



# **Climate Action in Delaware: 2016 Progress Report**

## **Adaptation Appendix**

**Produced by DNREC Division of Energy and Climate**

**Approved by the Cabinet Committee on Climate  
and Resiliency on 12/12/16**

## About This Document

In September 2013, Delaware Governor Jack Markell signed Executive Order 41: *Preparing Delaware for Emerging Climate Impacts and Seizing Economic Opportunities from Reducing Emissions*. The Executive Order directed Delaware state government agencies to address both the causes and consequences of climate change.

State agencies were directed to develop “agency-specific actionable recommendations for improving Delaware’s preparedness and resilience to climate impacts.” Through a year-long planning process, representatives of eleven state agencies worked together to identify climate risks to their departments. Each agency then proposed strategies to reduce impacts to their workers and facilities, and to maintain their ability to provide programs and services to the people of Delaware. The planning work culminated in the publication of the *Climate Framework for Delaware* in December 2014. The *Framework* contains 155 recommendations from state agencies for adaptation actions and greenhouse gas reductions.

Since 2014, Delaware state agencies have been working together to put these recommendations into action. “Climate Action in Delaware: 2016 Progress Report” highlights the actions and accomplishments made by Delaware’s state government to curb greenhouse gas emissions and adapt to the impacts of climate change.

This **Adaptation Appendix**, a companion document to the Progress Report, provides a summary of progress for each climate adaptation recommendation developed by the eleven Delaware state agencies. It can be utilized to gauge progress and to determine where resources may be needed in the future to stimulate progress toward a more resilient Delaware. The information in this appendix will help inform the State’s actions to continue progress.

# Climate Action in Delaware:

## Adaptation Appendix

### Appendix to the Climate Action in Delaware: 2016 Progress Report

The **Adaptation Appendix** provides a report on the progress of the 155 adaptation recommendations made by state agencies through Executive Order 41. The Appendix presents progress in two separate sections for ease of use:

- Recommendation Progress by Agency:
  - Includes current status and progress notes
  - Identifies a topic area for each recommendation
- Recommendation Progress by Topic:
  - Public Health and Safety
  - Natural Resources
  - State Assets and Infrastructure
  - Resilient Communities and Economies

In both sections, each recommendation is categorized as completed, in progress, not begun, or not reported. “Completed” indicates that the recommendation has been implemented. “In progress” indicates recommendations that are currently underway and/or are on-going. This includes many recommendations that by their very nature will be continuous efforts. “Not begun” indicates that the recommendation has not undergone any implementation to date. “Not reported” indicates those recommendations where status and/or progress were not available by the time of publication. Many recommendations also contain a brief description of the progress to date. Note that some agency recommendations refer to specific divisions (shown in brackets) for implementation of those adaptation strategies.

## **Acknowledgements**

This document was prepared by the Delaware Department of Natural Resources and Environmental Control, Division of Energy and Climate. We would like to acknowledge all agencies that have contributed to this effort. The agency's acronyms appear next to their name; agency acronyms will be used throughout the rest of the document.

Delaware Department of Agriculture (DDA)

Delaware Department of Education (DOE)

Delaware Department of Health and Social Services (DHSS)

Delaware Department of Natural Resources and Environmental Control (DNREC)

Delaware Department of Safety and Homeland Security (DSHS)

Delaware Department of State (DOS)

Delaware Department of Transportation (DelDOT)

Delaware Economic Development Office (DEDO)

Delaware State Housing Authority (DSHA)

Office of Management and Budget (OMB)

Office of State Planning Coordination (OSPC)

## Recommendation Actions By Agency

Agency	Executive Order 41 Adaptation Recommendations	Topic Area	STATUS KEY: Completed =  In Progress =  Not Begun = 	Progress Summary
<b>Department of Agriculture (DDA)</b>				
DDA	Evaluate response to increased susceptibility to forest wildfires by evaluating policies related to risk management, fire prevention, and fire management	Natural Resources		Providing programs, training and grants aimed at fire prevention. Educated over 21,000 people in fiscal year 2015. Provided wildland fire training in cooperation with Delaware State Fire School
DDA	Evaluate policies related to nutrient management, pesticide application, risk assessment, and cropping practices that may be affected by potential increases in the number of hot, dry days per year	Natural Resources		Providing education, training and technical assistance through nutrient management, pesticide certification, and other programs. Operates Delaware Rural Drip Irrigation Program in cooperation with Delaware Economic Development Office
DDA	Educate landowners and agricultural operators to address and mitigate loss of land due to sea level rise	Natural Resources		On-going work with Delaware Cooperative Extension, including education sessions during Delaware Ag Week and support of the LEADelaware leadership program
DDA	Educate landowners and agricultural operators on the effects of saltwater intrusion resulting from sea level rise	Natural Resources		On-going work with Delaware Cooperative Extension, may include new partnership opportunities with the US Department of Agriculture Climate Hub, a regional network for outreach and education
<b>Department of Education (DOE)</b>				
DOE	Improve guidelines for siting of school facilities	State Assets & Infrastructure		Collaborating with the Office of State Planning Office Coordination and school district facility staff
DOE	Promote the incorporation of cleaner school buses	State Assets & Infrastructure		48 propane buses currently transport students throughout the state and 5 more will be on the road in 2017
DOE	Promote Leadership in Energy and Environmental Design (LEED) or Green Ribbon school designs	State Assets & Infrastructure		No progress to date
<b>Department of Health and Social Services (DHSS)</b>				
DHSS	Develop health impact assessment tools [Public Health]	Public Health & Safety		Tools are currently available for assessment of health impacts. The Centers for Disease Control (CDC) and World Health Organization (WHO) have assessment tools that can be used
DHSS	Establish communication link to the Division of Developmental Disability clients who live on their own	Public Health & Safety		Established a Facebook page for the Disaster Coordinator to share information, resources, and current emergency/disaster information
DHSS	Advocate for an expansion of vector surveillance programs [Public Health]	Public Health & Safety		Collaborating with the Department of Natural Resources and Environmental Control mosquito control branch
DHSS	Monitor new and emerging diseases related to climate change [Public Health]	Public Health & Safety		Developed plans to respond to Ebola and Zika viral diseases
DHSS	Evaluate benefits and costs of developing environmental public health tracking system [Public Health]	Public Health & Safety		Strategic Opportunity Fund for Adaptation grant will initiate planning for Environmental Public Health Tracking System
DHSS	Incorporate climate change impacts information in Division of Public Health outreach materials [Public Health]	Public Health & Safety		Information sheets are on the Division's website

