

**South Carolina
Drycleaning Facility Restoration Trust Fund**

PROGRAM STATUS REPORT

Fiscal Year 2020

Prepared for **Gov. Henry McMaster**
and the **Members of the S.C. Legislature**



Prepared by the S.C. Department of Health and Environmental Control

W. Marshall Taylor Jr., Acting Director



Introduction

The S.C. Drycleaning Facility Restoration Trust Fund Program Status Report is provided to the S.C. General Assembly as required by the S.C. Hazardous Waste Management Act – S.C. Code of Laws, Article 4, Title 44, Chapter 56 (Section 44-56-430 A). This report contains:

- A summary of the activities for fiscal year (FY) 2020 (July 1, 2019 through June 30, 2020);
- Program funding sources;
- Funding eligibility requirements for drycleaners;
- Financial obligations; and
- A five-year budget projection.

Table of Contents

SECTION 1: Introduction.....	3
SECTION 2: Background	4
SECTION 3: Eligibility	5
SECTION 4: Fund Status.....	6
SECTION 5: Fiscal Year 2020 Accomplishments.....	10
SECTION 6: Public Participation	11

Acknowledgements

The S.C. Drycleaning Facility Restoration Trust Fund Program Status Report is submitted by the S.C. Department of Health and Environmental Control in compliance with S.C. Code Section 44-56-430(A). Additionally, Act 119 of 2005 mandates that agencies provide all reports to the General Assembly in an electronic format.

BUREAU OF LAND & WASTE MANAGEMENT

BUREAU CHIEF: Henry Porter

ASSISTANT BUREAU CHIEF: Donald L. Siron, P.G.

EDITOR: Robert Hodges

Acronyms & Definitions

Act	S.C. Drycleaning Facility Restoration Trust Fund Act of 2013
ACOR	Annual Certificate of Registration
DFEC	Drycleaning Facility Exemption Certificate
DFI	Detailed Facility Investigation
DOR	S.C. Department of Revenue
Dry-Drop	A retail store which collects items to be drycleaned at a remote location
EIA	Expanded Initial Assessment
Existing	A drycleaning facility that started operations before November 24, 2004
Former	A drycleaning facility that ceased operations before July 1, 1995
Fund	S.C. Drycleaning Facility Restoration Trust Fund
FY	Fiscal Year
New	A drycleaning facility that started operations on or after November 24, 2004
NFA	No Further Action
Opt-Out	A facility not subject to the Act, or eligible for the Fund, in accordance with 44-56-425
PCE	Tetrachloroethylene (Perchloroethylene or “perc”); a halogenated drycleaning fluid
DHEC	S.C. Department of Health and Environmental Control
Stoddard	A non-halogenated petroleum based drycleaning fluid
VIP	Vapor Intrusion Pathway
UVAP	Ultra Violet Air Purification

Web Links

Additional information and resources on DHEC’s Drycleaning Program are available at scdhec.gov/drycleaners. These resources include:

- **Laws and Regulations** (South Carolina Drycleaning Facility Restoration Trust Fund Act [See Article 4], and South Carolina Drycleaning Facility Restoration Regulations);
- **State Coalition for the Remediation of Drycleaners** (U.S. Environmental Protection Agency);
- **South Carolina’s Drycleaning Sites by Priority Groups**; and
- **DHEC Forms for Drycleaners**.

Background

SECTION 2

The S.C. General Assembly created the South Carolina Drycleaning Facility Restoration Trust Fund (Fund) in 1995 to address environmental contamination resulting from drycleaning activities.

The South Carolina Drycleaning Facility Restoration Trust Fund Act (Act) was revised in 2004, 2009 and 2013. The Fund was created at the urging of the drycleaning industry to protect drycleaners from financial liability caused by environmental problems at their facilities. The Act provides that monies from the general fund shall not be used for restoration of drycleaning facilities and that all funding sources for cleanup activities must come from the drycleaning industry. A description of funding sources is in Section 4.

The S.C. Department of Revenue (DOR) is responsible for drycleaner registration and collection of monies for the Fund.

The S.C. Department of Health and Environmental Control (DHEC) is responsible for administering the Fund. The Act allows DHEC to pay up to four staff using Fund monies to manage assessment and remediation of drycleaning facilities statewide. Currently, the Fund pays for 3.5 Full-Time Equivalent employees.

Sources of Contamination

There are several reasons for the presence of soil and groundwater contamination at drycleaning facilities – mostly centered around the use of solvents. The commonly used drycleaning solvents are organic solvents such as perchloroethylene (PCE – or “perc”) and petroleum-based solvents such as Stoddard solvent.

