being, cohesiveness, and strength to address everyday challenges and during extreme shocks, stressors or disruption	No	State and municipal agencies, academia, community-based organizations, health and environmental advocacy organizations and environmental justice organizations	Recommended	Time, difficulties quantifying metrics. DOH’s efforts around resilience will require extensive, networked series of programs, initiatives and activities	Medium-term	Finalize and implement strategies and action plans, which were developed by groups of external partners to achieve HNJ2030 goals, by January 2025.

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EI - 1	Update Energy Demand Forecasts	Regulatory, Programmatic	Office of Federal and Regional Policy Affairs, BPU Office of Federal and Regional Policy Affairs Division of Energy and Water, Office of the Economist	Access to energy is an inseparable and foundational component of modern life. In fact, the loss of a power source is often the defining factor separating an unpleasant, inconvenient weather phenomenon from a crisis.	The Board is the primary agency that oversees grid reliability and stability. This is a core and immutable function of the agency.	The assurance of electrical grid reliability addresses the needs of all New Jerseyans.	Maintaining grid reliability and security undergirds innumerable economic and social benefits.	Yes	PJM regional transmission organization, Investor-Owned Utilities, Electric Distribution Companies	Ongoing	Considerable modelling would need to be conducted to assess a range of possible extreme heat scenarios.	Medium-term	The Board will continue working with PJM to update demand forecasts and ensure future projections are in line with changing consumption trends and climate projections.
EI - 2	Assess Grid Reliability in Extreme Heat Events	Regulatory, Programmatic	BPU Division of Reliability and Security, Division of Energy and Water	Current infrastructure was built for the current climate and may require upgrades to withstand the effects of climate change and continue to provide reliable services. Ensuring the reliability and stability of our electric grid is essential during times of extreme heat and cold.	Ensuring the reliability of our electric grid is a core priority for the Board of Public Utilities.	The assurance of safe and reliable electrical service addresses a basic, essential need of all New Jerseyans.	Maintaining grid reliability and security undergirds innumerable economic and social benefits.	Yes	Investor-owned utilities, PJM regional transmission organization, electric distribution companies, municipalities hosting infrastructure	Completed	Assessing climate-related threats and vulnerabilities on infrastructure requires distributed monitoring and data collection efforts.	Short-term	The Board will continue working with investor-owned utilities to assess distribution system vulnerabilities and identify hazards to make strategic and effective investments that yield a more reliable and resilient grid through rate cases and infrastructure investment plans.
EI - 3	Implement a New Jersey Storage Incentive Program	Regulatory, Programmatic	BPU Division of Clean Energy	Energy storage resources are critical to increasing the resilience of New Jersey’s electric grid, reducing carbon emissions, and enabling New Jersey’s transition to 100% clean energy. Storage plays a key role in the clean energy transition. It will help balance and support the electric grid, especially during times when the sun isn’t shining, and the wind isn’t blowing and ensure reliability needs are met.	The Board is the key agency that oversees New Jersey’s electric grid. The State of New Jersey has one of the most ambitious storage targets in the nation, with a statutory mandate to achieve 2,000 megawatts of installed energy storage by 2030. New Jersey Energy Master Plan expects energy storage to be a key component of the state’s clean energy future.	This effort with help strengthen infrastructure serving the needs of all New Jerseyans by helping stabilize the grid and keep the lights on.	Improved battery storage could hasten the transition to clean energy. Energy storage could reduce peak load during extreme heat events resulting in savings for ratepayers.	Yes	NJ Clean Energy Program, investor-owned utilities, PJM regional transmission organization, environmental, clean energy and business organizations, storage non-governmental organizations and trade associations	Underway	Data gaps, including price trajectory and related trends, including new and emerging technologies. This effort will likely require interconnection reform to ensure effective implementation of energy storage.	Medium-term	The Board will design a request for proposals as it seeks to hire a consultant to design the final storage incentive program, based in part from the information gathered in the latter half of 2023 through its request for information.
EI - 4	Mitigate the Use of Peaker Plants	Regulatory, Programmatic, Legislative	BPU Division of Energy and Water, Division of Clean Energy	Peaker plants are generally the dirtiest, most inefficient, and costly electricity generating units that support the grid. Eliminating their use is a critical step for improving air quality, reducing local pollution, and saving ratepayers money.	The Board is the lead agency helping decarbonize the grid and support the transition to clean energy.	Environmental justice and overburdened communities	Replacing peaker plants provides community health and environmental benefits from reduced pollution resulting improvement in air quality. Ratepayers will also benefit from cost savings.	No	DEP, electrical distribution companies, environmental justice and business organizations	Recommended	The cost of energy storage is a primary obstacle to overcome. Alternatives would need to assure grid reliability.	Long-term	The Board of Public Utilities will explore comprehensive storage program design and consider how the Board could further facilitate emissions reductions from this energy generating segment. As of now, the Board does not have jurisdiction over peaker plants because the agency does not regulate generation.

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DWWS - 1	Analyze Evaporation and Water Use Changes	Programmatic	DEP Division of Water Supply and Geosciences	New Jersey’s water supply depends on the amount of water in the environment remaining after evaporation. Extreme heat increases evaporation of surface water supplies and increased temperatures will increase the statewide water demands (e.g., irrigation). A deeper understanding of these two factors is necessary for accurate predictions of future water availability and developing relevant programmatic and policy interventions, as needed.	Since the passing of the Water Supply Management Act (1981) the NJ Department of Environmental Protection is required to prepare and adopt the New Jersey Statewide Water Supply Plan, a document that analyzes relevant water supply data, examines growth projections, identifies and evaluates risks, and provides recommendations on how those expectations can be met.	Municipalities, industrial water users and the agricultural sector	More precise projections of water supply impacts and planning, which can address various components of water resource management including but not limited managing uncertainty from droughts or severe weather events, understanding changes in energy costs, development patterns, etc.	Yes	DEP Division of Water Supply and Geosciences, NJ water purveyors	Underway	Appropriate responses and interventions (legislative, regulatory, and technological) , will require considerable research, data and model improvements, stakeholder engagement and capacity building.	Short-term	The 2024 NJ Water Supply Plan is under development. A draft plan was published in Q1 2024. Use recommendations in it to guide new legislation and regulations and guide water supply decisions.
DWWS - 2	Analyze Increased Irrigation Water Demands Due to Longer Growing Season	Legislative, Regulatory, Programmatic	DEP Division of Water Supply and Geosciences	As climate changes, the growing season water needs for outdoor irrigation will also increase. Water for irrigation and potable water demands require different assessments and responses. Even so, some water systems may have to increase total system storage to meet increased annual demands and maintain system resilience. Better understanding of how increasing summer temperatures and lengthening of the growing season will help DEP plan for total annual water demands and peak demands.	DEP has multiple sources of authority through which it is empowered to protect water resources and water system infrastructure to ensure safe drinking water and system sustainability.	All New Jerseyans and New Jersey ecosystems	Better understanding the needs in agricultural systems helps DEP in more broadly managing and ensuring the overall resilience of the state’s water supply system.	Yes	DEP Division of Water Supply and Geosciences; NJ Department of Agriculture; NJ water purveyors; water consumers	Underway	Development of a consistent, uniform methodology for better understanding of how temperature increases will lengthen the growing season across New Jersey.	Short-term	Once finalized, the 2024 NJ Statewide Water Supply Plan will include recommendations to guide new legislation and regulations, and other important water supply decisions. DEP will continue engagement of counterparts within the Department of Agriculture on estimated water demand increased due to climate change, and possible interventions.
DWWS - 3	Analyze Peak Potable Water Changes Due to Increased Temperatures	Legislative, Regulatory, Programmatic	DEP	New Jersey’s water supply is designed to meet its maximum or peak demands. In many areas of the state, peak summer demand is highly influenced by outdoor irrigation needs. As such, understanding how peak water demand will change due to increased temperatures and corresponding irrigation needs is critical for water supply planning and increasing peak demand may stress the ability of some purveyors to supply sufficient water to communities in their service shed.	DEP is the agency tasked with implementation and enforcement of the federal Safe Drinking Water Act, and responsible for protecting public health of public water systems users. Understanding water availability and demand is a primary driver of the 1981 New Jersey Water Supply Management Act.	Communities which rely on surface water and groundwater supply for potable uses during peak summertime months	Better understanding peak water demands helps DEP in more broadly managing and ensuring the overall resilience of the state’s water supply system.	Yes	NJ water purveyors; water consumers	Underway	Deeper understanding of the seasonality of New Jersey’s warming trends, an active and ongoing area of research	Short-term	Once finalized, the 2024 NJ Statewide Water Supply Plan will include recommendations to guide new legislation and regulations, and other important water supply decisions, including ways to mitigate concerns related to climate change related impacts on peak water supply.

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DWWS - 4	Analyze Changes in Groundwater Recharge	Legislative, Regulatory, Programmatic	DEP Division of Water Supply and Geosciences	Groundwater recharge is the process by which unconfined aquifers—the water source which supplies wells, deeper aquifers and baseflow to streams—are replenished. Quantifying how groundwater recharge will change as precipitation and evapotranspiration patterns are altered by climate change is necessary in order to estimate the resilience of New Jersey’s groundwater supply.	Since the passing of the Water Supply Management Act (1981) the NJ Department of Environmental Protection is required to prepare and adopt the New Jersey Statewide Water Supply Plan, a document that analyzes relevant water supply data, examines growth projections, identifies and evaluates risks, and provides recommendations on how those expectations can be met.	Human and natural systems	Appropriate legislative and regulatory responses resulting from the analysis could improve water quality and benefit biodiversity and area ecology.	Yes	DEP Division of Water Supply and Geosciences; NJ water purveyors; water consumers	Underway	Better understanding of temperature and evapo-transpiration changes across NJ, and how these interact with land use changes to impact groundwater recharge.	Short-term	The 2024 NJ Water Supply Plan is under development. A draft plan was published in Q1 2024. Recommendations captured therein will guide new legislation and regulations and guide water supply decision to protect groundwater resources.
DWWS - 5	Continue Monitoring Flash Drought Conditions	Programmatic	DEP Division of Water Supply and Geoscience	Flash droughts are rapidly developing, high temperature and low precipitation events, usually of short duration. If they occur in the growing season, they can have a serious impact on agriculture and outdoor water demands for irrigation.	DEP monitors those conditions which cause droughts. Understanding when a flash drought develops helps the DEP assist water supply purveyors meet needs. The Department of Agriculture also has a high interest in flash droughts due to its impact on the agricultural sector.	Agricultural communities, human and natural systems	Potential responses taken as a result of this action could reduce the stress on the water supply posed by short-term drought and could also benefit natural systems which rely on the state’s water supply for their health.	Yes	Department of Agriculture, water purveyors, farmers, water suppliers, golf courses, public	Underway	Understanding of the timing of flash drought related to climate change and temperature increases.	Short-term	The Department’s drought work group actively monitors droughts and will continue research into flash droughts in NJ and how they may be impacted by climate change.
DWWS - 6	Highlands Water Conservation Outreach Program	Programmatic	NJ Highlands Council	Where water resources are stressed, management strategies and public outreach and education are necessary to reduce and, where feasible, eliminate deficits and ensure that supplies are not further depleted.	The Highlands Act directs the Highlands Council to work “to promote, in conjunction with the DEP and NJDA, conservation of water resources both in the Highlands Region and in areas outside of the Highlands Region for which the Highlands is a source of drinking water” (N.J.S.A 13:20-6.u).	Human and natural systems	This effort could serve as a model for strategic water conservation outreach efforts across the state. Improved water conservation by users outside of the Highlands Region can also reduce wastewater flows.	No	DEP, NJDA, NJ Highlands Council, NJ Highlands municipalities, counties, and water utilities	Recommended	Funding, coordination across state agencies	Medium-term	To launch the initiative, the Highlands Council will establish an advisory group comprised of representatives from the DEP, NJDA, and Highlands Council staff to further define the programs and goals and coordinate to establish Highlands-specific guidelines.
DWWS - 7	Incorporate Extreme Heat Considerations into Area-Wide Optimization Program	Programmatic	DEP Division of Water Supply and Geosciences	Surface water treatment plants must continually monitor various parameters of their source water to ensure that all steps of their treatment processes are operating as intended. They can remove potentially harmful contaminants to protect public health, including those that may be increased or exacerbated due to prolonged or acute heat events.	DEP is tasked with implementation and enforcement of the federal Safe Drinking Water Act, and responsible for protecting public health of public water systems users.	Human and natural systems	Improved resilience in the operations of public drinking water systems and, by extension, their economic wellbeing due to reduced down time caused by poor water quality conditions.	Yes	Regulated water systems	Ongoing	Water systems owners may be hesitant to go beyond the minimum regulatory standards, water systems staffing	Short-term	Continue advertising the Area Wide Optimization Program (AWOP) to public water systems to increase program participation.