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DHSS	Develop outreach materials on climate change and health [Public Health]	Public Health & Safety		Information sheets are on the Division's website
DHSS	Provide training for Division of Public Health staff on climate change impacts and risks to health [Public Health]	Public Health & Safety		Participating in the Climate-Ready Workforce Pilot Project
DHSS	Advocate for an expansion of air quality monitoring [Public Health]	Public Health & Safety		The Division of Public Health has and will continue to support efforts for cleaner air
DHSS	Identify funding opportunities for climate change and public health [Public Health]	Public Health & Safety		The Division of Public Health received a fellowship to support the Environmental Public Health Tracking Network
DHSS	Expand medicine refill window	Public Health & Safety		Current process allows for early refill requests prior to forecasted storm events
DHSS	Implement a statewide Smart-911 system	Public Health & Safety		Progress is on-going to transition county and municipal systems to access Smart-911
DHSS	Remove potential hazards from low-lying areas prior to a major event	State Assets & Infrastructure		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DHSS	Designate State Service Centers as critical facilities	State Assets & Infrastructure		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DHSS	Provide training and education on climate preparedness and adaptation	Resilient Communities & Economies		Participating in the Climate-Ready Workforce Pilot Project
DHSS	Evaluate feasibility of monitoring private coastal drinking water wells for salt water intrusion [Public Health]	Natural Resources		No progress to date
DHSS	Examine ways to track new and emerging diseases [Public Health]	Public Health & Safety		No progress to date
DHSS	Evaluate public health infrastructure and resources for data collection and analysis [Public Health]	State Assets & Infrastructure		No progress to date
DHSS	Evaluate Geographic Information System (GIS) mapping of vulnerable populations and disease patterns [Public Health]	Public Health & Safety		No progress to date
DHSS	Evaluate integration of Division of Public Health data sources [Public Health]	Public Health & Safety		No progress to date
DHSS	Review and update Division of Public Health programs for climate change impacts [Public Health]	Public Health & Safety		No progress to date
DHSS	Advocate integrating climate change with local activities [Public Health]	Public Health & Safety		No progress to date
DHSS	Discuss feasibility of requiring contingency plans from managed care organizations	Public Health & Safety		No progress to date
DHSS	Advocate for additional resources for the Low-Income Home Energy Assistance Program (LIHEAP)	Resilient Communities & Economies		No progress to date

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DHSS	Create a statewide climate resiliency educational campaign	Resilient Communities & Economies		No progress to date
DHSS	Consider creating mobile State Service Centers	Public Health & Safety		No progress to date
DHSS	Identify sites to be used as designated cooling and heating centers	State Assets & Infrastructure		No progress to date
<b>Department of Natural Resources and Environmental Control (DNREC)</b>				
DNREC	Develop model ordinance to secure home heating oil and propane tanks [Waste and Hazardous Substances]	State Assets & Infrastructure		Identified several authoritative sources for model ordinances
DNREC	Coordinate on the use of updated floodplain maps to assist with flood mitigation activities [Watershed Stewardship]	Resilient Communities & Economies		Floodplain maps for all three counties have been completed
DNREC	Evaluate voluntary and regulatory strategies to ensure that Delaware emission sources are well controlled [Air Quality]	Public Health & Safety		On-going efforts to evaluate emission control strategies
DNREC	Incorporate climate change into land stewardship decisions at the Delaware National Estuarine Research Reserve (DNERR) [Coastal Programs]	Natural Resources		On-going efforts to implement an Adaptation Plan for Delaware National Estuarine Research Reserve (DNERR) properties. Completed Living Shoreline demonstration site at Blackbird Creek Reserve
DNREC	Increase climate change-focused research and monitoring on Delaware National Estuarine Research Reserve (DNERR) land [Coastal Programs]	Natural Resources		On-going research and monitoring projects include carbon storage and tidal marsh resilience. Received a Strategic Opportunity Fund for Adaptation grant to develop ecosystem indicators to monitor climate change
DNREC	Develop a climate change adaptation plan for the Delaware National Estuarine Research Reserve (DNERR) [Coastal Programs]	Natural Resources		Evaluating recommendations in the completed Delaware National Estuarine Research Reserve (DNERR) adaptation plan. Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DNREC	Provide technical assistance to Delaware communities for climate change adaptation projects [Coastal Programs]	Resilient Communities & Economies		Awarded coastal resiliency planning grants to seven communities in 2015 and re-launched the grants program as the Resilient Community Partnership in 2016
DNREC	Incorporate Executive Order 41 in the Federal Consistency Program's enforceable coastal management policies [Coastal Programs]	Natural Resources		Policies are currently in draft form and will be finalized and incorporated into the program's policy update
DNREC	Increase educational awareness of climate change in Delaware [Coastal Programs]	Resilient Communities & Economies		On-going efforts to provide education and public outreach through presentations, programs and trainings, including science conferences, teacher professional development workshops, and interpretive exhibits at the Delaware National Estuarine Research Reserve (DNERR) locations
DNREC	Aid local governments in planning for climate change [Energy and Climate]	Resilient Communities & Economies		Provided technical support to local communities to integrate climate change into local Comprehensive Land Use plans. On-going participation in the Preliminary Land Use Service and training for local government and community groups

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DNREC	Ensure effective energy code compliance [Energy and Climate]	State Assets & Infrastructure		Staff hired to meet on-going compliance goals; anticipated updated codes in summer 2017. Also developing training for Home Energy Rating System (HERS) to launch in 2017
DNREC	Improve energy reliability and response to emergency events [Energy and Climate]	Resilient Communities & Economies		Inter-agency meetings are underway; the Energy Assurance Plan is expected to be updated by summer 2017
DNREC	Design and implement restoration activities to slow loss of coastal habitats [Fish and Wildlife]	Natural Resources		Restoration project design, permitting, and contracting process is underway for projects in Mispillion Harbor, Milford Neck, and Port Mahon
DNREC	Discuss expansion of invasive species control [Fish and Wildlife]	Natural Resources		Controlling some invasive species on state wildlife areas. Controlling phragmites on private and public lands
DNREC	Prepare to manage different fish and wildlife species and habitat [Fish and Wildlife]	Natural Resources		Continually monitoring new species arrivals and declining current species
DNREC	Evaluate strategies for increasing native pollinator habitat on public and private lands [Fish and Wildlife]	Natural Resources		Pollinator habitats are being taken into consideration in all restoration activities on public wildlife areas and through consultation with private landowners
DNREC	Consider relocating Division of Fish and Wildlife facilities [Fish and Wildlife]	State Assets & Infrastructure		Participating in the Climate Mitigation and Adaptation Planning Pilot Project. Relocated Aquatic Education Center based on Sea Level Rise models
DNREC	Adapt coastal impoundments and ponds [Fish and Wildlife]	Natural Resources		Restoration efforts initiated at Ted Harvey Conservation Area and Little Creek Wildlife Area impoundments. Design and engineering initiated at Augustine Wildlife Area
DNREC	Prepare for expanded mosquito production season [Fish and Wildlife]	Public Health & Safety		Zika transmissions in Delaware recognized as a possibility
DNREC	Prepare for increased nuisance wildlife complaints [Fish and Wildlife]	Natural Resources		Continually preparing for more complaints about the increase in human population and development
DNREC	Prepare for increased number of fish kills and harmful algal blooms [Fish and Wildlife]	Natural Resources		Continually preparing for more complaints about the increase in human population and development
DNREC	Adapt building processes [Parks and Recreation]	State Assets & Infrastructure		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DNREC	Educate staff and the public [Parks and Recreation]	Resilient Communities & Economies		Participating in the Climate-Ready Workforce Pilot Project
DNREC	Evaluate need for improving spill containment requirements for aboveground storage tanks and hazardous waste storage areas [Waste and Hazardous Substances]	State Assets & Infrastructure		One identified problem facility has been remediated. The Hazardous Waste Program is continually re-evaluating its requirements for technological changes
DNREC	Update and implement Debris Management Section of the State Emergency Operations Plan [Waste and Hazardous Substances]	Public Health & Safety		Plan update process is underway

