

Introduction

Dear Reader:

Hollowing out the EPA would be a disaster for Tennessee. Decisions are being made in Washington, DC that could move Tennessee's environment, public health and economy backward in the coming months and for years to come. The Trump Administration and many Members of Congress are working to weaken the U.S. Environmental Protection Agency (EPA) and cut its budget to its lowest level since the 1970s.

Hollowing out the EPA would be a disaster for Tennessee. Millions of Tennesseans could be at risk of exposure to dangerous or even toxic pollution in the air they breath and the water they drink. Cleanup of toxic superfund sites and some of the nation's most polluted air could languish. Millions of dollars in hazardous waste cleanup costs could be shifted from polluters to taxpayers.

This report, *State of Risk: How Hobbling the Environmental Protection Agency Would Threaten Tennessee's Health, Families, Jobs and Economy,* shows how shrinking the EPA and its programs could imperil a generation of environmental safeguards across the state. For more than 6 million residents who depend on a safe and healthy environment to live a good

life and support good jobs, undermining EPA's work would move Tennessee backward to a dirtier and more dangerous era.

The Environmental Defense Fund works to solve the most critical environmental problems facing the planet. We are guided by science and economics to find practical and lasting solutions to our most serious environmental problems. We work in concert with other organizations, business, government and communities to preserve natural systems.

I invite you to read the report and see how EPA budget cuts and eliminating environmental safeguards would harm the health of our children and families. I hope you'll join us in protecting our environment for our children and the generations who will follow us.

Sincerely,

Elizabeth B. Thompson

Elizabeth B. Thompson, Vice President U.S. Climate and Political Affairs

Acknowledgments

This is one in a series of Environmental Defense Fund reports cataloguing the impact of President Trump's proposed cuts to U.S. Environmental Protection Agency funding that protects public health and the environment in communities across America. The report was prepared and edited under the direction of Elgie Holstein, Senior Director for Strategic Planning at Environmental Defense Fund (EDF) and former Associate Director of the White House Office of Management and Budget. Special thanks to Ben Schneider, Senior Communications Manager, for coordinating the project and for overseeing the production and release of this series.

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State of risk: Tennessee

How hobbling the Environmental Protection Agency would threaten Tennessee's health, families, jobs and economy

Tennessee's environmental health depends on strong partnerships with the federal government.

Every Tennessean from the Smoky Mountains to the banks of the Mississippi depends on a safe and healthy environment. They need clean water, air and soil to raise healthy children and create jobs. Scenic waterways, clean mountain air and beautiful vistas attract millions of tourists each year; the Great Smoky Mountains National Park is the most visited national park in the USA. Chattanooga's turnaround — from the nation's most polluted city to a job-producing success story that is attracting investors from around the globe — shows how cleaning up our communities drives economic prosperity and family health.

Tennessee's environmental health depends on strong partnerships with the federal government. Over the last five years, Tennessee has received more than \$230 million in grants from the U.S. Environmental Protection Agency (EPA) to protect the state's environment and economy. Additional EPA dollars have gone straight to local and regional projects. Millions more have been spent to ensure that states such as Tennessee have the benefit of the best environmental protection and cleanup science and technology, as well as the legal support to go after polluters.

But the Trump Administration and many Members of Congress are working to hollow out the EPA and cut its budget to its lowest level since the 1970s, posing threats to millions of Tennesseans who depend on the agency to protect their health and the state's tourism and business climate. These historic cuts would reverse decades of progress in cleaning up the toxic substances that foul our drinking water, air and soil, posing grave

threats to our health and safety. They would strip the EPA of decades of scientific and technical expertise that Tennessee has turned to time and again to support state and local cleanups of toxic pollution.

These cuts could imperil generations of environmental and economic progress in Tennessee. The Mississippi, Tennessee and Cumberland rivers and other sources of statewide drinking water would have fewer safeguards against contamination. Superfund budgets for restoring sites like the contaminated Oak Ridge National Laboratory could be eliminated or drastically cut. Vanderbilt could lose millions from its efforts to assess innovative computer models that can test the toxic effect of chemicals. Homeowners could face more exposure to lead paint and poisonous radon gas.

