Department of Energy and Environmental Protection

At a Glance

ROBERT J. KLEE, ***Commissioner***

Mary Sotos, ***Deputy Commissioner of Energy (Public Utilities Regulatory Authority and Energy and Technology Policy)***

Bob Kaliszewski, ***Deputy Commissioner of Environmental Quality (Air Management, Materials Management and Compliance Assurance, and Water Protection and Land Reuse)***

Susan Whalen, ***Deputy Commissioner of Environmental Conservation (Outdoor Recreation and Natural Resources)***

***Established* – 2011**
***Statutory authority* – CGS Public Act 11-80, 2011**
***Central Office* – 79 Elm Street, Hartford, CT 06106-5127**
Average Full-Time Employees: 1016
Operating Expenses: $198,391,977
Organizational structure –

***Office of the Commissioner* – Chief of Staff, Offices of Affirmative Action, Legal Counsel, Adjudications, Policy, Planning and Program Development; and the Bureau of Central Services**.

***Office of the Deputy Commissioner of Energy (Public Utilities Regulatory Authority and Energy and Technology Policy)* – Public Utilities Regulatory Authority (PURA):** Divisions of Utility Regulation, Administration, Operations, Consumer Affairs and Procurement. **Bureau of Energy and Technology Policy:** Offices of Climate Change, Technology and Research; Energy Supply; and Energy Demand.

***Office of the Deputy Commissioner of Environmental Quality (Air, Waste and Water)* – Bureau of Air Management**: Divisions of Engineering & Enforcement; Planning & Standards; and Radiation. **Bureau of Materials Management and Compliance Assurance**: Divisions of Waste Engineering & Enforcement; Emergency Response and Spill Prevention; and Permitting and Enforcement (permitted discharges). **Bureau of Water Protection & Land Reuse**: Divisions of Remediation; Water Planning & Management; Land &Water Resources.

***Office of the Deputy Commissioner of Environmental Conservation (Outdoor Recreation and Natural Resources)* – Bureau of Natural Resources:** Divisions of Forestry; Fisheries and Wildlife. **Bureau of Outdoor Recreation:** Divisions of Boating; Environmental Conservation Police; and State Parks & Public Outreach.

Mission

It is the mission of the Department of Energy and Environmental Protection (DEEP) to fulfill the intent of the General Assembly, which declared that it is the policy of the state of Connecticut to:
"…conserve, improve and protect the air, water and other natural resources and environment of the State of Connecticut while fostering sustainable development. The agency's mission includes the goals of reducing electrical rates and decreasing costs for Connecticut ratepayers, ensuring the reliability of the state's energy supply, increasing the use of clean energy and developing the state's energy-related economy..."

Statutory Responsibility

Public Act 11-80, effective July 1, 2011, facilitated the establishment of the Department of Energy and Environmental Protection. The majority of the Commissioner's statutory responsibilities are found in the following titles of the Connecticut General Statutes: 15, 16, 16a, 22a, 23, 25, and 26.

Public Service

The Department of Energy and Environmental Protection (DEEP) was created by Public Act 11- 80. Effective July 1, 2011, DEEP brought together the former Departments of Environmental Protection (DEP) and Public Utility Control (DPUC) – now called the Public Utilities Regulatory Authority (PURA) – along with the energy policy group from the Office of Policy and Management (OPM).

During 2017-2018, DEEP continued to focus on:

- Improving the efficiency and effectiveness of the department
- Advancing the state's agenda to provide cleaner, cheaper, and more reliable energy to Connecticut's residents and businesses,
- Effective and efficient of the state's public utilities
- Protecting our environment and natural resources
- Providing first-class outdoor recreational opportunities to residents, businesses and visitors

Highlights and Achievements 2017-2018

Energy

Procuring cost-effective renewables to diversify Connecticut's energy portfolio

- Connecticut has utilized its procurement authority and the power of competition to drive down the costs of procuring 1,000 megawatts of new renewable energy sources to help ensure supplies of affordable and reliable power for Connecticut families and businesses.