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TR - 1	Mitigate Extreme Heat Conditions While Performing Concrete Work	Programmatic	NJDOT Division of Construction and Materials and Bureau of Materials	Extreme heat can disrupt how concrete work is both conducted and cured. The action helps minimize these concerns in relation to NJDOT operations.	Moderately high ambient temperatures can generate greater surface heat on concrete surfaces, affecting the ability for concrete to cure properly.	Infrastructure (road asset conditions)	The processes encompassed by the action will make concrete work more resilient to degradation, saving costs on road repairs.	Yes	U.S. Department of Transportation FHWA, other Transportation Agencies (TAs)	Underway	None	Short-term	Continue NJDOT practices that protect concrete work from heat impacts.
TR - 2	Implement Pavement Management Systems to Combat Extreme Heat	Programmatic	NJDOT Bureau of Pavement & Drainage Management and Technology	A strategy for including extreme heat and other climate considerations into NJDOT’s PMS will increase the quality and duration of pavement projects.	Heat conditions greatly affect pavement infrastructure, prompting action from NJDOT.	Infrastructure (pavement assets)	More proactive management of pavements to heat and other climate conditions will likely yield functional gains, including increasing the pavement life cycle.	Yes, part of an existing agreement with NJDOT and outside agency/ consultant	Rowan University, APTech, other TAs	Underway	Input from various units in the NJDOT will be needed.	Short-term	Further coordination with the study being conducted by Rowan University with support from APTech.
TR - 3	Research and Develop Heat Resilient Design and Construction Standards for Transportation Infrastructure	Research	NJDOT Bureau of Research	Incorporating lessons learned and materials developed by other states or national entities can accelerate the speed of NJDOT’s extreme heat adaptation.	The action is a priority in order to determine whether additional methods exist to avoid degradation of NJDOT assets that may result from extreme heat stress.	Infrastructure (This action will be applicable to a variety of NJDOT roadway assets, including materials, painting, and design and construction practices)	The utilization of other state and national entity “know-how” and material development generally affords cost-savings to NJDOT.	Yes, likely seek funding through existing or new NJDOT Bureau of Research contracts/ programs	The American Association of State Highway and Transportation Officials, Transportation Research Board , other New Jersey transportation entities and state Departments of Transportation, Other TAs	Recommended	Advancing the action will require approval and funding availability.	Medium-term	Inventory existing practices to mitigate extreme heat stress on NJDOT assets. Prepare a literature review of various design and construction practices being implemented by other transportation entities in New Jersey and other states that relate to extreme heat conditions.
TR - 4	Analyze Extreme Heat Long-Term Infrastructure Exposure and Impacts	Programmatic	NJTA Engineering Department	Launching a targeted research effort on extreme heat toll-road system impacts will support the development and integration of extreme heat resilience strategies into the Authority’s Resilience Plan and support updates to the Authority’s Procedures and Design Manual to prepare for the effects of climate change.	Research on extreme heat impacts is a priority for the Authority because it will provide information to the Authority’s overall understanding and approach to the emerging threat, the development of resilience strategies and opportunities to integrate extreme heat into the procedures and design manual.	This action will support the Authority’s operations, customers and communities. It will advance more resilient and sustainable infrastructure for New Jersey and the region.	The specific co-benefits of the strategies identified through this research may include financial, ecological, or other benefits for the reduction of risk to hazards other than extreme heat.	N/A	DEP, NJDOT, other TAs	Underway	Uncertainty associated with climate projections and the use of downscaled temperature data for New Jersey.	Medium-term	Review existing extreme heat research and develop a research plan to support more targeted research on extreme heat impacts, if needed.

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TR - 5	Integrate Extreme Heat into the Resilience Planning	Programmatic	NJTA Engineering Department	Integrating extreme heat resilience actions into the Authority’s Resilience Plan will support a coordinated approach to resilience across the enterprise and support strategies that align and achieve multiple objectives to provide our customers with a safe, efficient, innovative, and resilient toll- road system.	Updating the Authority’s Resilience Plan to include heat resilience is a priority because the Resilience Plan provides an overarching strategic framework and roadmap for advancing resilience strategies throughout our business operations and into the project delivery process.	Integrating extreme heat into the Authority’s Resilience Plan will advance a more resilient toll-road system and built infrastructure for New Jersey and the region. Integrating resilience considerations into the Authority’s capital planning efforts will assure that resilience remains a key focus area for future projects in the decades to come.	Improved infrastructure enhances public safety and convenience and supports emergency management operations.	N/A	DEP, NJDOT	Underway	Uncertainty associated with climate projections and the use of downscaled temperature data for New Jersey	Medium-term	Review existing extreme heat research and determine additional data needs to support the development and integration of strategies.
TR - 6	Update Authority Design Standards for Long-term Resilience	Guidance	NJTA Engineering Department	The Authority’s Design and Procedures Manuals specify how Authority projects are planned, designed, constructed, operated, managed, and maintained. Integrating extreme heat resilience and future conditions into these manuals supports more resilient infrastructure projects by adapting standards to account for extreme heat.	Updating the Design and Procedures Manuals is a priority for the Authority because achieving the desired levels of safety, convenience, and reliability across the design life of 50 to 100 years includes designing for future conditions such as extreme heat.	Updating the Design and Procedures Manuals will advance a more resilient toll-road system and built infrastructure for New Jersey and the region.	Improved infrastructure enhances public safety and convenience and supports emergency management operations.	N/A	NJDOT, other TAs	Underway	Uncertainty associated with climate projections and the use of downscaled temperature data for New Jersey, and sensitivity of Authority assets to extreme heat	Medium-term	Review existing extreme heat research and identify data and research needs to integrate extreme heat into the update process underway.
TR - 7	Implement a Cool Pavement Initiative at the Transportation Bank	Financing	I-Bank, NJDOT (Transportation Bank)	Opportunity to provide funding for transportation projects to mitigate/adapt to extreme heat concerns. Pavement made of traditional material absorbs heat from the sun and reemits it, contributing to increased temperatures in areas with high impervious surface cover such as urban communities. Reflective material can minimize heat retention and lower temperatures helping to mitigate extreme heat.	Aligns with the I-Bank’s mission to provide and administer low interest rate loans for projects that protect the public health and make possible, responsible and sustainable economic development.	Human/urban	Resilience-related, mitigation-related, non-climate	Yes, but not available for incentives	NJDOT	Recommended	Receive appropriation of additional funds in order to incentivize these types of projects with principal forgiveness opportunities	Medium-term	Coordination with and approval of NJDOT Local Aid Division on new program priorities
TR - 8	Pilot Heat Sensors at Port Authority Sites	Research	PANYNJ Engineering	The agency seeks to better understand the relationship between ambient temperature (as collected at public and private weather stations) and surface/enclosed (in-cabinet) temperatures across its varied facilities.	Consideration of ambient temperatures alone likely does not adequately indicate the heat burden on people, equipment, and materials at agency facilities, particularly large facilities with significant micro- climate variation.	Worker health, material durability, and equipment performance	Potentially, the sensor network could provide other inputs for incorporation into facility operations (as a real-time or analytical resource, or both).	Pursuing funding	N/A	Recommended	Challenges may include procurement and access to secure areas for sensor installation.	Short-term	The agency is seeking funding.

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TR - 9	Climate Risk Assessment Initiative	Programmatic	PANYNJ Engineering	The CRA initiative will enable the agency to proactively identify physical climate risks and scope mitigations, contributing to a more resilient Capital Plan. The initiative evaluates heat risks and mitigations across the Port Authority’s facilities including PATH, ports, airports, bridges, and tunnels.	Given its pivotal role in supporting regional mobility and economic activity, it is imperative that the agency reduce the physical risks of climate change to its facilities and operations.	The action addresses critical transportation assets, on which people and businesses throughout the region rely.	In addition to its primary purpose of enabling formulation of a more resilient Capital Plan, the CRA will support the agency’s grant, insurance, reporting and disclosures and Enterprise Risk Management functions.	Yes	Tenants, Utilities, peer agencies, other TAs	Underway	Will require integration with existing agency processes and workflows (e.g., Capital Planning) to be effective.	Short-term	Consultant-supported assessments are under way.
TR - 10	Evaluate HVAC Design Standards for Long-Term Resilience	Mechanical Guidelines	PANYNJ Engineering	As heatwaves occur more frequently (and last longer) and extreme temperature days increase in intensity, reevaluation of design guidelines for occupant comfort and operational efficiency is needed.	The agency has hundreds of buildings in its portfolio occupied by customers/travelers, employees and tenants.	The action addresses critical transportation assets, on which people and businesses throughout the region rely.	This effort is embedded within a broader initiative to drastically reduce the carbon intensity of new/substantially rehabilitated agency buildings.	Yes	Internal	Underway	New HVAC standards may require ASHRAE backing/buy-in prior to widespread implementation.	Short-term	Consultant-supported guideline update underway.
TR - 11	Update Port Authority Climate Resilience Design Guidelines	Guidance	PANYNJ Engineering	Extreme heat has the potential to impact Port Authority facilities, affecting operations, equipment, and people.	This action falls under two explicit agency priorities: Safety & Security and Sustainability.	The action addresses critical transportation assets, on which people and businesses throughout the region rely.	Design for extreme heat should increase the durability of materials and equipment, resulting in fewer disruptions, lower lifecycle costs and (potentially) lower embodied carbon over asset lifecycles.	Yes	Internal	Recommended	Material heat tolerances are not always explicit, and when they are it may be difficult to translate lab-derived thresholds to real-world scenarios. Further, the relationship between ambient temperatures and surface or enclosed temperatures is not always well defined.	Short-term	The agency expects to commence the guidelines update upon receipt of critical deliverables from its Climate Risk Assessment program, which features extreme heat analyses.
TR - 12	Incorporate Extreme Heat Initiatives and Guidance into NJ Transit Projects and Planning Documents	Guidance, Policy	NJ Transit Planning / Capital Programs	These documents are used by planners, architects, engineers and project managers in real-world projects engaged in planning, rehabilitating or constructing NJ Transit facilities. By incorporating the practices in updated planning and guidance documents, NJ Transit can improve passenger comfort, reduce heat in buildings and improve equipment reliability and station facility energy efficiency.	N/A	This action will primarily impact the health and safety of commuters using NJ Transit.	Reduced maintenance, reduced flooding, energy efficiency	Yes	N/A	Underway	Implementing changes in documents to the various operating units, planning teams and project management teams at NJ Transit.	Short-term	Develop and modify plans