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DNREC	Assist suppliers of potable water (from surface water intakes) in developing strategies to protect water intakes from flooding and salt water [Water]	State Assets & Infrastructure		The Water Supply Coordinating Council is routinely tracking water use and threats to water shortages
DNREC	Assist suppliers and users of potable water (from wells) to develop strategies for protection of wells from flooding and salt water [Water]	State Assets & Infrastructure		On-going consideration of long-term risk
DNREC	Issue emergency waivers for repairs to infrastructure, environmental resources, and property resulting from storms and flooding events in regulated wetlands and subaqueous lands [Water]	Resilient Communities & Economies		Waiver procedures currently exist
DNREC	Evaluate need for revisions to technical specifications for vegetative practices [Watershed Stewardship]	Natural Resources		Convened a Regulatory Advisory Committee to address revisions to the Sediment and Stormwater Regulations and Technical Standards and Specifications
DNREC	Evaluate need for revisions to technical standards and specifications for stormwater management [Watershed Stewardship]	State Assets & Infrastructure		Convened a Regulatory Advisory Committee to address revisions to the Sediment and Stormwater Regulations and Technical Standards and Specifications.
DNREC	Evaluate need for revisions to stormwater regulation [Watershed Stewardship]	State Assets & Infrastructure		Convened a Regulatory Advisory Committee to address revisions to the Sediment and Stormwater Regulations and Technical Standards and Specifications
DNREC	Evaluate changes to wetland and water quality monitoring [Watershed Stewardship]	Natural Resources		Completed field assessments in Smyrna and Appoquinimink watersheds. Monitoring coastal wetland changes and quantifying groundwater storage capacity
DNREC	Evaluate design specifications and maintenance practices for rain gardens and other small-scale stormwater systems [Watershed Stewardship]	State Assets & Infrastructure		Convened a Regulatory Advisory Committee to address revisions to the Sediment and Stormwater Regulations and Technical Standards and Specifications
DNREC	Discuss additional support for living shorelines to support shoreline management and protection [Watershed Stewardship]	Natural Resources		DNREC co-chairs the Delaware Living Shoreline Committee
DNREC	Plan for increasing demands for shoreline management and beach preservation [Watershed Stewardship]	Natural Resources		Preliminary efforts to identify additional funding sources. Efforts to identify additional sand supplies underway
DNREC	Evaluate needs for channel maintenance [Watershed Stewardship]	Natural Resources		Delaware Waterways Management and Financing Advisory Committee's recommendations for sustainable and dedicated funding for waterway management operations are being considered
DNREC	Consider incorporating equipment siting requirements into air permitting process [Air Quality]	State Assets & Infrastructure		No progress to date
DNREC	Build capacity to conduct climate change-focused air quality modeling [Air Quality]	Public Health & Safety		No progress to date but will hire a modeling expert
DNREC	Increase climate change-focused research and modeling [Air Quality]	Resilient Communities & Economies		The Division of Air Quality is developing a work plan for proposed ozone research

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DNREC	Develop model building code [Energy and Climate]	State Assets & Infrastructure		No progress to date
DNREC	Prepare to restore riparian buffers [Fish and Wildlife]	Natural Resources		Conducting a detailed analysis to determine the priority sites for restoration on state wildlife areas
DNREC	Prepare to restore ecological integrity of unique ephemeral wetlands [Fish and Wildlife]	Natural Resources		No progress to date
DNREC	Develop plan for access [Parks and Recreation]	State Assets & Infrastructure		No progress to date
DNREC	Assist local governments in developing strategies to protect wastewater treatment facilities from flooding [Water]	State Assets & Infrastructure		No progress to date
DNREC	Update mapping of tidal wetland jurisdictional boundaries [Water]	Natural Resources		No progress to date
DNREC	Study how to prioritize funding options to give preference to areas with effective practices for drainage and floodplain management [Watershed Stewardship]	Resilient Communities & Economies		No progress to date
DNREC	Evaluate the adequacy of drainage infrastructure [Watershed Stewardship]	State Assets & Infrastructure		No progress to date due to lack of funding
DNREC	Update floodplain maps with consideration of climate change dynamics [Watershed Stewardship]	Resilient Communities & Economies		No progress to date
<b>Department of Safety and Homeland Security (DSHS)</b>				
DSHS	Develop operational plans to adapt to sea level rise	Resilient Communities & Economies		Awarded Strategic Opportunity Fund for Adaptation grant to support advanced search and rescue training. Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DSHS	Consider alterations to policies regarding worker safety in an increased temperature environment	Public Health & Safety		Reviewed policies related to worker safety and made alterations that limit how long employees are allowed to work in extreme temperatures including review of K9 policies. Participating in the Climate-Ready Workforce Pilot Project
DSHS	Conduct research on the potential effects of climate change on structures and vehicles	State Assets & Infrastructure		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DSHS	Make programmatic adjustments to adapt to increasing levels of precipitation, flooding, and sea level rise	Resilient Communities & Economies		Transitioning Delaware State Police's and Capitol Police's patrol vehicles to SUVs with higher clearance to address sea level rise and additional snowfall. Participating in the Climate Mitigation and Adaptation Planning Pilot Project
<b>Department of State (DOS)</b>				
DOS	Evaluate and promote workplace options for employees	State Assets & Infrastructure		Staff have the option to utilize flexible or compressed schedules

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DOS	Complete mapping of cultural resources into Geographic Information System (GIS)-based system [Historical and Cultural Affairs]	State Assets & Infrastructure		Strategic Opportunity Fund for Adaptation grant received to implement this project
DOS	Ensure preparedness for threatened sites [Historical and Cultural Affairs]	State Assets & Infrastructure		Employing a readiness system for weather-related events which includes preparedness measures for specific sites
DOS	Assess financial impact of any new rates [Public Advocate]	Resilient Communities & Economies		Continually analyzing the financial impact for all newly established rates
DOS	Review Commission options to help reduce greenhouse gases and mitigate climate change [Public Service Commission]	Resilient Communities & Economies		Currently reviewing options to address climate change mitigation within the organization and outside of the agency. Have formed recommendations
DOS	Review potential for infrastructure enhancements that can help mitigate climate change exposure [Public Service Commission]	State Assets & Infrastructure		Utilities have made assessments of infrastructure enhancements and modifications in regards to reliability and storm response
DOS	Evaluate alternate utility rate structures [Public Service Commission]	Resilient Communities & Economies		Researching alternative rate designs for electric utilities to equitably incorporate distributed energy resources
DOS	Establish protocols to protect outdoor workers	Public Health & Safety		Reviewing current procedures in place and determining if any modifications are necessary
DOS	Conduct vulnerability assessments [Historical and Cultural Affairs]	Resilient Communities & Economies		No progress to date
DOS	Evaluate costs and benefits of creating historic preservation tax credit for adaptation and resiliency [Historical and Cultural Affairs]	State Assets & Infrastructure		No progress to date but are scheduled to conduct a comprehensive review of the Historic Preservation Tax Credit program in January 2018
DOS	Publish cultural resource management plans [Historical and Cultural Affairs]	State Assets & Infrastructure		No progress to date but aim to address the federally-mandated statewide historic preservation plan in January 2017
DOS	Broaden utility review of climate change initiatives to include non-regulated entities [Public Service Commission]	State Assets & Infrastructure		The Energy Efficiency Advisory Council will only deliberate on plans brought forth by the regulated utilities
DOS	Review utility tariff approaches to minimizing greenhouse gases [Public Service Commission]	Resilient Communities & Economies		Researching rate designs to equitably incorporate distributed energy resources for electric utilities
DOS	Coordinate review of storm response procedures with all regulated utilities [Public Service Commission]	State Assets & Infrastructure		No progress to date
DOS	Create energy baseline for leased sites	State Assets & Infrastructure		Compiling energy consumption information
DOS	Create energy baseline for office equipment	State Assets & Infrastructure		Compiling energy consumption information
DOS	Ensure new building compliance	State Assets & Infrastructure		No progress to date
DOS	Ensure financed building compliance	State Assets & Infrastructure		No progress to date

