Updated U.S. Climate Data Shows Rise in Average Temperatures Across Most of the Nation

*Nearly all parts of the country saw average temperatures increase*

PUBLISHED ON May 16, 2021

ATHENS, Ga. — Day-to-day swings in temperature are an accepted part of the weather in many areas around the country. However, when 30-year averages of daily temperature fluctuations from thousands of stations around the country indicate a steady change in average temperatures over time, there are tangible implications for agriculture, energy consumption and many other aspects of daily life.

The National Oceanic and Atmospheric Administration (NOAA) released its [new 30-year average U.S. Climate Normals](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZyQcz3p5Y123R5JBqDQPTj8uTU9cU_o5poDJFgSEy8c0gf5x9DM6jv9BIY4Z39v3hHcZ2if4vcPZmnJXWEqzeaqWeGJBB_X1m0_pMVJ5nATQBK5UimVRjvF2vHmVDRM0zx&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==) for the 1991-2020 period on May 4, and nearly all parts of the country saw average temperatures increase. The only exception was a small area of the north central Great Plains, which saw overall average temperatures drop.

This is not surprising because of the rising temperatures we are seeing in the U.S. as well as the rest of the world, said Pam Knox, agricultural climatologist with University of Georgia Cooperative Extension. Director of the UGA Weather Network, Knox administers the [Climate and Agriculture in the Southeast](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZyHgqTfE4qTUQbI4qTEiyF7-3Pm_g8jO4MAZzfo2PnGHNTufb8DmM2UNzt5NpQLCYC6Vds6AQTm8FfQk1c4ebYgzlt65Omx9NpWHzj5D8AKjk=&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==) blog for UGA Extension and regularly reports on weather patterns and events that could impact the state’s agricultural producers.

“Due to global warming caused by increasing greenhouse gases in the atmosphere, temperatures here in the Southeast increased by between 0.25 and 0.75 degrees Fahrenheit,” according to the climate normals, Knox said. “The changes in precipitation varied quite a bit across the country. Generally, the West got drier while the East got wetter. Here in the Southeast most areas got wetter, with only a small area of southeastern Georgia that got slightly drier.”

The 30-year normals for temperature, precipitation, degree days and several other variables are updated once every ten years and now cover the period from 1991 to 2020. The previous set of normals was based on data gathered between 1981 and 2010. NOAA National Centers for Environmental Information (NCEI) generates the official U.S. normals every 10 years according to the requirements of the World Meteorological Organization and National Weather Service.

This [article](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZyhBd1tQxfgwtjmaF7nfuAcVROYzGeTT_rqCVdXzbNHs3YlItghbG9107prrDsQ-6Vb7e72baN7iew-iYWcsNdjnWdQYsHhItZZmzvC8py3rNUcboMMJrf1yBIiTzAHyPxOHMtsIdXBGs=&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==) from the NCEI describes the process of calculating the normals, which are gathered from observations at approximately 9,800 stations across the U.S. operated by the National Weather Service. An [interactive map](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZyWKtpOjNuszVPMFwlnWoWjTrvksFT9N3qt-5Es0GDuKi97nrvi60n2HaGElEwEKIXZHXSCpOQRV4kbtn2YrmUWD7KAZMrTvSOyTu2yXB-2CCLAJ2tedwuab1wRCbjhQXRGM0gkOh_5SBkvnxGgixb_8FZwienxXgU6usIdX9wtGx5zYcGx599EFmGbUDIlxHy3syJZ1nAIhtuBvfxuU4hNqNkuI_4LHU6WN1xQ5vG1EMHiBX3woIsrA==&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==) providing links to individual stations is available from the North Carolina Institute for Climate Studies, which is co-located with the NCEI in Charlotte.

“When you are averaging so many things together and you have a big change, that is really indicative of the problem,” said Knox. “When you think about weather, a change of 10 degrees from day to day is a short-term variation and may not seem like a big deal. (NCEI) is averaging the daily weather data at thousands of stations every year.”

By averaging data from stations in so many different areas, the data reduces errors caused by individual stations or localized temperature anomalies.