- In the past, most drycleaning machines were transfer machines – where solvent-laden clothes were transferred to a separate machine for drying. This provided an opportunity for solvents to be spilled onto the floor which would then permeate the concrete floor and be released into the environment. Filling a drycleaning machine’s solvent tanks from drums or other containers could also result in spills, as could improper storage or handling of containers.
- In addition, since older drycleaning machines vented solvent vapors to the atmosphere, these

vapors could condense in cool weather and collect on nearby soil. Other potential sources of contamination include drycleaning waste, such as spent solvents, distillation waste, separator water and used filters. Before hazardous waste regulations were enacted in the early 1980s, these types of waste were commonly disposed of by pouring liquids into sewer lines, septic systems or onto the ground. Used solvent-laden filters were commonly placed on the ground to drain or into trash dumpsters that leaked.

Requirements of the Act

Currently, the Act requires that all drycleaning facilities participating in the Fund use special floor coatings around drycleaning machines and waste storage areas to prevent spilled solvents from permeating through concrete floors. Other requirements include containment pans or dikes for drycleaning machines and waste storage areas.

Drycleaners participating in the Fund are required to certify that their facilities meet the applicable containment requirements every five years. DHEC personnel also visit participating facilities to verify the presence and adequacy of containment structures prior to committing Fund dollars for assessment or remediation.

Advances in Environmental Protection

Modern dry-to-dry machines perform both washing and drying cycles without the need to transfer items, thereby greatly reducing the potential for release of solvents to the environment. Beginning in 2010, the Act required all “perc” drycleaning solvents to be delivered by a closed-loop system.

A closed-loop system reduces opportunities for spills and vapor loss during refilling by using a special dry-disconnect coupler. The coupler permits solvent flow and vapor return in one self-contained unit.

Furthermore, there is a growing trend among drycleaners to manage a series of remote dry-drop locations. A driver picks up clothes to be cleaned

from the dry-drop location and brings them to a “wet” drycleaning operation at a single central location. The driver then returns the cleaned clothes to the dry-drop location.

Finally, the newer drycleaning machines are much more efficient in their use of solvents, reducing the amount of solvents used due to fewer losses to the atmosphere, and reduced disposal costs due to reduced volumes used.

Eligibility

Eligibility for the Fund is dependent upon several factors as listed in Section 44-56-470 (B) of the S.C. Drycleaning Restoration Trust Fund Act of 2013 (Act). Revisions to the Act in 2013 have allowed an additional 115 facilities to be potentially eligible for the Fund. These facilities were not eligible previously because either the registrants did not have access to the property, or the initial sample did not show evidence of contamination. The revised Act included an application deadline of December 21, 2014 for former and existing facilities.

When the Fund was created in 1995, several hundred drycleaners registered with the S.C. Department of Revenue (DOR) and applied to DHEC for eligibility. Drycleaners who used petroleum-based solvents were given a one-time opportunity in 1995 to opt out of the Fund. These businesses are not required to pay the annual registration fees or surcharges paid by participating drycleaners, but they will not be able to access the Fund if contamination from their facilities is discovered.

There are 135 drycleaning facilities that have elected to opt out of the Fund. All new drycleaning facilities that opened on or after November 24, 2004, however, are required to participate by paying into the Fund regardless of the type of solvents used – which eliminates the opportunity to opt out of the fund.

Revisions to the Act in 2009 required that a facility possess either an Annual Certificate of Registration

While improvements in industry practices will not remove contamination that has already been released into the environment, these preventive measures will greatly reduce the probability and scope of future releases.

This allows the Fund to focus on cleaning up the past environmental releases with the expectation that far fewer new releases will occur.

SECTION 3

(ACOR) or a Drycleaning Facility Exemption Certificate (DFEC – for facilities that had chosen to opt out) in order to receive shipments of drycleaning solvent. The ACOR is issued yearly by DOR when the facility registration fees are paid.

The 2009 revisions also required opt-out facilities to obtain a DFEC between July 1, 2009 and December 31, 2009. Both certificates apply uniquely to the registration location and cannot be transferred.

Prior to the 2013 revisions to the Act, DHEC had performed investigation at every eligible drycleaning site in South Carolina and found contamination at the majority of these sites. Review of the results of these investigations indicated that groundwater contaminated by drycleaning operations had, in some cases, impacted public or private water supplies.

When impacts to drinking water are identified, DHEC immediately takes steps to eliminate the risk of human exposure to contaminants, usually by providing an alternative source of drinking water.