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TR - 13	Improve Bus Shelter Design	Programmatic	NJ Transit Planning / Bus Operations	The new design improves protection against extreme heat and additionally improves safety, lighting and overall passenger comfort.	N/A	Customer comfort, Infrastructure	Safety, lighting, seating area, weather protection	Yes	Local towns and municipalities	Underway	Funding, identifying locations	Short-term	Finalize design
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MCB - 1	Develop Guidance for Climate Change-Related Hazard Vulnerability Assessments	Guidance	DEP Office of Climate Resilience, DOS Office of Planning Advocacy	New Jersey municipalities must be equipped to effectively plan for and respond to local issues posed by climate change, including extreme heat.	The State of New Jersey affirms that it is imperative we integrate climate change into all local and regional planning efforts to ensure that investments made today are designed to withstand the conditions of tomorrow.	Public health	Good planning at the municipal level has additional benefits for other sectors and residents, beyond public health.	Partially	Sustainable Jersey, Municipal staff, Rutgers University, New Jersey Future, additional state agencies	Underway	Local capacity	Short-term	Comprehensive climate change-related hazard vulnerability assessment guidance is under development and expected this year.
MCB - 2	Develop Heat Intervention Toolkits for Built Environment	Guidance	DEP Office of Climate Resilience	This action gathers and showcases possible solutions and other extreme heat interventions in various community types applicable to New Jersey. The resultant strategies would provide local planning officials, planning board members, environmental commissioners and other stakeholders with a suite of possible approaches for mitigating the impacts of a warming planet amongst diverse built environments.	The Office of Climate Resilience provides planning and technical support to New Jersey's communities to help them make informed decisions about climate resilience.	Built environment and infrastructure, public health, environmental health	Energy cost savings, reduced heat island effect, improved air quality and, in some cases (such as green roofs), improved stormwater management	No	Municipal planning officials, NJ Chapter of the American Planning Association, Rutgers Center for Green Buildings, NJ Chapter of the U.S. Green Building Council	Recommended	Knowledge and information	Long-term	The first step would be to develop a comprehensive list of building types and neighborhood profiles throughout New Jersey, along with simplified summaries of building users as well as barriers to green building actions.
MCB - 3	Expand & Enhance Resilient NJ Program	Programmatic	DEP Office of Climate Resilience	Resilient NJ is an existing multi-faceted program that assists municipal and regional resilience planning efforts and resources through federally funded grants. It also hosts a comprehensive planning toolkit specifically designed to address the ongoing resilience planning needs expressed by New Jersey municipal officials. This effort is critical as disaster events including extreme heat events are increasing in frequency and severity. Effective planning is needed to protect communities.	The Resilient NJ program is flagship program of the DEP Office of Climate Resilience. The program encourages resilience action plans and requires that a vulnerability assessment be completed to analyze local vulnerabilities to climate impacts and identify strategies for addressing them, including extreme heat.	Human and ecological communities	Increased resilience across hazards such as flooding, extreme precipitation, storm surge, wildfire, etc	Yes	Municipal governments, community-based organizations, vulnerable populations, emergency services	Underway	Stability of funding, availability of data at the local level	Short-term	Continue to work with stakeholders and partners to develop guidance and resources which embed extreme heat planning guidance into the program. Continue to seek resources and mechanisms to establish state funding.
MCB - 4	Regional Resilience Officer Pilot Program	Programmatic	DEP Office of Climate Resilience	The majority of decisions that will determine whether New Jersey is resilient to the impacts of climate change will occur at the local level. Local governments often lack the capacity, resources and expertise to inform the identification and implementation of resilience actions of a technical nature.	Providing local governments with the capacity and technical expertise and experience to make and implement resilience decisions is critical. A resilience officer will provide critical on-the-ground, day-to-day support for local needs.	Human and ecological communities, social networks, and infrastructure	Capacity and technical assistance beyond extreme heat	No	DEP Office of Climate Resilience	Recommended	Funding	Long-term	Seek funding (e.g. federal grant) and work with procurement/contracting office(s) to develop program structure. Identify a list of organizations and the expertise they provide.
MCB - 5	Launch Resiliency & Adaptation Plan Assistance Program (RAPP)	Programmatic, Planning	DCA, Local Planning Services	The purpose of the RAPP program is to assist municipal governments and government authorities with completing their resilience action plans, which will help them better adapt to climate change and encourage community sustainability.	The Local Planning Services (LPS) office offers comprehensive planning services at no-cost to local governments to fulfill the New Jersey Department of Community Affairs (DCA) technical services mission.	Urban/transitional /environmental justice communities	Capacity and technical assistance beyond extreme heat	N/A	DCA, Local Planning Services, DEP Office of Climate Resilience	Underway	Staff Capacity	Medium-term	The first step in advancing this effort is the launching of the RAPP program as a pilot. We have identified a short list of eligible municipalities with which to launch the program.

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MCB - 6	Launch Just Resilience Initiative	Planning, Programmatic	DEP Office of Climate Resilience, Rutgers-Newark Clement Price Institute	Using extreme heat mitigation as a central focus, Just Resilience will develop and implement a resilience and climate adaptation plan to offer significant, measurable and replicable environmental, social, and economic co-benefits to disadvantaged communities and residents of the Pasasic Watershed overall. This includes reducing energy bills, improving water and air quality, reducing flood risk and increasing social engagement and knowledge around climate change adaptation and resilience through the establishment of Community Resilience Hubs (CRH).	Community resilience hubs offer a unique opportunity to build local capacity while meeting the hyper-local needs of the communities surrounding them.	Greater Passaic River Watershed	This project integrates aspects of transportation, power and building sectors to address extreme heat. We hope to harness co-benefits that include flood mitigation, enhanced community social resilience, workforce development and the direct and indirect economic benefits of reducing cooling costs.	Yes	Communities, local leaders and nonprofit community-based organizations from the Greater Passaic River Watershed; NJ BPU	Recommended	Aligning the necessary entities to advance collaborate will be a primary challenge. Community resilience hubs require ready and willing participation of local entities	Short-term	Using a distributed resource approach, create a network that can represent the interests of local communities and support a network of community resilience hubs. Together this network of partners will convene, analyze, engage and accelerate implementation of locally appropriate solutions. One early action will be the development of a shared information infrastructure and dashboard of all required and desired outcome measures at scales ranging from the individual and household to the community. This will enable us to identify needs, and to quantify and celebrate progress as it occurs.
MCB - 7	Fund Temporary Grant Writing Support Staff	Programmatic	DEP Office of Climate Resilience	While there is federal funding available for resilience activities, New Jersey’s overburdened communities have comparatively less capacity to seek and apply for those funding opportunities.	Ensuring that New Jersey’s urban and overburdened communities have access to the resources necessary to seek funding opportunities is consistent with the State’s resilience and environmental justice priorities.	Human and ecological communities, social networks, infrastructure	Capacity and technical assistance beyond extreme heat	No	DEP - Office of Environmental Justice	Recommended	Funding, staff capacity	Long-term	The first step in advancing this effort would be to secure dedicated funding to establish this approach.
MCB - 8	Provide Hazard Mitigation Technical Assistance to Communities	Planning, Programmatic	NJOEM	This action facilitates hazard mitigation activities including actions to mitigate extreme heat. Underserved communities are given priority for this assistance.	Increases technical capacity and expands grant access.	Underserved communities	Capacity and technical assistance beyond extreme heat	Yes	NJOEM, academic partners	Recommended	Resources, funding, and staff capacity	Medium-term	This action is under development.
MCB - 9	Continue the Resilient Communities Program	Funding	DCA Disaster Recovery and Mitigation	This action offers direct financial assistance to municipalities and is explicitly designed to mirror the federal Building Resilient Infrastructure in Communities (BRIC) grant application process in order to familiarize communities with the BRIC process.	Hurricane Ida relief is a high priority for DCA, including Resilient Communities.	Dependent on the needs of the community	Dependent on applications	Application period complete; no further funding rounds confirmed	DCA, state agencies, communities in State-identified Most Impacted and Distressed (MID) areas	Ongoing	Program is open only to State-identified Ida MIDs	Short-term	Application phase, timing TBD.
MCB - 10	Develop Green and Sustainable Remediation Guidance for Licensed Site Remediation Professionals	Guidance	DEP Contaminated Site Remediation & Redevelopment	There are nearly 15,000 contaminated sites across the state of NJ Department of Environmental Protection Licensed Site Remediation Professional (LSRP) program. Green and sustainable remediation (GSR) is a proven method for site-specific employment of products, processes, technologies and procedures that mitigate contaminant risk while balancing community goals, economic impacts and environmental effects.	GSR holds immense value in helping to reduce impacts of climate change by factoring in considerations for carbon emissions, sustainability, resilience and community-level impacts, the DEP Contaminated Site Remediation & Redevelopment (CSRR) Program has developed Administrative Guidance for Green, Sustainable and Resilient Remediation, posted September 2023.	Urban communities, overburdened communities	Carbon sequestration from green space development, public access to green space	N/A	Environmental consultants, licensed site remediation professionals (LSRPs), developers, responsible parties, Mayors, urban residents	Completed	This action is completed.	Medium-term	Perhaps TA for some communities for later BRIC applications (note that this would at most only be for communities with an accepted application, TA would not be funded generally under this program)

