



**United States
Environmental Protection Agency**

FISCAL YEAR 2021

**Justification of Appropriation
Estimates for the Committee
on Appropriations**

Tab 08: Leaking Underground Storage Tanks

EPA-190-S-20-001

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**Environmental Protection Agency
FY 2021 Annual Performance Plan and Congressional Justification**

Table of Contents – Leaking Underground Storage Tanks

Program Projects in LUST	535
Enforcement	537
Civil Enforcement.....	538
Operations and Administration.....	540
Acquisition Management.....	541
Central Planning, Budgeting, and Finance	542
Facilities Infrastructure and Operations.....	544
Underground Storage Tanks (LUST/UST)	546
LUST / UST.....	547
LUST Prevention	550
LUST Cooperative Agreements.....	551
Program Project Description:.....	551
Research: Sustainable Communities.....	554
Research: Sustainable and Healthy Communities	555

**Environmental Protection Agency
FY 2021 Annual Performance Plan and Congressional Justification**

**APPROPRIATION: Leaking Underground Storage Tanks
Resource Summary Table
(Dollars in Thousands)**

	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted
Leaking Underground Storage Tanks				
Budget Authority	\$98,172.9	\$91,941.0	\$48,218.0	-\$43,723.0
Total Workyears	41.1	46.6	40.7	-5.9

Bill Language: Leaking and Underground Storage Tank Trust Fund Program

For necessary expenses to carry out leaking underground storage tank cleanup activities authorized by subtitle I of the Solid Waste Disposal Act, \$48,218,000, to remain available until expended, of which \$48,218,000 shall be for carrying out leaking underground storage tank cleanup activities authorized by section 9003(h) of the Solid Waste Disposal Act: Provided, That the Administrator is authorized to use appropriations made available under this heading to implement section 9013 of the Solid Waste Disposal Act to provide financial assistance to federally recognized Indian tribes for the development and implementation of programs to manage underground storage tanks.

**Program Projects in LUST
(Dollars in Thousands)**

Program Project	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted
Enforcement				
Civil Enforcement	\$678.1	\$620.0	\$541.0	-\$79.0
Operations and Administration				
Central Planning, Budgeting, and Finance	\$258.3	\$321.0	\$450.0	\$129.0
Facilities Infrastructure and Operations	\$847.2	\$868.0	\$796.0	-\$72.0
Acquisition Management	\$70.2	\$163.0	\$138.0	-\$25.0
Subtotal, Operations and Administration	\$1,175.7	\$1,352.0	\$1,384.0	\$32.0
Underground Storage Tanks (LUST / UST)				
LUST / UST	\$10,133.9	\$9,240.0	\$7,149.0	-\$2,091.0
LUST Cooperative Agreements	\$59,225.6	\$55,040.0	\$38,840.0	-\$16,200.0
LUST Prevention	\$26,829.1	\$25,369.0	\$0.0	-\$25,369.0

Program Project	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted
Subtotal, Underground Storage Tanks (LUST / UST)	\$96,188.6	\$89,649.0	\$45,989.0	-\$43,660.0
Research: Sustainable Communities				
Research: Sustainable and Healthy Communities	\$130.5	\$320.0	\$304.0	-\$16.0
TOTAL LUST	\$98,172.9	\$91,941.0	\$48,218.0	-\$43,723.0

Enforcement

Civil Enforcement

Program Area: Enforcement

Goal: Greater Certainty, Compliance, and Effectiveness

Objective(s): Compliance with the Law

(Dollars in Thousands)

	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted
Environmental Programs & Management	\$160,202.2	\$167,615.0	\$157,820.0	-\$9,795.0
<i>Leaking Underground Storage Tanks</i>	<i>\$678.1</i>	<i>\$620.0</i>	<i>\$541.0</i>	<i>-\$79.0</i>
Inland Oil Spill Programs	\$2,393.3	\$2,413.0	\$2,462.0	\$49.0
Total Budget Authority	\$163,273.6	\$170,648.0	\$160,823.0	-\$9,825.0
Total Workyears	908.3	916.2	857.1	-59.1

Program Project Description:

The Civil Enforcement Program's goal is to ensure compliance with the Nation's environmental laws to protect human health and the environment. The Program collaborates with the United States Department of Justice, states, local agencies, and tribal governments to ensure consistent and fair enforcement of environmental laws and regulations. The Civil Enforcement Program develops, litigates, and settles administrative and civil judicial cases against violators of environmental laws.