Sufficient funding is not available to address contamination at all sites. Therefore, DHEC prioritizes sites for future work based on actual or potential risks to human health and the environment.

Prioritization criteria are outlined in both the Act and in Regulation 61-33, Subpart D. This process is described in greater detail in Section 4.

Fund Status

SECTION 4

Funding Sources

Revenue for the Fund is currently derived from four sources – all of which come from the drycleaning industry:

- Annual registration fees;
- Surcharges on drycleaning solvents;
- Facility deductibles, which range from \$1,000 to \$25,000; and
- A 1 percent surcharge on the gross proceeds of retail sales of laundering and drycleaning services.

Annual registration fees apply to operating drycleaning facilities – and vary based on the number of people employed – including employees at drop-off locations. Facilities employing up to 4 employees pay \$750 per year, those with 5-10 employees pay \$1,500 per year, and those with 11 or more employees pay \$2,250 per year.

Solvent surcharges are \$10 per gallon for halogenated solvents – such as PCE, \$2 per gallon for non-halogenated drycleaning fluids such as Stoddard solvent or Green Earth solvent – and 25 cents per pound for non-liquid drycleaning agents.

Deductible amounts are assigned to a facility based on the date the eligibility application was submitted to DHEC. The Act initially offered a \$1,000 deductible

for facilities submitting an application by November 24, 2005, as an incentive to quickly bring existing or former facilities into the Fund. Existing or former drycleaning facilities submitting an eligibility application after November 24, 2005, have a deductible of \$25,000. New facilities starting operations on or after November 24, 2004, have a deductible of \$25,000.

A 1 percent surcharge on retail sales of laundering and drycleaning services is collected at the point of sale, regardless of whether the store is a “dry-drop” or has a drycleaning machine on site. This surcharge produces the majority of revenue for the Fund. The 1 percent surcharge is in addition to the 5 percent sales tax collected at the point of sale which goes to the South Carolina General Fund.

According to DOR data, 144 operating drycleaning facilities in South Carolina are currently paying into the Fund. The DOR also reports that out of the 135 facilities that elected to “opt-out” of the program, 68 remain operating.

New technology has the possibility of dramatically changing the drycleaning industry. The technology does not involve the use of traditional solvents – like perc or Stoddard – but only uses water, special soaps, and specialized machines. When the specialized machines replace the old drycleaning equipment, the business is no longer is a drycleaner because there are no solvents being used to clean clothes.

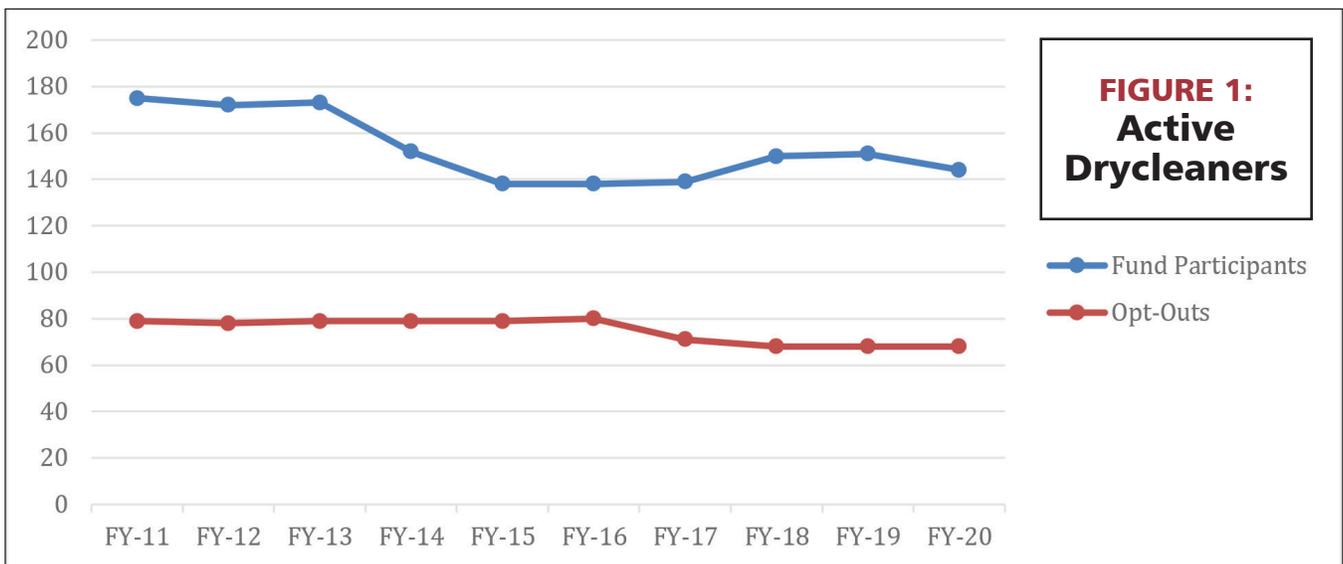


FIGURE 1:
Active Drycleaners

A facility that continues to be covered by the Fund and using the specialized machines, however, would still be required to collect the 1 percent sales fee.

