

2016



# Hazardous Waste Management Fund

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A Report to the General Assembly

*Commonwealth of Kentucky  
Energy and Environment Cabinet  
Department for Environmental Protection  
Division of Waste Management  
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# TABLE OF CONTENTS

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<b>02</b>	<i>EEC Mandate</i>
<b>03</b>	<i>History and Purpose of the Fund</i>
<b>05</b>	<i>Revenues</i>
<b>07</b>	<i>Expenditures</i>
<b>09</b>	<i>Capital Projects</i>
<b>20</b>	<i>Brownfield Redevelopment Program</i>
<b>24</b>	<i>Costs of Cleanup</i>
<b>25</b>	<i>Superfund Sites Near You</i>
<b>27</b>	<i>Future of the Fund</i>
<b>28</b>	<i>Credits and Acknowledgements</i>
<b>29</b>	<i>Appendix of Tables</i>
<b>30</b>	<i>Table 1: Hazardous Waste Management Fund Revenues FY 2015-16</i>
<b>31</b>	<i>Table 2: Hazardous Waste Management Fund Expenditures FY 2015-16</i>
<b>32</b>	<i>Table 3: Cumulative Expenditures on Active Capital Project Accounts</i>
<b>33</b>	<i>Table 4: Active Capital Project Account Expenditures FY 2015-2016</i>

*ON THE COVER*  
*Brownfield Redevelopment Site*  
*Retreat at Louisville, LLC Student*  
*Rental Housing Complex adjacent to*  
*the University of Louisville*

## *EEC Mandate*

This report has been prepared as required by KRS 224.46-580(13)(c). The purpose of the report is to provide information related to the commonwealth's hazardous waste management fund (HWMF). Specifically, the report includes information related to the expenditures and revenues of the hazardous waste management fund for fiscal years 2015 and 2016.

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*KRS 224.46-580(13)(c) "The cabinet shall file with the Legislative Research Commission a biennial report, beginning two (2) years after July 15, 2008, on the revenues and expenditures of the fund."*

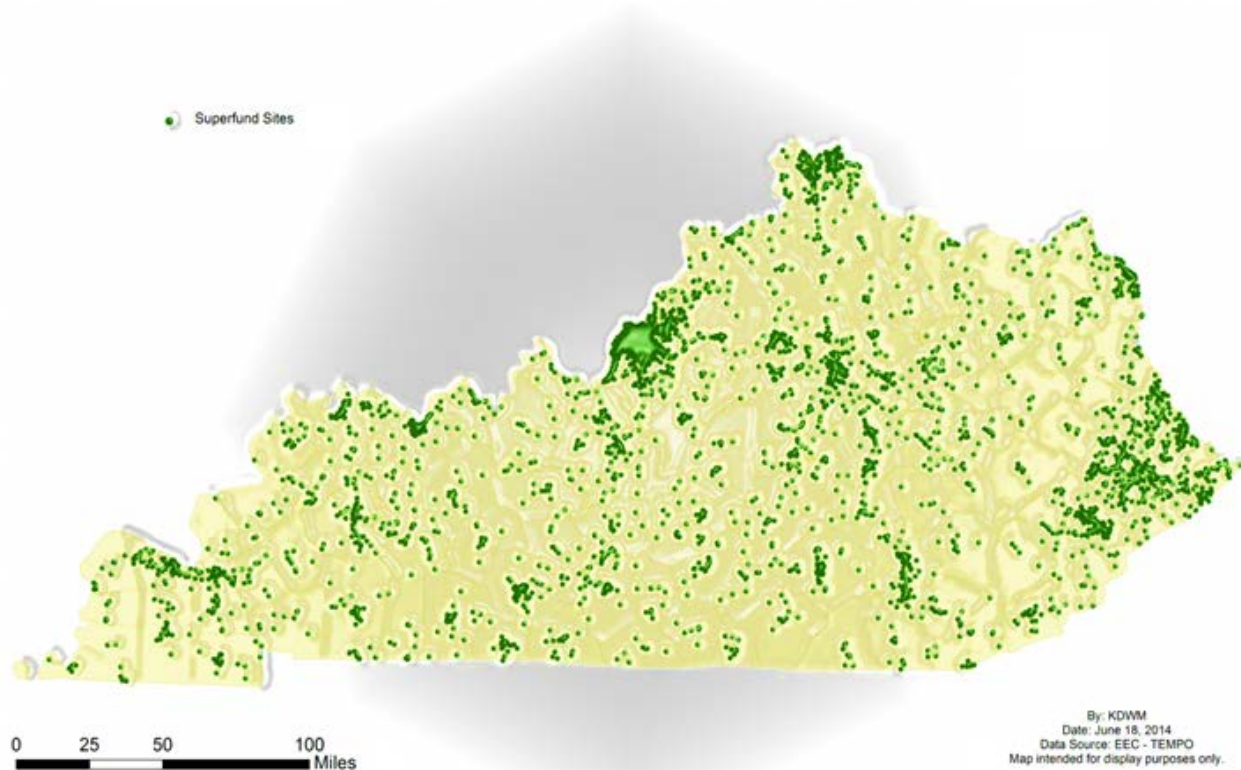
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# HISTORY AND PURPOSE OF THE FUND