To protect the Nation's groundwater and drinking water from petroleum and hazardous substance releases from Underground Storage Tanks (UST), the Civil Enforcement Program provides guidance, technical assistance, and training to promote and enforce cleanups at sites with UST systems.¹ The Enforcement and Compliance Assurance Program uses its Leaking Underground Storage Tanks (LUST) resources to oversee cleanups by responsible parties.

FY 2021 Activities and Performance Plan:

Work in this program directly supports Goal 3/Objective 3.1, Compliance with the Law in the *FY 2018 - 2022 EPA Strategic Plan*. In FY 2021, EPA will work with states and tribes on a case-by-case basis to prioritize LUST enforcement goals for cleanup. The Agency will continue to provide guidance, technical assistance, oversight, and training to enforce cleanups at LUST sites by responsible parties.

¹ For more information, please refer to: www.epa.gov/swrust1/cat/index.htm.

Performance Measure Targets:

(PM 434) Millions of pounds of pollutants and waste reduced, treated, or eliminated through concluded enforcement actions.

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Units
Target					325	325	325	325	Millions of Pounds
Actual	1,221	1,030	62,223	461	810	347			

(PM 436) Number of all referred no complaint filed (RNCF) civil judicial cases that are more than 2.5 years old.

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Units
Target						129	120	120	Cases
Actual						94			

FY 2021 Change from Estimated FY 2020 Enacted Budget (Dollars in Thousands):

- (-\$5.0) This change is a decrease due to the recalculation of base payroll costs.
- (-\$74.0 / -0.3 FTE) The net program change reflects EPA’s efforts to target funds to the highest priority sites.

Statutory Authority:

Reorganization Plan No. 3 of 1970, 84 Stat. 2086, as amended by Pub. L. 98–80, 97 Stat. 485 (codified at Title 5, App.) (EPA’s organic authority); Subtitle I of the Solid Waste Disposal Act.

Operations and Administration

Acquisition Management

Program Area: Operations and Administration
Goal: Greater Certainty, Compliance, and Effectiveness
Objective(s): Improve Efficiency and Effectiveness

(Dollars in Thousands)

	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted
Environmental Programs & Management	\$33,799.8	\$30,945.0	\$29,621.0	-\$1,324.0
<i>Leaking Underground Storage Tanks</i>	<i>\$70.2</i>	<i>\$163.0</i>	<i>\$138.0</i>	<i>-\$25.0</i>
Hazardous Substance Superfund	\$18,593.2	\$20,533.0	\$22,982.0	\$2,449.0
Total Budget Authority	\$52,463.2	\$51,641.0	\$52,741.0	\$1,100.0
Total Workyears	261.2	285.7	259.5	-26.2

Program Project Description:

Leaking Underground Storage Tank (LUST) resources in the Acquisition Management Program support the Agency’s contract activities.

FY 2021 Activities and Performance Plan:

Work in this program supports Goal 3/Objective 3.5, Improve Efficiency and Effectiveness in the *FY 2018 – 2022 EPA Strategic Plan*. Acquisition Management resources in LUST support information technology needs and the training and development of EPA’s acquisition workforce.

Performance Measure Targets:

Work under this program supports performance results in the Acquisition Management Program under the EPM appropriation.

FY 2021 Change from Estimated FY 2020 Enacted Budget (Dollars in Thousands):

- (-\$25.0) This program change reflects a reduction as a result of more effective business practices in the Acquisition Management Program.

Statutory Authority:

Reorganization Plan No. 3 of 1970, 84 Stat. 2086, as amended by Pub. L. 98–80, 97 Stat. 485 (codified at Title 5, App.) (EPA’s organic statute); Subtitle I of the Solid Waste Disposal Act.