- Utilizing the state's procurement authority, DEEP procured, on behalf of all electric ratepayers, over 400 megawatts of small scale renewable energy and energy efficiency resources, and over 400 megawatts of large-scale renewable energy projects, 90 megawatts of which will be located in Connecticut. Over the course of three renewable energy solicitations, the state saw bid prices for grid-scale projects drop by nearly half. In the most recent solicitation, the state selected over 250 megawatts of additional projects, including Connecticut's first purchase of offshore wind which will bring significant economic development to the state's ports. In 2018, the state launched a Shared Clean Energy Facility (SCEF) pilot program, with DEEP selecting over 5 megawatts of solar. The program will also have a dedicated subscription target of low- and moderate-income consumers. As a result of increased investments in energy efficiency, Connecticut was ranked fifth among the 50 states in the annual scorecard issued by the American Council for an Energy Efficient Economy (ACEEE). The strong ranking reflects the state's efforts to reduce the demand for electric power to reap the benefits of lower bills for families and businesses, a stronger economy, cleaner air, and a reduction in harmful carbon emissions linked to climate change.

Advancing resiliency through Connecticut's statewide microgrid program

- Connecticut was the first state in the country to establish a statewide microgrid program. Microgrids build local resiliency for electrical load in critical community operations. The program currently includes nine operational microgrids with one currently under construction. Seven additional microgrid applications are presently under review by DEEP with the anticipation that awards will be granted to qualified projects by the end of 2018.

Achieving energy savings for state agencies, residents, and businesses

- DEEP has lead a statewide effort on energy efficiency, implementing energy efficiency projects for state facilities that will save $6 million per year in energy costs. Connecticut state government also saved an estimated $1 million in SFY18 in

agency operating costs through the competitive purchase of electricity for the aggregated pool of state facilities.

- DEEP provides review and oversight to Connecticut's residential and commercial investments in energy efficiency across the state through implementation of Connecticut's award-winning Conservation and Load Management Plan (C&LM) Plan. In 2017, the electric energy efficiency benefits in Connecticut were equivalent to two 45 megawatt power plants and saved residents, businesses, and municipalities $75 million. Homeowners, renters, local manufacturers and businesses, and municipalities will save $841 million over the lifetime of those 2017 energy efficiency investments. Similar savings have occurred from investments each year of this administration. These energy efficiency investments return $7 into Connecticut's economy with each dollar invested in energy efficiency upgrades and in 2017 generated a $1.4 billion increase to the Gross State Product.

Climate Change

Connecticut continues to serve as a national leader in addressing climate change from both sides of the climate equation: The state is focused on both mitigation – reduction of carbon emissions – and adaptation – strategies to protect communities from changes we are already seeing.

Regional Greenhouse Gas Initiative

- Connecticut is a founding member of the Regional Greenhouse Gas Initiative (RGGI). RGGI is a bi-partisan, cooperative effort by nine Northeastern and Mid-Atlantic states to utilize a market-based mechanism to reduce carbon dioxide emissions from power plants. This first in the nation cap and invest program provided Connecticut with over $134 million in auction proceeds for investments in energy efficiency and renewable energy while at the same time, the RGGI states agreed to pursue an additional 30 percent reduction in emissions between 2020 and 2030.

Climate Legislation

Connecticut has been a foremost leader among US states on climate policy, including:

- Adopting the most ambitious Renewable Portfolio Standard (RPS) in the northeast - 40 percent RPS by 2030.

- The ability to competitively procure up to two-thirds of the state's electric load from sustainable and carbon-free sources including solar, wind, small hydro, fuel cells, and nuclear.

· The creation of the nation's first full-scale green bank — The Connecticut Green Bank — to leverage public and private funds to accelerate the growth of green energy in Connecticut.

Governor's Council on Climate Change

· Executive Order 46 led to the creation of the Governor's Council on Climate Change (GC3) to examine the effectiveness of existing policies and regulations designed to reduce greenhouse gas emissions and to identify new strategies to meet the state's greenhouse gas emissions reduction target of 80 percent below 2001 levels by 2050. Upon thorough review of a variety of mitigation scenarios that drive down greenhouse gas emissions in the electric, building, and transportation sectors, the GC3, through consensus, recommended adopting an economy-wide mid-term greenhouse gas emission reduction target of 45 percent below 2001 levels by 2030. This target was adopted by the General Assembly in 2018 and signed into law as Public Act 18-50.

