



Resilience Roundup

September 1, 2015

A service of the Connecticut Institute for Resilience and Climate Adaptation (CIRCA)

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- September 21, 2015 - CIRCA Webinar for Municipal Resilience Grant program (Sign up via email at CIRCA_MunicipalFunds@uconn.edu)

- October 15, 2015 - CIRCA Municipal Resilience Grant [program](#) applications due. Up to \$100K
- October 21, 2015 - Connecticut Association of Flood Managers 2nd Annual Conference
- December 1-2, 2015 - Living Shorelines: 1st National Technology Transfer Meeting and Regional [Workshops](#) RAE and CIRCA Sponsored in Hartford, CT

CIRCA in the News

[August 18, 2015 - Connecticut and pope on same page, CT Post](#)

Pope Francis has now added his influential voice to those calling for action to address Climate Change. This summons should be well received in Connecticut - where we are already at work to address what the Pope called "one of the principal challenges facing humanity in our day."

In his Encyclical, the Pope concluded - as have the vast majority of climate scientists - that "most global warming in recent decades is due...mainly as a result of human activity." The Pope also recognized the "grave implications: environmental, social, economic, political..." we are already seeing from changing weather patterns.

In Connecticut, our approach to the Climate Change mirrors the Pope's analysis. We are focused on both mitigation - or the reduction of harmful greenhouse gas emissions - as well as adaptation - resiliency strategies to help our state and its residents better withstand climate impacts. Connecticut's long-term goal for emissions reductions is an ambitious one - to reduce greenhouse gas emissions to 80 percent below 2001 levels by 2050. Governor Malloy recently established the Governor's Council on Climate Change - with representatives from key state agencies, business and industry, and environmental advocacy groups - to develop solutions needed to achieve this target.

The new Council has a strong foundation to build on. Through programs that are bringing cleaner, cheaper, and more reliable power to our homes and businesses - and growing our economy and creating new jobs - we've already reduced emissions to 10 percent below 1990 levels. This means we've met a 2020 interim goal well ahead of schedule.

Greenhouse gas emissions are primarily created from the burning of fossil fuels like coal, oil, natural gas and gasoline that are used to produce electricity, heat buildings, power industrial processes and provide transportation. To reduce our reliance on these fuels and cut the volume of emissions, Connecticut is:

* Reducing demand for electricity and heat through energy efficiency. We doubled funding for cost-effective programs, cutting bills by more than \$81 million in 2014 alone and cutting emissions significantly.

* Reducing the need to burn fossil fuels by deploying clean, renewable power systems, like solar. In the past few years we've triggered a 10-fold increase in the amount of renewable power generated in-state. We've also signed contracts for renewable power to be generated from large-scale, regional projects, such as a 250-megawatt wind farm in Maine.

* Actively participating in the nation's first successful market-based program to reduce greenhouse gas emissions at electric power plants. Known as the Regional Greenhouse Gas Initiative, or RGGI, this program has already cut emissions from power plants in our state by 40 percent since 2005 - and provided more than \$100 million dollars to invest in efficiency and renewable programs, all while our economy grew. In the transportation sector the fuel burned by the millions of vehicles on our roads is responsible for about 40 percent of Connecticut's greenhouse gas emissions. We are promoting the sale and use of alternative vehicles - such as electric cars - that produce dramatically lower or zero emissions. In addition, an ambitious transportation initiative proposed by Governor Malloy offers road improvements that will reduce emissions through improved traffic flow and public transit projects that will get people out of their cars.

One important lesson we've learned is that innovations in financing are as important to our success as technological breakthroughs. Our first-in-the-nation Connecticut Green Bank is helping residents and businesses finance energy efficiency and renewable projects with reduced out of pocket expenses and low interest rates - making the payback from clean energy even more attractive. The Green Bank is accomplishing this by using scarce public dollars to leverage private capital.

On the other side of the ledger, we are putting adaptation strategies in place to address the impacts of Climate Change that are already apparent - and which, despite mitigation efforts, will unavoidably increase in the near term. These strategies cover everything from land use, shoreline preservation, resilient

engineering, and policy and financing tools to protect natural resources, habitats and species. To move adaptation strategies forward, we've built a unique partnership with the University of Connecticut through the new Connecticut Institute for Resilience and Climate Adaptation - or CIRCA. CIRCA is focused on applied research that offers homeowners, businesses, municipalities and institutions realistic and environmentally sound programs to lessen the negative impacts of Climate Change. Make no mistake about it: climate change is a reality that is already here. We see it in the warming waters and changing fish species of Long Island Sound and in the new insects and invasive plant and animal species on our lands and lakes. We also see it in changing precipitation patterns and we saw it in the destructive force of recent major storms that we will all long remember. As Pope Francis stressed in his statement, we have a moral imperative to act now for the sake of our planet and future generations. Given the political deadlock and the power of climate-deniers on the national scene and in many states, Connecticut is serving as a beacon of hope. We are showing that strategies to reduce greenhouse gas emissions can work - and will grow our economy, not undermine it - and that strategies to adapt to a changing climate can strengthen our communities and protect our citizens, our infrastructure investments, and our precious natural resources. Robert Klee is the Commissioner of Connecticut's Department of Energy and Environmental Protection and the Chairman of the Governor's Council on Climate Change.