Central Planning, Budgeting, and Finance

Program Area: Operations and Administration

Goal: Greater Certainty, Compliance, and Effectiveness

Objective(s): Improve Efficiency and Effectiveness

(Dollars in Thousands)

	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted
Environmental Programs & Management	\$72,920.6	\$71,423.0	\$76,603.0	\$5,180.0
<i>Leaking Underground Storage Tanks</i>	<i>\$258.3</i>	<i>\$321.0</i>	<i>\$450.0</i>	<i>\$129.0</i>
Hazardous Substance Superfund	\$23,772.7	\$21,971.0	\$22,462.0	\$491.0
Total Budget Authority	\$96,951.6	\$93,715.0	\$99,515.0	\$5,800.0
Total Workyears	421.4	456.0	435.3	-20.7

Total workyears in FY 2021 include 1.0 FTE funded by TSCA fees and 1.0 FTE funded by e-Manifest fees.

Total workyears in FY 2021 include 39.0 FTE to support Central Planning, Budgeting, and Finance working capital fund (WCF) services.

Program Project Description:

EPA’s financial management community maintains a strong partnership with the Leaking Underground Storage Tanks (LUST) Program. Activities under the Central Planning, Budgeting, and Finance Program support the management of integrated planning, budgeting, financial management, performance and accountability processes, and systems to ensure effective stewardship of LUST resources. This includes developing, managing, and supporting a performance management system consistent with the Government Performance and Results Modernization Act of 2010 that involves: strategic planning and accountability for environmental, fiscal, and managerial results; providing policy, systems, training, reports, and oversight essential for the financial operations of EPA; managing the agencywide Working Capital Fund; providing financial payment and support services for specialized fiscal and accounting services for the LUST programs; and managing the Agency's annual budget process.

FY 2021 Activities and Performance Plan:

Work in this program directly supports Goal 3/Objective 3.5, Improve Efficiency and Effectiveness in the *FY 2018 - 2022 EPA Strategic Plan*. EPA will continue to ensure sound financial and budgetary management of the LUST Program through the use of routine and ad hoc analysis, statistical sampling, and other evaluation tools. Building on the work begun in previous years, EPA will continue to monitor and strengthen internal controls with a focus on sensitive payments and property. In addition, the Agency is reviewing its financial systems for efficiencies and effectiveness, identifying gaps, and targeting legacy systems for replacement.

Performance Measure Targets:

Work under this program supports performance results in the Central Planning, Budgeting, and Finance Program under the EPM appropriation.

FY 2021 Change from Estimated FY 2020 Enacted Budget (Dollars in Thousands):

- (+\$164.0) This change is an increase due to recalculation of base payroll costs.
- (-\$35.0 / -0.4 FTE) This net program change is a decrease as the Agency streamlines in the areas of strategic planning, budget preparation, financial reporting, and transaction processing.

Statutory Authority:

Reorganization Plan No. 3 of 1970, 84 Stat. 2086, as amended by Pub. L. 98-80, 97 Stat. 485 (codified as Title 5, App.) (EPA's organic statute); Subtitle I of the Solid Waste Disposal Act.

Facilities Infrastructure and Operations

Program Area: Operations and Administration

Goal: Greater Certainty, Compliance, and Effectiveness

Objective(s): Improve Efficiency and Effectiveness

(Dollars in Thousands)

	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted
Environmental Programs & Management	\$321,500.4	\$287,595.0	\$317,345.0	\$29,750.0
Science & Technology	\$67,856.9	\$65,372.0	\$67,908.0	\$2,536.0
Building and Facilities	\$23,017.8	\$26,922.0	\$33,377.0	\$6,455.0
<i>Leaking Underground Storage Tanks</i>	<i>\$847.2</i>	<i>\$868.0</i>	<i>\$796.0</i>	<i>-\$72.0</i>
Inland Oil Spill Programs	\$577.3	\$665.0	\$682.0	\$17.0
Hazardous Substance Superfund	\$82,243.2	\$76,473.0	\$76,831.0	\$358.0
Total Budget Authority	\$496,042.8	\$457,895.0	\$496,939.0	\$39,044.0
Total Workyears	329.9	315.4	307.6	-7.8

Total workyears in FY 2021 include 2.1 FTE to support Facilities Infrastructure and Operations working capital fund (WCF) services.

Program Project Description:

EPA’s Facilities Infrastructure and Operations Program in the Leaking Underground Storage Tank (LUST) appropriation supports the Agency’s rent, transit subsidy, and facilities management services. Funding is allocated for such services among the major appropriations for the Agency.