The combined revenue of the Fund for FY20 was \$812,595.27 as compared to \$946,282.11 in FY19. The historical revenue trend shows revenue to the Fund declined steadily from a high in 1997 until 2003 when the 1 percent surcharge on retail sales of drycleaning services was implemented (Figure 2). With the exceptions of FY10 and FY15, revenue has generally declined since FY07. Based on the trend, FY21 revenue is estimated to be no more than \$800,000.

The cumulative revenue from the inception of the program through the end of FY20 is \$26,591,625.73 and the cumulative expenditures are \$24,284,662.91 (Figure 3). Allowing for outstanding commitments of \$1,388,388.41, the uncommitted Fund balance on June 30, 2020 was \$918,574.41. The Fund is managed to retain about \$750,000 as a contingency for emergency corrective actions.

Project Inventory

There are 380 eligible sites where DHEC may obligate Fund monies for assessment and remediation. In FY20, one new facility registered with DOR as an operating drycleaner and completed an

eligibility application with DHEC. Drycleaners that are registered pay the fees and taxes into the fund regardless of whether a complete eligibility application has been submitted.

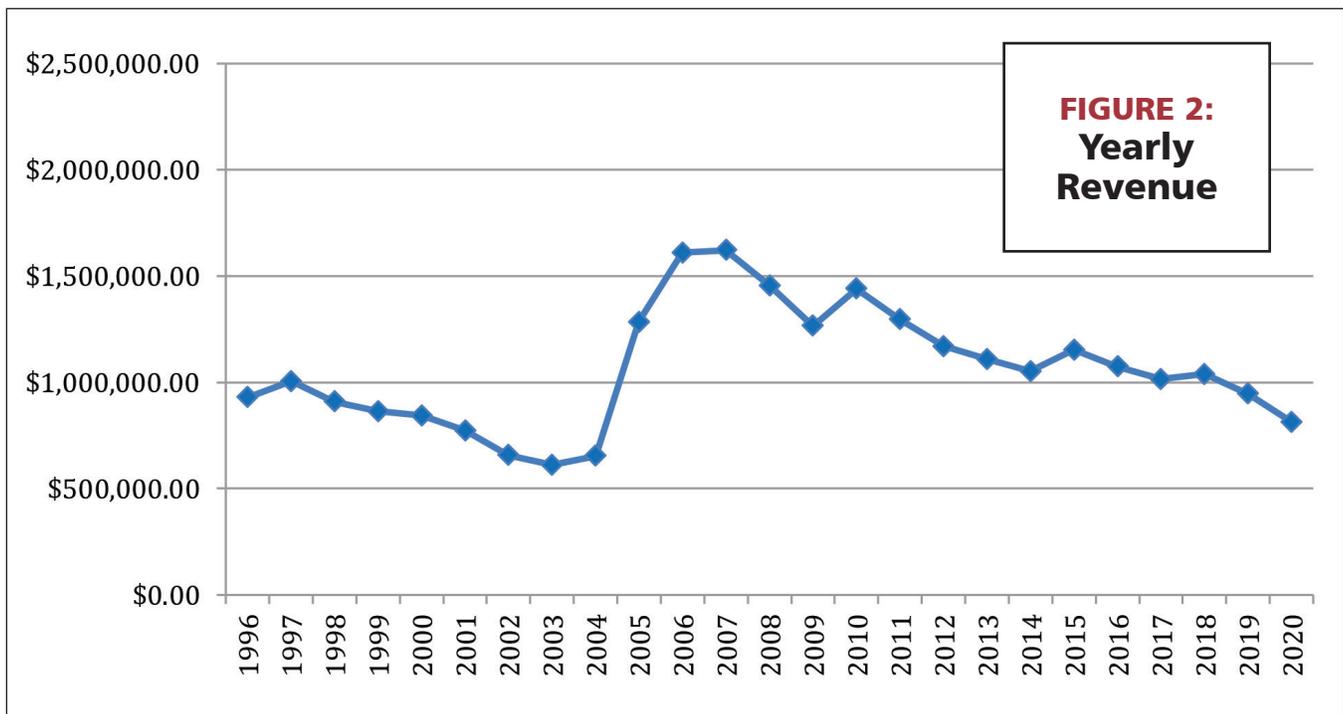
The program conducted assessments at all eligible sites and no additional sites meet the No Further Action (NFA) criteria. Therefore, the current total of NFA sites remains at 163. This leaves 217 sites where some level of additional work is anticipated.