For Tennessee's minority populations, including 1.1 million African-Americans and nearly 350,000 Latinos who have faced many institutional barriers to building a good life, these cuts would do extra damage. For example, the EPA indicates that 156 million people, including 62 percent of all minorities in the United States, live within three miles of a Superfund, brownfield or solid and hazardous waste "corrective action" site.1 But the Administration is proposing to cut 100 percent of the funding for the EPA's environmental justice work under the Superfund cleanup program, along with a 37 percent cut in funding to notify communities everywhere about what chemicals are being stored and used at industrial locations.2

The Trump
Administration's
cuts will move
Tennessee's
environment
backward to a

dangerous and

dirtier era.

The Trump Administration is also trying to shut down a modest program, EPA's Office of Environmental Justice, which has enjoyed bipartisan support for its efforts to ensure that everyone gets equal protection from environmental and health hazards. The Environmental Justice Small Grants Program, for instance, has made large impacts with low-dollar amounts, providing more than \$24 million in funding to more than 1,400 projects nationwide since 1994.³

For every family, especially their vulnerable children and seniors, these cuts will move Tennessee's environment backward to a dangerous and dirtier era: More poisons in our soil and toxic substances in our water, and more of the cancers that follow. More asthma attacks and smog, and more "Code Red" days when kids and seniors should stay indoors. More mercury, arsenic, lead and other toxic substances that have no place in anyone's

lungs, drinking water or dinner. More untended waste sites that threaten community health and sap economic development. And fewer investigations to make polluters pay for the costs of cleaning up their waste.

As Congress moves toward adopting a new budget this fall, cuts have already been proposed by both the Administration and Appropriations Committee members in Congress. Many vital spending decisions will be made behind closed doors as members horse-trade and make deals with an Administration that is eager to weaken EPA and jettison pollution prevention and cleanup programs. That's why it's so important to understand which antipollution programs are being targeted for elimination or deep reductions: so that Tennesseans can weigh in with their Members of Congress to ensure that EPA funding is fully preserved.

The Trump Administration's road map: Eliminating and slashing EPA programs that protect Tennessee's environment

Purpose	Trump proposal	2012-2016 Grants
Fights runoff pollution from roads, parking lots and excessive fertilizer	Eliminate	\$12.2 million
Research related to human health and safety	Eliminate	\$4.8 million
Reduces radon in homes, schools and buildings	Eliminate	\$1.1 million
Protects water and soil from	Eliminate	\$3.4 million
tanks leaking chemicals	Cut 48%	\$7.5 million
Supports water quality clean up and improvement	Cut 30%	\$11.7 million
Reduces "Code Red & Orange" days	Cut 30%	\$14.6 million
Helps states with their priority issues	Cut 18%	\$7.5 million
	Fights runoff pollution from roads, parking lots and excessive fertilizer Research related to human health and safety Reduces radon in homes, schools and buildings Protects water and soil from tanks leaking chemicals Supports water quality clean up and improvement Reduces "Code Red & Orange" days Helps states with their	Fights runoff pollution from roads, parking lots and excessive fertilizer Research related to human health and safety Reduces radon in homes, schools and buildings Protects water and soil from tanks leaking chemicals Supports water quality clean up and improvement Reduces "Code Red & Orange" days Helps states with their Fights proposal Eliminate Cut 48% Cut 30%

The threat to Tennessee's waters

"[In] the Tennessee
River you will often
find yourself with a
staph infection or
skin infection...If you
happen to get in the
creeks and accidently
drink some of the water
you could easily get
something called
Giardia or E. coli
poisoning."

Dr. Mike McKinney professor of environmental science at the University of Tennessee, Knoxville.⁵ From the Mississippi, Tennessee and Cumberland rivers to countless lakes, streams and creeks across the state, Tennessee's waterways provide clean drinking water, recreational opportunity and stunningly beautiful wildlife habitats. They are essential to the state's economy, enabling industry to grow and drawing tourists from around the world, whether on Mississippi River cruises or whitewater rafting in the Great Smoky Mountains.

But Tennessee's waters face serious challenges. The Tennessee Department of Environment and Conservation says that 30 percent of state waters can't support a healthy population of fish and other aquatic wildlife. Almost 40 percent are not fit for human recreation. And while the globally famous Jack Daniels distillery could afford to purchase 250 acres to ensure the purity of its spring waters, smaller businesses and millions of individuals and families across the Cumberland Basin and throughout the state rely on federally funded monitoring to help ensure the safety and quality of their water.