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RP - 1	Continue Restoration of Meadowlands Habitats and Open Spaces	Programmatic	NJSEA Meadowlands Research & Restoration Institute	Development and pollution have had deleterious effects on the ecology of the Meadowlands over the past 200 years, and many resources have been expended in the past 40 years to restore lost ecological functions and benefits to restore resiliency to the environment. This action is needed to protect these past efforts, but also to continue to promote ecological resiliency and create more canopy in developed areas.	Protecting and restoring habitat has been a priority for this agency since 1969 when the agency (as the Hackensack Meadowlands Development Commission) was first created.	Human and ecological	Improved air and water quality, improved public physical and mental health, reduced energy use, reduced stormwater runoff and protection against extreme storm and heat events.	Partially	DEP and federal resource agencies (USACE, USEPA, USFWS, NOAA)	Underway	Future funding, invasive species, development pressure	Short-term	This action is already underway and will continue through development of grants to fund habitat enhancement and vegetation planting projects.
RP - 2	Incorporate Extreme Heat Risk and Opportunities into Agency Strategic Plans	Programmatic	NJSEA Department of Land Use	Incorporating extreme heat risk and opportunities into NJSEA’s strategic planning process is essential so that when extreme events occur, NJSEA is prepared with mitigative efforts and strategies to lessen potentially dangerous impact.	Incorporating changing climate conditions, including extreme heat risks, into NJSEA’s strategic plans is a priority because of the potential lethal effects extreme heat can have to the Meadowlands’ human and ecological communities, as well as the infrastructure that runs through and surrounds the district.	Human community that lives, works and recreates in the district, and the ecological communities of the Meadowlands	Development of mitigative activities, improved public health, reduced stormwater runoff.	N/A	NJDOT, NJ Transit, NYNJ Port Authority, Williams Gas Pipeline, PSEG. Stakeholders: Hackensack Riverkeeper, NJ Audubon, Bergen County Audubon	Underway	Staff time and capacity	Short-term	Work is moving forward on incorporating extreme heat risks and opportunities within the NJSEA Department of Land Use strategic plans. Next steps will include coordinating those efforts among NJSEA Departments and preparing for the next Master Plan Update.
RP - 3	Updating NJSEA’s Master Plans and Guidelines to Incentivize Resilient Practices	Programmatic	NJSEA Department of Land Use	In addition to incorporating information about extreme heat risks and mitigative practices on state lands, NJSEA will incentivize private developers to undertake practices that help reduce the effects of climate change and extreme heat through the Master Plan, Zoning Regulations and Landscape and Open Space Guidelines.	This action is a priority for the NJSEA to protect the ecological and human communities that live, work and travel through the Meadowlands, which can only be accomplished through the coordination and collaboration of both the state and private entities.	Human and ecological	Reduced energy use, improved public health, reduced stormwater runoff and improved water and air quality.	N/A	DEP, private developers	Underway	Continuously updating the Master Plan, Guidelines and Zoning Regulations to keep pace with our changing understanding of climate change	Short-term	Currently reviewing guidelines to incentivize resilient practices
RP - 4	Incorporate Extreme Heat into the Highlands Regional Master Plan Update	Programmatic	NJ Highlands Council	The 2004 Highlands Act established the Highlands Council and charged it with the creation and adoption of a Regional Master Plan (RMP) to protect and enhance the resources within the New Jersey Highlands region. When the Highlands RMP was published in 2008, it did not directly address climate resilience, or prevention and mitigation of extreme heat impacts.	The Highlands Council prioritizes including climate resilience initiatives within the RMP because climate change directly impacts our mission to restore and enhance the Highlands Region’s natural and cultural resources while working to establish and maintain a sustainable economy.	Human and ecological	The Regional Master Plan establishes a standard framework for future land use decisions across the region	Yes	NJ Highlands municipalities, counties and residents	Underway	None anticipated	Short-term	The Highlands Council staff have begun development of this report, with completion projected for late 2024.

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RP - 5	Update to Highlands Land Use Ordinance	Regulatory	NJ Highlands Council	Standard asphalt surfaces absorb energy from the sun and re-emit radiation as heat, contributing significantly to the urban heat island effect. Cool pavements, on the other hand, contain brighter materials that reflect up to three times as much sunlight, emitting significantly less heat. Increasing tree canopy coverage helps to reduce heat effects by providing shade to buildings and surfaces, and through evapotranspiration.	Land use ordinance (LUO) and project review standards (PRS) are the main implementation mechanism for the RMP.	Human and ecological	Development of mitigative activities, improved public health, reduced stormwater runoff.	Yes	NJ Highlands Counties and Municipalities	Recommended	Need for full information regarding cool pavement and rooftop surfacing options (costs, applicability, testing, maintenance), outreach and local adoption	Medium-term	Revisions of the LUO and PRS.
RP - 6	Incorporate Evaluation of Extreme Heat Prevention and Mitigation Strategies for Local Governments	Funding	NJ Highlands Council	Extreme heat presents risks to public health, particularly in vulnerable populations and to the sensitive species and ecosystems of the Highlands Region.	These actions relate directly to the mission of the Highlands Council to preserve and protect the many resources of the region.	Human and ecological	Connecting habitats for wildlife, expanding use of green infrastructure and mitigating greenhouse gas emissions.	Yes	NJ Highland’s municipalities and counties	Recommended	Identifying funding sources	Short-term	Address through climate hazard vulnerability assessments and municipal resiliency action programs.
RP - 7	Highlands Region Community Forestry Management Planning	Funding, Programmatic	NJ Highlands Council	The management, protection and enhancement of urban forest coverage benefits air quality, promotes energy efficiency by shading buildings and helps to control heat island effects by lowering land surface temperatures through tree canopy shading and other cooling services (urban albedo, evapotranspiration).	The Highlands Regional Master Plan (p. 217) recognizes that “increased urban forest cover will improve stormwater retention, water quality, air quality, community character, and quality of life for residents of Highlands communities” and identifies the need for Community Forestry Management Plans to maintain and increase forest cover in developed areas.	Human, ecological and urban communities	Advance environmental justice and equity.	No	NJ Highlands municipalities and counties, other state agencies including the DEP NJ Forest Service	Recommended	Partnerships and funding to implement urban forestry programs	Medium-term	Encourage municipalities to adopt Community Forestry Management Plans as authorized by the New Jersey Shade Tree and Community Forestry Assistance Act (N.J.S.A. 13: 1L-17.1 et. seq.) and associated guidelines.
RP - 8	Reduce and Disconnect Impervious Surfaces	Programmatic	NJ Highlands Council	Impervious surfaces limit groundwater infiltration and recharge and contribute to the heat island effect.	Increases in impervious surface reduce water quality, reduce groundwater recharge and increase the heat island effect, all of which lead to strains on the availability of water.	Human and ecological	Reduce stormwater runoff, decrease pollution inputs to surface waters, creates opportunities for planting of trees and vegetation that provide habitat, bring shade and soften the appearance and impact of built form on the community.	Yes	NJ Highlands municipalities and counties	Underway	Data gaps, funding needs	Medium-term	Utilize mapping to identify large and underutilized impervious surface locations, examine impervious surface conditions, assess needs for impervious surface reductions in relation to surface waters and water quality, coordinate with municipalities to identify opportunities. Coordinate with Rutgers to implement Impervious Cover Reduction Action Plans.

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RP - 9	Expand NJ Highlands Water Use and Conservation Management Program	Funding	NJ Highlands Council	Water resources may become more stressed as extreme heat events drive increased demand. Higher temperatures will also cause higher evapotranspiration.	The Highlands Act charges the Highlands Council with promoting the conservation of water resources for the region. The Highlands Council works to address issues concerning water resources in the Highlands Region, including the availability, protection and restoration of water resources and the management of development patterns ensure that the carrying capacity of water resources is not exceeded.	Human and ecological, overburdened and socially vulnerable populations	Advance environmental justice and equity	Yes	NJ Highlands municipalities and counties	Underway	Ongoing updates will be needed as climate impacts advance. New techniques for ensuring aquifer recharge	Short-term	An additional outreach push to municipalities to participate in adoption of water use and conservation measures.
RP - 10	Heat-Tolerant Native Pinelands Plant Species Guidebook	Conservation, Regulatory, Programmatic	Pinelands Commission	This action will enable the Pinelands Commission to evaluate its existing requirements and recommendations for the use of native plant species (trees, shrubs and grasses) in landscaping plans and refine them to reflect and implement climate resilience objectives throughout this ecologically unique region of the state.	The Pinelands Commission is charged with preserving protecting and enhancing the natural and cultural resources of the Pinelands National Reserve and encouraging compatible economic and other human activities consistent with that purpose.	Ecological	Property owners and municipalities implementing more climate-resilient landscaping approaches may also be more mindful and prepared to mitigate the effects of invasive species.	N/A	Pinelands, municipalities, non-profit organizations (e.g., Native Plant Society of New Jersey)	Recommended	Availability of staff time, identification of data specific to the Pinelands region	Medium-term	The Pinelands Commission staff will conduct research and gather data necessary to refine its existing Native Pinelands Plant Species guidance document and potentially inform future rulemaking efforts.

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UHI - 1	Urban Cooling Pilot Program	Programmatic	DEP Office of Climate Resilience, assisted by the Office of Environmental Justice	This action will ensure that communities have an opportunity to escape the heat and maintain health and safety during times of extreme heat. The program will demonstrate a coordinated government approach to addressing the impacts of UHIs and building resilience and adaptive capacity of communities through mitigation strategies such as implementation of cool pavements, cool roofs, urban street tree plantings, water features, weatherization, and other tools. This action will seek to include financial and technical support.	This action aligns with Priority 1, 2, 4, and 5.	Urban communities, overburdened communities	Quality of life improvements, savings benefits from energy efficiency improvements, urban greening, urban beautification and others.	Yes	BPU, NJDOT, NJDOH, NJOEM, Environmental Justice Advisory Council, Municipalities, community-based organizations, environmental and justice groups, Sustainable Jersey	Recommended	Funding, staff capacity, guidance on technical support	Medium-term	Further discussion is needed to identify lead office and to assess potential for collaboration with sister agencies and need with existing programming.
UHI - 2	Develop Heat Island Assessment and Action Strategy	Research, programmatic	DEP Office of Environmental Justice	Collecting hyper local data helps to better inform municipal and community heat mitigation plans to develop local solutions. This action will build on the lessons learned and best management practices from projects in Newark, Jersey City and Elizabeth to collect local temperature readings and develop a more nuanced picture of heat disparities within different neighborhoods with a focus on overburdened communities. These assessments will provide community tailored guidance on how to address this issue.	This action is a priority for the DEP, since identifying these UHIs and working with communities to determine mitigation efforts to reduce their health impacts will improve outcomes during extreme heat events in alignment with Priority 1.	Urban communities, overburdened populations	Air quality and meteorological data will enhance NJ’s local network of air quality information. Depending on UHI mitigation options implemented, there could be reduced flooding, air pollution and carbon sequestration benefits from green infrastructure and urban forestry initiatives.	TBD	NJDOH, Community Partners, Environmental Justice Advisory Council, DEP Air Monitoring Division	Recommended	Funding and staff capacity, identification of local community partners, coordination in implementation of strategies	Medium-term	Launch internal project team, and confirm external institutional, organizational and community-based partners. Determine replicability of project approaches to optimize consistency in the methods DEP will use when deploying air quality and temperature sensors. Establish a workplan that efficiently and strategically builds off of existing projects and research activities in selected communities.
UHI - 3	Inform the Public on Reducing Energy Use	Programmatic	BPU New Jersey Clean Energy Program/ Division of Clean Energy	Energy efficiency and electrification offer residents, especially those in overburdened communities and low-income households, opportunities to reduce costs and improve indoor air quality, while also improving quality of life in their neighborhood’s outcome by potentially reducing ambient heat that may exacerbate urban heat impacts.	BPU is actively supporting and investing in energy efficiency programs and on-bill assistance programs in partnership with our investor owned utilities. There is a robust ecosystem of options for homeowners, renters and businesses to participate in the programs.	Low-income households, overburdened communities	Improved indoor air quality can yield improved health outcomes for residents. On-bill assistance allows ratepayers to prevent service disruptions and focus on other priorities in their lives that need financial support.	Yes	Investor owned utilities, Sustainable Jersey, NJDCA, community-based organizations, businesses	Ongoing	Ensuring ratepayers are aware of the robust programming the state and our investor owned utilities offer	Short-term	This action is regularly implemented.