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DOS	Promote personal energy use awareness	Resilient Communities & Economies		No progress to date but there are plans to enact this in conjunction with the energy baseline implementation
DOS	Include protected classes and undocumented communities in outreach efforts [Human Relations Commission]	Resilient Communities & Economies		
DOS	Increase amount of technical staff [Public Advocate]	State Assets & Infrastructure		
DOS	Enhance outreach to utility consumers [Public Advocate]	Resilient Communities & Economies		
DOS	Mitigate below-grade facilities	State Assets & Infrastructure		

### Delaware Department of Transportation (DeIDOT)

DeIDOT	Continue development of geospatial data sets that can help identify vulnerable areas and help estimate the impact of reasonably anticipated events	Resilient Communities & Economies		The vulnerability assessment and scenario base analysis are underway. Completed data collection for Hazus tool for conducting cost and impact assessments. Continually making improvements and overcoming barriers
DeIDOT	Conduct comprehensive assessment of state roadway risks and assets	State Assets & Infrastructure		Received a Strategic Opportunity Fund for Adaptation grant to support a comprehensive corridor evaluation of State Route 9
DeIDOT	Integrate climate resiliency into project development, traffic, bridge, and highway design	State Assets & Infrastructure		The Bridge Design Manual has added wording associated with climate change and sea level rise in consideration when scoping a project
DeIDOT	Build transportation enhancements (pathways, trails, roadscapes, etc.) to accommodate impacts of climate change	State Assets & Infrastructure		Received a Strategic Opportunity Fund for Adaptation grant to develop approaches to increasing resilience on State Route 1, including use of green infrastructure techniques. Current work for trails and pathways utilizing flooding and sea level rise tools. Strategic Implementation Plan for Climate Change, Resilience and Sustainability to be completed in 2016
DeIDOT	Identify and assess existing chronic flooding and erosion problems caused by sea level rise, frequent storms, tidal forces, subsidence, and aging infrastructure	Resilient Communities & Economies		On-going review of infrastructure inventory, improving databases to monitor condition of roadways and bridges. Added flood monitoring capabilities for roadways for ten sites. The Weather and Flooding Strategic Plan has been completed and was approved. An Implementation Plan based on the Strategic Plan findings and recommendations is starting
DeIDOT	Reevaluate stormwater management approaches	State Assets & Infrastructure		Engaging with research on the cost of climate change
DeIDOT	Incorporate climate impacts into cost-effective investment in infrastructure	State Assets & Infrastructure		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DeIDOT	Evaluate obtaining insurance to assist in recovery from catastrophic events	State Assets & Infrastructure		Considering the development of a Transportation Risk Map and strategies for disaster risk
DeIDOT	Evaluate and adjust worker safety guidelines	Public Health & Safety		Participating in the Climate-Ready Workforce Pilot Project
DeIDOT	Provide training to improve worker knowledge	Public Health & Safety		Participating in the Climate-Ready Workforce Pilot Project

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DeIDOT	Evaluate driving restrictions for air quality events	Public Health & Safety		The Division of Maintenance & Operations currently refrains from mowing operations on Red Ozone Alert Days
DeIDOT	Develop revised maintenance schedules in response to air quality	Public Health & Safety		Participating in the Climate-Ready Workforce Pilot Project
DeIDOT	Adjust transit service in emergencies	State Assets & Infrastructure		The Delaware Transit Corporation Division adjusts service levels when required during weather events. Adjustments include reducing, modifying and/or suspending service depending on the severity and timing of the event
DeIDOT	Reevaluate emergency response protocols	Resilient Communities & Economies		Participating in the Climate-Ready Workforce Pilot Project. Provided awareness training to the Department's Strategic Leadership Team. Security projects at maintenance yards are underway.
DeIDOT	Support local governments with land use assessment tools	Resilient Communities & Economies		Received a Strategic Opportunity Fund for Adaptation grant to improve the Traffic Impact Study process. Supported the development of a toolkit for community resilience produced by the University of Delaware's Institute for Public Administration. Strategic Implementation Plan for Climate Change, Resilience and Sustainability to be completed in 2016
DeIDOT	Evaluate low-emission vehicle deployment	State Assets & Infrastructure		Participating in Delaware Clean Cities. Piloted propane-fueled F250 trucks in the fall of 2015
DeIDOT	Evaluate alternative energy technology in facilities	State Assets & Infrastructure		Attempting to meet Leadership in Energy and Environmental Design (LEED) Silver Certification requirements for new facilities. Utilizing waste oil heaters in some locations
DeIDOT	Evaluate materials used to reduce the impacts of stormwater runoff	State Assets & Infrastructure		No progress to date. Research lab and modelling capabilities needed
DeIDOT	Explore new pavement technology	State Assets & Infrastructure		No progress to date. Impacts to traffic and revenues needed
<b>Delaware Economic Development Office (DEDO)</b>				
DEDO	Advocate for adoption of state recommendations for climate change adaptation	Resilient Communities & Economies		Created new web page to highlight programs related to Executive Order 41
DEDO	Provide and market public transportation to attractions throughout the state	State Assets & Infrastructure		Promotes public transportation and ride sharing to state-sponsored events
DEDO	Alter the standard for weekly rentals	State Assets & Infrastructure		
DEDO	Promote economic growth and development in climate-resilient locations	Resilient Communities & Economies		The "Sites & Buildings" page on the Delaware Economic Development Office website allows visitors to search for available brownfield sites
DEDO	Assist in bolstering resilience in the agriculture sector	Natural Resources		In conjunction with the Department of Agriculture, the Delaware Economic Development Office actively promotes the Delaware Rural Irrigation Program