Prioritization

DHEC prioritizes sites for future funding based on available assessment information. The Funding Priority system categorizes sites into one of five groups and is designed to identify sites that require immediate action to eliminate the risk of human exposure or to prevent imminent exposure to environmental contamination.

While the Funding Priority Group System categorizes sites broadly, it does not prioritize individual sites within each group.

Currently, all eligible sites have been evaluated using the group system. A list of sites is available at scdhec.gov/drycleaners.



**FIGURE 2:
Yearly
Revenue**

Assessment Costs

A full delineation assessment – or Detailed Facility Investigation (DFI) – has been completed at 56 of the 217 sites to date. This means that 161 sites still require some level of assessment. The costs for full assessments have ranged from \$51,000 to \$477,000 per site with an average cost of \$174,318. In the past five years, the average cost of 10 full assessments completed was \$73,255. This reduction in the average assessment cost compared to previous years is attributed to more streamlined investigation processes. Assuming that the average full assessment cost can be kept near \$90,000 per site and that the remaining 161 sites could require a full assessment, projected funding of about \$14.5 million will be needed for assessment of the balance of eligible sites. This estimated future funding amount has not been adjusted for inflation.

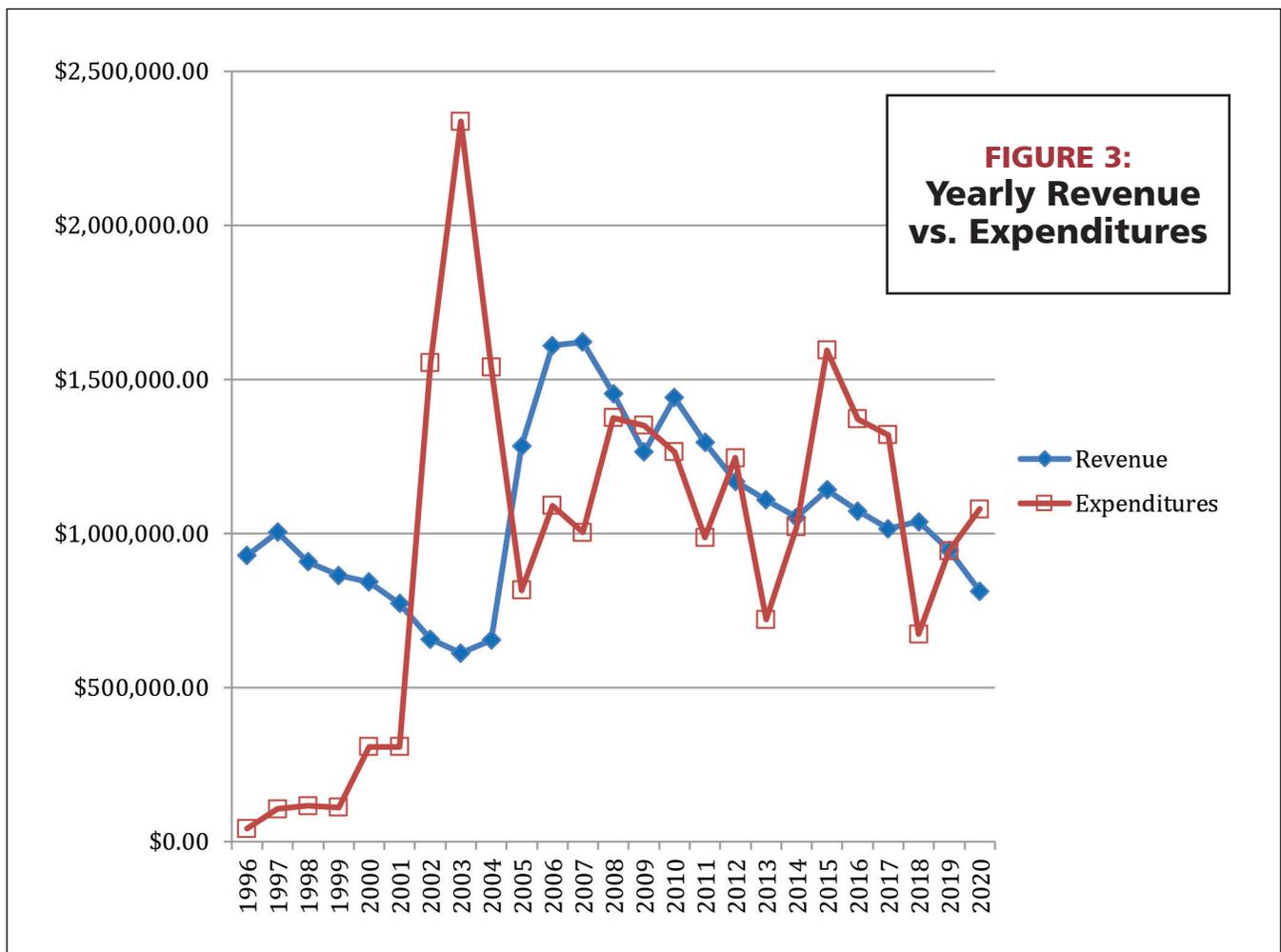
The estimated amount of future assessment costs could be significantly lower as the program devises