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) was enacted by Congress in 1980 in response to the threat of hazardous waste sites. The two sites that caused the need for this legislation were Love Canal in upper New York state, and A.L. Taylor, Distler Farms (a.k.a. The Valley of the Drums) in Shepherdsville, Kentucky. Precipitated by the discovery of A.L. Taylor, Distler Farms site, the Kentucky State Superfund Program began in 1981. There have been more than 6,000 sites that have been investigated, characterized, cleaned-up, or are being investigated, remediated, or under long-term management since the program started. The Superfund Program maintains an inventory of these superfund sites (Fig. 1).

In 1980 the General Assembly created the Hazardous Waste Management Fund (HWMF) to provide the Energy and Environment Cabinet with the funds necessary to protect the health of the citizens and environment of the commonwealth from threats associated with releases of hazardous substances, pollutants and contaminants. Since then, over \$73 million has been spent remediating more than 570 contaminated sites, making the Commonwealth of Kentucky a cleaner and safer place to live. In fiscal years 2015 and 2016 the cabinet registered 200 new superfund sites and oversaw remediation of 207 sites. In addition, the cabinet performed 933 technical site reviews, supervised managed closures for 211 sites, designed and managed state-lead actions at 14 sites, and finalized state-lead actions that resulted in closing nine state-lead sites.

**Figure 1: Active, Managed and Closed Superfund Sites in Kentucky**



The HWMF is the sole source of funding to clean up sites where a release of hazardous substances, pollutants or contaminants has been discovered and no viable responsible party is available.

Specifically, HWMF funds are used for the following throughout the commonwealth:

- Response to emergencies with releases of hazardous substances, pollutants, and contaminants;
- Assessments and remediation of contaminated sites where a viable responsible party cannot be identified;
- Technical reviews and oversight of state-lead and responsible party driven remediation projects; and
- Provision of core funding for the Kentucky Pollution Prevention Center's (KPPC) technical assistance and outreach services as part of the University of Louisville's J.B. Speed School of Engineering.

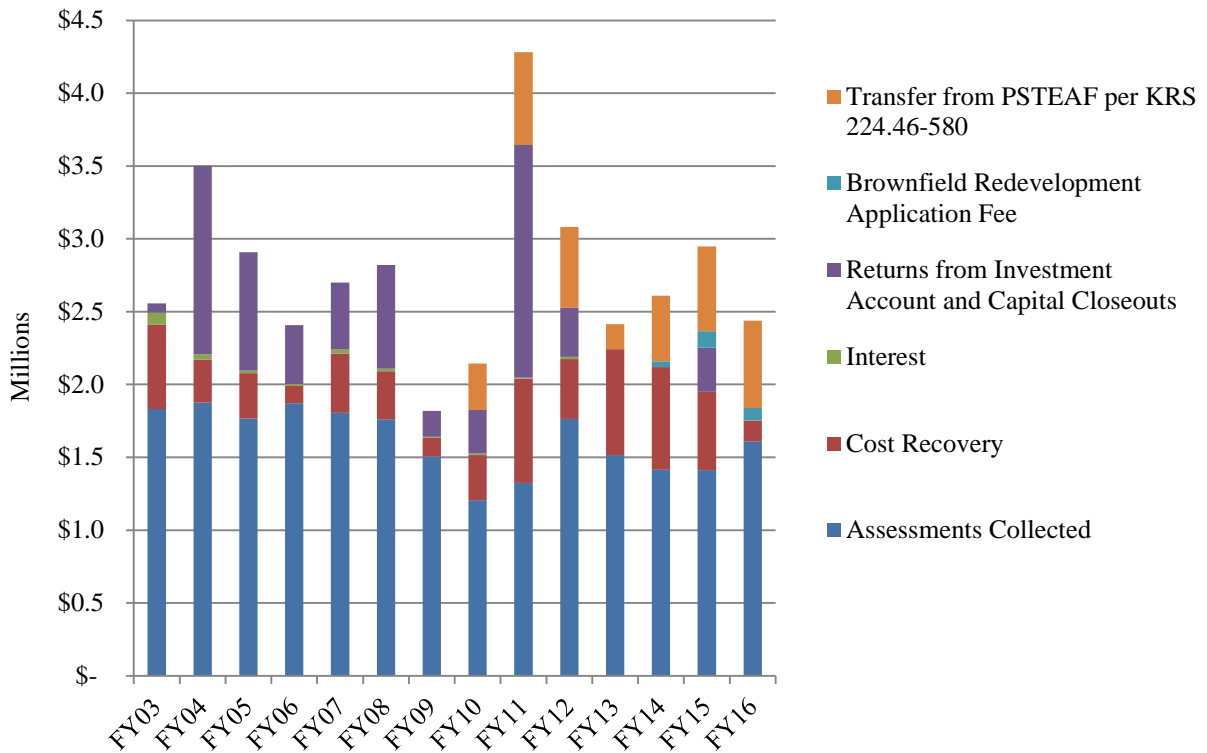
The HWMF has cumulatively provided more than \$8.2 million in funding for the Kentucky Pollution Prevention Center. KPPC was established in 1994 to provide technical assistance to business and industry and promote pollution prevention technologies and procedures. The HWMF contributes a percentage of the assessment fee receipts to KPPC annually in accordance with the statute (Table 1). For specific activities performed by KPPC, visit [kppc.org](http://kppc.org).