FY 2021 Activities and Performance Plan:

Work in this program directly supports Goal 3/Objective 3.5, Improve Efficiency and Effectiveness in the *FY 2018 – 2022 EPA Strategic Plan*. The Agency will continue to conduct rent reviews and verify monthly billing statements for its lease agreements with the General Services Administration and private landlords. For FY 2021, EPA is requesting a total of \$0.62 million for rent in the LUST appropriation. EPA uses a standard methodology to ensure that rent charging appropriately reflects planned and enacted resources at the appropriation level.

Performance Measure Targets:

EPA’s FY 2021 Annual Performance Plan does not include annual performance goals specific to this program.

FY 2021 Change from Estimated FY 2020 Enacted Budget (Dollars in Thousands):

- (-\$72.0) This program change is a decrease to basic operations and maintenance costs.

Statutory Authority:

Federal Property and Administration Services Act; Reorganization Plan No. 3 of 1970, 84 Stat. 2086, as amended by Pub. L. 98-80, 97 Stat. 485 (codified at Title 5, App.) (EPA's organic statute); Subtitle I of the Solid Waste Disposal Act.

Underground Storage Tanks (LUST/UST)

LUST / UST

Program Area: Underground Storage Tanks (LUST / UST)

Goal: A Cleaner, Healthier Environment

Objective(s): Revitalize Land and Prevent Contamination

(Dollars in Thousands)

	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted	
Environmental Programs & Management	\$11,089.8	\$10,750.0	\$6,863.0	-\$3,887.0	
<i>Leaking Underground Storage Tanks</i>	<i>\$10,133.9</i>	<i>\$9,240.0</i>	<i>\$7,149.0</i>	<i>-\$2,091.0</i>	
Total Budget Authority	\$21,223.7	\$19,990.0	\$14,012.0	-\$5,978.0	
Total Workyears	89.1	91.6	68.8	-22.8	

Program Project Description:

The Leaking Underground Storage Tank (LUST) resources in the LUST/Underground Storage Tank (UST) Program ensure that petroleum contamination is properly assessed and cleaned up. Under this program, EPA issues, monitors, and oversees LUST cleanup cooperative agreements to states.² EPA also provides technical assistance and training to states and tribes on how to conduct cleanups and improve the efficiency of state programs. As of September 2019, 57,308 LUST sites had not achieved cleanup completion.³

In addition, EPA has direct implementation authority and responsibilities in Indian Country. In that role, EPA oversees cleanups by responsible parties, conducts site assessments, remediates contaminated water and soil, and provides alternative sources of drinking water when needed. EPA's funding for Indian Country is the primary source of money for these activities. With few exceptions, tribes do not have independent program resources to pay for assessing and cleaning up UST releases, and in many cases, there are no responsible parties available to pay for the cleanups at sites in Indian Country.

Cleaning up LUST sites protects people from exposure to contaminants such as benzene, a known carcinogen, and makes land available for reuse. A 2018 study found that high profile UST releases decrease nearby property values 2 to 6 percent. Then, once a cleanup is completed, nearby property values rebound by a similar margin.⁴ In 2019, cleanups were completed at 8,358 LUST sites.

FY 2021 Activities and Performance Plan:

² States as referenced here also include the District of Columbia and five territories as described in the definition of state in the Solid Waste Disposal Act.

³ Please see EPA website: <http://www.epa.gov/ust/ust-performance-measures>.

⁴ Guignet, D., Jenkins, R., Ranson, M., & Walsh, P. J. (2018). Contamination and incomplete information: Bounding implicit prices using high-profile leaks. *Journal of environmental economics and management*, 88, 259-282. <https://doi.org/10.1016/j.jeem.2017.12.003>.

Work in this program directly supports Goal 1/Objective 1.3, Revitalize Land and Prevent Contamination, in the *FY 2018 – 2022 EPA Strategic Plan*. EPA’s ambitious 11,200 annual target for the number of LUST sites that meet risk-based standards for human exposure and groundwater migration has proven especially challenging. EPA has intensively engaged state partners to identify long-term strategies to meet the long-term performance goal of completing 56,000 additional LUST cleanups between FY 2018-2022. In FY 2019, LUST cleanups increased to 8,358 representing the first annual increase in such cleanups since FY 2013.