more effective approaches to reduce costs while maintaining quality results. It is anticipated that significantly lower estimates will be reflected in future annual reports.

Remediation Costs

Once sites are fully assessed, they will be classified as an Active Remedial System, a Limited Removal Action, Long-Term Monitoring or an NFA. NFAs are only issued to clean sites or sites with such low levels of contamination that they are not expected to impact human health or the environment.

Long-Term Monitoring requires periodic sampling to document the contamination is not expanding and is decreasing over time. Limited Removal Actions include removal of highly contaminated soil, passive remedies, and institutional controls that enhance cleanup and reduce expenditures while protecting human health and the environment. Active Remedial Systems include pilot studies as well as cleanup



system design and installation – which may include vapor intrusion mitigation/remediation systems, groundwater recovery wells, carbon filtration units, monitoring and operations as well as maintenance in order to reduce risks and reach cleanup goals.

Projection of remediation funding needs is based on historic patterns where 37 percent of sites received NFA determination following assessment, 20 percent of sites required limited removal, and 25 percent of sites required active remediation. The average cost of Limited Removal Actions to date is \$66,668 per site. The average cost of Active Remedial Systems to date is \$500,000 per site. Using the assumption that historic patterns will continue, the projected funding need estimates for assessment and remediation are compiled in Table 1. This is a reduction of \$14,303,364 from the FY19 estimate realized by innovations in remediation methods and a decrease in the percentage of sites requiring active remediation.

Future Liabilities

Based on expenditures to date and the above projections, DHEC estimates that a total of about \$36 million will be required to fully assess and clean up all eligible sites. This estimated future funding amount has not been adjusted for inflation.

TABLE 1: Assessment & Cleanup Cost Estimates			
WORK	SITES	ESTIMATED COST	SITE TOTAL COST
Need Full Assessment	161	\$90,000	\$14,490,000
NFA at 37 Percent of 217	80	Work Complete	\$0
Limited Removal at 20 Percent of 217	44	\$66,668	\$2,933,392
Active Remediation at 25 Percent of 217	54	\$500,000	\$20,000,000
ESTIMATED TOTAL			\$36,623,376

Five-Year Funding Projection

The revenue projection for FY21 is \$800,000, based upon DOR receipts through June 2020 (Table 2). The projected revenue to the Fund for the next five years is expected to remain at about \$800,000 per year.

TABLE 2: Revenue & Expenditures		
FISCAL YEAR	REVENUE	EXPENDITURES
1996	\$928,545.65	\$42,582.84
1997	\$1,005,142.60	\$106,383.46
1998	\$908,516.14	\$115,929.62
1999	\$864,553.81	\$111,067.06
2000	\$842,913.75	\$308,156.47
2001	\$773,511.14	\$308,078.22
2002	\$657,242.36	\$1,553,734.08
2003	\$612,189.97	\$2,337,642.77
2004	\$654,508.34	\$1,540,095.94
2005	\$1,284,353.96	\$816,404.12
2006	\$1,610,701.26	\$1,090,890.57
2007	\$1,621,127.21	\$1,003,163.01
2008	\$1,454,856.48	\$1,375,857.27
2009	\$1,265,303.68	\$1,350,910.21
2010	\$1,440,750.89	\$1,265,239.30
2011	\$1,295,766.34	\$986,750.81
2012	\$1,169,338.75	\$1,245,870.21
2013	\$1,109,546.43	\$721,003.50
2014	\$1,052,666.79	\$1,021,339.51
2015	\$1,153,199.80	\$1,594,982.97
2016	\$1,073,528.33	\$1,371,967.90
2017	\$1,015,634.34	\$1,319,952.90
2018	\$1,038,221.51	\$673,964.35
2019	\$946,282.11	\$942,976.09
2020	\$812,595.27	\$1,079,719.73
2021	\$800,000.00	\$800,000.00
2022	\$800,000.00	\$800,000.00
2023	\$800,000.00	\$800,000.00
2024	\$800,000.00	\$800,000.00
2025	\$800,000.00	\$800,000.00