Local and State New Clips

[August 25, 2015 - Attorney: Stonington not obligated to reimburse residents for loss of flood discount. The New London Day](#)

Stonington - Town Attorney Thomas Londregan has informed the Board of Selectmen that the town has no legal obligation to reimburse property owners who lost their annual 5 percent flood insurance premium discount and to do so would be in violation of the town's authority.

At a Board of Selectmen meeting last month, some Mystic residents demanded that the town reimburse them for the loss or possibly face a class action lawsuit.

One of them, Thomas Norris, has sent a letter to the selectmen containing a proposed resolution that would reimburse property owners for the loss of the discount, for which the town has accepted responsibility.

"While it may be that the town is not 'legally' responsible for the loss, the town has an ethical and moral obligation to do what is right and that is to reimburse the blameless policy holders for their financial loss," he wrote.

Norris' resolution would require the town to reimburse property owners for their loss now and in the future if the town cannot get the discount reinstated by Nov. 1.

Property owners are expected to raise the issue with selectmen when the board meets Wednesday night at 7 p.m. at the high school.

In his letter, Londregan noted that participation in the flood discount program is voluntary by municipalities and the town could have discontinued its participation any time if it decided the time and cost of the program had become a burden.

He pointed out that state statutes and case law generally hold that municipalities are not liable for discretionary actions.

"Since the Community Rating System is a voluntary incentive program, I can find no duty for the Town to participate," he wrote. "Since participation is not mandatory but discretionary, I find no liability for the town for not remaining in the program." ...

[August 24, 2015 - Coast Guard's Top Officer In Katrina Response Takes On New Leadership Role At Academy. Hartford Courant](#)

NEW LONDON - Former Admiral Thad Allen's legacy as the face of the Coast Guard during the Hurricane Katrina rescue effort is lending strength to the Coast Guard Academy's renewed focus on creating leaders.

Allen, 66, who also had major roles in the response to the 9/11 terrorist attack and the Deep Horizon oil spill off the Gulf Coast, has been tapped to give a major address each year on the character of leadership to the Corps of Cadets.

In his new role, Allen gave his first speech last week, just in time to usher in the 10th anniversary of the defining episode of the modern Coast Guard: the rescue of more than 33,000 people from flood-ravaged New Orleans.

A decade after the storm, Allen said, the Katrina effort continues to influence training and helped the Coast Guard mature as a service.

He had arrived in New Orleans to find a rescue effort in disarray. Appointed by President George W. Bush as the lead federal official one week into the recovery effort, he simply started at the beginning to transform what had been a chaotic, haphazard effort epitomized by the horrendous conditions at the Superdome, where refugees from the deadly storm were gathered.

"The first week of the Katrina relief effort was a failure of the imagination," Allen said in an interview. "My job was to go to New Orleans, be accountable to the American public, cut the red tape, and improve the velocity of the response.

"They had lost the continuity of government," Allen continued. "There was no way to coordinate police, fire, and medical response. There wasn't a central organizing structure.

"On my arrival, we re-established those elements. We organized the city into sectors so the local government could carry out its legal responsibilities."

And the Coast Guard could concentrate on what it does best, deploying 62 aircraft, 42 cutters, 131 small boats, more than 5,000 Coast Guard personnel, and rescuing an estimated 33,735 people, including 138 displaced by Hurricane Rita later that season.

Katrina killed 1,833 people and caused \$75 billion in damage in New Orleans and along the Mississippi coast, yet many had predicted the levees were vulnerable and a disaster of that magnitude was inevitable.

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[August 23, 2015 - Warming Temperatures Threaten Lobsters in Southern New England. WNPR](#)

Fishermen in the Gulf of Maine have been harvesting lobsters at record highs. That's in contrast to fishermen in Southern New England, where there has been a sharp decline in the lobster population since the late 1990s.

A report (pdf) by Atlantic States Marine Fisheries Commission attributes that to climate change.

Mark Gibson, deputy chief of the marine fisheries division at the Rhode Island Department of Environmental Management's Division of Fish & Wildlife, said warming waters in Southern New England are prompting lobsters to crawl north. But there's more than that happening.

"There are also increased mortality rates and reduced growth rates of those animals that are remaining in the Southern New England area," said Gibson. "So not only are they dying faster, but they are growing slower, which has a feedback loop. The smaller you are, the more vulnerable you are to predators. It's a double whammy-not only [are they] dying faster but growing slower and predisposing yourself to other risks."