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DEDO	Educate and assist businesses and industry in adapting to climate change	Resilient Communities & Economies		Actively markets educational events such as the Department of Natural Resources and Environmental Control's Division of Energy & Climate's 'Fueling the Future' ride-and-drive clean transportation conference
DEDO	Advocate for the reuse of existing industrial brownfield sites	State Assets & Infrastructure		The "Sites & Buildings" page on the Delaware Economic Development Office website allows visitors to search for available brownfield sites
<b>Delaware State Housing Authority (DSHA)</b>				
DSHA	Evaluate energy-efficiency standards of the Low Income Housing Tax Credit (LIHTC) program	Resilient Communities & Economies		Received a Strategic Opportunity Fund for Adaptation grant to support technical assistance to Low-Income Housing Tax Credit (LIHTC) awardees. Project will also evaluate energy certification programs suitable for Delaware programs
DSHA	Explore partnering on grants that address resiliency, such as the upcoming Housing and Urban Development (HUD) National Disaster Resilience Competition	Resilient Communities & Economies		Received two grants through Strategic Opportunity Fund for Adaptation competitive grant program. Pursued Housing and Urban Development (HUD) National Disaster Resilience Competition grant, but projects not eligible for funding
DSHA	Consider sea level rise in Delaware State Housing Authority programs	Resilient Communities & Economies		The Delaware State Housing Authority uses the State Strategies map, which considers sea level rise and flood risk, as a criteria for participation in the Low-Income Housing Tax Credit (LIHTC) program
DSHA	Promote sustainable building practices into the Downtown Development District (DDD) grant program	Resilient Communities & Economies		Received a Strategic Opportunity Fund for Adaptation grant to provide incentives for project achieving Leadership in Energy and Environmental Design (LEED) Silver certification through the U.S. Green Building Council
DSHA	Incorporate information on sea level rise in homeownership counseling	State Assets & Infrastructure		No progress to date
<b>Office of Management and Budget (OMB)</b>				
OMB	Advocate for changes to state building design practices and policies	State Assets & Infrastructure		Continually seeking to improve building efficiency and comfort
OMB	Improve resilience of state facilities and equipment	State Assets & Infrastructure		Participating in the Climate and Energy Assessment of State Facilities Pilot Project
OMB	Incorporate flooding considerations into siting of state facilities	State Assets & Infrastructure		Served on flood avoidance workgroup and helped to develop a guide for state agencies. Included Executive Order 41 on review checklist
OMB	Increase maintenance of state facilities as a result of climate impacts	State Assets & Infrastructure		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
OMB	Investigate alternate work schedules for outdoor workers	Public Health & Safety		Participating in the Climate-Ready Workforce Pilot Project
OMB	Incorporate resilience into Messenger Services	Resilient Communities & Economies		Participating in the Climate-Ready Workforce Pilot Project
OMB	Offer training opportunities for employees on impacts of climate change	Resilient Communities & Economies		Participating in the Climate-Ready Workforce Pilot Project
OMB	Revise Life Cycle Costing Analysis to account for climate change impacts	Resilient Communities & Economies		No progress to date

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OMB	Incorporate resilience in Government Support Services contracting	Resilient Communities & Economies		No progress to date
<b>Office of State Planning Coordination (OSPC)</b>				
OSPC	Revise the Preliminary Land Use Service checklist for Comprehensive Plans	Resilient Communities & Economies		This recommendation has been implemented
OSPC	Examine ways to incorporate climate change and sea level rise as factors in the next update to State Strategies for Policies and Spending	Resilient Communities & Economies		This recommendation has been implemented
OSPC	Examine ways to incorporate climate change and sea level rise impacts into the Preliminary Land Use Service application	Resilient Communities & Economies		Being reviewed by the Office of State Planning Coordination staff
OSPC	Provide technical support to local governments for Comprehensive Plans and local ordinances	Resilient Communities & Economies		On-going technical support to local communities (in coordination with the Department of Natural Resources and Environmental Control) and will continue to conduct regularly scheduled updates to their comprehensive plans
OSPC	Provide technical assistance to support integration of climate impacts and to reduce greenhouse gas emissions through adaptation and mitigation at the local level	Resilient Communities & Economies		On-going technical support to local communities (in coordination with the Department of Natural Resources and Environmental Control) and will continue to conduct regularly scheduled updates to their comprehensive plans
OSPC	Establish and maintain Geographic Information System (GIS) layers related to climate change and sea level rise impacts in FirstMap	Resilient Communities & Economies		Geographic Information System (GIS) layers have been incorporated into FirstMap. Maintaining useful data will be an ongoing effort

## Recommendation Actions By Sector

Agency	Executive Order 41 Adaptation Recommendations	STATUS KEY: Completed =  In Progress =  Not Begun = 	Progress Summary
<b>Public Health &amp; Safety Sector</b>			
DHSS	Develop health impact assessment tools [Public Health]		Tools are currently available for assessment of health impacts. The Centers for Disease Control (CDC) and World Health Organization (WHO) have assessment tools that can be used
DHSS	Establish communication link to the Division of Developmental Disability clients who live on their own		Established a Facebook page for the Disaster Coordinator to share information, resources, and current emergency/disaster information
DHSS	Advocate for an expansion of vector surveillance programs [Public Health]		Collaborating with the Department of Natural Resources and Environmental Control mosquito control branch
DHSS	Monitor new and emerging diseases related to climate change [Public Health]		Developed plans to respond to Ebola and Zika viral diseases
DHSS	Evaluate benefits and costs of developing environmental public health tracking system [Public Health]		Strategic Opportunity Fund for Adaptation grant will initiate planning for Environmental Public Health Tracking System
DHSS	Incorporate climate change impacts information in Division of Public Health outreach materials [Public Health]		Information sheets are on the Division's website
DHSS	Develop outreach materials on climate change and health [Public Health]		Information sheets are on the Division's website
DHSS	Provide training for Division of Public Health staff on climate change impacts and risks to health [Public Health]		Participating in the Climate-Ready Workforce Pilot Project
DHSS	Advocate for an expansion of air quality monitoring [Public Health]		The Division of Public Health has and will continue to support efforts for cleaner air
DHSS	Identify funding opportunities for climate change and public health [Public Health]		The Division of Public Health received a fellowship to support the Environmental Public Health Tracking Network
DHSS	Expand medicine refill window		Current process allows for early refill requests prior to forecasted storm events
DHSS	Implement a statewide Smart-911 system		Progress is on-going to transition county and municipal systems to access Smart-911
DNREC	Evaluate voluntary and regulatory strategies to ensure that Delaware emission sources are well controlled [Air Quality]		On-going efforts to evaluate emission control strategies
DNREC	Prepare for expanded mosquito production season [Fish and Wildlife]		Zika transmissions in Delaware recognized as a possibility
DNREC	Update and implement Debris Management Section of the State Emergency Operations Plan [Waste and Hazardous Substances]		Plan update process is underway

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
DSHS	Consider alterations to policies regarding worker safety in an increased temperature environment		Reviewed policies related to worker safety and made alterations that limit how long employees are allowed to work in extreme temperatures including review of K9 policies. Participating in the Climate-Ready Workforce Pilot Project
DOS	Establish protocols to protect outdoor workers		Reviewing current procedures in place and determining if any modifications are necessary
DeIDOT	Evaluate and adjust worker safety guidelines		Participating in the Climate-Ready Workforce Pilot Project
DeIDOT	Provide training to improve worker knowledge		Participating in the Climate-Ready Workforce Pilot Project
DeIDOT	Evaluate driving restrictions for air quality events		The Division of Maintenance & Operations currently refrains from mowing operations on Red Ozone Alert Days
DeIDOT	Develop revised maintenance schedules in response to air quality		Participating in the Climate-Ready Workforce Pilot Project
OMB	Investigate alternate work schedules for outdoor workers		Participating in the Climate-Ready Workforce Pilot Project
DHSS	Examine ways to track new and emerging diseases [Public Health]		No progress to date
DHSS	Evaluate Geographic Information System (GIS) mapping of vulnerable populations and disease patterns [Public Health]		No progress to date
DHSS	Evaluate integration of Division of Public Health data sources [Public Health]		No progress to date
DHSS	Review and update Division of Public Health programs for climate change impacts [Public Health]		No progress to date
DHSS	Advocate integrating climate change with local activities [Public Health]		No progress to date
DHSS	Discuss feasibility of requiring contingency plans from managed care organizations		No progress to date
DHSS	Consider creating mobile State Service Centers		No progress to date
DNREC	Build capacity to conduct climate change-focused air quality modeling [Air Quality]		No progress to date but will hire a modeling expert