Fiscal Year 2020 Accomplishments

SECTION 5

Investigation Activities

DFIs were completed on three sites in FY20. Vapor Intrusion Pathway (VIP) investigations were completed at 11 sites. The Drycleaning Program achieved 100 percent completion of sub-slab soil/gas and indoor air sampling on all qualified sites by the end of FY20.

Remediation Activities

During FY20, DHEC conducted remedial work at 45 sites. The program installed Sub Slab Depressurization Systems and Ultraviolet Air Purifications Systems (UVAPs) on seven sites in FY20, bringing the total number of these systems operating to 18 facilities. A total of 960 pounds of PCE was removed in FY20. Chloroform gas is been removed at 12 of sites using UVAP systems. The program continues remedial activities on these and other sites.

Monitoring

There are 56 sites at which full DFI assessment have been completed, but these site conditions do not meet NFA criteria. Based on risk evaluation criteria,

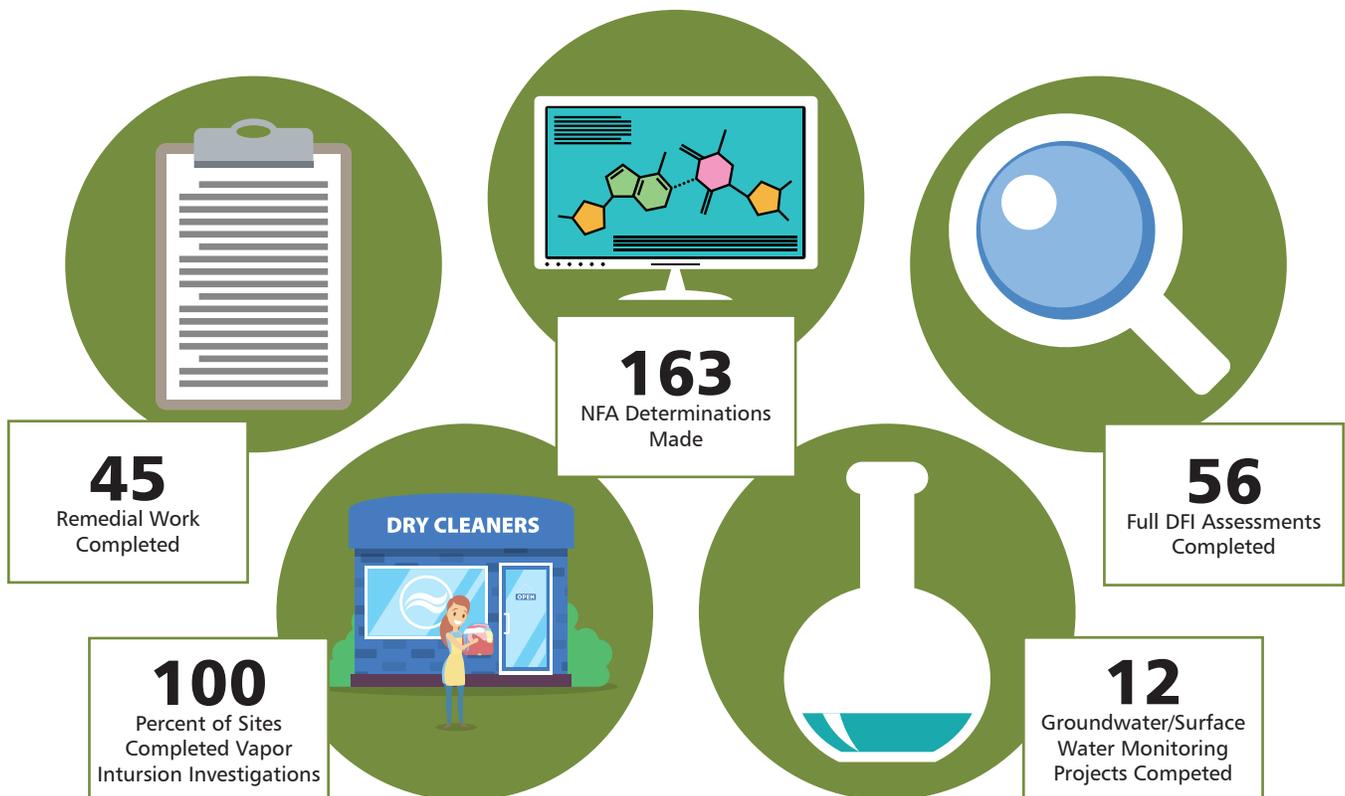
however, conditions at these sites do not warrant substantial fund expenditures. Therefore, the sites are sampled on a periodic basis, generally every 2 to 3 years, to continue monitoring site conditions for risk evaluation. During FY20, groundwater and/or surface water quality monitoring was completed at 12 sites and work is in progress on 10 sites.