Risks like shell disease, said Gibson.

"Water temperatures can influence lobsters' vulnerability to shell disease and also they cite evidence that shell disease itself increases the mortality rate of lobsters and reduces their growth rate," said Gibson.

The number of days when water temperatures in Southern New England are above 68 degrees is

increasing, threatening lobsters. But the number of days in the ideal cold range in the Gulf of Maine is increasing.

Regulators anticipate climate change will continue to affect lobster health and its distribution in the region in the future.

[August 22, 2015 - That sinking feeling: No support for flood wall concept from shoreline residents, Fairfield Citizen Online](#)

Building a wall to curb flooding at Fairfield Beach during severe storms failed to win waves of support at Thursday's forum hosted by the town's Flood and Erosion Control Board.

The wall was proposed at an elevation of 12 feet and would run from the Jacky Durrell Pavilion to the town's wastewater treatment plant outfall, or between 345 and 1094 Fairfield Beach Road. By comparison, Fairfield Beach Road now is mostly at an elevation of six feet and Penfield Beach at an elevation of about 10 feet, according to Albert F. Grauer, the board chairman.

In one scenario, the wall would run along the beach in front of homes closest to the shoreline. In the other scenario, it would run behind those homes. Grauer said town officials estimate that a wall between the Jacky Durrell Pavilion and wastewater treatment plant outfall would cost approximately \$5 million.

"I would strongly object to it," said Jane Purcell, who owns a home in the 900 block of Fairfield Beach Road. Purcell said the wall likely would cause property values in the area to decline and that it wouldn't be very effective because her property is around elevation 12 and water surged above it during Superstorm Sandy in October 2012.

Paige Herman, president of the Fairfield Beach Residents Association and a resident of Fairfield Beach Road for 68 years, suggested instead that homeowners build sand dunes in front of their properties and predicted "a lot of opposition" to construction of a wall.

Herman said she had a sand dune in front of her home before Sandy struck and credited it with absorbing the storm's first tidal blow. "I think a sand dune that is properly vegetated is a strong thing," she said. "People say it's a Band-Aid, but it's a Band-Aid I was glad to have for Superstorm Sandy."...

[August 20, 2015 - Feeling the heat: Earth in July was hottest month on record, The New London Day](#)

Washington - Earth just keeps getting hotter. July was the planet's warmest month on record, smashing old marks, U.S. weather officials said.

And it's almost a dead certain lock that this year will beat last year as the warmest year on record, they said.

July's average temperature was 61.86 degrees Fahrenheit, beating the previous global mark set in 1998 and 2010 by about one-seventh of a degree, according to figures released Thursday by the National Oceanic and Atmospheric Administration. That's a large margin for weather records, with previous monthly heat records broken by a 20th of a degree or less.

"It just reaffirms what we already know: that the Earth is warming," NOAA climate scientist Jake Crouch said. "The warming is accelerating and we're really seeing it this year."

NOAA records go back to 1880. Separate calculations by NASA and the Japanese weather agency also found July 2015 to be a record.

The first seven months of 2015 were the hottest January-to-July span on record, according to NOAA. The seven-month average temperature of 58.43 degrees is 1.53 degrees warmer than the 20th-century average and a sixth of a degree warmer than the old record set in 2010. ...

[August 19, 2015 - 60 Years After Flood, Winsted Works Toward Economic Growth, Hartford Courant](#)

WINSTED - The Flood of 1955, which occurred 60 years ago this week, radically re-shaped downtown Winsted, as the south side of Main Street was wiped away by the force of the waters.

About 170 of 200 businesses built along the Mad and Still rivers were destroyed. The town suffered more than \$30 million worth of damage. The street itself was torn apart, gouged to a depth of 10 feet.

"The buildings that were on the riverside, almost all of them hung partly or completely over the river," said Larry Marolda, a life-long town resident who was 9 at the time of the flood.

The economy of Winsted was also altered dramatically that day.

Both Marolda and Town Historian Milly Hudak, who also lived through the flood, remember a very different downtown before the cataclysmic event.

"The downtown was extremely busy every day. On the weekends, Friday night - when the stores used to be open on Friday night - I mean, everyone in town was down there doing their shopping because you buy just about anything you needed for yourself and your family right on Main Street, Winsted," said Hudak. "You know, shoes and clothing and groceries and hardware, everything was available."

Said Marolda: "People just proceeded slowly up and down, and of course there were sewers on either side. And it was just a much different town. A guy about 10 years older than me listed something like 35 or 40 little corner stores, because back in the day in a mill town like Winsted, most people didn't drive."

In the decades following the flood, the town has searched to find a way to replace this concentration of stores in the downtown area.