More dangerous runoff in our water

PROGRAM AT RISK: Nonpoint source pollution program grants

The Trump Administration would eliminate a category of EPA grants that for Tennessee have totaled \$12.2 million over the last five years, helping to control pollutants carried by rainfall runoff into Tennessee drinking water, rivers and lakes.

EPA grants to Tennessee for nonpoint source pollution, 2012-2016

Year	EPA Grants
2012	\$2.5 million
2013	\$2.4 million
2014	\$2.4 million
2015	\$2.4 million
2016	\$2.5 million
Total	\$12.2 million

Such runoff, sometimes called "Nonpoint Source Pollution," is the leading cause of water quality problems in the United States. It comes when rainwater washes over areas containing contaminants such as industrial waste, agricultural pesticides or lawn-treatment chemicals. Stormwater can threaten our water with animal waste laden with harmful pathogens, sewage, industrial waste, pesticides, abandoned mine runoff, and oil and gas from roadways.

Dozens of Tennessee projects have used EPA grant money to combat nonpoint source pollution. In Morgan County, for example, water quality samples taken in 1998 showed that the entire 29-mile length of Crab Orchard Creek, a tributary of the Emory River, was contaminated by polluted runoff, much of it believed to have trickled in from abandoned coal mines. EPA grants helped launch a series of projects, including construction of filtration ponds and a new wetland area, to reduce the damage from mine runoff. By 2007, surveys of the creek showed that it had returned to health.⁷

More pollution in public water systems

PROGRAM AT RISK: Public water system supervision grants

Most Americans get their water from public water systems. EPA Public Water System Supervision Grants help Tennessee monitor the performance of the state's public water systems, supervise compliance and enforcement of clean-water regulations, provide technical advice to water system managers, certify water-testing labs, and ensure that systems keep customers informed about water quality.

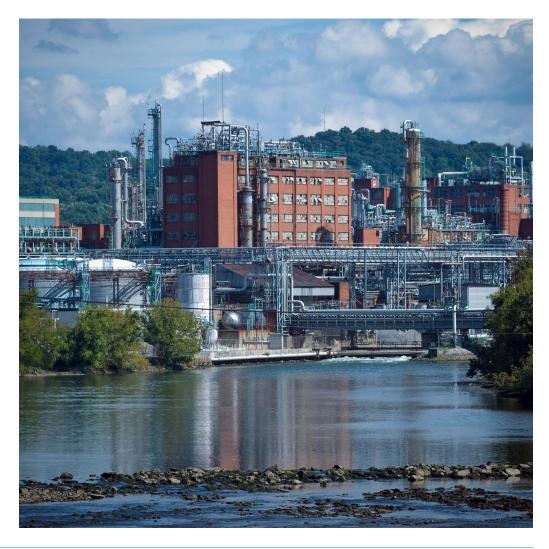
From 2012-16, the EPA provided \$3.8 million in Public Water System Supervision Grants to Tennessee. These grants would also be slashed by 30 percent under the Trump budget.

More threats to clean drinking water

PROGRAM AT RISK: Water pollution control grants

Another major source of EPA funds for water quality is the agency's Water Pollution Control Grant program, which provides support to states for a variety of tactics that protect human health and safety from contaminated water. The Tennessee Department of Environment and Conservation received more than \$11.7 million in these grants from 2012 to 2016; the Trump Administration budget would cut such grants by 30 percent.





The threat to Tennessee's soil

Superfund has reduced severe threats to Tennesseans' health and returned contaminated properties to job-creating productivity.

The Trump Administration's proposed EPA budget would drastically reduce funding for programs that protect Tennesseans from the health and safety risks of contaminated soil and that help clean up pollution so that contaminated properties can be returned to productive economic use. The positive effects of clean soil multiply through the environment, since contaminated soil can also pollute groundwater.

Fewer cleanups of toxic substances, less accountability for polluters

PROGRAM AT RISK:
Superfund program, including emergency response and enforcement funds

Under the Trump Administration's budget, hazardous substance cleanup spending through Superfund would be cut by 30 percent, including an 18 percent cut to emergency response funds, which help clean up the most urgent threats. Since 44 percent of people living within a one-mile radius of a Superfund site nationwide are minorities, 9 Superfund cleanups are also critical to helping minority

Tennessee superfund sites



communities build better lives. And the Administration's cuts would shift more cleanup costs from polluters to taxpayers by instituting 37 percent cuts in enforcement efforts to track down toxic polluters to make them pay for cleaning up sites for which they are responsible.