“Urban heat islands, like the one in Atlanta, are really a very small part of the total average. You can’t blame the overall increases in temperature on that. The majority of these stations are not in cities, they are in places like Brooklet, Georgia,” said Knox, referring to the southeast Georgia town of about 1,395 where one of the NCEI stations is located.

While the changes in overall average temperature may not be readily detectable, the changes have a cumulative impact on many economically important areas, she added.

“In some respects, it is not going to affect people on a daily basis, but it does affect the cost of energy, the kind of crops we grow, what it does to the ecosystem and what can survive — all things that are economically really important. It is changing and getting warmer decade by decade, and all of the things scientists have been saying about a warming climate are really coming true.”

As an example, peach trees in Georgia require a certain number of cooling hours over the winter to produce a good crop each year. When temperatures warm over a long time period, the gradual change can affect crop yields and producer revenues. If yields decrease significantly, producers may have to change the varieties they are planting, something that can cost thousands of dollars and influence market availability of certain crops.

“If you have to put a new tree in the ground, there are a lot of economic costs that go along with that. It can also make a big difference in food prices and in the livelihoods of farmers growing the food,” Knox said. “A lot of people are divorced from the process of what farmers have to do to get food to their tables.”

More information on the new climate normals is available on the [NCEI website](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZyhBd1tQxfgwtjmaF7nfuAcVROYzGeTT_rqCVdXzbNHs3YlItghbG9107prrDsQ-6Vb7e72baN7iew-iYWcsNdjnWdQYsHhItZZmzvC8py3rNUcboMMJrf1yBIiTzAHyPxOHMtsIdXBGs=&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==). Information on the UGA Weather Network can be found at [weather.uga.edu.](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZygpuivOO5_KmetwINNEC4BGO7dUeAE1c6QBGfNpfvbwakiKZjukgN2bvYiqs9GoJB1M_OQFK0_WEtrFDHzCua3w==&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==)–Maria M. Lameiras, University of Georgia

As Climates Change, Prepare for More Mosquitoes in Winter

*New study shows that mosquitoes can adjust to rapid changes in temperature. We know that mosquitoes can viral diseases that affect our game birds.*

PUBLISHED ON June 10, 2021

GAINESVILLE, Fla. — In many parts of the world, mosquitoes are a common summertime nuisance.But in places on the front lines of climate change, these disease-spreading insects may one day be a year-round problem, according to new research from the University of Florida.

“In tropical regions, mosquitoes are active all year, but that isn’t the case for the rest of the world. Outside of the tropics, winter temperatures cause mosquitoes to go into a kind of hibernation called diapause. We call these mosquitoes ‘cold bounded’ because their activity is limited by these lower temperatures,” said Brett Scheffers, senior author of the study and an assistant professor in the UF/IFAS wildlife ecology and conservation department.

“However, with climate change, we expect summers to get longer and winters to become shorter and warmer. What will that mean for those cold bounded mosquitoes? How will they respond?” Scheffers said.

To help answer those questions, the study’s authors conducted experiments with mosquitoes collected in and around Gainesville, a North Central Florida city on the dividing line between subtropical and temperate climates. [Their study is published in the journal “Ecology.”](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZyUGFHbmwEKtem9XrvvLaJ1e7n2TIdRHOazovztWvYImHGs9uiEO2c3A_UGyg66IQCG6xuOmT7C4Lo9wl9aAGbZT1l5MYRD8KmvBltzpFIKlMuKgvEI4QTJju2PdtYkkWWUOClPxnNMak=&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==)

The researchers compared how mosquitoes collected during different parts of the year responded to changes in temperature.

“We found that the mosquitoes in our study are what we call ‘plastic,’ meaning that, like a rubber band, the range of temperatures they can tolerate stretches and contracts at different times of year,” Scheffers said.

The researchers found that in the spring, when nighttime temperatures are still cold and daytime temperatures begin to warm up, mosquitoes can tolerate a larger range of temperatures. Come summer, when daily temperatures are warm, that range contracts. In autumn, when temperatures begin to cool off, the range stretches again, Scheffers explained.

“That tells us that as climate change makes our autumns and winters warmer, mosquitoes in more temperate regions are well prepared to be active during those times,” Scheffers said.