During the 2008 legislative session the HWMF was extended through June 30, 2016, and a requirement was added that tasks the cabinet to submit a biennial report regarding HWMF revenues and related activities and expenditures. The legislation was extended again during the 2015 session to extend the HWMF through 2024. This biennial report is required by KRS 224.46-580(13)(c) and includes information from FY 2015 and FY 2016.

# REVENUES

The HWMF sources of revenue include the hazardous waste generator assessment fees, transfers from the Petroleum Storage Tank Environmental Assistance Fund (PSTEAF), Brownfield Redevelopment Program application fees, interest earned on the HWMF account, cost recoveries (monies recovered from responsible parties), and returns from investment and capital closeout accounts (Table 1 and Fig. 2).

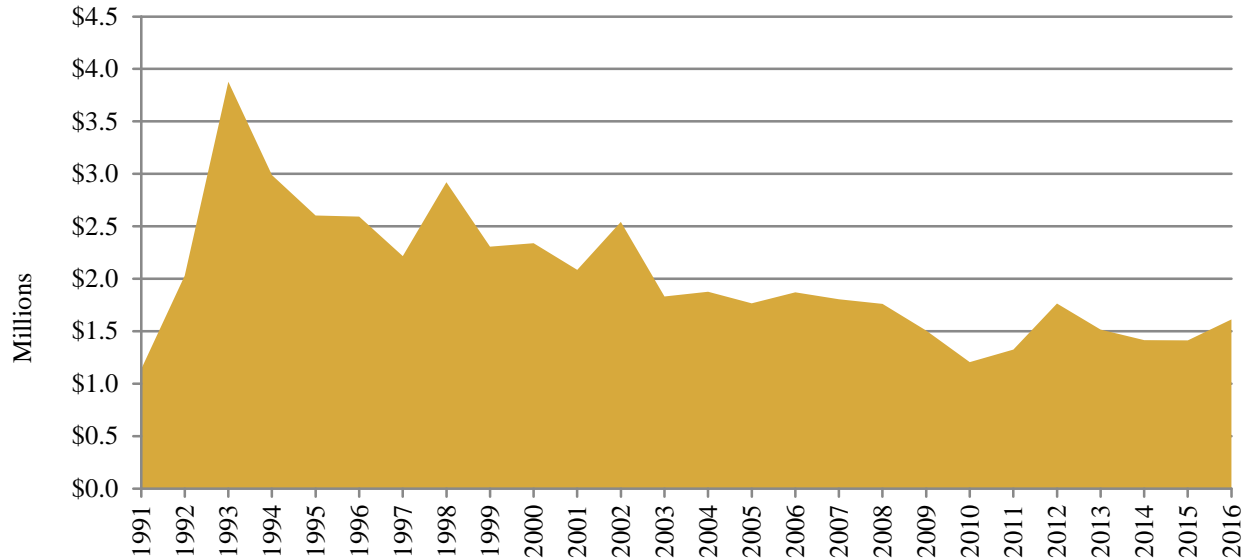
**Figure 2: HWMF Revenues for FY 2003-16**



The hazardous waste generator assessment fee is authorized pursuant to KRS 224.46-580(8) and is collected from generators of hazardous waste at the rate of one and two-tenths cents (\$0.012) per pound for liquid waste and two-tenths of a cent (\$0.002) per pound for solid waste.