Tennessee has 18 sites listed on the Superfund National Priorities List. ¹⁰ By cleaning up vast amounts of toxic waste, the EPA's Superfund program has reduced severe threats to Tennesseans' health and returned contaminated properties across the state to job-creating productivity (or restored them as vital natural habitats). Without Superfund cleanups, toxic chemicals like lead, mercury, arsenic, and dioxin are left to render entire locations dangerous or uninhabitable, and to leak into water and food supplies.

Tennessee is home to some of the nation's most successful and significant Superfund cleanup projects. The Copper Mining Basin District in the state's southeastern corner was once a barren wasteland, more than 50 square miles of red-clay hills stripped of vegetation, plagued by contaminated soil and water. 11 Led by EPA's Superfund program, federal, state and local partners worked together with legally responsible private parties to remove waste and contaminated structures, cap or clean up water and soil pollution, and plant hundreds of thousands of trees. 12

Other examples abound:

- The groundwater at the Milan Army Ammunition Plant was contaminated with explosive compounds.¹³
- The Memphis Aquifer and public drinking water supply wells in Collierville were

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Memphis resident
Sharri Schmidt says
that working at a
contaminated site had
a profound effect on
her body: "My sight is
starting to go. I have no
feeling in my fingers,"
she says. "Those
connections have been

broken from the brain

to the body."17

poisoned with hexavalent chromium from old battery casings and the residue from a farm equipment plant.¹⁴

- At the Oak Ridge National Laboratory—
 home of Manhattan Project research and
 nuclear weapons production—radioactive
 plutonium and strontium, as well as a
 variety of toxic chemicals, have
 contaminated groundwater and soil in
 hundreds of locations. The cleanup won't
 be done until 2047.¹⁵
- For decades, a landfill in Lewisburg was a dumping ground for paint strippers and solvents, industrial plastic waste, residual metals and empty containers of adhesives, cements, lacquers and paints.¹⁶

EPA Superfund cleanups in these and many other sites have rescued Tennessee lands from toxic contamination and protected the health and safety of untold number of people for generations to come.

Fewer cleanups and less economic development at polluted properties

PROGRAM AT RISK: Brownfield Grants

Brownfield are properties where contamination prevents economic development and threatens public health and safety. Research has shown that residential property values near restored brownfield sites around the



country have increased between 5 and 15 percent and can increase property values in a 1.24-mile radius of that site. A study analyzing data near 48 brownfield sites shows an estimated \$29 million to \$97 million in additional tax revenue was generated for local governments in a single year after cleanup (two to seven times more than the \$12.4 million EPA contributed to cleaning up those brownfield sites). 18

More than 124,000 jobs and \$24 billion of public and private funding have been leveraged as a result of pollution assessment grants and other EPA brownfield grants. On average, \$16 was leveraged for each EPA brownfield dollar spent, and 8.5 jobs leveraged per \$100,000 of EPA brownfield funds expended on assessment, cleanup, and revolving loan fund cooperative agreements. ¹⁹ EPA brownfield grants have even greater positive impacts on communities with higher poverty rates, large minority populations, and lower-than-average incomes. ²⁰

Year	Tennessee brownfield restoration grants
2012	\$966,192
2013	\$1.7 million
2014	\$1.3 million
2015	\$1.4 million
2016	\$1.5 million
Total	\$6.8 million

The Trump Administration would cut brownfield restoration grants by 30 percent.

Tennessee has more than 130 listed brownfield sites — properties where hazardous pollution threatens public health and safety and prevents economic development. From 2012 to 2016, Tennessee received nearly \$7 million in EPA grants that have helped local counties and communities clean up polluted properties.

EPA brownfield restoration grants have helped catalyze private sector loans and other funding to pay for expert tests of soil, groundwater, sediment, surface water and vapors—and then to clean up contamination from leaking petroleum tanks, metals and other hazardous substances.

Brownfield grants
"represent the full
spectrum of a win-win.
On the environmental
side, they help
transform blighted
property....on the
economic front, they
produce significant
sources of revenue,
increase property value
and bring jobs."

Bob Martineau Commissioner, Tennessee Department of Environment and Conservation²³ Before redevelopment can happen safely and be permitted to go forward, brownfield sites must be assessed and tested for soil contamination, and the risk of hazardous substances, petroleum or asbestos being released when digging around land or dismantling properties. To carry out this assessment work, EPA funds pay for expert tests of soil, ground water, sediment, surface water and vapors.