“Our results suggest that to better understand how well populations and species may be able to tolerate ongoing climate change, we need to measure species thermal responses across different times of the year,” said Brunno Oliveira, the study’s first author, who conducted the study while a postdoctoral researcher in Scheffers’s lab.

“This information would help us to deliver a more accurate representation of the temperature range a species can tolerate,” said Oliveira, now a postdoctoral research at University of California Davis.

For their experiment, the researchers collected the mosquitoes at more than 70 sites around Gainesville and the nearby UF/IFAS Ordway-Swisher Biological Station, a 9,500 acre research and conservation area located about 20 miles east of the city.

The scientists lured mosquitoes with special traps that emit carbon dioxide gas, the same gas that humans and animals exhale when we breath. To a mosquito, a strong whiff of carbon dioxide means a meal is nearby.

With these traps, the researchers caught more than 28,000 mosquitoes representing 18 species. From this collection, the scientists randomly sampled about 1,000 mosquitoes to test in the lab.

Each mosquito was placed in a vial that was then put in a water bath. Over time, the researchers changed the water temperature, increasing or decreasing the temperature inside the vials. The scientists monitored each mosquito’s activity, noting when mosquitoes became inactive, a signal that either the upper or lower temperature thresholds were met.

“It was surprising to see how well these little creatures could tolerate high temperatures during the experiments, often well above the mean ambient temperatures measured by the weather stations,” said Gécica Yogo, one of the study’s co-authors. Yogo helped conduct the study while she was research scholar trainee at UF as part of her master’s program at AgroParisTech in France. She is now a soil carbon engineer at INRAE, the French National Institute for Agriculture, Food and Environment.

The researchers say they don’t yet know what allows mosquitoes to adjust to rapid changes in temperature.

“Many people do not realize how quickly natural selection can act on short-lived animals,” said Daniel Hahn, professor in the UF/IFAS entomology and nematology department and a co-author of the study. “Whether the changes we are seeing in mosquito thermal properties are due to rapid natural selection across seasons, seasonal plasticity – much like a dog changing its coat — or a combination of both, is what we are working on now.”

The researchers say that insights from this study can help communities better prepare for the impacts of climate change as they relate to mosquitoes, which spread diseases that affect humans and animals.

“The more mosquito activity there is, the greater the risk of these diseases spreading. Knowledge is power, and knowing that mosquitoes will be more active for more of the year can inform how we get ready for climate change,” Scheffers said.

Peter Jiang, one of the study’s co-authors and an entomologist with City of Gainesville’s Mosquito Control division, said that residents play an important role in controlling mosquitoes now and in the future.

Simple actions can keep mosquito populations down, Jiang said.

“Neighbors are encouraged to empty, remove or cover any receptacle that would hold water — particularly old bottles, tin cans, junk and tires — repairing leaky pipes, outside faucets and screens, covering or turning small boats upside down, and, twice a week, changing water in wading pools, bird baths, pet dishes and vases holding flowers or cuttings,” Jiang said.

Residents looking to learn more about how to control mosquitoes can contact their local UF/IFAS Extension office or their municipal or county mosquito control program.

In addition to informing decision-making, studies like this one bring into focus an aspect of climate change now getting more attention.

“When we talk about how climate change might affect plants and animals, we are often talking about species moving to new areas because the conditions are changing — in other words, the arrival of something new. However, climate change will also affect species we live with right now, like highly flexible mosquitoes, and that’s another aspect to consider,” Scheffers said. —Samantha Murray, UF/IFAS

Benefits of Nipple Drinker Catch Tray

*Data suggests that catch trays do not contribute to Salmonella growth*

PUBLISHED ON June 9, 2021

TUCKER, Ga. — USPOULTRY and the USPOULTRY Foundation announce the completion of a funded research project at the University of Georgia in Athens, Georgia in which researchers examined the benefits of nipple drinker catch trays. The research was made possible in part by an endowing Foundation gift from Claxton Poultry and is part of the Association’s comprehensive research program encompassing all phases of poultry and egg production and processing. A brief summary of the completed project is provided below. A complete report, along with information on other Association research, may be obtained through USPOULTRY’s website, [www.uspoultry.org](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPpOuKvLGzU5Mp06qXoliKmpHk-8WiO8p7JQJ1Bvy8P0OBhc3e9TXSbPb1TP4X1NORRDKT1vIBn8A-GVuEDzspNB3Wyg9vYiJFw==&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==). The project summary is as follows.