Adaptation

· The Connecticut Institute for Resilience and Climate Adaptation (CIRCA), a partnership between DEEP and the University of Connecticut, continues to support resiliency initiatives of communities, residents, businesses, and institutions in vulnerable shoreline and flood plain areas of our state. CIRCA is providing grant funds for projects to protect critical infrastructure and properties, as well as developing data and information, including localized sea-level rise projections, that communities will use to engage in sound land use planning for the future. CIRCA also played a key role in Connecticut's successful application to HUD's National Disaster Resilience Competition that resulted in a $54 million federal grant award, and will use a portion of those funds to develop the Connecticut Coastal Connections Resilience Plan for Fairfield and New Haven counties.

· DEEP has collaborated with academic, non-profit and government partners at the local, state and regional level to advance development and implementation of coastal green infrastructure and living shorelines solutions for shoreline management.

· DEEP and UConn in partnership with a statutory advisory committee and non-profit organizations are developing the Long Island Sound Blue Plan, as authorized by P.A. 15-66. The Blue Plan is intended to create a spatial plan for the waters of Long Island Sound so as to protect and minimize conflict between natural resources and existing and future uses such as fishing, aquaculture, and navigation.

Public Utilities Regulatory Authority

- Adjudicated and approved 24 applications for Water Infrastructure and Conservation Adjustments (WICA) for the purpose of accelerating the replacement or rehabilitation of aging water systems as well as to encourage conservation and secure system resilience.

- Developed new, streamlined procedures that will facilitate the continued build-out of Connecticut's advance broadband and cellular networks and better enable PURA to focus adjudicatory efforts on those siting applications with objections from adjacent property owners.

- Continued to better ensure public safety and deter safety violations and violators by conducting over 450 gas pipeline safety inspections, investigating over 600 reports of Call Before You Dig damages and violations and by taking over 220 enforcement actions, including collecting approximately $1.5 million in civil penalties.

- Developed (jointly with the Department of Public Health) a more efficient and more thorough process to regulate small water systems that are in need of improvements or in some cases possible takeover.

- Adjudicated major rate case proceedings involving three of Connecticut major electric and gas companies: Connecticut Light and Power, Yankee Gas and Connecticut Natural Gas.

- Initiated several generic regulatory proceedings to evaluate and make recommendations regarding: the electric distribution company's system planning practices, grid modernization, integration of distributed energy resources (DERs), and the Electric Efficiency Partners program.

- Reviewed and approved power purchase contracts for over 800 MW of clean energy and energy efficiency resources selected in response to DEEP's Energy procurement Request for Proposals.

- Monitored the activities of electric suppliers in Connecticut and initiated investigations regarding the customer service practices of 20 of those electric suppliers to determine whether they are in compliance with state statutes, state regulations and PURA's orders.

- Reviewed and approved approximately 7,200 applications for Class I, II and III renewable energy facilities.

· Consumers Services Unit staff responded to nearly 18,000 complaints and inquiries from consumers and was able to secure refunds for a number of these consumers totaling $132,000.

Environmental Quality

Air Management

· Adopted several significant regulations to reduce emissions of ozone precursors (nitrogen oxides and volatile organic compounds) from fuel-burning equipment (boilers, turbines and engines), municipal waste combustors, and paints and consumer products. Upon full implementation, these new rules are anticipated to reduce ozone precursor emissions by over 1,000 tons per year. These improvements in air quality are achieved with an understanding of Connecticut's regulated businesses reflected in reasonable compliance schedules and flexible compliance options.

· Launched the first solicitation under the Volkswagen environmental mitigation grant which will provide Connecticut with at least $55 million and the ability to leverage at least another $20 million in private investment to pursue additional clean diesel and other transformative air quality improvement projects in Connecticut.

· Partnered with the Connecticut Center for Advanced Technology to fund a hydrogen fueling station in the Greater New Haven area. The fueling station is needed before the widespread introduction of fuel cell electric vehicles in Connecticut which will build from and support Connecticut's fuel cell industry.

· Implemented online EZfile registration and payment system for users of radiation producing devices and material. In addition, worked collaboratively with the solid waste industry to implement market based radiation response protocols to allow haulers and facilities to efficiently adjudicate their own radiation alarms while ensuring health and safety of the public.