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UHI - 4	Minimize Urban Heat Island Effect in Major Infrastructure Projects	Regulatory, Programmatic	DEP Division of Resilience Engineering and Construction	Urban heat island effects could be minimized by incorporating shaded areas of appropriate vegetation for congregation in urban spaces or water stations for animals and people.	Action advances green infrastructure and environmental justice initiatives, especially in urban areas.	Urban communities	Advances environmental justice initiatives for more green space.	N/A	State and Federal	Underway	Educate project engineers on the strategies that can be implemented in an infrastructure project	Short-term	Educate engineers and funding partners.
UHI - 5	Encourage Redevelopment of Brownfields into Green Spaces	Funding, Legislative, Programmatic	DEP Contaminated Site Remediation & Redevelopment (CSRR)	Developers and municipalities work with the Office of Brownfield and Community Revitalization to implement redevelopment plans which often include green spaces. These offices may actively be participating in discussions regarding remediation and redevelopment and able to engage the municipality or other public entity to incorporate cooling strategies into their redevelopment plans.	Pursuant to 7:26E-1.9, DEP must encourage the use of green and sustainable practices during the remediation of contaminated sites. This action item would help repurpose those areas into urban green spaces that help combat the urban heat effect in a warming environment.	Urban communities, overburdened communities, ecological habitat	Carbon drawdown from forest or wetlands in urban green spaces, improved public access to parks within cities, improved public health from remediation of contaminated sites and decreased heat risk, reduced flooding.	Yes	Brownfields, Green Acres, environmental consultants, licensed site remediation professionals (LSRPs), developers, responsible parties, mayors, urban residents	Underway	CSRR lacks final decision-making authority and thus can only encourage rather than require green spaces. Gentrification following green redevelopment is a potential environmental concern.	Medium-to long-term	Discuss financially incentivizing remediations that incorporate cooling strategies like tree plantings or wetland creation through the Hazardous Discharge Site Remediation Fund Grants.

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UTC - 1	Expand Urban & Community Forestry Program Support & Technical Assistance in Overburdened Communities	Programmatic	DEP State Parks, Forests & Historic Sites, Urban and Community Forestry Program	Trees are one of the simplest and most widely appreciated ways to reduce ambient temperatures.	Expanding tree canopies in urban environments, especially within overburdened communities is a key component in addressing environmental justice actions as the benefits trees provide are often lacking in the underserved communities where tree canopy is limited.	Overburdened and underserved communities and other urban centers	Urban beautification, stormwater mitigation, reducing air pollutants, wildlife habitat	Yes	DEP State Parks, Forests & Historic Sites, Urban and Community Forestry Program	Underway	Staffing, funding	Medium-term	DEP will continue to implement existing and expanded programs and seek permanent funding sources to implement and build upon a variety of initiatives underway seeking to improve support, technical assistance and grants available to support urban canopy expansion efforts.
UTC - 2	Leverage Federal Funds to Provide Sub-Grants for Urban & Community Forestry Efforts in Overburdened Communities	Funding, Programmatic	DEP State Parks, Forests & Historic Sites, Urban and Community Forestry (UCF) Program	This historic funding to State Forest Services will rapidly expand the work able to be done in the most overburdened communities in NJ. The New Jersey Forestry Sites (NJFS) UCF program has applied for, and been preliminarily awarded, \$11.25 million to provide planning, inventory, maintenance, tree planting and education through sub grants to municipalities in New Jersey.	This work directly targets the NJUCF programs currently in place, amplifying the amount of work possible through this funding. The funding must be sub awarded to overburdened communities, those which typically suffer from heat island effects and a lack of canopy most.	Overburdened and underserved communities and other urban centers	Urban beautification, stormwater mitigation, reducing air pollutants, wildlife habitat	Yes	Local Governments, NJ Tree Foundation, Community Forestry Council, DEP Environmental Justice Office	Underway	Staffing, outreach	Short-term	After official award from USFS, sub award notice will be posted and outreach started.
UTC - 3	Update the Community Forestry Management Plan Guidelines	Programmatic	DEP State Parks, Forests & Historic Sites, Urban and Community Forestry Program	Community Forestry Management plans are where local governments outline their goals and objectives for the five-year period in the plan. For future grant cycles, this can be incorporated into the application scoring process through a metric to show the work will help reduce heat island effects as appropriate.	Heat reduction, carbon sequestration and reduction in energy use are all benefits trees provide, so planning for the management of local government trees is important to provide those benefits.	Public health, overburdened communities, infrastructure, urban centers	Urban beautification, stormwater mitigation, reducing air pollutants, wildlife habitat	N/A	Local Governments, NJ Shade Tree Federation, Community Forestry Council	Completed	Data gaps, local application of metrics	Short-term	The Community Forestry Management Plan Guidelines were completed January 2024.
UTC - 4	Analyze New Jersey’s Urban Canopy	Programmatic	DEP State Parks, Forests & Historic Sites, Urban and Community Forestry Program	Having scientifically sound data such as canopy assessments are critical to make these decisions and focus efforts where they are needed most. It is important to understand the current state of the urban canopy and to know where gaps in canopy cover are to make management decisions.	Sustaining and increasing tree canopy within urban areas is critical for not only climate change and reducing heat island impacts, but also to provide shaded areas for family to enjoy being outside within their neighborhood	Overburdened and underserved communities and other urban centers	Urban beautification, stormwater mitigation, reducing air pollutants, wildlife habitat	Yes	DEP Science and Research/ Rutgers/Rowan /Arbor Day Foundation/ American Forests	Underway	Staffing, data gaps, external partners	Medium-term	None identified
UTC - 5	Promote Urban Canopy on Private Property	Programmatic	DEP State Parks, Forests & Historic Sites, Urban and Community Forestry Program	Urban canopy is not limited to publicly owned property and through outreach efforts to educate on proper tree maintenance and benefits, this issue has been addressed for some time.	Trees planted on private property are most often the ones to shade houses or apartment buildings, reducing energy bills and combating heat effects.	Overburdened and underserved communities, built infrastructure	Urban beautification, stormwater mitigation, reducing air pollutants, wildlife habitat	N/A	Local Governments, NJ Shade Tree Federation, Community Forestry Council	Underway	None identified.	Short-term	None identified

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REC - 1	Modify Green Acres Funding Requirements to Prioritize Climate and Heat Impact Mitigation	Funding	DEP Green Acres	Giving the public respite from climate change by including water features and shade.	Heat island effect	Park users, families	Greenspace and parks, particularly in urban areas, is associated with lower crime rates, more community engagement and better overall community health.	Yes	Local governments and non-profits	Ongoing	Municipalities need to prioritize these kinds of projects – our applications and workshops help guide them towards these kinds of projects.	Short-term	Continue this prioritization in the next funding round and finalize <i>Outside, Together!</i>
REC - 2	Continue Implementation of the Local Recreation Improvement Grant Program	Funding	DCA	Local governments often do not have the funding to independently take necessary actions to improve/repair recreation and outdoor facilities.	Funding local government units is a key part of the Division of Local Government Services' mission.	Underserved communities	Greenspace and parks, particularly in urban areas, are associated with lower crime rates, more community engagement, and better overall community health.	Yes	DCA, local government units, local populations	Ongoing	Need more data on best practices for combatting extreme heat (what areas are most critical, what park/greenspace assets most important, etc.). In addition, parkland requires funding to for upkeep, so grants for repair and improvement are only one part of a larger process. If this program were to specifically target extreme heat resilience, this data would be necessary to do so successfully.	Short-term	
REC - 3	Incorporate Cool Design Strategies in Parks	Programmatic	DEP State Parks Service Office of Resource Development	With climate change and days getting warmer and staying warmer longer, there is an increased need to investigate other water-based activities for visitors to stay cool and hydrated while enjoying the outdoors, areas for them to rest and to provide shade options as well as EV charging stations for visitors. This will support green designs options and reducing our carbon footprint.	There has been greater demand for swimming areas within the state park system with limited resources to expand this type of water based recreational activity.	Families and visitors to state parks	Community engagement, bringing people together while enjoying the outdoors, help reduce carbon footprint.	Yes	DCA, DOH code review	Recommended	Needed infrastructure and maintenance expertise, funding and identifying areas for installation.	Medium-term	Establishing a list of state parks that may be able to accommodate developing alternate water-based recreation infrastructure, identify areas in the park for the new installations.
REC - 4	Prevent Heat Illness During Equine Sporting Events	Regulatory	Law and Public Safety (LPS), NJ Racing Commission	The action permits the NJRC to ensure the health, safety, and welfare of the equine and human race participants in extreme weather conditions such as high heat and humidity.	The action advances the NJRC’s commitment to race participant safety.	Human and equine communities	None identified.	N/A	Horse racing communities and spectators	Completed	N/A	Short-term	This action has been completed.

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AG - 1	Promote Climate-Smart Practices	Programmatic	NJDA Division of Agriculture and Natural Resources, State Agricultural Development Committee, Division of Markets	This will encourage and incentivize state producers to adopt practices that will increase resilience to extreme environmental conditions. Promotion of multifaceted agricultural systems to allow for a more durable agricultural economy.	This action is a priority as it promotes the continued viability of the agricultural industry. In addition, this can help facilitate another mechanism for funding to implement on-farm conservation measures and growers’ transitions to different production systems.	Agricultural community	Can facilitate the creation of jobs and enhance local economies	Yes	DEP, USDA Natural Resource Conservation Service (NRCS), Rutgers Cooperative Extension, farm owners and nonprofit groups	Underway	Lack of producer access to technical assistance and funding to implement conservation measures, generating buy-in.	Long-term	Securing the appropriate funding sources and staffing or ways to incentivize adoption of these practices.
AG - 2	Provide Localized Assistance, Planning, and Funding for Soil Conservation Districts	Programmatic	NJDA Division of Agriculture and Natural Resources, USDA NRCS	This action allows for interagency collaboration, increases staffing capacity to be able to provide technical assistance for producers looking to implement on-farm climate smart agricultural practices (CSAPs) and private landowners to address resource concerns and institute conservation measures.	Agricultural producers are seeking professionals that can provide recommendations, and write conservation plans for use on site. Further, this item would aid to increase the number of staff capable of drafting conservation/management plans. These management plans allow landowners and producer access to federal conservation cost share funding.	Agricultural community	Improving soil and water quality	No	Local Soil Conservation Districts (SCDs), Rutgers Cooperative Extension, landowners and agriculture producers	Recommended	Funding, staff capacity	Long-term	Identify the means of funding for education and capacity building.
AG - 3	Revise the Conservation Cost Share Program Rules	Legislative, Programmatic	NJDA Agriculture and Natural Resources, NJDA State Agriculture Development Committee	These revisions allow for larger suite of conservation practices that producers could apply for state cost share.	Implementation of more on-the-ground conservation efforts could improve the growers’ access to financing opportunities and ability to integrate a wider array of on-farm conservation practices.	Agricultural community	Improve state’s environmental resources (specifically soil and water) and can facilitate growth of local economies	Yes	U.S. Department of Agriculture-Natural Resources Conservation Service	Underway	Enrollment, financing	Medium-term	Drafting and revising current program.
AG - 4	Launch a State-Specific Commercial Crop Breeding Program	Programmatic	NJDA Divisions of Plant Industry and Agriculture and Natural Resources	This action ensures continued food security, growth of the economy, and protection of farm investments.	This action is a priority for continued agricultural production in the New Jersey and ensuring agricultural viability.	Agricultural community, food access	Crop efficiency, reduced environmental impact	No	USDA NRCS, USDA Plant Materials Center, Rutgers Cooperative Extension, agricultural producers, private crop consulting firms, non-profit interest groups	Recommended	Time and monetary investment	Long-term	Target outreach to producers cultivating the state’s major cash crops and determine the current conditions of the cultivated varieties.