Project #F085: Evaluation of a Drinker System With or Without Trays on House Litter Conditions, Bird Performance, Health and Welfare

(Michael Czarick, Department of Poultry Science, University of Georgia, Athens, Georgia)

Michael Czarick and colleagues at the University of Georgia Department of Poultry Science have recently completed a research project with the objective of evaluating the effect of catch trays on broiler water usage, litter moisture, water activity, footpad health and whether catch trays increase a bird’s exposure to Salmonella and/or Pseudomonas. Overall, the study indicated that catch trays did not affect bird water usage and may help maintain lower moisture and water activity in the litter underneath drinker lines. This data suggests that catch trays do not contribute to Salmonella growth.

The research [summary](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZybE6VtXrv0IyrggCBBLN1IAmHkgjHaOHf6NYxJ3h4oC77WEP9ejK7-5y9toYLZGYuGRs8NGoimxSeYNYql38ktNeePNQEGVgk7KS2QO8pXBNwLse4rrRZPbvar0dQbl6m&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==) can be found on the USPOULTRY website. Information on other Association research may also be obtained by visiting the USPOULTRY website, [www.uspoultry.org](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPpOuKvLGzU5Mp06qXoliKmpHk-8WiO8p7JQJ1Bvy8P0OBhc3e9TXSbPb1TP4X1NORRDKT1vIBn8A-GVuEDzspNB3Wyg9vYiJFw==&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==). — USPOULTRY

Poultry Biosecurity Outreach Effort Targets Youth, Students

*USDA APHIS is launching a new outreach effort aimed at youth and student poultry owners*

PUBLISHED ON June 3, 2021

WASHINGTON — The United States Department of Agriculture’s (USDA) Animal and Plant Health Inspection Service (APHIS) is launching a new outreach effort specifically aimed at helping youth and student poultry owners learn about and practice good biosecurity. This new effort is called #FlockDefender.

Youth are the future of our nation’s poultry farming and industry. The #FlockDefender outreach program shares the agency’s existing Defend the Flock message that encourages and prepares all poultry owners to implement diligent biosecurity practices with future and aspiring growers. APHIS provides youth, students and their leaders and teachers with many electronic resources they can use during meetings, classes and when caring for their flocks. APHIS is also encouraging these young poultry enthusiasts to share photos of their poultry or biosecurity practices.

With a growing number of small poultry flocks across the country, now is the time to spread the word to young enthusiasts. It’s always best for flock health to have solid biosecurity in place from the very beginning. Making biosecurity an every day, every time practice helps keep poultry healthy and prevent the spread of infectious poultry diseases.

But it’s not just youth – anyone who works with or raises poultry should follow good biosecurity practices all the time. Some European and Asian countries are dealing with highly pathogenic avian influenza outbreaks right now. These practices will make a difference in protecting your flock, should we face similar circumstances in the future. Here are some tips anyone can follow:

* Choose new birds from National Poultry Improvement Plan participating flocks.
* Quarantine new birds for at least 30 days before introducing them to an existing flock.
* Designate a Line of Separation between your flock and the rest of the world, along with rules for crossing that line.

When launching #FlockDefender, APHIS updated and refreshed the whole Defend the Flock website. You can explore the site, the campaign resources and more detailed biosecurity information at [www.aphis.usda.gov/animalhealth/defendtheflock](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZy4GPMhbmIKVtvTGlFxn0GDkY4d125MLsXLECfZPxELaYCooPi2VxnyKyCzcy6oLz5mdSr0kG9hDo850g6MgiPWunFT0xQsgjJKe7bPLGb-9JmoO5CVL70GlbOVt9plfrnwLLPmyizpdhiE7Z0Z0_69lv_v2ISEM369YZqqe8I_tRxHSgQXefHpmZfyCOZxZ6geBs0t7nUn5wuhY_R4xXfKmOYy0TaNiEeQcTWzWNAOIMLk1FjGt1ySUVFIgPk42Vm&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==). –USDA APHIS

New Oral Solution Combats Major Poultry Disease

*Coccidiosis costs the poultry industry $3.5 billion in annual losses worldwide*

PUBLISHED ON June 6, 2021

WASHINGTON — Researchers at the USDA’s Agricultural Research Service and US Biologic, Inc., have developed an oral solution to an antibiotic alternative that fights against poultry coccidiosis, which costs the poultry industry $3.5B in annual losses worldwide.