Just last year, EPA began providing brownfield funding to Chattanooga to clean up a century of coal tar residues and polycyclic aromatic hydrocarbons, 21 and to Knoxville to clean up contaminated former warehouses and dry cleaner sites. 22

The enemy underground: leaking underground storage tank grants

PROGRAM AT RISK: Leaking underground storage tank programs

Across the country, thousands of underground storage tanks and accompanying pipes — many of them made from older corroding steel — hold and carry a variety of fuels and chemicals.²⁴ When tanks leak harmful chemicals such as oil, gas, benzene and toluene into soil and ground water, drinking water and soil are fouled, community health is jeopardized, and economic development is crippled.

Preventing and addressing spills from these backlogs is a major environmental priority. According to EPA, Tennessee has more than

Tennessee leaking underground storage tank (LUST) grants

Year	LUST Prevention Program	LUST Trust Fund
2012	\$671,000	\$1.4 million
2013	\$826,972	\$1.6 million
2014	\$676,000	\$1.5 million
2015	\$620,000	\$1.9 million
2016	\$620,000	\$1.1 million
Total	\$3.4 million	\$7.5 million

240 leaking underground tanks in need of cleanup.²⁵

EPA support is essential to Tennessee programs to monitor underground storage tanks, detect leaks of petroleum products, address the causes, repair any damage to soil or groundwater and hold polluters responsible or pay for cleanup if the responsible party can't be found or is no longerin business. Tennessee's underground storage tank program received more than \$10.9 million in EPA grant funding from 2012 to 2016.

Tennessee receives grants to address underground tanks from two sources. The first—Prevention, Detection and Compliance Grants, which totaled \$3.4 million over the last five years — would be eliminated entirely by the Trump budget. The second—a trust fund paid for by a one-cent federal fuel tax, which has provided \$7.5 million to Tennessee for monitoring and cleanup assistance — would be cut in half.

Weakening the fight against hazardous waste, from oil to toxic mercury

PROGRAM AT RISK: Hazardous waste management grants

Tennessee operates an active hazardous waste management program to monitor and control the use and disposal of toxic substances and to clean up contamination when it occurs. Hazardous waste can be waste from industrial products, such as toxic solvents; waste oil from automotive and other engines; or other toxic substances such as deadly mercury.

From 2012 to 2016, EPA provided Tennessee's Department of Environment and Conservation \$10.5 million in grants to support its hazardous waste management program. The Trump Administration's proposed budget would cut state hazardous waste management grants by 30 percent, weakening the state's ability to monitor potential threats to health and safety and to process permits and monitor compliance by the state's businesses.

The threat to Tennessee's air

In 2016, for the first time in decades, all of Tennessee met federal air quality standards for smog and soot. ²⁶ This was a historic turnaround for the state, for local air-quality officials, and for businesses that stood up for clean air. EPA support was critical to reaching this milestone, including millions of dollars in grant funding to monitor air quality, develop air pollution control programs and enforce air quality regulations. But the proposed Trump budget would reduce federal support to key clean air programs.

Meanwhile, the Great Smoky Mountains National Park — which attracted more than 11 million visitors in 2016 who spent an estimated \$942.7 million and supported more than 14,000 jobs²⁷ — is increasingly threatened by air pollution. Regional summertime views that tourists treasure have been reduced by 80 percent since 1948 (and 40 percent even in the winter). Exposure to ground-level ozone has reached threatening levels that are among the

highest in the eastern United States, triggering sinus inflammation, chest pains, permanent damage to lung tissue and reduced immune system functions.²⁸

No longer keeping watch for code orange: slashing Clean Air Act grants

PROGRAM AT RISK: Clean pollution control grants

The Trump Administration budget would cut 30 percent from programs that help states and communities monitor air quality.

Among Tennessee's biggest sources of EPA funding is the agency's air pollution control program grants. From 2012 to 2016, EPA provided \$14.6 million in grants to support Tennessee clean air programs. In Chattanooga, where severe air quality problems in the late 1960s prompted the community to establish a county air pollution control board and establish stringent local air pollution rules, EPA funding is about one-third of the Chattanooga-Hamilton County Air Pollution Control Bureau's budget. The Bureau hasn't had a budget increase since 2002 and has been laying off staff.²⁹ EPA provides similar support to local pollution control or health department programs in the Knoxville, Nashville and Memphis areas.