Materials Management

· Consistent with P.A. 14-94, a development team was selected to modernize the Materials Innovation and Recycle Authority (MIRA) facility in Hartford and is in contract negotiations with MIRA. The development concept employs several hundred million dollars of private capital for enhanced recycling, anaerobic digestion and composting technologies. Remaining material will be combusted for the production of electricity in a refurbished power system. The proposal reduces by approximately one-half the amount of waste currently combusted at the facility. The concept helps maintain in-state waste management capacity rather than increasing reliance on out-of-state landfilling, which is consistent with the state's statutory waste management hierarchy as well as the state's 2016 Comprehensive Materials Management Strategy.

- The single largest component of solid waste sent to incinerators and landfills is organic waste including food scraps. Infrastructure in CT to handle organic waste and recycle and repurpose such materials is growing. Permitted a fourth anaerobic digestion (AD) facility to foster the commercial recovery of compost and clean energy from food scraps and other organic material. AD is a state of the art composting like process where microorganisms break down organic materials, such as food scraps and manure, in the absence of oxygen, typically in a sealed oxygen tank called an anaerobic digester. The benefits of AD include green jobs, renewable energy generation, greenhouse gas emissions reduction, waste diversion and production compost suitable for sale and use as a soil amendment. The four facilities are B&R Corporation, the first operating AD in Southington and three projects pending construction are Turning Earth, LLC, also in Southington, Bridgeport Bioenergy, LLC in Bridgeport and the newest project, City Wide Energy, in North Haven.

- Connecticut currently has four successfully established Extended Producer Responsibility (EPR) programs for the collection and recycling of used or unwanted electronics, thermostats, paint and mattresses. Connecticut's EPR programs have diverted more than 26 million pounds of materials from disposal, saved municipalities $2.6 million dollars per year in avoided disposal costs, created more than 100 jobs and reduced greenhouse gas emissions by more than 13 million kilograms of carbon equivalent. The EPR programs have given CT residents more and convenient access to recycling of thermostats, paint, electronics and mattresses.

- The RecycleCT Foundation spearheaded a creative and engaging public outreach campaign to raise participation in recycling, decrease contamination and make it easier to understand what residents should place into the blue recycling bin and what should be put in the garbage. RecycleCT Foundation, a state-chartered fund established by Public Act 14-94, chaired by Commissioner Klee, combines public and private resources to promote research and education activities and public information programs aimed at increasing the rate of recycling and reuse in the state. The outreach is built around the theme of *What's IN, What's OUT* and builds on efforts to create a universal list of materials accepted by recycling facilities and to standardize residential recycling rules across Connecticut. The outreach campaign includes a mobile-friendly widget that provides a quick answer to questions about what can and can't be recycled; short videos to highlight recycling issues; material that cities and towns can customize and share with their residents, including a brochure with a convenient list of items that can be recycled and social media messages for Facebook and Twitter. Similar standardization efforts are being looked at in other states. One of the short videos and the RecycleCT website both received awards from Connecticut Advertising Club.

- Moved forward to implement recommendations of a 2016 Comprehensive Materials Management Strategy (CMMS), which provides a framework for doubling the diversion of trash to 60% by increasing the recycling rate and recapturing more materials of value from the waste stream. The CMMS focuses on strengthening local

waste reduction and recycling programs; use of new technologies to more effectively sort recyclables and recover materials from the waste stream; increased enforcement by DEEP, municipalities and facility operators; and greater participation from corporations that produce materials to have them share in the cost and development of recycling programs.

Emergency Response

· Responded to reports of 1,371 releases of petroleum or hazardous material in order to ensure steps were taken to protect public health and the environment and that a proper cleanup was conducted.

Stormwater Management

· Continued partnership with the Center for Land Use Education and Research and the Nonpoint Education for Municipal Officials programs at the University of Connecticut to assist Connecticut municipalities with implementing the requirements of the MS4 General Permit. Stormwater runoff is the number one cause of stream impairment in urban areas. The MS4permit contains requirements for the operation of 121 municipal and federal and state institution stormwater systems in order to protect and enhance the quality of the state's waters.

Brownfields Remediation

· Continued efforts to streamline the process for cleanup of contaminated lands in order to put properties back into productive reuse – eliminating threats to human health and the environment and public health as well as generating new tax revenues for cities and towns and creating jobs for our residents.