Coccidiosis is a parasitic disease that develops in an animal’s intestinal tract and can spread between animals via the ingestion of infected feces or tissue.

The study — published in the June issue of [Frontiers in Veterinary Science](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZydLypm2-45jpynbDyY2HkJCMhigePwihxNjnMDY_QwNCthkvRvPdMcCTyPurJHrV7OE2Zyivjr1CG6qznfomBDkF-zBCuXTgLDf0PERBJ2vN4Jzr-B_rsnYc2FYLzm6NksmhGc3u98zhpNyfm1HfsOQ==&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==) — showed that infected chickens that were fed the oral solution did not experience the same weight loss as non-treated birds. The treated chickens also experienced improved gut health, less infectious bacteria in their feces, and a great reduction in the spread of disease. These changes were not seen in birds fed with probiotics only, showing changes only occurred in the presence of cNK-2.

“This oral method will help greatly reduce the clinical impact of coccidiosis, lessen spread of the disease, and improve gut health in poultry,” said USDA-ARS Research Molecular Biologist Hyun Lillehoj. “This means that birds fed with cNK-2 will have an overall healthier gut and less disease.”

The newly developed oral product is delivered in a probiotic powder that can be mixed into current feed processes and then fed to the birds across their lifetime, without requiring additional steps or new ingredients.

“Poultry solutions must be practical and economical,” said US Biologic CSO, Dr. Jolieke G. van Oosterwijk said. “Oral delivery of the cNK-2 accomplishes both goals and can lead to increased global protein sustainability and food equity.”

The USDA-ARS and US Biologic have patented the technology, and US Biologic has signed an exclusive global commercialization agreement with the goal of developing and licensing the technology for industry use.

This project was funded in part by USDA’s National Institute of Food and Agriculture under the Small Business Innovation Research Program, and in part by USDA’s Agricultural Research Service.

The [Agricultural Research Service](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPu_YjmZwuwaHZMeVT2QVSAWHesMHW8yc8zjd5jM3uNFTrVgblBIBJx0klZZ7PS5s2hvD4qG8ZaUeF0eKRqt_Na50CIc2S08Fag==&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==) is the U.S. Department of Agriculture’s chief scientific in-house research agency. Daily, ARS focuses on solutions to agricultural problems affecting America. Each dollar invested in agricultural research results in $17 of economic impact. –USDA ARS