"It had a tremendous impact on the economy. It wiped out every business on the river side of Main Street, in addition to a great deal of destruction on the buildings on the other side of Main Street," said Hudak. "A great deal of it did not come back, as you know by riding on Main Street today. Some of the businesses did try to come back, but the loss of business after the flood was never 100 percent restored."

The future of commerce in Winsted - its' prospective economic niche - is uncertain.

Marolda hopes that the center of town can become a commercial destination for people visiting the area, akin to Great Barrington, Massachusetts. ...

[August 18, 2015 - As Lobster Population Shifts North, Connecticut Industry Struggles. Hartford Courant](#)

PORTLAND, Maine - The lobster population has crashed to the lowest levels on record in southern New England while climbing to heights never before seen in the cold waters off Maine and other northern reaches - a geographic shift that scientists attribute in large part to the warming of the ocean.

The trend is driving lobstermen in Connecticut and Rhode Island out of business, ending a centuries-old way of life.

Restaurant diners, supermarket shoppers and summer vacationers aren't seeing much difference in price or availability, since the overall supply of lobsters is pretty much steady.

But because of the importance of lobsters to New England's economy, history and identity, the northward shift stands as a particularly sad example of how climate change may be altering the natural range of many animals and plants.

"It's a shame," said Jason McNamee, chief of marine resource management for Rhode Island's Division of Fish and Wildlife. "It's such a traditional, historical fishery."

In 2013, the number of adult lobsters in New England south of Cape Cod slid to about 10 million, just one-fifth the total in the late 1990s, according to a report issued this month by regulators. The lobster

catch in the region sank to about 3.3 million pounds in 2013, from a peak of about 22 million in 1997.

The declines are "largely in response to adverse environmental conditions, including increasing water temperatures over the last 15 years," along with continued fishing, the Atlantic States Marine Fisheries Commission said in a summary of the report.

[August 16, 2015 - Millions To Be Spent To Protect Sewage Plants From Effects Of Climate Change, Hartford Courant](#)

HARTFORD - Experts say that more than half of Connecticut's 88 sewage plants may be at "high risk" for flooding because of the increasing likelihood of major climate-change-related storms and rising sea levels.

The danger is that stormwater could inundate the plants, damage electrical systems and other vital controls and result in raw or partially treated sewage being released into streams, rivers and Long Island Sound.

That's exactly what happened in 2012 during Storm Sandy, when about 24.3 million gallons of sewage overflowed from Connecticut wastewater systems, according to some estimates.

Concerned state lawmakers approved \$20 million this year for projects designed to protect sewage plants and other key infrastructure like roads and bridges. The money will also be used to create or preserve wetlands and dunes along the shoreline, which are important features guarding against storm surges. That's in addition to the \$378 million approved by the legislature this year in low-interest loans and grants to municipalities to improve sewage treatment systems.

Most climate scientists expect extreme storms like Sandy, a "superstorm" that caused an estimated \$50 billion in damage to the East Coast, to become more common as average temperatures increase and sea levels rise.

Connecticut officials are taking those warnings seriously.

"I think we have to," said William Robinson, acting director of the Bridgeport Water Pollution Control Authority. "Sandy proved the vulnerability [of sewer plants] all over the East Coast."

As a result of Sandy's storm surges, Bridgeport's two treatment facilities released more than 19.5 million gallons of partially treated sewage into Long Island Sound, according to a 2013 report by the environmental group Climate Central. Sandy triggered overflows from at least 17 different wastewater treatment plants and sewer systems along the state's shoreline, the Climate Central report found.

Connecticut got off easy. Sandy's greatest impact on sewage overflows was in New Jersey and New York. The Climate Central report estimated that 11 billion gallons of sewage was released by the storm, enough to bury all of Central Park in sludge 41 feet high.

"We sort of dodged a bullet with Sandy," said Leah Schmalz, program director for the nonprofit Connecticut Fund for the Environment and its Save the Sound program. She said the massive storm caused significant damage in Connecticut, but was also a clear danger signal about how much worse it could be if the state doesn't take action.

Storm Surges

In recent decades, Connecticut has spent about \$2.5 billion in state and federal money on building and improving wastewater treatment systems, according to the state Department of Energy and Environmental Protection.

Much of the \$20 million in new state bond money is expected to go toward protecting many of the improved sewage facilities from storm flooding. Deciding where and how that money should be used won't be easy. State officials say they are still deciding criteria for distribution of the funds and warn that

the money isn't likely to start flowing for such projects until 2016.

Many sewer plants are gravity-fed operations that, by necessity, are in low-lying areas vulnerable to flooding. Protecting plants can involve building berms, providing alternative electrical sources and changing the location of key control units and pumping stations.

Denise Ruzicka, director of DEEP's planning and standards division, warns that the storm-related problems facing Connecticut's sewage plants are very "case specific." Shoreline facilities need to worry about storm surges off Long Island Sound. Some inland plants along the Connecticut River could be vulnerable to river floods, while others, like the one in Hartford, are protected by dikes and berms.