EPA will continue to collect and analyze information about the initiation and cleanup of UST releases. This information will chart progress toward achieving its annual performance goal of completing 11,200 cleanups in FY 2021 and inform EPA’s work with its state partners to increase the number of cleanups completed. As part of that effort, EPA and individual states may initiate Kaizen process improvement events if EPA and the state determine the Kaizen event will help streamline a state’s process.

In FY 2021, EPA will:

- Work with states and tribes within available resources to implement strategies to reduce the number of sites that have not reached cleanup completion and to address new releases as they continue to be confirmed.
- Provide targeted training to states and tribes, such as remediation process optimization and rapid site assessment techniques.
- Monitor the soundness of financial mechanisms, in particular, insurance and state cleanup funds that serve as financial assurance for LUST releases; ensuring that money is available to pay for cleanups. In addition, EPA will continue to provide analysis and technical assistance to states to help them improve the environmental and financial performance of their cleanup funds.
- Provide support in Indian Country for site assessments, investigations, and remediation of high priority sites; enforcement against responsible parties; cleanup of soil and groundwater; alternate water supplies; cost recovery against UST owners and operators; oversight of responsible party lead cleanups; and technical expertise and assistance to tribal governments.
- Provide resources and support to states and tribes to quickly address emergency responses from releases to the environment. Releases from USTs can result in imminent threats to public safety when petroleum or petroleum vapors reach explosive levels in sewers, utility corridors, underground parking structures, and basements near a LUST site. Emergency response incidents across the country show that reporting, initial abatement measures, and free product removal activities may need to be implemented immediately upon discovery of a release to protect human health and the environment.⁵

⁵ For more information, please see: <http://astswmo.org/compendium-of-emergency-response-actions-at-underground-storage-tank-sites-version-2/>.

Performance Measure Targets:

Work under this program supports performance results in the LUST Cooperative Agreements Program under the LUST appropriation.

FY 2021 Change from Estimated FY 2020 Enacted Budget (Dollars in Thousands):

- (+\$582.0) This change is an increase due to the recalculation of base payroll costs.
- (-\$2,673.0 / -5.2 FTE) This net program change reflects a focus on cleaning up the highest priority LUST sites in Indian Country and a reduction in resources that provide subject matter and technical expertise to states and tribes.

Statutory Authority:

Resource Conservation and Recovery Act §§ 8001, 9001-9014.

LUST Prevention

Program Area: Underground Storage Tanks (LUST / UST)

Goal: A Cleaner, Healthier Environment

Objective(s): Revitalize Land and Prevent Contamination

(Dollars in Thousands)

	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted
<i>Leaking Underground Storage Tanks</i>	<i>\$26,829.1</i>	<i>\$25,369.0</i>	<i>\$0.0</i>	<i>-\$25,369.0</i>
Total Budget Authority	\$26,829.1	\$25,369.0	\$0.0	-\$25,369.0

Program Project Description:

The Leaking Underground Storage Tank (LUST) Prevention Program works to ensure that groundwater is protected from petroleum and associated chemicals leaking from underground storage tanks (USTs). The LUST Cooperative Agreement Program provides funding to states to assess and clean up LUST sites. This program has provided funding to states,⁶ tribes, and/or intertribal consortia to inspect, prevent releases, ensure compliance with federal and state laws, and enforce these laws for the 549,583 federally regulated active USTs.⁷ The Energy Policy Act (EPA) of 2005 requires EPA or states to inspect every UST once every three years.

FY 2021 Activities and Performance Plan:

Resources are proposed for elimination for this program in FY 2021. States could elect to maintain core program work with state resources rather than federal resources.

Performance Measure Targets:

EPA’s FY 2021 Annual Performance Plan does not include annual performance goals specific to this program.

FY 2021 Change from Estimated FY 2020 Enacted Budget (Dollars in Thousands):

- (-\$25,369.0) This funding change proposes to eliminate the LUST Prevention Program.

Statutory Authority:

Solid Waste Disposal Act of 1976, as amended by the Superfund Amendments and Reauthorization Act of 1986, § 2007(f); Energy Policy Act, § 9011.

⁶ States as referenced here also include the District of Columbia and five territories as described in the definition of state in the Solid Waste Disposal Act.