Water Diversions

· DEEP proposed a change to the Water Diversion Regulations to ensure that increased use of registered diversions into new or expanded service areas will not significantly impact the environment. This proposal was approved by the General Assembly's Regulations Review Committee.

Wastewater Treatment

· Work continued on major Clean Water Fund projects with the Hartford area Metropolitan District Commission (MDC) and the New Haven area wastewater treatment district aimed at separating storm water from sanity sewer systems in order to reduce overflows of sewage into the Connecticut River or Long Island Sound.

Water Protection and Land Reuse

- Actively participated with the Water Planning Council to develop the first Connecticut State Water Plan in January of 2018.
- Continued to work with communities across the state to upgrade wastewater treatment plants to address phosphorus pollution including bringing a number of plants on line and continuing design of additional plants. Upgrades will improve water quality by reducing nutrient loads in our rivers and streams.
- Worked to implement an owner- responsible inspection program to ensure safe dams across Connecticut. Participated in a number of significant state dam repair projects including Glasgo Pond Dam in Griswold and removal of Springborn Dam in Enfield, a high hazard dam.
- Enhanced public notification of sewage overflows by publishing an on-line tool for municipal reporting and viewing by citizens.
- Worked with many stakeholders and responsible parties to clean up contaminated sites and put them back to productive reuse. The cleanup of lead contamination in sediment in the Mill River in Fairfield was a major accomplishment.

Environmental Conservation

State Parks

- DEEP implemented the new Passport to the Parks program, which provides free parking access to Connecticut State Parks for residents in Connecticut registered vehicles. The program is funded through a $10 per registration ($5 per year) fee on non-commercial motor vehicles. This new funding mechanism provides sustainable, predictable funding for the operation of our State Parks. Because of the availability and predictability of these new funds, four previously closed state park campgrounds were re-opened, along with expansion of other state park services to the public.

- DEEP completed or initiated major investments at some of our popular state parks along the shore. At Hammonasset Beach State Park in Madison, a major project to replace and upgrade all of the site utilities was completed along with the installation of a new 2 mile long recreation trail. A new bathhouse complex was installed, and a major beach re-nourishment project completed in the West Beach area of the park. The major development phase of Silver Sands State Park, Milford was initiated to bring a much-needed bathhouse and other public services to this popular park. These projects will help ensure a strong future for the state park system and increase public access for outdoor recreation opportunities on Connecticut's shoreline.

- DEEP created a master plan for Seaside State Park in Waterford, our first new shoreline state park in over 50 years. An RFP process was initiated to develop a public-private partnership with the goal of creating a state park lodge concept at the park to preserve the existing historic buildings at Seaside State Park.

Boating

- The third annual Aquatic Invasive Species Awareness Weekend took place in July at popular boat launches throughout the state to educate boaters on prevention of the spread of invasive plants and animals. DEEP partnered with the Candlewood Lake Authority to provide public awareness and recommendations on how to discourage the growth of these harmful plants and animals.

- DEEP instructors taught 2739 students in approximately 95 Safe Boating Certificate courses. Under the guidance of DEEP and school teachers, forty-three Student Ambassadors educated their peers in 28 schools across the state.

- DEEP partnered with federal and state agencies to complete construction of the improved Branford River State Boat Launch in Branford on the East River. The existing asphalt boat ramp was replaced with a two-lane, concrete ramp with a grooved surface. The old fixed dock system was replaced with a new ADA accessible floating dock system. The dock is located between the two ramps and provides access for boaters on both sides. The turning area was redesigned and paved to provide optimal access at the launch.

- DEEP partnered with federal and local officials to complete a $1.43 million Boating Infrastructure Grant project at Thamesport Marina consisting of new floating concrete docks at the mouth of the Thames River to provide dockage for up to 54 large transient vessels, and awarded an additional $190,000 in grant money to that marina to replace aging underground diesel and gas storage tanks to ensure that fuel will be available to the transient boaters. The Boating Infrastructure Grant program provides funding opportunities to public and private agencies, marinas and other facilities that provide tie-up opportunities for recreational boats 26’ or more in length in Connecticut. Investment in slips for larger recreational vessels along the Thames River and Long Island Sound encourage use of these waterways and stimulates tourism and economic development.

