## Shutdown's invisible costs: Cyberthreats, untrained firefighters, bug invasions

By **Todd C. Frankel** and Joel Achenbach January 18

The emerald ash borer, *Agrilus planipennis*, is never furloughed. Native to Asia, this insect is an invasive species killing beloved ash trees across North America.

"It's sweeping like fire through timber," said Jeanne Romero-Severson, a plant geneticist at the University of Notre Dame, who has been working with the Forest Service on a breeding program to create an insectresistant ash tree.

She had been planning to meet with colleagues to discuss the bad beetle at an annual U.S. Agriculture Department invasive species conference scheduled to be held last week. But then came the partial government shutdown. The conference was canceled, even as nature marches — and hops, crawls, wriggles and oozes — onward.

"The invasion continues. The trees continue to die," Romero-Severson said. "We're losing time we cannot recover."

The most severe costs of the shutdown may be these invisible ones — the loss of relatively obscure activities by a massive federal bureaucracy with responsibilities that stretch into unexpected corners of society. The cost of not doing this work doesn't translate neatly into a dollar figure or a percentage of economic growth chipped off the gross domestic product. And it's hardly as tangible as long lines at the airport or long waits to get questions answered by the Internal Revenue Service. But it is the hard-to-fathom toll of telling hundreds of thousands of people with expertise to stay home.

That means canceling training for wildland firefighters, law enforcement and Border Patrol agents. Research grant proposals go unreviewed. Safety checks of sports stadiums are postponed. Efforts to improve election security are put on hold.

Much of the government work that is not considered essential during a shutdown, and thus not labeled "excepted" under agency plans, involves nonurgent but important activities. As the Trump administration rushes to preserve vital functions, it's the type of work that attracts little attention. But those involved say that although it may be hard to measure, letting these efforts lapse will have a long-term cost.

One worrisome area, for example, is cybersecurity. The threats are mounting as the government tries to stave off digital attacks and secure election processes in advance of the 2020 races. But the Department of Homeland Security's shutdown plan called for furloughing more than 1,500 of the 3,500 employees in the newly formed Cybersecurity and Infrastructure Security Agency (CISA).

"We're under attack every day from very sophisticated nation-states like Russia, China, North Korea and Iran," said Suzanne Spaulding, a Homeland Security undersecretary during the Obama administration in charge of cybersecurity and infrastructure protection. "They get better every day. And we're not. We're in a holding pattern."

"We are in a race with our adversaries, with the bad guys, on innovating in cyberspace," she said. "It is a challenge when you have a full team, when all hands are on deck. And all hands are not on deck."

The CISA issued a brief statement about staffing levels: "Due to the lapse of appropriations, CISA has ceased a variety of critical cybersecurity and infrastructure protection capabilities. However, we have maintained baseline operational capabilities supporting national security, including staff in the National Risk Management Center, in accordance with DHS and OMB guidance."

Medical science and pharmacology are also fields that evolve rapidly and require government regulation. At the Food and Drug Administration, the pipeline for drug approval has slowed, and staffing has diminished because of the shutdown.

The FDA review for a new drug to treat peanut allergies in children has been delayed by the shutdown. Drugmaker Aimmune Therapeutics said the timeline for its federal regulatory approval has been pushed to the end of the year. Doctors nervously watch for signs of significant delays with new treatments.

"You have to worry," said Walter Curran Jr., executive director of the Winship Cancer Institute of Emory University.

Another concern is wildfires. They've been getting worse in the western United States, and particularly horrific fires have consumed hundreds of thousands of acres and killed scores of people over the past two years. About 200 federal workers who were set to begin training to fight forest fires last week in Colorado Springs were forced to drop out because of the shutdown. Many of them hoped to join fire hotshot crews.

Another training session in Tennessee also was canceled. The missed training means many workers will not be qualified to help fight forest fires or can't move on to become crew bosses or incident commanders.

There's already a shortage of wildland firefighters, said Wendy Fischer, executive director of the Colorado Wildland Fire and Incident Management Academy.

"This situation sets people back," she said. "And we're coming up on fire season."

The shutdown obviously doesn't help the economy. A top White House economist this week said that the economic impact from the shutdown will be twice as great as previously estimated. But the numbers, even if they involve multiple billions of dollars, remain fairly modest compared with the vast scale of the U.S. economy.

That said, the shutdown has the potential to deliver a psychological blow to the country that could send the economy reeling, economists have warned.

"Broadly it's more like an economic corrosive rather than a cliff event. It's wearing down the economy and sentiment, confidence, people's optimism," said Mark Zandi, chief economist for Moody's Analytics. "At some point the corrosive will eat through the foundations of the economy and the economy will break, but no telling when that will happen."

The broader business community likes predictability and reliable data, noted economist Robert Shapiro, who was an official in the Commerce Department during the Clinton administration. He said the Bureau of Economic Analysis — an agency with data so sensitive that it puts officials in a locked room to review numbers that could jolt the markets — is not putting out valuable monthly reports during the shutdown.

"What's happening in home construction? What's happening in manufacturing orders? What's happening in retail sales? What's happening in exports and imports? Do you know we don't know what the trade deficit is, in November? Trump can't even know if his trade tariffs are working!" Shapiro said.

And so the U.S. economy is "flying blind," as he put it on the Brookings Institution's website.

"The decisions proceed with a lot more guesswork than usual, because they don't have the data, and in those cases you're more likely to have bad decisions, and that impairs the efficiency of the economy," he said.

As for the bugs, the cancellation of the invasive species meeting in Annapolis was devastating to many researchers, including Andrew Liebhold, a forest service research entomologist who had been looking forward to hearing from a South African scientist studying the Sirex woodwasp. It inserts eggs into trees, killing them, and could become a major threat to U.S. pine trees.

And an entire morning was to be spent talking about the spotted lanternfly. The bug has exploded from a curiosity in 2014, when the insect native to Southeast Asia was first spotted in Pennsylvania. Now, it's an invasive threat seen in at least six Mid-Atlantic states. The U.S. Agriculture Department spent millions of dollars trying to contain the bug, which is a threat to grapes and hardwoods. The agency thought it had the lanternfly under control, but in recent months the situation turned dire and now the bug is everywhere, Liebhold said.

A government shutdown doesn't help.

"It sets us back a long way. It means the science slows down," he said. "We're already struggling to keep up with invasive species."

No private company is going to take on the research and management of the lanternfly, he said.

"That's what we do," he said.