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AG - 5	Communicate Practical Conservation for Livestock Producers Within Watersheds and Riparian Corridors	Programmatic	NJDA Division of Agriculture and Natural Resources	This action addresses critical water resource concerns by replanting riparian corridors with trees and other vegetation. Planted trees will provide shading to grazing livestock and filter nutrients from entering stream.	This action is promoting conservation through outreach efforts and providing producers with financial and technical assistance to implement on-farm conservation measures.	Water resources, livestock	Improvement of water quality	Yes	NJDEP Division of Water Quality, Rutgers Cooperative Extension	Underway	Program expansion, cost	Medium-term	Conduct outreach
AG - 6	Reduce Human Health Impacts Associated with Livestock Mortality	Legislative, Programmatic	NJDA Division of Animal Health and Agricultural and Natural Resources	This action protects both livestock and humans from illness caused by livestock mortality.	Having mortality disposal plans in place, which include alternative disposal methods, would provide pre-emptive management strategies of large-scale livestock mortality scenarios.	Public health	Cost of disposal can be reduced by having a plan in place that implements multiple disposal methods.	No	USDA Animal and Plant Health Inspection Service	Underway	Regulatory barriers, transportation issues	Long-term	Determining livestock population thresholds, specifying which farms could qualify for preparedness plan. The scale of livestock production in New Jersey may not warrant plans.
AG - 7	Utilize and Share the Rutgers Urban Agriculture Report	Programmatic	NJDA Divisions of Agricultural and Natural Resources, Office of the Secretary and Division of Markets	The report addresses challenges posed by urban growers, some of which include land access, food insecurities and accessing technical assistance.	This action promotes the continuation of agricultural production within the New Jersey.	Agricultural community	Can facilitate the creation of jobs and enhance local economies	N/A	Rutgers Cooperative Extension Office of Urban Agriculture, Natural Resources Conservation Service, local municipalities, non-profit interest groups and private industry	Completed	N/A	N/A	This action is already being implemented.

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ECO - 1	Promote Forest Restoration and Conservation in the Highlands	Funding, Regulatory	NJ Highlands Council	Forests aid in extreme heat mitigation by sequestering greenhouse gases, acting as riparian buffers to cool surface waters, cooling by evapotranspiration, improving air quality, and having a higher reflective power (albedo) than developed/urban areas and impervious surfaces.	The Highlands Region contains some of the most important forests in the state. These forests are vitally important to every element of the Highlands Region, including performing an integral role in watershed health, sequestering greenhouse gasses and providing other ecosystem services that reduce heat.	Forest habitats and ecosystem	Improve water quality, provide critical habitat for wildlife, promote biodiversity and provide recreational opportunities	Partially	DEP, US Fish and Wildlife Service (USFWS), Highlands municipalities	Underway	Staffing, funding, external partners	Long-term	Increase outreach to municipalities to create Stream Corridor Protection, Restoration Plans and Watershed Restoration Plans and Forest Stewardship Plans. Identify forest land for open space preservation, as well as financing sources for acquisition.
ECO - 2	Enhance Forest Resilience in Wildlife Management Areas	Planning, Programmatic	DEP Fish & Wildlife and State Parks, Forests & Historic Sites (DEP)	Forest species composition and forest management decisions can ensure that forests are better suited to withstand periods of extreme heat and drought. This will build resilience of DEP’s forested lands so they can withstand periods of extreme heat as expected in future climate scenarios, leading to a more resilient forest resource.	Forests are important habitats and provide shade to people and wildlife during periods of extreme heat.	Forest habitats and ecosystem	Carbon sequestration	No	Fish & Wildlife, State Parks, Forests & Historic Sites, USFWS, US Department of Agriculture, Forest Service, New Jersey Audubon, Society, Conserve Wildlife, The Nature Conservancy, Sierra Club, Highlands Council, Conservation Foundation, Pinelands Commission	Recommended	Staffing and capacity	Long-term	Next steps include forest inventories, planning and mapping to assess current forest composition versus projected forest composition and mortality under future climate change scenarios.
ECO - 3	Remove Dams Where Appropriate	Programmatic	DEP Natural Resource Damages and Fish & Wildlife	Removing dams will improve water quality, reduce thermal stressors and restore natural flow regimes. There are also recreational benefits for increased water sports such as canoeing and kayaking.	This action will reduce elevated stream/river temperatures and increase ecosystem resilience, especially during periods of extreme heat. For DEP owned dams, this eliminates maintenance and liability.	Riverine habitats and ecosystems	Improved drinking water quality, recreational benefits	Partially	Natural Resource Damages, US Fish & Wildlife Service, American Rivers, The Nature Conservancy, Musconetcong Watershed Association, Upper Raritan Watershed, Parks, Forestry & Historic Sites	Recommended	Financial and time commitment	Long-term	Continue to seek funding for dam removal projects. Assist in coordination with Non-Governmental Organizations, NRD, and other funding sources to continue to remove dams impacting NJ’s aquatic resources.

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ECO - 4	Protect Coldwater Riparian Habitats	Programmatic	DEP Fish & Wildlife and Green Acres	Maintaining acceptable water quality is critical to the survival of species inhabiting riparian waters.	This action is a priority as it is critical to species such as Brook Trout survival and presence in New Jersey and throughout its native range.	Riverine habitats and ecosystems	Improved drinking water quality, recreational benefits	Yes	Fish & Wildlife, Drinking Water, NJ Fish & Game Council, Endangered & Nongame Species Advisory Committee, Eastern Brook Trout Joint Venture, Trout Unlimited, NJ State Federation of Sportsmen's Clubs	Underway	Integrating federal data into local efforts	Medium - to long-term	Integrate priority riparian corridors into Green Acres acquisition priorities.
ECO - 5	Assess Baseline Species and Climatological Records	Research	DEP Natural Heritage Program; DEP Fish and Wildlife	This action of compiling floral/faunal records in association with climatological information could provide baseline information, to help highlight impacts of extreme heat and drought-like conditions to the environment and ecological value.	This could be a valuable step in documenting changes over time. Additionally, records are likely limited temporally, and it is uncertain how much might be gained in such an assessment.	Ecological communities	Insights into habitat management, fish and wildlife management, and pest management	No	Natural Heritage Program; Fish and Wildlife	Not Started	Data compilation, aligning records	Medium - to long-term	Identify key team across programs and external partners, review literature for data sources and research findings., compile data sources, develop standardization procedures, format data tables, analyze for trends relating climatological factors, such as reduced precipitation or elevated temperatures.

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HAB - 1	Respond to the Impact of Harmful Algal Blooms on Recreation	Programmatic	DEP Division of Water Monitoring and Standards	HABs affect human health and the ability to recreate in surface waters. Increasing temperature is expected to exacerbate and expand HABs across New Jersey. This will stress the ability of DEP staff to monitor all. There will also be the need for additional monitoring equipment, laboratory analysis instrumentation and staff.	Ensuring public health and safety during a time of increasing HABs is critical to communicating where hazards exist. Accurately defining when a HAB ends will allow the safe resumption of the surface water.	Public health	Tourism and economic benefits	Yes	DEP/DWMSP C; lakeside communities; municipalities; DEP/P&F; water recreation; NJDOH and local health departments	Underway	Staffing, additional resources (FTEs, equipment) needed	Short-term	Additional monitoring of HABs, development of staff and lab capabilities.
HAB - 2	Protect Drinking Water Sources from HAB Impacts	Regulatory, Programmatic	DEP Division of Water Supply & Geoscience	Protecting drinking water sources from adverse HABs impacts is key to public health. Cyanotoxins caused by harmful algal blooms which manage to break through treatment processes can cause short term health impacts. If rulemaking is adopted, would provide clear pathways for DEP to compel public water systems to take actions if a HAB occurs in its source water.	DEP is the agency which has primacy from the federal Environmental Protection Agency (USEPA) to implement and enforce the Safe Drinking Water Act, to protect public health of users of public water systems.	Public health	None identified	Yes	DOH, Public Water Systems, Laboratories	Underway	Laboratory capacity, variable treatment systems.	Medium-term	Following Drinking Water Quality Institute (DWQI)
HAB - 3	Empower Harmful Algal Blooms Research	Research	DEP Science and Research, Freshwater Biological Monitoring	HABS impact water quality and impact recreational use of our waterways. HABs greatly impact recreational use of waterways during periods of extreme heat which create water conditions conducive to blooms. It is also important to understand the impact of various HAB treatments on aquatic biota.	Impact on recreational use and potential impact on aquatic biota	Public health and ecological health	Tourism and economic benefits	No	Public Water systems, laboratories, environmental advocates	Recommended	Funding, staff capacity	Short-to long-term	Develop and implement research strategies which can identify some watershed driving forces for HAB formation. Specifically, try to understand some features for blooms such as nutrient demand, toxin production and algal community composition. Work with communities to leverage existing data and identify what data needs to be collected to strengthen datasets.
HAB - 4	Implement the DEP Water Infrastructure Implementation Plan	Programmatic	DEP Water Resource Management	In partnership with the NJ Infrastructure bank, the DEP forms the NJ Water Bank which provides low-cost funding to support water infrastructure projects. These funds provide improved water quality, service, to minimize costs to residents to accomplish key projects. This money is operated through the State Revolving Fund, and eligible public water systems, or local governments, can use the money to improve drinking water, wastewater or stormwater services.	Funding projects that could assist in addressing HABs (e.g. extending sewer service areas, aquatic weed harvesters)	Statewide communities	Reduce water rates increases for eligible applications	Yes	Public water systems, environmental advocates	Ongoing	System capacity to participate and identify eligible projects for funding.	Medium-term	Continue to implement NJ Technical Assistance Program and outreach.