Some communities, including Bridgeport, New Haven, Hartford and Norwich, have "combined sewer overflows" where raw sewage and rainwater flow into the same system. Waste treatment plants can normally handle the combined flow, but can be overwhelmed by massive storms like Sandy, and that's when untreated or partially treated sewage can be released into waterways.

Schmalz said DEEP officials have "done a phenomenal job to get those sewage treatment plants upgraded." But she added that more work needs to be done to make sure that storm overflows don't create massive problems. "One billion gallons of raw sewage still makes its way to Long Island Sound every year from those combined sewage overflow systems," Schmalz said.

A "seat-of-the-pants" evaluation done last year by DEEP experts listed 13 of the 14 sewage treatment plants directly on Long Island Sound as "high risk" for flooding. Of the 15 wastewater treatment facilities along the Connecticut River, nine were considered highly vulnerable to storm-flood scenarios. Ruzicka said one of the tasks the department needs to complete is a detailed "vulnerability assessment" for the most at-risk sewage plants.

Work to protect vulnerable wastewater treatment facilities using previously approved state and federal funding is already underway in places like Fairfield.

Fairfield Improvements

Fairfield's sewage plant is about half a mile from Long Island Sound, and the storm surge from Sandy flooded some of the facility's tanks, said Ed Boman, the town's assistant director of public works.

Boman estimated that "a couple million gallons" of partially treated sewage was released during the storm. The experience pushed Fairfield officials to apply for state and federal funding to better protect the plant, and they plan to spend about \$4.8 million on the project.

About \$2.3 million will be used to build a 1,500-foot-long berm, at least 6 feet high, to protect against storm surges, Boman said. Another \$2.5 million will go toward creating a microgrid with solar panels and natural gas- and diesel-powered generators so the plant can operate on self-generated electricity for at least 60 days.

Robinson said Bridgeport will need several million dollars in grants to increase protection for its two sewage plants. When those plants were built, they were above the known flood plain, according to Robinson, but rising sea levels have forced new estimates on how high storm surges can reach.

"The Federal Emergency Management Administration has changed the elevation on their flood maps," Robinson explained, which means those Bridgeport plants are now seen as in greater danger from storms like Sandy.

One of the Hartford-area treatment plants included in the "high risk" category on DEEP's preliminary flood warning list is in South Windsor. The facility on Vibert Road stands on the very edge of the Connecticut River flood plain.

Fred Shaw, the town's water pollution control superintendent, said South Windsor began making flood-protection improvements to the plant back in the 1980s after Hurricane Gloria. That storm surrounded the sewer plant with flood waters. "We were an island," Shaw recalled. Using grant money, South Windsor

built a series of berms around the plant, and changed storm drains to prevent water from backing up into the facility's buildings. Shaw said a recent engineering evaluation determined that the plant remains "adequately protected, even if we are right at the edge of the flood plain."

There is also state funding now being made available for "green infrastructure" projects intended to absorb stormwater and heavy rain to keep them from inundating sewer plants and drainage systems.

Such projects include everything from urban gardens on roofs and open areas to soak up rainwater, "bio-swales" and berms along streets and parks to contain or divert flooding, Schmalz said.

Projects to expand or create wetlands and dune areas that act as "natural water absorbers and buffers" will also be under consideration for funding, said Jesse Stratton, DEEP's director of policy.

In a world where climate change is becoming a harsh reality, officials are looking for any way to adapt and minimize the damage.

Robinson puts it this way: "We have to protect ourselves the best we can."

[August 12, 2015 - Plainville Gets \\$1.3 Million Grant To Complete Razing Homes In Floodplain, Hartford Courant](#)

PLAINVILLE - The town has received a new \$1.3 million federal grant that will allow it to purchase and demolish nine homes in a neighborhood by the Pequabuck River that's prone to flooding.

The grant was announced Wednesday.

The nine homes are on Robert Street Extension and Norton Place Extension. The neighborhoods are in a floodplain and frequently flood during heavy rain. Thirteen homes have already been demolished and one more is likely to come down soon. Previous federal and state grants paid for the demolition.

Once the nine homes are gone, the neighborhood will only have two homes left standing, with a total of 23 demolished, Town Manager Robert Lee said Wednesday.

"Those two homeowners have declined to participate," he said. "It's a voluntary program."

The \$1.3 million grant comes from the Federal Emergency Management Agency. U.S. Rep Elizabeth Esty, D-5th District and Sens. Richard Blumenthal and Christopher Murphy issued a joined statement about the award. ...