Secretary's Corner

*Be Prepared*

Hurricane season officially begins June 1 and the [Emergency Watershed Protection Program](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZyEBqOiuCC2d9cexm5lGAz3EM2VQTb9Vd1_bulR6a0TtacoveR2NqKfHaJ2HiJiGy_erW1eRg5gQqFMIX9GeSjkTiGEDcH4rfVFV8YFU7kUPstJASBX09QNnc846gQs20vFwIHJRzvt-qCUweIxj3qxqc2fs0Rpu3C2P7ZOf2JQnQGMEM4nuM3ZKPCR8_iFq_1xTBss2MA-n4BUifc0gA0USN-XRZkQMh8JrCEBW52iCVrS2IoAin_r3XLBoh_dVlhsuKz5bSFJ7teTCX47VztXuvOrc6iw2zc17ozjdFGxGDjy_SJAjc87kM0lJOCfhXvmayInE7uxg_Z0jYnaUD7cA6WqmWjdzcgOEXSnEaGHLihjgx5ykTtcn0exn3T2f-H_qBe_89hBcjUogVa3POYviJWsVok04AWGg6e_NPr_FE5E4W5O32ZBQo4pKsQDjY8vqHUiPm0DkddiYWQRmpSIJypMJ5cPNIDHngtBqHefUVggC3glXdg8S4C4ash0floCsT431DrjkiuRpSm6D-xw9MeXYATj7a1Zzk02TtTWwgtKPN1w9JrlD-1yziLPC0EtbEoXWH4ZvmB2A3ITjiSuv-_o_VDMQf6t_APiMin4X-S8X7TbMWSXZlHExQkoKm7IwlHhDVe9HG2hGfmtaStMJLcBC5mgwQeMTSRpVI1v_QNTSyim7YeUbLGtMoITD8uPnSiqPXtb_k=&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==) (EWP) may be able to help if your area suffers damage from a natural disaster. The program can relieve imminent hazards to life and property caused by floods, fires, wind­storms and hurricanes. Aid may include financial and technical assistance to remove debris from streams, protect destabilized stream banks and establish cover on critically eroding lands, repair conservation practices and purchase flood plain easements.The public and private landowners are eligible for assistance, but must be represented by a project sponsor, such as a city, county, conservation district or a Native American tribe or organization. USDA’s [Natural Resources Conservation Service](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZyE7_kRvXzddnyNfjzHtY8jc5jeltVCfmZKm0-wjs_usEnxiD6wOyZWnQtMdu5II9kNUooM3nEECuPSg_5t3o6h91nlsN0yJMbMnKoRIj7Ubz0VEp8SAfOSQsCvN7lQTHwxZSpS5yBfC8eXI2-LSCfcFebj_rL-waSL-aS3dQW8zCT1XUCRjGMBZS3yOnKvJ9vYqKhw0HLY0ufN9QdHhBdl57Il1XV4HlaG29ZG3VO-SJ5412l444BsNqjTlsYOxzZ01fFitvAAJA5fws2SnLHVyjYf2qsPVuFbpeuPp-_lGJ8UGJCtFEEufab1iG894V-2UKz1e_aVK9O-oK2g9_JCewL6BwB4W6f-WzCg_DfLRDd6XzFRKKDPuIRXouuZKenqcCU8BW0v4VlobNc3nKUVNPJ8E2a4SgiXnbvk3ZC6ikjJwRNIxjWQcOgdWb29daGSOPWQHrCkd62E0Dnv6_cvtwrB05PZDgcIxgYgDt6zCQxzkQ2DmTc_M2gP79X9j8I_Qv_zI3f63Ayb7Q1Zm16TgghemS_Z9K4WT0vxt5L2BcaFBBqpJk7yPncLdfRbw90xQNK08jy3Rda26UhjkslFF8jMJTjlxwWEZgRaxNTUlMu8SCnu3lDGCXz6d6fVim6Ti1xlQjjy2pYR4uugDwtMDyTvPpv4EObDyeaVBlldKs=&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==), (NRCS) provides technical assistance and pays up to 75 percent of the construction. Local sources contribute the remaining portion in the form of cash or in-kind services.

The process begins when the sponsor requests assistance from a local [NRCS office](https://r20.rs6.net/tn.jsp?f=001GePolJ-tNDnk9w_e9Rpmlfoegi6hBzJY3NlnMq3uhHCKyH5l9eCBPvQetW2AspZyla7X0kXLh0wqcEgVYEM8otk8u0ib8ja2XkYdY1qlRYGecwkupVTg0CiP27SbNT-6mnnG3bCpIEo9ThrKYvKflLuWvEVKqCt-qLQg76-p5GOanAt9taprFxioUMP_Pvg9vTLzwZMjYWoopGxkS0HzdiIHqCb4fMCnUHb-rAAqhEhrJL7ER4aBd0yti0aA_MLC-vaMFZ2TmF6Y9HSkHSCK4g==&c=ujJlWdRE0529xqeolPpETfXD8b2quHwTYZYxc3PaWkBWhLMR5-843w==&ch=zTEAz9WPQeNFy0kPHbs1Qk4-LZMs44neFKAawip2EKIN1ruxmmfo2w==). Staff visit the site and determine eligibility based on environmental impacts and economic analysis, then request funding from the NRCS national office. If Congress appropriates funds, the sponsor enters into a cooperative agreement to complete the work.

Happy Hunting

Dr. Gary S. Davis

Exec. Sec. SEGB&HPA

[www.segamebirds.us](http://www.segamebirds.us/)