Programs to monitor and cut air pollution are especially important to minority populations which are disproportionately located in urban areas like Memphis, (where 70 percent of the population are minorities).³⁰ Air pollution can affect heart health and

Sue Evans has been dealing with allergies ever since moving to Chattanooga. She keeps track of allergy and air quality reports to help decide when she can spend time outside. "I've been taking allergy shots for four years. I carry a rescue inhaler," says Evans. "I try to stay in the house when the air quality is bad, but that doesn't always work because I do have

to go to work every

dav."34

"Americans' lung health is far better protected today than it was before the Clean Air Act health protections began nearly five decades ago... As we move into an ever-warmer climate, cleaning up these pollutants will become ever more challenging, highlighting the critical importance of protecting the Clean Air Act."

Harold P. Wimmer National President and CEO of the American Lung Association even trigger heart attacks and strokes. Across the country, African-American and Latino children are more likely to suffer from asthma than whites,³¹ and nearly three-fourths of African-Americans live in counties that don't meet federal air quality standards. More than 1.8 million Latinos live within a half mile of oil and gas facilities that often emit harmful pollution,³² fueling more than 150,000 asthma attacks among children and resulting in 112,000 lost school days each year.³³

EPA air pollution control grants to Tennessee, 2012-2016

Recipient C	Clean Air Grants	
Chattanooga-Hamilton Count	y \$1.9 million	
Knox County	\$1.5 million	
Nashville-Davidson County	\$2.0 million	
Shelby County	\$2.4 million	
Tennessee Dept of Environmental Conservation	nt \$6.8 million	
Total	\$14.6 million	

Grant funding helps support air quality monitoring to detect days when the concentration of pollutants in the air could be harmful to vulnerable populations such as children, the elderly, or people with health conditions, including more than 145,000 Tennessee children and 454,000 adults diagnosed with asthma.³⁴ Cleaner air means fewer Code Orange days, fewer asthma attacks and fewer worker sick days. More than 2,000 Tennesseans are saved every year by EPA programs cutting air pollution and toxic mercury.³⁵

Thanks to EPA monitoring assistance, Tennessee can assess ozone threat levels. But in Memphis and surrounding Shelby County, which is still earning a "D" from the American Lung Association, kids, seniors and other vulnerable people continue to face too many Code Orange days when they must stay inside to avoid the risk of asthma and other health problems.³⁶

EPA funding also supports enforcement of the Clean Air Act. Tennessee Valley Authority (TVA) facilities violated the Act by belching out illegal levels of sulfur dioxides and nitrogen oxides, which can cause a number of serious health problems, some fatal, if breathed in. The EPA stepped in and reached a settlement requiring TVA to modernize its equipment and invest in clean energy projects. The result? Tennesseans suffer an estimated 1,200 to 3,000 fewer premature deaths, 2,000 fewer heart attacks, and 21,000 fewer cases of asthma attacks each year — meaning \$27 billion in annual health costs.³⁷

Preventing lung cancer deaths from radon exposure

PROGRAM AT RISK: EPA's state indoor radon grant program

Invisible, odorless radon is the nation's second leading cause of lung cancer, responsible for about 21,000 lung cancer deaths each year.³⁸ EPA's State Indoor Radon Grant Program promotes radon-reducing features in new homes and schools, and inspections and fixes in existing homes. The program also educates and enlists consumers, real estate professionals, state and local building code officials, schools officials, nonprofit public health organizations and professional organizations.³⁹

From 2012-16, the EPA provided \$1.1 million in State Indoor Radon Grant Program Grants to Tennessee. These grants would be eliminated under the Trump budget.

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Weakening response to other problems

Less flexibility to pursue emerging problems

PROGRAM AT RISK: Performance partnership grants

The Trump Administration has proposed a massive 44 percent reduction in EPA Performance Partnership Grants, which allow Tennessee to apply EPA grant money to their most pressing air, water and land issues. These grants allow recipients to use EPA awards with greater flexibility for addressing priority environmental problems or program needs, streamline paperwork and accounting procedures to reduce administrative costs, and try cross-program initiatives and approaches that were difficult to fund under traditional category grants. Tennessee received more than \$7.5 million in Performance Partnership Grants from 2012 to 2016.