⁷ See EPA website: <http://www.epa.gov/ust/ust-performance-measures>.

LUST Cooperative Agreements

Program Area: Underground Storage Tanks (LUST / UST)

Goal: A Cleaner, Healthier Environment

Objective(s): Revitalize Land and Prevent Contamination

(Dollars in Thousands)

	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted
<i>Leaking Underground Storage Tanks</i>	\$59,225.6	\$55,040.0	\$38,840.0	-\$16,200.0
Total Budget Authority	\$59,225.6	\$55,040.0	\$38,840.0	-\$16,200.0

Program Project Description:

This funding is used to award cooperative agreements to states⁸ to implement the Leaking Underground Storage Tank (LUST) Program. The LUST Program ensures that petroleum contamination is properly assessed and cleaned up by providing states with funding to address releases, including in groundwater.⁹ LUST funding supports states in managing, overseeing, and enforcing cleanups at LUST sites. This is achieved by focusing on increasing the efficiency of LUST cleanups nationwide, leveraging private and state resources, and enabling community redevelopment. Cleaning up LUST sites protects people from exposure to contaminants and makes land available for reuse.

EPA’s backlog study characterized the national inventory of sites that have not reached cleanup completion. The study found that almost half of the releases were 15 years old or older, and that groundwater was contaminated at 78 percent of these sites. Remediating groundwater contamination is often more technically complex, takes longer, and is more expensive than remediating soil contamination.¹⁰ Potential adverse health effects from chemicals in gasoline such as benzene as well as methyl-tertiary-butyl-ether (MTBE), alcohols, or lead scavengers contribute to the importance of cleaning up these contaminants and increase the cost of cleaning up these sites.¹¹

In 2016, EPA released a study called “Property Value Study of High-Profile UST Release Sites.” The purpose of the study was to determine the impact of high-profile UST releases on housing prices. The study found that high profile UST releases decrease nearby property values 2 to 6 percent. Once a cleanup is completed, nearby property values rebound by a similar margin.¹²

⁸ States as referenced here also include the District of Columbia and five territories as described in the definition of state in the Solid Waste Disposal Act.

⁹ Almost half of the Nation’s overall population and 99 percent of the population in rural areas rely on groundwater for drinking water. (See *EPA 2000 Water Quality Inventory Report*, https://archive.epa.gov/water/archive/web/html/2000report_index.html).

¹⁰ Please see *The National LUST Cleanup Backlog: A Study Of Opportunities*, September 2011, <http://www.epa.gov/ust/national-lust-cleanup-backlog-study-opportunities>.

¹¹ Please see *Technologies for Treating MtBE and Other Fuel Oxygenates*, May 2004, pages 2-6 and 2-7, <https://clu-in.org/download/remed/542r04009/542r04009.pdf>.

¹² Guignet, D., Jenkins, R., Ranson, M., & Walsh, P. J. (2018). Contamination and incomplete information: Bounding implicit prices using high-profile leaks. *Journal of environmental economics and management*, 88, 259-282. <https://doi.org/10.1016/j.jeem.2017.12.003>.

FY 2021 Activities and Performance Plan:

Work in this program directly supports Goal 1/Objective 1.3, Revitalize Land and Prevent Contamination, in the *FY 2018 – 2022 EPA Strategic Plan*. EPA’s ambitious 11,200 annual target for the number of LUST sites that meet risk-based standards for human exposure and groundwater migration has proven especially challenging. EPA has intensively engaged state partners to identify long-term strategies to meet the long-term performance goal of completing 56,000 additional LUST cleanups between FY 2018-2022. In FY 2019, LUST cleanups increased to 8,358 representing the first annual increase in such cleanups since FY 2013.

EPA will continue to collect and analyze information about the initiation and cleanup of UST releases. This information will chart progress toward achieving its annual performance goal of completing 11,200 cleanups in FY 2021 and inform EPA’s work with its state partners to increase the number of cleanups completed. As part of that effort, EPA and individual states may initiate Kaizen process improvement events if EPA and the state determine the Kaizen event will help streamline a state’s process.