During the last twenty years there has been a steady decline in revenue generated annually through the HWMF assessment fee (Fig. 3).

**Figure 3: FY 1991-FY2016 HWMF Assessment Fee Revenues**



Factors that contribute to the decline in assessment fees include amendments to KRS 224.46-580 that provide the following exemptions:

- Emission control dust and sludge from the primary production of steel that is recycled by high temperature metals recovery or managed by stabilization of metals (Effective 2004);
- Assessment fee waiver granted for hazardous waste generators owing less than fifty dollars (\$50) (Effective 2006); and
- Waste that is delivered from the generator to an industrial boiler or furnace and burned for energy recovery shall be assessed at half the rate of the assessment (Effective 2008).

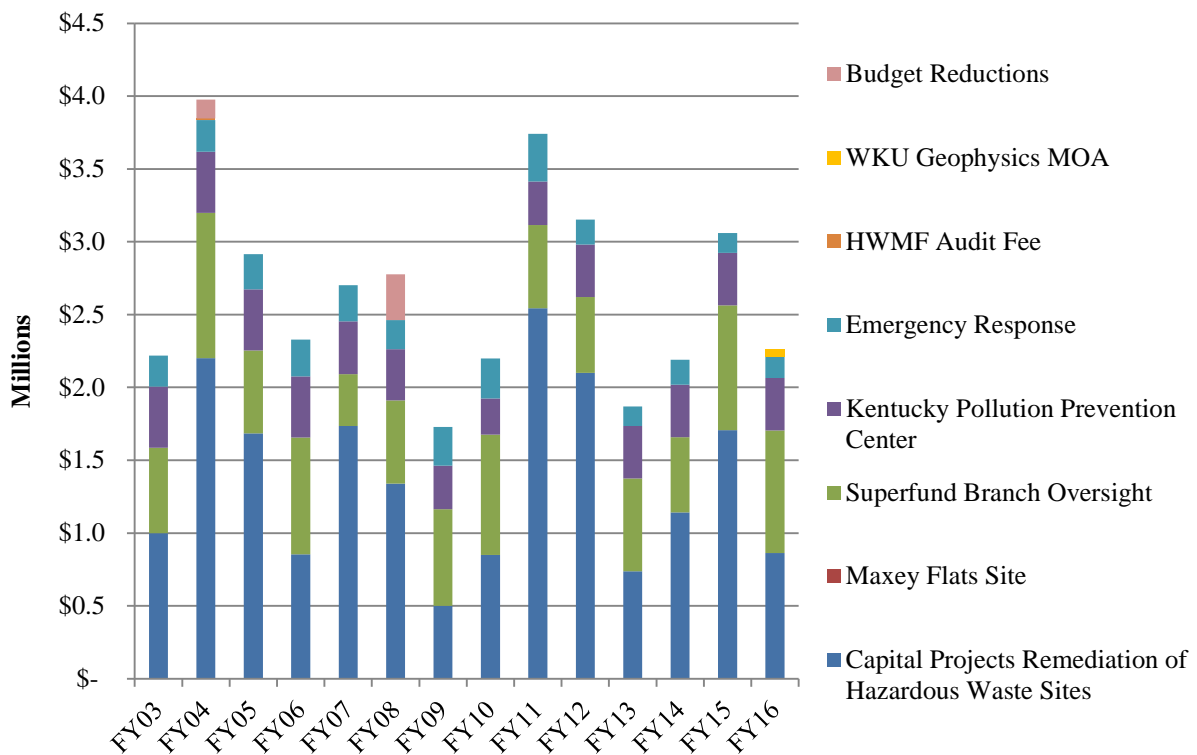
Other declines in revenue can be explained by companies filing for bankruptcy, companies moving their operations out of state, a decline in the number of generators, and an increase in waste minimization and recycling efforts. In recent years, the cabinet's cost recovery efforts have helped to offset some of the decline in assessment fee revenue.

# EXPENDITURES

The cabinet utilizes HWMF monies to provide technical reviews and oversight of state-lead and responsible party driven remediation projects. Many of these projects result from previous heavy industrial activities such as wood treatment, metals plating, chemical production, and dry cleaning.