Total # of Recommendations = 30

Completed = 2  
 In Progress = 20  
 Not Begun = 8  
 Not Reported = 0

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
<b>Natural Resources Sector</b>			
DDA	Evaluate response to increased susceptibility to forest wildfires by evaluating policies related to risk management, fire prevention, and fire management		Providing programs, training and grants aimed at fire prevention. Educated over 21,000 people in fiscal year 2015. Provided wildland fire training in cooperation with Delaware State Fire School
DDA	Evaluate policies related to nutrient management, pesticide application, risk assessment, and cropping practices that may be affected by potential increases in the number of hot, dry days per year		Providing education, training and technical assistance through nutrient management, pesticide certification, and other programs. Operates Delaware Rural Drip Irrigation Program in cooperation with Delaware Economic Development Office
DDA	Educate landowners and agricultural operators to address and mitigate loss of land due to sea level rise		On-going work with Delaware Cooperative Extension, including education sessions during Delaware Ag Week and support of the LEADelaware leadership program
DDA	Educate landowners and agricultural operators on the effects of saltwater intrusion resulting from sea level rise		On-going work with Delaware Cooperative Extension, may include new partnership opportunities with the US Department of Agriculture Climate Hub, a regional network for outreach and education
DNREC	Incorporate climate change into land stewardship decisions at the Delaware National Estuarine Research Reserve (DNERR) [Coastal Programs]		On-going efforts to implement an Adaptation Plan for Delaware National Estuarine Research Reserve (DNERR) properties. Completed Living Shoreline demonstration site at Blackbird Creek Reserve
DNREC	Increase climate change-focused research and monitoring on Delaware National Estuarine Research Reserve (DNERR) land [Coastal Programs]		On-going research and monitoring projects include carbon storage and tidal marsh resilience. Received a Strategic Opportunity Fund for Adaptation grant to develop ecosystem indicators to monitor climate change
DNREC	Develop a climate change adaptation plan for the Delaware National Estuarine Research Reserve (DNERR) [Coastal Programs]		Evaluating recommendations in the completed Delaware National Estuarine Research Reserve (DNERR) adaptation plan. Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DNREC	Incorporate Executive Order 41 in the Federal Consistency Program's enforceable coastal management policies [Coastal Programs]		Policies are currently in draft form and will be finalized and incorporated into the program's policy update
DNREC	Design and implement restoration activities to slow loss of coastal habitats [Fish and Wildlife]		Restoration project design, permitting, and contracting process is underway for projects in Mispillion Harbor, Milford Neck, and Port Mahon
DNREC	Discuss expansion of invasive species control [Fish and Wildlife]		Controlling some invasive species on state wildlife areas. Controlling phragmites on private and public lands
DNREC	Prepare to manage different fish and wildlife species and habitat [Fish and Wildlife]		Continually monitoring new species arrivals and declining current species
DNREC	Evaluate strategies for increasing native pollinator habitat on public and private lands [Fish and Wildlife]		Pollinator habitats are being taken into consideration in all restoration activities on public wildlife areas and through consultation with private landowners

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
DNREC	Adapt coastal impoundments and ponds [Fish and Wildlife]		Restoration efforts initiated at Ted Harvey Conservation Area and Little Creek Wildlife Area impoundments. Design and engineering initiated at Augustine Wildlife Area
DNREC	Prepare for increased nuisance wildlife complaints [Fish and Wildlife]		Continually preparing for more complaints about the increase in human population and development
DNREC	Prepare for increased number of fish kills and harmful algal blooms [Fish and Wildlife]		Continually preparing for more complaints about the increase in human population and development
DNREC	Evaluate need for revisions to technical specifications for vegetative practices [Watershed Stewardship]		Convened a Regulatory Advisory Committee to address revisions to the Sediment and Stormwater Regulations and Technical Standards and Specifications
DNREC	Evaluate changes to wetland and water quality monitoring [Watershed Stewardship]		Completed field assessments in Smyrna and Appoquinimink watersheds. Monitoring coastal wetland changes and quantifying groundwater storage capacity
DNREC	Discuss additional support for living shorelines to support shoreline management and protection [Watershed Stewardship]		DNREC co-chairs the Delaware Living Shoreline Committee
DNREC	Plan for increasing demands for shoreline management and beach preservation [Watershed Stewardship]		Preliminary efforts to identify additional funding sources. Efforts to identify additional sand supplies underway
DNREC	Evaluate needs for channel maintenance [Watershed Stewardship]		Delaware Waterways Management and Financing Advisory Committee's recommendations for sustainable and dedicated funding for waterway management operations are being considered
DEDO	Assist in bolstering resilience in the agriculture sector		In conjunction with the Department of Agriculture, the Delaware Economic Development Office actively promotes the Delaware Rural Irrigation Program
DHSS	Evaluate feasibility of monitoring private coastal drinking water wells for salt water intrusion [Public Health]		No progress to date
DNREC	Prepare to restore riparian buffers [Fish and Wildlife]		Conducting a detailed analysis to determine the priority sites for restoration on state wildlife areas
DNREC	Prepare to restore ecological integrity of unique ephemeral wetlands [Fish and Wildlife]		No progress to date
DNREC	Update mapping of tidal wetland jurisdictional boundaries [Water]		No progress to date

Total # of Recommendations = 25

Completed = 0

In Progress = 21

Not Begun = 4

Not Reported = 0

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
<b>State Assets &amp; Infrastructure Sector</b>			
DNREC	Develop model ordinance to secure home heating oil and propane tanks [Waste and Hazardous Substances]		Identified several authoritative sources for model ordinances
DOS	Evaluate and promote workplace options for employees		Staff have the option to utilize flexible or compressed schedules
DOE	Improve guidelines for siting of school facilities		Collaborating with the Office of State Planning Office Coordination and school district facility staff
DOE	Promote the incorporation of cleaner school buses		48 propane buses currently transport students throughout the state and 5 more will be on the road in 2017
DHSS	Remove potential hazards from low-lying areas prior to a major event		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DHSS	Designate State Service Centers as critical facilities		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DNREC	Ensure effective energy code compliance [Energy and Climate]		Staff hired to meet on-going compliance goals; anticipated updated codes in summer 2017. Also developing training for Home Energy Rating System (HERS) to launch in 2017
DNREC	Consider relocating Division of Fish and Wildlife facilities [Fish and Wildlife]		Participating in the Climate Mitigation and Adaptation Planning Pilot Project. Relocated Aquatic Education Center based on Sea Level Rise models
DNREC	Adapt building processes [Parks and Recreation]		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DNREC	Evaluate need for improving spill containment requirements for aboveground storage tanks and hazardous waste storage areas [Waste and Hazardous Substances]		One identified problem facility has been remediated. The Hazardous Waste Program is continually re-evaluating its requirements for technological changes
DNREC	Assist suppliers of potable water (from surface water intakes) in developing strategies to protect water intakes from flooding and salt water [Water]		The Water Supply Coordinating Council is routinely tracking water use and threats to water shortages
DNREC	Assist suppliers and users of potable water (from wells) to develop strategies for protection of wells from flooding and salt water [Water]		On-going consideration of long-term risk
DNREC	Evaluate need for revisions to technical standards and specifications for stormwater management [Watershed Stewardship]		Convened a Regulatory Advisory Committee to address revisions to the Sediment and Stormwater Regulations and Technical Standards and Specifications.
DNREC	Evaluate need for revisions to stormwater regulation [Watershed Stewardship]		Convened a Regulatory Advisory Committee to address revisions to the Sediment and Stormwater Regulations and Technical Standards and Specifications