National News Clips

[September 1, 2015 - Obama to Call for More Icebreakers in Arctic as U.S. Seeks Foothold, New York Times](#)

ANCHORAGE - President Obama on Tuesday will propose speeding the acquisition and building of new Coast Guard icebreakers that can operate year-round in the nation's polar regions, part of an effort to close the gap between the United States and other nations, especially Russia, in a global competition to gain a foothold in the rapidly changing Arctic.

On the second day of a three-day trip to Alaska to highlight the challenge of climate change and call for a worldwide effort to address its root causes, Mr. Obama's proposals will touch on one of its most profound effects. The retreat of Arctic sea ice has created opportunities for shipping, tourism, mineral exploration and fishing - and with it, a rush of marine traffic that is bringing new difficulties.

"Arctic ecosystems are among the most pristine and understudied in the world, meaning increased

commercial activity comes with significant risks to the environment," the White House said in a fact sheet issued in advance of an announcement by Mr. Obama in Seward, where he planned to hike to Exit Glacier on Tuesday and tour Kenai Fjords National Park by boat.

"The growth of human activity in the Arctic region will require highly engaged stewardship to maintain the open seas necessary for global commerce and scientific research, allow for search and rescue activities, and provide for regional peace and stability," the statement said.

[August 31, 2015 - Penn State report: Effects of climate change to accelerate in Pennsylvania, Pittsburgh Post-Gazette](#)

Hot enough for ya? It's a question Pennsylvanians will hear more and more as global climate change causes temperatures to climb at an accelerated rate and the commonwealth begins to sweat things like air and water quality, insect-borne diseases and more extreme weather events, according to a report from Penn State University.

The globe's changing climate will boost temperatures across the state, causing widespread economic, environmental, public health and even recreational changes, said James Shortle, professor of agricultural and environmental economics and lead author of the multidisciplinary report.

"The scientific data is clear," said Mr. Shortle, who also heads the Environment and Natural Resources Institute at the university. "Climate change is happening, and there will be impacts to Pennsylvania."

[August 28, 2015 - Obama says Katrina strengthened the nation's response to catastrophes, ClimateWire](#)

President Obama described New Orleans as a symbol of progress in the nation's handling of natural catastrophes two days before Hurricane Katrina's 10th anniversary. But after spending billions of dollars to rebuild, some experts warn that government policies still lack the wherewithal to minimize the economic and social damage of large storms.

Speaking in the Andrew P. Sanchez Community Center located in the city's Lower 9th Ward, Obama eulogized the victims of the Category 3 hurricane and confronted continuing racial and economic inequalities in perhaps the hardest-hit neighborhoods of New Orleans. He called it an "epic struggle" and pointed to the impacts of climate change as a rising threat. ...

A report released this week by the Georgetown Climate Center says Katrina sparked new efforts to build in stronger ways that could buttress the city against future cataclysms. But it's not all good news. Limitations within the federal government and clumsy requirements in laws overseeing emergency funding are preventing cities from going further.

After Katrina, Congress made key improvements to disaster funding. It removed language that encouraged communities to rebuild facilities to the same standards that allowed them to be damaged in the first place. And cities can now lump numerous schools or road projects together, helping them interconnect their assets when rebuilding. Before, each project had to be constructed independently.

But obstacles to resilience remain, the Georgetown report says. So-called green infrastructure to reduce flooding, like permeable surfaces and designing some areas to flood in order to slow runoff, is considered one way to reduce subsidence and limit damage from flooding.

But federal policies tend to favor hardened infrastructure. Funding for stormwater systems requires that the project results in at least \$1 of benefits, or avoided losses, for each dollar invested. But the Georgetown report says that federal policies underestimate the benefits of green infrastructure by failing to capture the value of reduced subsidence or improved water quality.

"Absent further reform, these obstacles will continue to bedevil efforts to rebuild communities more

sustainably in the wake of future disasters," the report says.

[August 27, 2015 - Katrina: Lasting Climate Lessons for a Sinking City, Climate Central](#)

This week marks a decade since Hurricane Katrina spun violently toward the coasts of Louisiana and Mississippi, ravaging both states when it barreled ashore on Aug. 29, 2005.

Katrina taught New Orleans and the Gulf Coast many lessons about how vulnerable the region is to natural disaster, especially to sea level rise and storm surge made worse by climate change. But a more complex, man-made problem also threatens New Orleans and it was captured in the indelible images taken in the aftermath of the hurricane, when miasmal flood waters submerged up to 80 percent of the city: as sea levels rise, the Crescent City is sinking

New Orleans flooded because the levees protecting it broke after the hurricane struck. The water stayed put, however, because the city is in a bowl dipping below sea level - and that bowl is getting deeper, sinking at a rate of up to 4 feet a century, primarily because the surrounding swamps were drained so the metro area could be expanded.

Accounting for the land's subsidence, the sea level in southeast Louisiana is expected to rise by more than 20 inches by 2050. That, coupled with increased tropical storm intensity driven by climate change - and the inexorable disappearance of the coastal wetlands that act as a storm surge buffer - has put New Orleans in a precarious position in a warming world.