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LRA - 1	Evaluate Amending Rules and Regulations Around Vegetative Mitigation	Regulatory	DEP Watershed & Land Management	The removal of impervious surfaces reduces the heat island effect, which can be further mitigated with increased plantings in the area.	Using a forward-thinking approach to vegetation mitigation and impervious coverage requirements will allow for the state to help mitigate the heat island effect today while also planning for the future of New Jersey’s environment.	Human and ecological communities	New vegetation can also increase habitat value, improve water quality and increase carbon sequestration. Can prevent increased in water temperatures which may lead to algal blooms	Undetermined	NJDOT, environmental groups, local governments, development groups, environmental justice organizations and stakeholders, and researchers	Underway	Understanding of existing literature	Medium-term	The scope of work, full time employee hours required, research needs and potential options for addressing these are necessary next steps. After the literature review and completion of any additional needed research, a rule team will map out amendments as well as a timeline for proposal, adoption and implementation.
LRA - 2	Build Climate Resilience into Contaminated Site Remediation and Restoration Plans	Programmatic	DEP Legal and Regulatory, Contaminated Site Remediation & Redevelopment	Voluntary projects that increase tree cover in urbanized areas will improve heat resilience in these areas and help combat extreme heat.	DEP actively works to encourage projects that will have the greatest beneficial effect on the community, public health and the environment. Reducing extreme heat will serve that agency goal.	Urban communities	Improved air quality, beautification	N/A	Municipalities, Environmental Justice groups, DEP	Underway	Projects as part of settlement discussions will require cooperative responsible parties, as well as available space and interest in the community that suffered the original environmental injury.	Medium-term	Work with programs within DEP to identify potential projects that include vegetation and tree cover.
LRA - 3	Cooperate on Multistate Climate Change Policy and Litigation Advocacy	Programmatic	DEP LPS, Division of Law	The causes and impacts of climate change occur across state and international borders and require national and international cooperation to address.	This action is a priority because national policy is improved when New Jersey’s interests and opinions inform it.	Human and ecological communities	Interstate government cooperation, economic benefits	N/A	Client agencies affected by individual multistate proposals including the NJDEP, NJDA	Underway	The primary limitations will be staff availability and the short notice upon which many multistate actions occur.	Medium-term	Our multistate policy participation is underway and ongoing.

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ASU - 1	Conduct Temperature-Related Literature Reviews	Research	DEP Science and Research	Up-to-date scientific information on critical topics related to increasing temperatures will be readily available (e.g., increasing risk of illnesses, drivers of marine heatwaves, drought impacts to agricultural production, thermal tolerances of ectothermic animals, chemical dissolution of contaminants, extreme heat effects on air quality, etc.).	This is a priority to keep informed on the latest science of climate change and its impacts.	Human and ecological communities	Many New Jersey programs and the public will be informed on the science related to the effects of increasing temperatures on human and ecological assets.	No	Various agencies	Ongoing	Staff capacity	Short-to long-term	Continue reviewing the literature on the effects of increasing temperatures on human and environmental health in New Jersey. Incorporate any new relevant scientific information into the DEP's climate change science reports, web resource and data gaps as needed.
ASU - 2	Ground Truth Surface Temperature Observations	Research	DEP Environmental Public Health Analysis (DEP)	Ground truthing surface temperature observations is critical to validate satellite data. Including observations along gradients would be valuable in describing the impacts of different land use types and green spaces for example.	This is a priority as it will help identify communities and locations in need of more resilient landscapes and validate satellite data, allowing more efficient means of supporting vulnerable populations.	Human and ecological communities	Reporting on extreme heat conditions at various scales (city, county, New Jersey) and land uses	No	Environmental and Public Health Analysis; State Climatologist/ Rutgers University	Underway	Staff, funding	Short-to medium-term	Next steps include assembling the research team, developing a plan (sampling strategy; site selection), and acquiring and installing instrumentation. Then data can be collected and analyzed to assess the variability across land use types under different heating days.
ASU - 3	Monitor Changes in Surface Water Temperatures	Programmatic	DEP Division of Water Monitoring, Standards, and Pesticide Control	The DEP’s first Scientific Report on Climate Change stated that New Jersey is warming faster than the rest of the Northeast region and the world. This warming trend would undoubtedly negatively affect freshwater systems. Responding will require enhanced monitoring of surface water temperature, correlation with climate change, and prediction of future surface water temperature changes.	The quality and temperature of surface water is critical to the maintenance of aquatic ecology and water resources of New Jersey. Understanding changes is necessary for DEP to take appropriate actions.	Aquatic ecosystems	Protection of water supply for human consumption and the health of the aquatic ecosystem	Partially	DEP Division of Water Monitoring Standards and Pest Control; DEP Fish and Wildlife; aquatic ecosystem NGOs; dischargers; water purveyors; U.S. Environmental Protection Agency (EPA)	Ongoing	Funding	Medium-term	Continue to monitor surface water temperatures.
ASU - 4	Assess Sea Surface Temperature Extremes	Research	DEP Marine Water Monitoring	Marine heatwaves are increasingly frequent and can cause changes in chemical properties, habitat quality and ecological activities.	New Jersey’s commercially important fisheries may be drastically altered by recurring extreme marine heatwaves and/or gradual, more sustained temperature changes.	Ecological communities	Human benefits exist in informing fisheries management needs and evaluating potential changes to ecosystem services.	No	Marine Water Monitoring	Recommended	Funding, data gaps	Medium-to long-term	Next steps include coordination with internal and external groups, acquiring data sources for assessment and identifying any spatial gaps.
ASU - 5	Study Offsite Runoff Effects on Trout Streams	Programmatic	Division of Water Monitoring, Standards, and Pesticide Control, Fish and Wildlife	Trout are sensitive to water temperature. Significant changes in stream temperature can affect other components of the aquatic ecosystem as well. Temperature exceedance can lead to a stream being evaluated as impaired.	DEP wants to limit the miles of streams which are evaluated as being impaired for one or more criteria. Understanding how runoff from development may affect stream temperatures may help land use planning agencies in preventing such impairments.	Aquatic ecosystems	Human benefits exist in informing fisheries management needs and evaluating potential changes to ecosystem services.	No	DEP Division of Water Monitoring Standards and Pest Control; DEP Fish and Wildlife, EPA; DEP Watershed & Land Management; water supply purveyors with reservoirs; MS4 permit holders	Recommended	More data is needed on the correlation of climate change, runoff temperature and stream temperature.	Medium-term	Next steps include increased surface water temperature monitoring. This will require a reevaluation of the current network, prioritization of additional monitoring and increased resources.

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ASU - 6	Improve Understanding of Heat-Related Climate Vulnerability of Marine Resources	Research	DEP Marine Resources Administration (Bureau of Marine Fisheries and Bureau of Marine Habitat & Shellfisheries)	New Jersey’s fishing and shell fishing industries are crucial contributors to the economy. Importantly, it is critical to understand the risk and presence of new pathogenic species that can decimate coastal shellfish stocks and marine fisheries.	DEP is charged with managing marine resources. Warming waters will impact commerce, recreational opportunities and aquatic biota and coastal ecology.	Aquatic ecosystems	Economic benefits, both from safeguarding commercial fishers as well as recreational users	No	DEP, universities, National Oceanic and Atmosphere Administration, commercial fishing and shellfishing industries, shellfish and marine fisheries advisory councils, regional fisheries management councils and commissions	Ongoing	Evolving data landscape, funding	Long-term	To start, the DEP will conduct a desktop study of what is being done at a national level to assess climate vulnerability in marine fisheries. DEP will develop long-term monitoring programs for marine species pathogens, with an initial focus on shellfish. Capacity exists, but only small scale and not geographically broad; new program would be (more or less) built from foundation.
ASU - 7	Update New Jersey Climate Model Projections	Research	DEP Science and Research	This action would align projected temperature data with the new scenarios from the most recent Intergovernmental Panel on Climate Change reports (i.e., Shared Socioeconomic Pathways instead of Representative Concentration Pathways).	This is a priority because it allows staff to discuss New Jersey specific temperature changes using the up-to- date standards.	Human and ecological communities	This information would be useful to many DEP and New Jersey programs to plan for climate impacts today and into the future.	No	Environmental and Public Health Analysis; Northeast Regional Climate Center	Recommended	Funding, staff capacity	Long-term	Next steps include acquiring funding and then developing & conducting a study to project temperature in New Jersey based on an ensemble of downscale climate model projections.
ASU – 8	Develop a Series of Technical & Applied Research Workshops	Research	DEP Offices of Climate Resilience and Environmental and Public Health Analysis, and Division of Science and Research	As part of its ongoing commitment to advancing our scientific understanding of climate change, the DEP has identified and created a list of known climate change research and data gaps, which include knowledge gaps regarding ambient air temperatures and urban heat islands, among other topics of relevance to extreme heat resilience. Filling knowledge gaps will expand understanding of the potential impacts from climate change and help identify ways to respond and mitigate the effects.	Through Executive Order 89, the DEP is tasked with developing and regularly updating a Scientific Report on Climate Change to serve as a basis for the State’s climate resilience work.	Researchers and network of community-based organizations supporting projects through citizen science activities	Peer-to-peer knowledge sharing can help to build better connections between researchers on variety of issues beyond extreme heat.	No	Academic institutions, community-based partners involved in participatory research, research collaboratives and communities of practice	Underway	Especially for applied, community-based and participatory research projects, it would be ideal to identify opportunities for grant funding to advance implementation and not just study.	Short-term	The Office of Climate Resilience is collaborating with researchers and program administrators from various New Jersey based institutions to convene a series of both invitation-only and public-facing workshops, webinars and in-person sessions to take place from Summer 2024 to Spring 2025.

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COM - 1	Develop a Cool Buddy Program	Programmatic	DHS Department of Aging Services	Older adults and people with disabilities are often at high risk of adverse effects of extreme heat.	The action would inform the development of sustainable infrastructure for building leadership and knowledge among individuals who could identify and support heat-vulnerable people in their own communities.	Seniors and aging populations, disability community	Opportunities for building social cohesion and addressing isolation in this population	No	Department of Human Services, County Area Agencies on Aging, New Jersey Office of Emergency Management	Recommended	Funding	Medium-term	DHS will begin researching best practices and develop a template.
COM - 2	Develop an Extreme Heat Resource Guide for Vulnerable Communities	Programmatic	DHS Department of Aging Services, Division of Developmental Disabilities, Division of Disability Services, Division of Deaf and Hard of Hearing, Commission for the Blind and Visually Impaired, Office of New Americans	Building public awareness and understanding of extreme heat is critical to mitigating risk. Many of the communities that are likely to be exposed to extreme heat also face barriers to information, including technological, language and geographic barriers. Building upon Department of Human Services’ relationships and expertise working with these communities can help increase awareness about the dangers of extreme heat.	This program benefits a considerable portion of the state’s residents who are likely to experience adverse effects of increased temperatures during the summer months. This program has the capacity to provide a minimum level of awareness of the dangers of extreme heat and can assist in promoting other heat mitigation actions.	Individuals disproportionately affected by exposure to extreme heat and/or barriers to resources to mitigate the impacts of extreme heat, including individuals who are blind, visually impaired, deaf or hard of hearing; individual with disabilities; older adults; new Americans, and households with low income.	None identified	No	Department of Human Services, NJ Office of Emergency Management, County Boards of Social Services, Human Services Directors	Recommended	Funding	Medium-term	Obtaining information and materials needed to promote awareness of extreme heat, informing relevant divisions of this effort.
COM - 3	Develop a Comprehensive Training Program	Programmatic	Interagency Council on Climate Resilience	Providing those who assist in public cooling efforts with proper training is essential to ensure that community members have access to safe and cool environments and essential educational materials during and in the lead up to extreme heat events.	Equipping those who assist in cooling the public is crucial to enhancing public health and reducing mortality rates.	First responders, community educators and those who serve the needs of heat impacted individuals	None identified	No	Professionals, community-based organizations and groups involved in heat response	Recommended	Needs of diverse professional groups working in different operational contexts (for example, librarians and recreation staff as compared to healthcare providers and first responders) will require differentiated instruction approaches.	Medium-term	Assess the needs of the relevant professionals, develop and distribute training content and guidance for use in different extreme heat response and preparedness settings.
COM - 4	Develop Education Resources for Small Businesses	Programmatic	NJ DOS – Office of Planning Advocacy, Business Action Center	Extreme heat will impact small business in New Jersey.	New Jersey’s small businesses are a critical component to New Jersey’s economy.	Small business owners	Economic resilience	No	NJ DOS – Business Action Center	Recommended	Funding, technical assistance	Medium-term	Waiting on DEP guidance in order to develop education resources for small business.