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
DNREC	Evaluate design specifications and maintenance practices for rain gardens and other small-scale stormwater systems [Watershed Stewardship]		Convened a Regulatory Advisory Committee to address revisions to the Sediment and Stormwater Regulations and Technical Standards and Specifications
DSHS	Conduct research on the potential effects of climate change on structures and vehicles		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DOS	Complete mapping of cultural resources into Geographic Information System (GIS)-based system [Historical and Cultural Affairs]		Strategic Opportunity Fund for Adaptation grant received to implement this project
DOS	Ensure preparedness for threatened sites [Historical and Cultural Affairs]		Employing a readiness system for weather-related events which includes preparedness measures for specific sites
DOS	Review potential for infrastructure enhancements that can help mitigate climate change exposure [Public Service Commission]		Utilities have made assessments of infrastructure enhancements and modifications in regards to reliability and storm response
DeIDOT	Conduct comprehensive assessment of state roadway risks and assets		Received a Strategic Opportunity Fund for Adaptation grant to support a comprehensive corridor evaluation of State Route 9
DeIDOT	Integrate climate resiliency into project development, traffic, bridge, and highway design		The Bridge Design Manual has added wording associated with climate change and sea level rise in consideration when scoping a project
DeIDOT	Build transportation enhancements (pathways, trails, roadscapes, etc.) to accommodate impacts of climate change		Received a Strategic Opportunity Fund for Adaptation grant to develop approaches to increasing resilience on State Route 1, including use of green infrastructure techniques. Current work for trails and pathways utilizing flooding and sea level rise tools. Strategic Implementation Plan for Climate Change, Resilience and Sustainability to be completed in 2016
DeIDOT	Reevaluate stormwater management approaches		Engaging with research on the cost of climate change
DeIDOT	Incorporate climate impacts into cost-effective investment in infrastructure		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DeIDOT	Evaluate obtaining insurance to assist in recovery from catastrophic events		Considering the development of a Transportation Risk Map and strategies for disaster risk
DeIDOT	Adjust transit service in emergencies		The Delaware Transit Corporation Division adjusts service levels when required during weather events. Adjustments include reducing, modifying and/or suspending service depending on the severity and timing of the event
DeIDOT	Evaluate low-emission vehicle deployment		Participating in Delaware Clean Cities. Piloted propane-fueled F250 trucks in the fall of 2015

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
DeIDOT	Evaluate alternative energy technology in facilities		Attempting to meet Leadership in Energy and Environmental Design (LEED) Silver Certification requirements for new facilities. Utilizing waste oil heaters in some locations
DEDO	Provide and market public transportation to attractions throughout the state		Promotes public transportation and ride sharing to state-sponsored events
DEDO	Alter the standard for weekly rentals		
DEDO	Advocate for the reuse of existing industrial brownfield sites		The "Sites & Buildings" page on the Delaware Economic Development Office website allows visitors to search for available brownfield sites
OMB	Advocate for changes to state building design practices and policies		Continually seeking to improve building efficiency and comfort
OMB	Improve resilience of state facilities and equipment		Participating in the Climate and Energy Assessment of State Facilities Pilot Project
OMB	Incorporate flooding considerations into siting of state facilities		Served on flood avoidance workgroup and helped to develop a guide for state agencies. Included Executive Order 41 on review checklist
OMB	Increase maintenance of state facilities as a result of climate impacts		Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DOE	Promote Leadership in Energy and Environmental Design (LEED) or Green Ribbon school designs		No progress to date
DHSS	Evaluate public health infrastructure and resources for data collection and analysis [Public Health]		No progress to date
DHSS	Identify sites to be used as designated cooling and heating centers		No progress to date
DNREC	Consider incorporating equipment siting requirements into air permitting process [Air Quality]		No progress to date
DNREC	Develop model building code [Energy and Climate]		No progress to date
DNREC	Develop plan for access [Parks and Recreation]		No progress to date
DNREC	Assist local governments in developing strategies to protect wastewater treatment facilities from flooding [Water]		No progress to date
DNREC	Evaluate the adequacy of drainage infrastructure [Watershed Stewardship]		No progress to date due to lack of funding

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
DOS	Evaluate costs and benefits of creating historic preservation tax credit for adaptation and resiliency [Historical and Cultural Affairs]		No progress to date but are scheduled to conduct a comprehensive review of the Historic Preservation Tax Credit program in January 2018
DOS	Publish cultural resource management plans [Historical and Cultural Affairs]		No progress to date but aim to address the federally-mandated statewide historic preservation plan in January 2017
DOS	Broaden utility review of climate change initiatives to include non-regulated entities [Public Service Commission]		The Energy Efficiency Advisory Council will only deliberate on plans brought forth by the regulated utilities
DOS	Coordinate review of storm response procedures with all regulated utilities [Public Service Commission]		No progress to date
DOS	Create energy baseline for leased sites		Compiling energy consumption information
DOS	Create energy baseline for office equipment		Compiling energy consumption information
DOS	Ensure new building compliance		No progress to date
DOS	Ensure financed building compliance		No progress to date
DeIDOT	Evaluate materials used to reduce the impacts of stormwater runoff		No progress to date. Research lab and modelling capabilities needed
DeIDOT	Explore new pavement technology		No progress to date. Impacts to traffic and revenues needed
DSHA	Incorporate information on sea level rise in homeownership counseling		No progress to date
DOS	Increase amount of technical staff [Public Advocate]		
DOS	Mitigate below-grade facilities		

Total # of Recommendations = 56

Completed = 2

In Progress = 33

Not Begun = 19

Not Reported = 2

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
<b>Resilient Communities &amp; Economies Sector</b>			
DNREC	Coordinate on the use of updated floodplain maps to assist with flood mitigation activities [Watershed Stewardship]		Floodplain maps for all three counties have been completed
OSPC	Revise the Preliminary Land Use Service checklist for Comprehensive Plans		This recommendation has been implemented
OSPC	Examine ways to incorporate climate change and sea level rise as factors in the next update to State Strategies for Policies and Spending		This recommendation has been implemented
DHSS	Provide training and education on climate preparedness and adaptation		Participating in the Climate-Ready Workforce Pilot Project
DNREC	Provide technical assistance to Delaware communities for climate change adaptation projects [Coastal Programs]		Awarded coastal resiliency planning grants to seven communities in 2015 and re-launched the grants program as the Resilient Community Partnership in 2016
DNREC	Increase educational awareness of climate change in Delaware [Coastal Programs]		On-going efforts to provide education and public outreach through presentations, programs and trainings, including science conferences, teacher professional development workshops, and interpretive exhibits at the Delaware National Estuarine Research Reserve (DNERR) locations
DNREC	Aid local governments in planning for climate change [Energy and Climate]		Provided technical support to local communities to integrate climate change into local Comprehensive Land Use plans. On-going participation in the Preliminary Land Use Service and training for local government and community groups
DNREC	Improve energy reliability and response to emergency events [Energy and Climate]		Inter-agency meetings are underway; the Energy Assurance Plan is expected to be updated by summer 2017
DNREC	Educate staff and the public [Parks and Recreation]		Participating in the Climate-Ready Workforce Pilot Project
DNREC	Issue emergency waivers for repairs to infrastructure, environmental resources, and property resulting from storms and flooding events in regulated wetlands and subaqueous lands [Water]		Waiver procedures currently exist
DSHS	Develop operational plans to adapt to sea level rise		Awarded Strategic Opportunity Fund for Adaptation grant to support advanced search and rescue training. Participating in the Climate Mitigation and Adaptation Planning Pilot Project