[August 27, 2015 - Warming Seas Rising Faster Than Predicted, NASA Scientists Say, Bloomberg](#)

Global sea levels are rising faster than predicted as a result of warming temperatures driven by burning fossil fuels, according to researchers who now say an increase of at least 3 feet (1 meter) is likely "unavoidable."

The world's oceans, expanding due to added heat and melting ice, have risen an average of almost 3 inches since 1992, with some areas seeing an increase of as much as 9 inches, NASA scientists said at a briefing Wednesday that cited new satellite data. Heat already stored in the sea means further sea level rise is almost certain, although how quickly remains unclear, according to a statement from the U.S. National Aeronautics and Space Administration.

"People need to be prepared," Josh Willis, an oceanographer at the agency's Jet Propulsion Laboratory in Pasadena, California, said on a conference call. "We're going to continue to have sea level rise for decades and probably centuries."

[August 26, 2015 - NOAA issues first warming strategy, E&E News](#)

The National Oceanic and Atmospheric Administration released its first-ever "climate science strategy" today, providing a blueprint for how fishery managers will tackle climate change over the next five years.

The agency released the draft version of the strategy earlier this year with little fanfare (Greenwire, Jan. 23). But today's final version drew immediate criticism from House Natural Resources Chairman Rob Bishop (R-Utah), who suggested that the strategy could hurt the U.S. fishing industry by putting too much emphasis on climate change. The White House "has created another regiment to carry out its radical climate change strategy," Bishop said in a statement.

"With zero scientific justification, NOAA's plan has underhandedly changed the way our fisheries have been successfully managed for decades," he said. "Despite the lack of data, it elevates climate change to its top priority -- completely upending the tested, measurable standards in assessing our nation's fisheries."

But NOAA's National Marine Fisheries Service characterized the strategy as a way to help regional fishery managers respond to climate change's effect on the marine resources that local communities and fishermen depend on. The strategy identifies the risks -- such as the loss of ocean-dependent jobs -- and lays out seven steps for the next five years, including selecting "robust strategies" for managing fisheries under a changing climate.

[August 25, 2015 - Obama to speak 'frankly' on 11-day climate change tour, USA Today](#)

President Obama will log more than 14,000 miles on Air Force One over the next 11 days in a climate change tour that will take him from the desert West to the Gulf of Mexico to the Arctic Circle.

In Las Vegas, New Orleans and in the small Alaska fishing village of Kotzebue, Obama will deliver a three-pronged message: The United States needs to increase the use of alternative energy sources, make coastal communities more resilient and urge a global response to climate change.

The three major climate-themed events are part of a conscious effort by Obama to speak "frequently and frankly" about the issue over his second term, said Brian Deese, a senior Obama adviser who handles environmental and energy issues for the White House. They come three weeks after the White House launched a plan for cutting greenhouse gas emissions by 32% over 25 years.

[August 19, 2015 - Rebuilt confidence in New Orleans flood controls fuels rebuilding, Reuters](#)

When Angele Givens looks around her neighborhood in the Gentilly section of New Orleans, she is struck by the contrast with 10 years ago, when Hurricane Katrina triggered floods that filled her home and tens of thousands of others with water. Today, more than 80 percent of the structures in her Vista Park neighborhood have been renovated or rebuilt, and work is underway on others. But the area may never have staged its comeback without a rebuilding of confidence in local flood protection, said Givens, president of her neighborhood's improvement association.

"I never worried about flooding before Katrina, but after the storm, we had to ask whether it made sense, financially, to come back," she said. Billions of dollars of work carried out by the U.S. Army Corps of Engineers, including the construction of a massive surge barrier just east of the city, helped answer that question, Givens said. "They have done a lot of work on the levees and the canals," she said. "I think our odds against floods are significantly improved."

The 2005 flood that inundated 80 percent of New Orleans and killed 1,572 people began hours after Katrina had blown through the city. Water forced by the storm into inland canals overwhelmed levees and broke through floodwalls. After Katrina, Congress authorized spending more than \$14 billion to beef up the city's existing flood protection infrastructure and to build a series of new barriers. Despite the enormous outlay, there are no guarantees. Plans to bolster flood protection, drawn up years ago, never addressed the wild card of climate change, which most experts now acknowledge will lift sea levels and trigger more intense storms.

Protecting against the potential devastation of those changes will require the building of more artificial barrier islands and wetlands south of New Orleans, experts say, a work in progress that will take years to complete. Still, in the past 10 years, the Corps has bolstered 350 miles of levees and upgraded 70 pumping stations.

Announcements

USGS Handbook on Sea Level Rise science and models for non-scientists [released](#).