In FY 2021, EPA will:

- Collaborate with states to develop and implement flexible, state-driven strategies to reduce the number of remaining LUST sites that have not reached cleanup completion. Through the cooperative efforts between EPA and states, the backlog was reduced by approximately 44 percent between the end of 2008 and the end of 2019 (from 102,798 to 57,308). As of September 2019, 57,308 releases remain that have not reached cleanup completion.¹³
- Provide resources to states to perform core cleanup work. Some states also may be able to pursue other means to maximize the effectiveness or efficiency in protectively completing cleanups and reducing their backlogs.
- Leverage funding by developing best practices and supporting management, guidance, and enforcement activities through LUST Cleanup Cooperative Agreements. LUST Cleanup Cooperative Agreements help achieve more than 8,000 cleanups annually, whereas, if EPA were to apply the funding directly, only about 390 cleanups would occur annually (assuming an average cleanup cost of \$141,000 per site).¹⁴
- Provide resources and support to states to quickly address emergency responses from releases to the environment. Emergency response incidents across the country show that reporting, initial abatement measures, and free product removal activities need to be implemented immediately upon discovery of a release to protect human health and the environment.¹⁵

¹³ Please see EPA website: <http://www.epa.gov/ust/ust-performance-measures>.

¹⁴ Average cleanup cost per site based on ASTSWMO’s 2018 Annual State Fund Survey Results at: <http://astswmo.org/state-fund-survey-results-2018/>.

¹⁵ For more information, please see: <http://astswmo.org/compendium-of-emergency-response-actions-at-underground-storage-tank-sites-version-2/>.

The Energy Policy Act (EPA) of 2005 requires that states receiving LUST Cooperative Agreements funding meet certain release prevention requirements, such as inspecting every facility at least once every three years. In FY 2021, EPA will continue to factor state compliance with EPA requirements into LUST Cleanup Cooperative Agreement decisions.

Performance Measure Targets:

(PM 112) Number of LUST cleanups completed that meet risk-based standards for human exposure and groundwater migration.

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Units
Target	9,000	8,600	8,600	8,600	11,200	11,200	11,200	11,200	Cleanups
Actual	10,393	9,869	8,977	8,775	8,128	8,358			

FY 2021 Change from Estimated FY 2020 Enacted Budget (Dollars in Thousands):

- (-\$16,200.0) This program change reflects a focus on cleaning up the highest priority sites.

Statutory Authority:

Resource Conservation and Recovery Act § 9003(h)(7).

Research: Sustainable Communities

Research: Sustainable and Healthy Communities
 Program Area: Research: Sustainable Communities
 Goal: Greater Certainty, Compliance, and Effectiveness
 Objective(s): Prioritize Robust Science

(Dollars in Thousands)

	FY 2019 Actuals	Estimated FY 2020 Enacted	FY 2021 Pres Budget	FY 2021 Pres Budget v. Estimated FY 2020 Enacted
Science & Technology	\$135,083.1	\$132,477.0	\$58,597.0	-\$73,880.0
<i>Leaking Underground Storage Tanks</i>	<i>\$130.5</i>	<i>\$320.0</i>	<i>\$304.0</i>	<i>-\$16.0</i>
Inland Oil Spill Programs	\$599.6	\$664.0	\$522.0	-\$142.0
Hazardous Substance Superfund	\$11,004.7	\$16,463.0	\$11,448.0	-\$5,015.0
Total Budget Authority	\$146,817.9	\$149,924.0	\$70,871.0	-\$79,053.0
Total Workyears	411.9	421.8	294.6	-127.2

Program Project Description:

EPA’s Sustainable and Healthy Communities (SHC) Research Program under the Leaking Underground Storage Tanks (LUST) appropriation provides federal, regional, and community decision-makers with tools, methods, and information to prevent leaking underground storage tanks and mitigate release at LUST sites. Specifically, this research provides information and tools designed to enable decision-makers to better:

- Assess sites and evaluate the implications of alternative remediation techniques, policies, and management actions to assess and cleanup leaks at fueling stations.
- Identify the environmental impacts and unintended consequences of existing and new biofuels available in the marketplace.
- Protect America’s land, groundwater resources, and drinking water supplies that could be impacted by the Nation’s more than 550 thousand underground fuel storage tanks.¹⁶

The SHC Research Program is one of six integrated and transdisciplinary research programs in the Research and Development Program. Each of the six integrated and transdisciplinary research programs is guided by a Strategic Research Action Plan (StRAP) that reflects the research needs of agency program and regional offices, states, and tribes, and is implemented with their active collaboration and involvement. As part of the FY 2021 Budget, the new SHC FY 2019-2022 StRAP builds upon prior SHC StRAPs and continues a practice of conducting innovative scientific research aimed at solving the problems encountered by Agency partners and stakeholders.