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
DSHS	Make programmatic adjustments to adapt to increasing levels of precipitation, flooding, and sea level rise		Transitioning Delaware State Police's and Capitol Police's patrol vehicles to SUVs with higher clearance to address sea level rise and additional snowfall. Participating in the Climate Mitigation and Adaptation Planning Pilot Project
DOS	Assess financial impact of any new rates [Public Advocate]		Continually analyzing the financial impact for all newly established rates
DOS	Review Commission options to help reduce greenhouse gases and mitigate climate change [Public Service Commission]		Currently reviewing options to address climate change mitigation within the organization and outside of the agency. Have formed recommendations
DOS	Evaluate alternate utility rate structures [Public Service Commission]		Researching alternative rate designs for electric utilities to equitably incorporate distributed energy resources
DeIDOT	Continue development of geospatial data sets that can help identify vulnerable areas and help estimate the impact of reasonably anticipated events		The vulnerability assessment and scenario base analysis are underway. Completed data collection for Hazus tool for conducting cost and impact assessments. Continually making improvements and overcoming barriers
DeIDOT	Identify and assess existing chronic flooding and erosion problems caused by sea level rise, frequent storms, tidal forces, subsidence, and aging infrastructure		On-going review of infrastructure inventory, improving databases to monitor condition of roadways and bridges. Added flood monitoring capabilities for roadways for ten sites. The Weather and Flooding Strategic Plan has been completed and was approved. An Implementation Plan based on the Strategic Plan findings and recommendations is starting
DeIDOT	Reevaluate emergency response protocols		Participating in the Climate-Ready Workforce Pilot Project. Provided awareness training to the Department's Strategic Leadership Team. Security projects at maintenance yards are underway.
DeIDOT	Support local governments with land use assessment tools		Received a Strategic Opportunity Fund for Adaptation grant to improve the Traffic Impact Study process. Supported the development of a toolkit for community resilience produced by the University of Delaware's Institute for Public Administration. Strategic Implementation Plan for Climate Change, Resilience and Sustainability to be completed in 2016
DED0	Advocate for adoption of state recommendations for climate change adaptation		Created new web page to highlight programs related to Executive Order 41
DED0	Promote economic growth and development in climate-resilient locations		The "Sites & Buildings" page on the Delaware Economic Development Office website allows visitors to search for available brownfield sites
DED0	Educate and assist businesses and industry in adapting to climate change		Actively markets educational events such as the Department of Natural Resources and Environmental Control's Division of Energy & Climate's 'Fueling the Future' ride-and-drive clean transportation conference
DSHA	Evaluate energy-efficiency standards of the Low Income Housing Tax Credit (LIHTC) program		Received a Strategic Opportunity Fund for Adaptation grant to support technical assistance to Low-Income Housing Tax Credit (LIHTC) awardees. Project will also evaluate energy certification programs suitable for Delaware programs

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
DSHA	Explore partnering on grants that address resiliency, such as the upcoming Housing and Urban Development (HUD) National Disaster Resilience Competition		Received two grants through Strategic Opportunity Fund for Adaptation competitive grant program. Pursued Housing and Urban Development (HUD) National Disaster Resilience Competition grant, but projects not eligible for funding
DSHA	Consider sea level rise in Delaware State Housing Authority programs		The Delaware State Housing Authority uses the State Strategies map, which considers sea level rise and flood risk, as a criteria for participation in the Low-Income Housing Tax Credit (LIHTC) program
DSHA	Promote sustainable building practices into the Downtown Development District (DDD) grant program		Received a Strategic Opportunity Fund for Adaptation grant to provide incentives for project achieving Leadership in Energy and Environmental Design (LEED) Silver certification through the U.S. Green Building Council
OMB	Incorporate resilience into Messenger Services		Participating in the Climate-Ready Workforce Pilot Project
OMB	Offer training opportunities for employees on impacts of climate change		Participating in the Climate-Ready Workforce Pilot Project
OSPC	Examine ways to incorporate climate change and sea level rise impacts into the Preliminary Land Use Service application		Being reviewed by the Office of State Planning Coordination staff
OSPC	Provide technical support to local governments for Comprehensive Plans and local ordinances		On-going technical support to local communities (in coordination with the Department of Natural Resources and Environmental Control) and will continue to conduct regularly scheduled updates to their comprehensive plans
OSPC	Provide technical assistance to support integration of climate impacts and to reduce greenhouse gas emissions through adaptation and mitigation at the local level		On-going technical support to local communities (in coordination with the Department of Natural Resources and Environmental Control) and will continue to conduct regularly scheduled updates to their comprehensive plans
OSPC	Establish and maintain Geographic Information System (GIS) layers related to climate change and sea level rise impacts in FirstMap		Geographic Information System (GIS) layers have been incorporated into FirstMap. Maintaining useful data will be an ongoing effort
DHSS	Advocate for additional resources for the Low-Income Home Energy Assistance Program (LIHEAP)		No progress to date
DHSS	Create a statewide climate resiliency educational campaign		No progress to date
DNREC	Increase climate change–focused research and modeling [Air Quality]		The Division of Air Quality is developing a work plan for proposed ozone research
DNREC	Study how to prioritize funding options to give preference to areas with effective practices for drainage and floodplain management [Watershed Stewardship]		No progress to date

Agency	Executive Order 41 Adaptation Recommendations	<b>STATUS KEY:</b> Completed =  In Progress =  Not Begun = 	Progress Summary
DNREC	Update floodplain maps with consideration of climate change dynamics [Watershed Stewardship]		No progress to date
DOS	Conduct vulnerability assessments [Historical and Cultural Affairs]		No progress to date
DOS	Review utility tariff approaches to minimizing greenhouse gases [Public Service Commission]		Researching rate designs to equitably incorporate distributed energy resources for electric utilities
DOS	Promote personal energy use awareness		No progress to date but there are plans to enact this in conjunction with the energy baseline implementation
OMB	Revise Life Cycle Costing Analysis to account for climate change impacts		No progress to date
OMB	Incorporate resilience in Government Support Services contracting		No progress to date
DOS	Include protected classes and undocumented communities in outreach efforts [Human Relations Commission]		
DOS	Enhance outreach to utility consumers [Public Advocate]		

Total # of Recommendations = 44

Completed = 3

In Progress = 29

Not Begun = 10

Not Recorded = 2