No-Further-Action Sites

DHEC has made NFA determinations at 163 sites where investigation has determined that drycleaning contaminants are not present at levels that require additional assessment or remediation. Provided that these facilities continue to meet the requirements of the Act, they remain eligible in the event that evidence of contamination is discovered in the future.

Alternative Water Supplies

The Fund will provide safe drinking water to any residence or business impacted by a participating drycleaning site. No sites required an alternative water supply in FY20.



Containment Certification

Containment measures are required in all areas where drycleaning solvents are used or stored in order for operating drycleaning facilities to qualify for the Fund. Containment measures may include impermeable pans of sufficient capacity under drycleaning machinery, sealing concrete floors with epoxy paint, etc. This topic is addressed in greater detail in "Drycleaning Containment Guidelines," which may be found on the drycleaning program website. See Section 1 for the Web link.

Operating drycleaning facilities self-certify containment measures every five years [44-56-480(A)] to ensure that containment remains effective. Failure to comply with the containment requirements constitutes gross negligence which may impact site eligibility for the Fund [44-56-480(D)].

DHEC does not routinely conduct containment inspections but will inspect facilities on a case-by-case basis. The containment certification mail-out occurred in FY18 and 97 percent of certifications were received by FY19. The next mail out is due in FY23.

Public Participation

One of DHEC's goals for the Fund is to encourage public participation in the remedy selection/cleanup process. Community involvement in the program is important for several reasons. Primarily, it gives local residents an opportunity to have input into choosing a remedial strategy and allows them to voice any concerns they may have about the site.

People living near a site may be aware of conditions that could influence the effectiveness of the available remedies. Sharing of such important information can aid DHEC's understanding of the site and influence remedial decisions.

When DHEC conducts assessment activities, it may be necessary to address the potential migration of contaminants onto or beneath adjacent properties. Field personnel meet with homeowners and business owners in the area surrounding the site when there is a likely risk to drinking water supply wells. DHEC may conduct sampling to determine if the wells have been affected by contamination emanating from a drycleaner property. If drinking water supplies have been contaminated, DHEC will ensure that those

Form Revisions

The Drycleaner Eligibility Application form was revised in May 2005. Revisions to the Act in 2013 eliminated portions of that application form.

The Eligibility Application form (DHEC 3469) was updated in July of 2014 to match the revised Act and includes fillable form fields. No forms were revised in FY20.

Revisions of the Regulations

The revisions to the Act in 2013 removed certain requirements of drycleaning facilities and property owners to participate in the Fund.

DHEC, working with the Drycleaning Advisory Council, revised Regulation R.61-33. The draft regulations had a public comment period in the fall of 2016 followed by a hearing by the DHEC Board in December 2016.

The Regulations became effective May 26, 2017. No regulations were revised in FY20.

SECTION 6

impacted have access to an alternate source of drinking water until an effective remedy to exposure is in place.

DHEC distributes information about sites and upcoming remediation activities to the public via legal notices in local newspapers, the agency's online public notice page and letters to area residents, local government officials and locally elected members of the S.C. General Assembly.

DHEC schedules a public meeting at a location near the drycleaning site and advertises the time and place in a legal notice. DHEC also sends individual letters to those in the vicinity of the site.

At the meeting, a DHEC spokesperson presents an overview of site conditions and explains the potential remedies that have been considered. An open forum with a question-and-answer session follows this presentation. If participants have further questions, they are encouraged to call the program's toll-free telephone number at 1-866-343-2379