Recent Accomplishments of the SHC Research Program include:

- **Using GIS to Address Vulnerability of Underground Storage Tanks (USTs) to Flooding:** Fueling stations are critical in disaster response and are potential sites of fuel

¹⁶ For more information, please see: <https://www.epa.gov/ust>.

releases in flooding events. In Hurricane Harvey, for example, approximately 1,200 Underground Storage Tanks (USTs) containing up to 15.4 million gallons of fuel were inundated. Across the Nation, there are approximately 33,000 USTs within the Federal Emergency Management Agency's (FEMA) estimated 100-year floodplains. This research is focused on systematically assessing storm and flood risk at UST sites to help EPA's Land and Emergency Management Program identify protection strategies to "harden" facilities against damage at each location, ensuring readiness and preventing releases. This research was presented to the Association of State and Territorial Waste Management Officials in May 2019.

FY 2021 Activities and Performance Plan:

Work in this program directly supports Goal 3/Objective 3.3, Prioritize Robust Science in the *FY 2018 – 2022 EPA Strategic Plan*. Specifically, this work will aim to characterize sites and contaminants released from LUSTs identified under the LUST Trust Fund with an emphasis on assisting the Agency and states in addressing the backlog of sites for remediation. Also, this research will help communities remediate contaminated sites at an accelerated pace and lower costs, while reducing human health and ecological impacts. Resulting methodologies and tools will help localities and states return properties to productive use, thus supporting the Agency's mission of protecting human health and the environment in the context of communities. Such work is integral to achieving EPA's priority of revitalizing land and preventing contamination.

In FY 2021, EPA research under SHC will develop models, metrics, and spatial tools for EPA regions and states to evaluate the vulnerability of groundwater to LUSTs and the subsequent human health risks that follow contamination. New data collection methods will be used to identify groundwater wells nationally, which then will be used to develop a groundwater vulnerability model at local, state, and national scales. SHC also will assist EPA's Underground Storage Tanks Program, other programs, and states by updating technical guidance manuals and evaluations of risk to underground storage tank system components from new fuel formulations.

Research Planning:

EPA's Board of Scientific Counselors (BOSC) is a federal advisory committee that provides advice and recommendations to EPA on technical and management issues of its research programs. The SHC Research Program will continue to meet regularly over the next several years with the BOSC SHC subcommittee to seek input on topics related to research program design, science quality, innovation, relevance, and impact.

The Agency assesses its research performance through the distribution of research evaluation surveys to key users of its research products. This provides evidence for how research products are being used, by whom, and the degree of satisfaction product users have with research product quality, usability, and timeliness of delivery. Through the evaluation process, the Agency identifies its strengths and finds targeted areas for improvement to its research programs.

EPA's state engagement¹⁷ is designed to inform states about their role within EPA and EPA's research programs, and to better understand the science needs of state environmental agencies. Key partners at the state level include: the Environmental Council of the States, with its Environmental Research Institute of the States and Interstate Technology and Regulatory Council; the Association of State and Territorial Health Officials; as well as state media associations, such as the Association of State and Territorial Solid Waste Management Officials.

Performance Measure Targets:

Work under this program supports performance results in the Research: Sustainable and Healthy Communities Program under the S&T appropriation.

FY 2021 Change from Estimated FY 2020 Enacted Budget (Dollars in Thousands):

- (+\$176.0) This change is an increase due to the recalculation of base payroll costs.
- (-\$192.0) This program change streamlines research to characterize and remediate contaminated leaking UST sites.

Statutory Authority:

Reorganization Plan No. 3 of 1970, 84 Stat. 2086, as amended by Pub. L. 98-80, 97 Stat. 485 (codified as Title 5 App.) (EPA's organic statute); Subtitle I of the Solid Waste Disposal Act.

¹⁷ For more information on EPA's engagement with states, please see: <https://www.epa.gov/research/epa-research-solutions-states>.