- A record level of over 1.347 million gallons of recreational vessel boat sewage was removed through pumpouts from vessels in Candlewood Lake and Long Island Sound in 2017, resulting in an increase of 6.4 percent in the amount of waste removed from previous years. Grant money totaling $1 million was also awarded for boat sewage disposal facilities, or pumpout stations, for 43 marine facilities during the 2018 boating season. Program is administered by DEEP with a grant from the US Fish and Wildlife Service’s Clean Vessel Act (CVA) program and provides free pumpout service to boaters in Connecticut.

Environmental Conservation Police

- DEEP EnCon Police continued its mission to provide natural resource protection and public safety through education, outreach and enforcement. Throughout the year, EnCon Police received 28,613 calls for service, which included 270 public outreach events, 132 arrests, 1404 infractions, 786 written warnings and 538 verbal warnings.

- DEEP EnCon Police worked with the Boating Division, United States Coast Guard, local and State Police on two initiatives*; Operation Dry Water* and *Operation Wild Water*.

- *Operation Dry Water* consisted of four on-water boating events. Events took place at the mouth of the Connecticut River (Old Lyme and Old Saybrook), the lower Connecticut River (Middletown and Haddam), and at Candlewood and Coventry Lakes. Safety compliance checks were completed on 240 vessels resulting in 12 citations issued and two arrests for Boating Under the Influence.

- *Operation Wild Water* was an initiative to educate manually powered vessel operators on boating safety and the importance of wearing personal flotation devices. "If Found" stickers were issued to be placed on unregistered watercraft to aid first responders in identifying owners if they were found unmanned. These watercraft include canoes, kayaks and paddleboards.

- DEEP EnCon Police was recognized as an accredited agency by the National Association of State Boating Law Administrators Boat Operations and Training (BOAT) Program. The BOAT Program's mission is to ensure the readiness of law enforcement and emergency response boat crews throughout the country. Accreditation of an agency ensures that its training curricula, policies, qualification processes and documentation for crew members, boat operators for search and rescue, and tactical operators meet the BOAT Program's National Standards, and allow an agency to train and qualify all of its officers internally, as well as its partners on the water.

Natural Resources

- Enhanced fishing opportunities for Connecticut residents by producing and stocking 680,000 trout into nearly 100 lakes and ponds and more than 120 rivers and streams. Further enhanced fishing by stocking 1,120 large broodstock Atlantic salmon, 150,000 kokanee salmon, 28,000 walleye, 17,000 catfish, and 2,400 northern pike into selected waters located throughout the state.

- Connecticut Wildlife staff continue to lead a six-state effort to restore native New England Cottontail populations in the Northeast. This regional effort includes the restoration of thousands of acres of young-forest habitat, population surveys,

research, monitoring, and captive breeding and release of rabbits. Populations of other rare or declining young forest species also benefit from this effort including many birds such as woodcock, ruffed grouse, blue-winged warbler, Eastern towhee, and the prairie warbler. The success of this Connecticut led effort has benefited all Connecticut residents by enabling the U.S. Fish and Wildlife Service to avoid listing the New England Cottontail under the Federal Endangered Species Act.

- Forestry staff facilitated the development of 40 new or revised forest stewardship plans covering 4,498 acres of private land and provided education and technical assistance to over 1,600 landowners. This enabled private Connecticut forest land owners to access over $1 million in federal funding from the USDA Natural Resource Conservation Service Environmental Quality Incentives Program for implementing sound forest management practices.

- Completed 15 timber sale agreements improving forest health and wildlife habitats on approximately 1,000 acres of Agency managed State Forests. Initiated 25 new timber sale agreements to improve forest health, create wildlife habitat, and generate revenue in subsequent fiscal years.

Agency Transformation

LEAN

- DEEP continues to employee LEAN techniques to streamline permitting and enforcement decision making processes as well as to improve the agency's own business practices.

Technology Advances

- DEEP is working to make the best use of modern technologies to make it more convenient and efficient for the regulated community and the public to do business with the agency and to communicate important information to these audiences.

- Online offerings through DEEP's EZ-File system were expanded and now provide the opportunity to obtain several permits electronically and also to file various reports and information that are required.

- DEEP expanded the use of social media by various programs, to reach more people with important news and information.