Coastal managers and planners now have access to a new U.S. Geological Survey handbook that, for the first time, comprehensively describes the various models used to study and predict sea-level rise and its potential impacts on coasts.

September 15, 2015 - Applications due for the third round of funding through the Matching Funds [Program](#). The Connecticut Institute for Resilience and Climate Adaptation (CIRCA) has made up to \$100,000 available for matching funds for projects that will assist Connecticut towns and cities adapt to a changing climate and enhance the resilience of their infrastructure.

CIRCA will consider requests from Connecticut municipalities, institutions, universities, foundations, and other non-governmental organizations. To be funded, a successful Matching Funds request must have a commitment of primary funding within 6 months of the CIRCA award announcement, or have received a waiver from the CIRCA Executive Steering Committee. CIRCA Matching Funds will provide up to 25% of the primary funder's contribution other than municipal or State of Connecticut funds to enhance the likely success of project proposals that advance CIRCA research and implementation priorities. Requests are due to CIRCA by September 15, 2015.

Those requesting Matching Funds should consult the CIRCA office via email at CIRCA_matchingfunds@uconn.edu with any questions. Matching Fund request forms can be found at <http://circa.uconn.edu/funds.htm>. All requesting funds must complete the form in its entirety on or before September 15, 2015. Matching Funds requests will be accepted on a rolling basis.

Notification of award: Requests will be acted upon every two months. The review will be held on September 15, 2015 and every two months thereafter.

September 17, 2015 - Municipal Forum sponsored by Institute for Sustainable Energy. Climate Change and Sustainability: Practical Solutions for your Municipality

When: Thursday September 17, 2015; 9am-4pm

Where: Middlesex Community College Middletown, CT

Learn from your peers, connect with tools and resources. Hear municipal success stories

If you have any suggestions of great success stories to include in the forum or would like more information. Please email ise@easternct.edu

Registration Now Open: http://www1.easternct.edu/sustainenergy/upcoming_events/

September 21, 2015 - Sign up via email (CIRCA_MunicipalFunds@uconn.edu) for the Municipal Resilience Grants program webinar to get all of your questions answered before applications are due October 15, 2015.

October 15, 2015 - CIRCA Municipal Resilience Grants [program](#) applications due.

CIRCA is requesting grant proposals from municipal governments and councils of government for initiatives that advance resilience, including the creation of conceptual design, construction (demonstration projects or other) of structures, or the design of practices and policies that increase their resilience to climate change and severe weather. This program is focused on implementation. The CIRCA Executive Steering Committee has made up to \$100,000 in funds available to municipal governments and councils of government for the execution of resilience initiatives.

Project proposals should develop knowledge or experience that is transferable to multiple locations in Connecticut and have well-defined and measurable goals. Preferable projects will be implemented in no more than an 18-month time frame. Preference will also be given to those projects that leverage multiple funding sources and that involve collaboration with CIRCA to address priority areas identified in the program materials found [here](#).

Eligible applicants are all Connecticut municipalities and councils of government. Partnerships are encouraged.

Proposal Deadline: October 15, 2015 by 4:00 PM.

October 21, 2015 - Save the Date! Connecticut Association of Flood Managers 2nd Annual Conference
Where: Water's Edge Resort and Spa, 1525 Boston Post Road, Westbrook, CT 06498

Time: 8:00 A.M. to 5:00 P.M.

<http://ctfloods.org/events/>

December 1-2, 2015 - Living Shorelines: Sound Science, Innovative Approaches, Connected Community 1st National Technology Transfer Meeting and Regional [Workshops](#)

When: December 1-2 2015

Where: Hilton Hartford Hartford, CT

Restore America's Estuaries, in partnership with the Connecticut Institute for Resilience and Climate Adaptation, is pleased to announce a first-of-its-kind living shorelines event! This Summit - Living Shorelines: Sound Science, Innovative Approaches, Connected Community - will feature nationally-relevant issues and discussions along with region-specific workshops.

Whether you call them "soft shorelines," "living shorelines," "soft armoring," or "soft stabilization projects," you belong at this gathering!

Follow on twitter @LSSummit2015

Contact Jeff Benoit - jbenoit@estuaries.org

Any Questions? Contact Suzanne Simon - ssimon@estuaries.org

The *Resilience Roundup* highlights [CIRCA's](#) presence in the news, provides links to recent local/state/national news articles related to resilience and adaptation, and announces upcoming events and seminars.

The Connecticut Institute for Resilience and Climate Adaptation's (CIRCA) mission is to increase the resilience and sustainability of vulnerable communities along Connecticut's coast and inland waterways to the growing impacts of climate change and extreme weather on the natural, built, and human environment. The institute is located at the University of Connecticut's Avery Point campus and includes faculty from across the university. CIRCA is a partnership between UConn and the Connecticut Department of Energy and Environmental Protection (CT DEEP).

circa.uconn.edu

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