Higher lead poisoning risks

PROGRAM AT RISK: EPA's lead paint professional certification

The threat to Tennessee's families extends into their homes: Among the programs the Trump Administration budget would eliminate is an EPA grant program to help the state train and certify workers involved in renovating older homes with toxic lead-based paint. Their

knowhow to properly deal with lead contamination safely protects the health of children and families across the state. Tennessee received more than \$1.6 million in EPA grants for such training and certification from 2012 to 2016, a program that would be eliminated under the Trump budget proposal.

Less money for Tennessee environmental research

PROGRAM AT RISK: Science to achieve results

EPA's Science to Achieve Results (STAR) program grants enlist some of the nation's top scientists and engineers to investigate factors affecting human health and safety and development of pollution control techniques. 40 Among STAR grant recipients is a joint project of Vanderbilt University in Nashville and the University of Pittsburgh. The center is working to solve a key problem in environmental studies: the fact that data on effects of many chemicals on human health is scarce because studies on human subjects are expensive and fraught with ethical concerns. The Vanderbilt-Pittsburgh project examines the use of organic laboratory models - what scientists called "organs on a chip" -- to test the toxic effect of chemicals.41 Vanderbilt has received \$4.8 million in EPA STAR grants for the project, which would be eliminated under the Trump budget.

The Trump
Administration
budget would
eliminate an EPA
program to help train
and certify workers
renovating homes with
toxic lead-based paint.

Tennessee EPA Grants, FY2012-2016

Recipient	Grants
TN Dept of Environment and Conservation	\$196,416,803
Tennessee Department of Agriculture	\$13,765,677
Vanderbilt University	\$4,900,526
Shelby County Health Department	\$2,819,504
Chattanooga-Hamilton County Air Pollution Control Bureau	\$2,500,070
United South and Eastern Tribes Inc.	\$2,323,039
Knox County Dept of Air Quality Management	\$2,174,450
Shelby County Health Department	\$1,587,658
Nashville-Davidson County Health Dept	\$1,576,463
Metropolitan Gov't of Nashville & Davidson County	\$1,301,815
TN Dept of Agriculture	\$1,077,225
City of Erwin — Erwin Utilities	\$974,400
Campbell County	\$885,000
Chattanooga Area Regional Council O Governments	f \$500,000
Memphis Bioworks Foundation	\$499,999
The Enterprise Center Inc.	\$499,999
City of Tusculum	\$485,000

Recipient	Grants
Hancock County	\$485,000
City of Harrogate	\$485,000
Springville - Springville Utility District	\$485,000
Town of Surgoinsville	\$485,000
City of Union City	\$400,000
Upper Cumberland Development District	\$400,000
City of Knoxville	\$350,000
Multiple Recipients	\$292,004
Water Authority of Dickson County	\$242,000
Chattanooga — City of Chattanooga	\$200,000
Univ of Tennessee — Agriculture	\$200,000
U of TN MTAS — University of Tennessee	\$129,725
Urban Green Lab Inc.	\$91,000
University Of Tennessee-Research	\$89,973
Community Development Council of Greater Memphis	\$65,000
University of Tennessee	\$57,750
Tennessee Environmental Council	\$57,000
Southeast Watershed Forum	\$54,745
Trevecca Naz — Trevecca Nazarene University	\$38,468

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Notes

Unless otherwise indicated, all data in this report are current as of July 2017 and figures for government spending and grants are drawn from www.usaspending.gov, and from official federal government budget documents. Additional information is drawn from state budget sources.

- https://www.epa.gov/sites/production/files/2014-03/documents/oswer_fy13_accomplishment.pdf, p. 23.
 This figure includes Superfund, Brownfield and Resource Conservation and Recovery Act sites.
- https://www.epa.gov/sites/production/files/2017-06/documents/fy18-cj-04-environmental-programs.pdf, p. 189.
- https://www.epa.gov/environmentaljustice/environmental-justice-small-grants-program
- https://ag.tennessee.edu/tnyards/Pages/Water-Quality-Facts-for-TN.aspx
- University of Tennessee's School of Journalism and Electronic Media, 4/20/2017
- ⁶ https://www.epa.gov/nps/what-nonpoint-source
- 7 https://www.epa.gov/sites/production/files/2015-10/documents/tn_craborchard-2.pdf
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- https://www.epa.gov/sites/production/files/2015-09/documents/webpopulationrsuperfundsites9.28.15.pdf
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