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COM – 5	Launch Meadowlands Climate Change and Heat Extremes Education Campaign	Programmatic	NJSEA Meadowlands Environment Center	NJSEA serves as a regional source of information for the Meadowlands District, and can widely spread information regarding extreme heat risk and mitigative actions through our already existing climate change education programs.	The development of a heat education program is a priority for the education component of NJSEA as it will fill in missing components within our current climate education programs.	Human community	Increased public knowledge and improved public health	N/A	Ramapo University	Underway	None identified	Short- term	NJSEA will coordinate with Ramapo University and the Meadowlands Environmental Center educators to develop a new health education campaign.
COM – 6	Conduct Extreme Heat Public Outreach to Veterans and Their Families	Programmatic	DMAVA Veterans Service and Public Affairs Office	Providing information to NJ resident soldiers, veterans and families about extreme heat events and options to stay safe during those times is critical to maintaining the public health.	This service falls directly under the mission of the department for continuing support the military-associated public.	Veterans and their families	Reduced morbidity and increased comfort	N/A	Staff, soldiers, veterans and military families	Underway	Data, reaching veteran population	Short-term	Formatting of information, design of a communication strategy and staff training are the next steps to implementing the action.
COM – 7	Expand Surveillance, Analysis, Tracking, and Publication of Heat-Related Illness Data and Educational Resources	Programmatic	NJDOH	Tracking heat related illnesses and deaths helps research and planning efforts throughout the state. Educational resources provide information on how to reduce risk.	NJDOH continues to work to protect the health and wellness of all NJ residents.	Public health	Decreased costs for heat related health care and hospitalizations	Yes	NJDOH, general public, local and county health departments, health care providers, employers, labor organizations	Underway	None identified.	Medium-term	None Identified.
COM – 8	Develop Heat Hub NJ and Launch Extreme Heat Education and Outreach Campaign	Programmatic	Interagency Council on Climate Resilience	Extreme heat is a “silent killer” in large part due to the general lack of awareness regarding the risks extreme heat events pose to vulnerable individuals. As 90+°F days increase in our state, a concerted and strategic education and outreach effort will help build our overall readiness and elevate our collective adaptive capacity to confront the worst heat impacts.	The Interagency Council on Climate Resilience is cognizant of the risks associated with extreme heat and recognizes the importance of building up the state’s collective awareness related to extreme and dangerous temperatures.	Statewide human communities	Opportunities for building social cohesion	Yes	IAC, strategic partnerships to engage “hard to reach” populations, schools and public health professionals	Underway	Engaging hard- to-reach communities, assessing effectiveness of campaign.	Short-term	Continue to add new resources to Heat Hub NJ as they develop. Create key public health and education messaging, develop strategic partnerships with state-wide, regional and local partners. Ensure all materials are translated to ensure language accessibility.
COM – 9	Leverage Social Media Communications for Visitors to State Parks, Forests & Historic Sites	Programmatic	DEP	Providing information to park visitors will prepare them for the risks of extremely hot days in NJ state parks.	It is important for visitors to be prepared, know warning signs of dehydration and too much sun exposure to avoid needing emergency services while outdoors.	Park visitors and families	Reducing the need for emergency services while in NJ state parks	Yes	DEP	Underway	None identified	Short-term	Develop social media templates to readily post warnings and tips to the public during extreme heat days.

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FF - 1	Continue Implementation of the Natural Climate Solutions Grant Program	Funding, Programmatic	DEP Bureau of Climate Change and Clean Energy	Funds on the ground nature-based solution projects to mitigate the impacts of climate change, including urban heat island effects.	Advances New Jersey’s Global Warming Response Act 80x50 Report and details out how natural working lands are needed to reduce carbon emissions and reach net-zero carbon emissions by 2050.	Green and blue carbon ecological communities, overburdened communities	Multiple ecosystem-climate resilient benefits and anthropogenic benefits directed towards air, water quality, improves economic and social-equity	Yes	DEP, NJDA, Environmental Restoration Advocacy groups	Ongoing	Depreciating funds for National Climate Solutions grants, Greenhouse Gas, Natural and Working Lands Strategy inventory data gaps, Carbon sequestration calculation tools, staffing capacity	Short-term	Execute grant contracts, grant management, Round 2-Request for Proposals timing is to be determined.
FF - 2	Identify, Prioritize, and Incentivize Water Bank Projects that Incorporate Green Infrastructure	Financing	I-Bank, DEP (Water Bank)	Opportunity to prioritize and incentivize funding for green infrastructure projects in urban areas.	Aligns with the I-Bank’s mission to provide and administer low interest rate loans for projects that protect the public health and make possible, responsible and sustainable economic development.	Human/urban, ecological	Resilience-related, mitigation-related, non-climate	Partially	DEP	Underway	Modifications to DEP prioritization ranking and receive appropriation of additional funds in order to incentivize these types of projects with principal forgiveness opportunities.	Medium-term	Coordinate with, and secure approval of DEP Division of Water Quality Municipal Finance and Construction Element, modify H2Loans and receive appropriation of additional funds.
FF - 3	Support Communities Using Transportation Set-Aside Funds for Shade Improvements	Programmatic	NJDOT Division of Local Aid and Economic Development	The action would reduce heat risks to people by providing additional shade to NJ communities’ infrastructure and transportation facilities receiving Transportation Alternatives (TA) Set-Aside funding.	The action fits into NJDOT’s role in aiding local governments to best access and utilize grant-funded dollars.	Public health, overburdened communities, built infrastructure	Including shade-related streetscaping and landscaping amenities in TA Set-Aside projects increase their appeal to pedestrian traffic and commercial activity. The addition of trees may benefit air quality.	Yes	USDOT Federal Highway Administration, Local governments	Recommended	Dependent on local government interest	Short-term	Discuss and develop the approach that the NJDOT Division of Local Aid and Economic Development may take with communities in advancing this goal.
FF - 4	Launch a Multimodal Shade Tree Initiative	Funding	I-Bank, NJDOT (Transportation Bank)	Opportunity to provide funding for multimodal transportation projects to mitigate/adapt to extreme heat concerns.	Aligns with the I-Bank’s mission to provide and administer low interest rate loans for projects that protect the public health and make possible, responsible and sustainable economic development.	Human/urban	Resilience-related, mitigation-related, non-climate	No	NJDOT	Recommended	Amend Transportation Bank January report and receive appropriation of additional funds	Medium-term	Coordination with and approval of DOT Local Aid Division on new program priorities.

CCRS PRIORITY AREA 5 PROMOTE CLIMATE-INFORMED INVESTMENTS AND INNOVATIVE FINANCING										FUNDING PROGRAMS REVISION AND FINANCING (FF)				
Action ID	Action Title	Action Type	Lead Program	Why the action is important?	If/why the action is a priority for the agency	What community (human/ecological) or asset the action will address	Co-benefits	Funding Available	Relevant Agencies/ Stakeholders	Status/ Progress	Anticipated challenges/ needs to implement, including data gaps	Time-frame	Next Steps for Implementation	
FF - 5	Develop Extreme Heat Underwriting Guidelines	Research, Policy	NJHMFA Technical Services	This action will improve the health and welfare of residents of Agency-financed affordable housing.	The Agency’s mission is to provide financing for quality affordable housing.	Residents of Agency-financed affordable and Special Needs housing	Decarbonization, enhanced energy efficiency, improved resident comfort	No	NJHMFA Technical Services, Multifamily & Supportive Housing, Special Needs Housing Providers, Division of Developmental Disabilities, DHS, BPU	Recommended	Possible increased project costs	Short-term	Research cost implications, provide guidelines/policy for Multifamily and Supportive Housing Division review and discussion.	
FF - 6	Incorporate Extreme Heat Risk and Opportunities into Incentive Programs	Programmatic	NJEDA - Aspire and Brownfield & Sustainable Systems	This is an opportunity to emphasize details for climate justice initiatives to help further advance green, urban design and landscaping improvements that mitigate extreme heat in urban environments.	The action is a priority for NJEDA towards creating more inclusive community development programs that allow for sustainable and equitable economic growth.	Human and Ecological Communities	Developers are more likely to examine other climate resilient and environmental justice considerations when planning their projects.	Yes	NJEDA and funding applicants	Completed	The potential for increased costs to developers may outweigh the benefit from the incentive.	Short-term	Identify opportunities to incorporate into future programs.	
FF - 7	Implement the Federal STORM Act	Funding	NJOEM	The Safeguarding Tomorrow through Ongoing Risk Mitigation (STORM) Act which amends the Stafford Act to authorize states to establish revolving loan funds that provide hazard mitigation assistance for local governments to reduce risks from natural hazards and disasters.	The Act complements existing grant programs, allows for new funding solutions.	Community Lifelines	Has the potential to complement existing programs and efforts	TBD	NJOEM	Recommended	New program, slow roll out, underfunded given need and potential	Medium-term	Awaiting FEMA determinations and award.	
FF - 8	Identify Bidding, Services, and Contracting Opportunities to Prepare for Extreme Heat	Programmatic	Interagency Council on Climate Resilience	Expanding the scope of goods and services under existing state contract assists state, county, and local jurisdictions in their procurement needs and provides vendors will be able to get contracts with the state.	Expanding the scope of services and goods and expanding and diversifying the goods and service under contract with the state provides resiliency in the procurement process and aids in agencies in the timely procurement of the goods and services they require.	Various, depending on the specific extreme heat procurement needs of members of the Interagency Council	DPP’s procurement process assists small, minority, veteran, and LGBTQ+ business owners in securing business with the State of New Jersey.	N/A	None identified	Ongoing	None identified	Long-term	Dialogue with the Interagency on needed goods and services. Promote the availability of state contracts for municipal and county use. Start this effort with a few targeted outreach sessions and/or focus groups to determine the greatest pain points municipal procurement leaders, public works directors, budget directors, and local government sustainability staff experience when soliciting and securing services to advance environmental sustainability and climate resilience-related products and services.	

Action ID	Action Title	Action Type	Lead Program	Why the action is important?	If/why the action is a priority for the agency	What community (human/ ecological) or asset the action will address	Co-benefits	Funding Available	Relevant Agencies/ Stakeholders	Status/ Progress	Anticipated challenges/ needs to implement, including data gaps	Time-frame	Next Steps for Implementation
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FF - 9	Provide Emergency Resources to Small Businesses During Extreme Heat Events	Legislative	NJEDA Community Development	This action is important because it can support businesses that are impacted by extreme heat.	This action helps the Authority by supporting vulnerable business and providing much-needed immediate support to help businesses and nonprofits. Financial assistance due to emergencies helps impacted entities return to normal operations so they may continue their role as the economic drivers of New Jersey's communities.	Small businesses	The program supports businesses and non-profits that are the economic drivers of New Jersey's communities.	No	NJEDA, BPU, and the business community	Recommended	Funding	Long-term	Receiving funding and creating a program to disburse funds
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