The cabinet directly manages (state-lead) the cleanup of contaminated sites for which there is no viable responsible party. When a significant amount of remediation will be necessary, a capital project account is created within the HWMF (Table 3). A capital project may include site investigation, site remediation or may be a declared environmental emergency, and typical costs range from \$20,000 to \$1,000,000 plus per site. The costs may extend over multiple years, and do not include those for long-term monitoring, maintenance, operation, or costs for resources required at sites unable to achieve acceptable cleanup levels (i.e. unrestricted use). Project scope reductions or completions below projected costs will result in transfers of dollars back into the HWMF. Currently, due to limited funding, capital project expenditures are very minimal (Table 4). Additionally, HWMF expenditures have declined in direct proportion to the decline in revenue available (Table 2 and Fig. 4).

**Figure 4: HWMF Expenditures FY 2003-16**



The cabinet provides a service to the citizens of the commonwealth through its Technical/Professional oversight activities to ensure that emergency response and cleanup



projects are properly conducted. Cabinet personnel respond in numerous ways including: contracting for and conducting state-lead cleanups in the role of an absentee responsible party, and providing assistance to responsible parties to aid in the cleanup of their sites, and being actively involved in emergency responses.

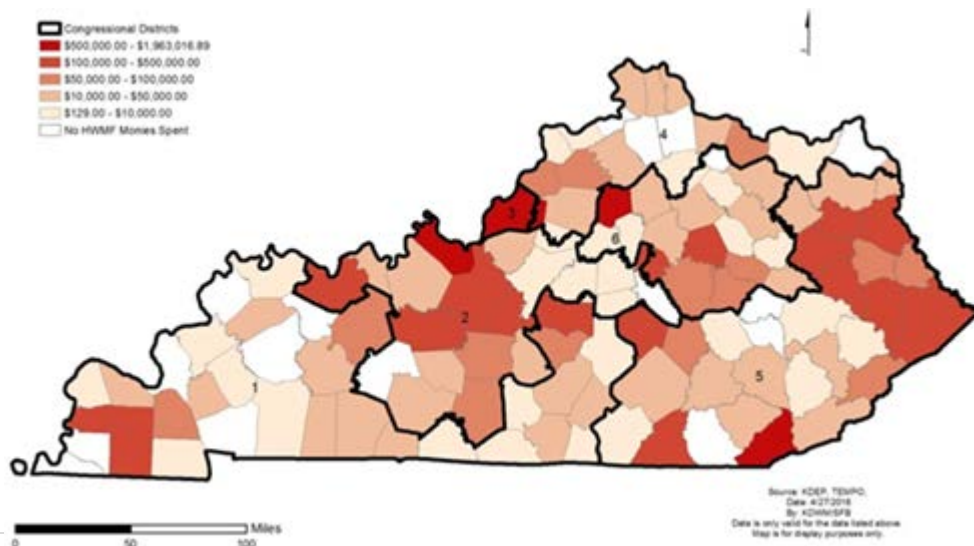
The HWMF is also used to fund oversight and maintenance activities on federal Superfund sites that have been delisted by the United States Environmental Protection Agency (EPA). These sites are known as National Priority List (NPL) sites. The expenditures are likely to increase over time as more federal sites are delisted or reach the legal lifespan of federal oversight.

Large capital projects are a key component of state-lead oversight that the cabinet performs, but small remedial actions can be just as important and constitute a substantial volume of the remediation work performed. These corrective actions may include anything from site characterization to remediation. Sites requiring cleanup could range from such causes as wire burning operations, collection and disposal of mercury waste and transformer spills to industrial chemical spills, and the removal and disposal of abandoned drums. Some of the contaminants discovered at these sites include toxic heavy metals, such as lead, arsenic, and mercury or toxic or cancer-causing chemicals, such as polychlorinated biphenyls, benzene, or trichloroethylene. These sites have real potential to be immediately dangerous to local residents, wildlife, and vegetation and pose a long-term threat to both the public and the environment. To compound the problem, these sites are typically located along highways or waterways and are easily accessible to the citizens of the commonwealth.

The Environmental Response Team (ERT) is tasked with responding to environmental emergencies including petroleum releases, landfill fires, train derailments, tanker truck releases, industrial chemical releases and many other environmental issues requiring immediate attention. During FY 2015-16, ERT received 27,165 notifications, 1,048 of which required an emergency response. Of those, 17 were declared an emergency and addressed using HWMF monies.

Superfund site remediation and responses to emergencies throughout the commonwealth are costly (Fig. 5).

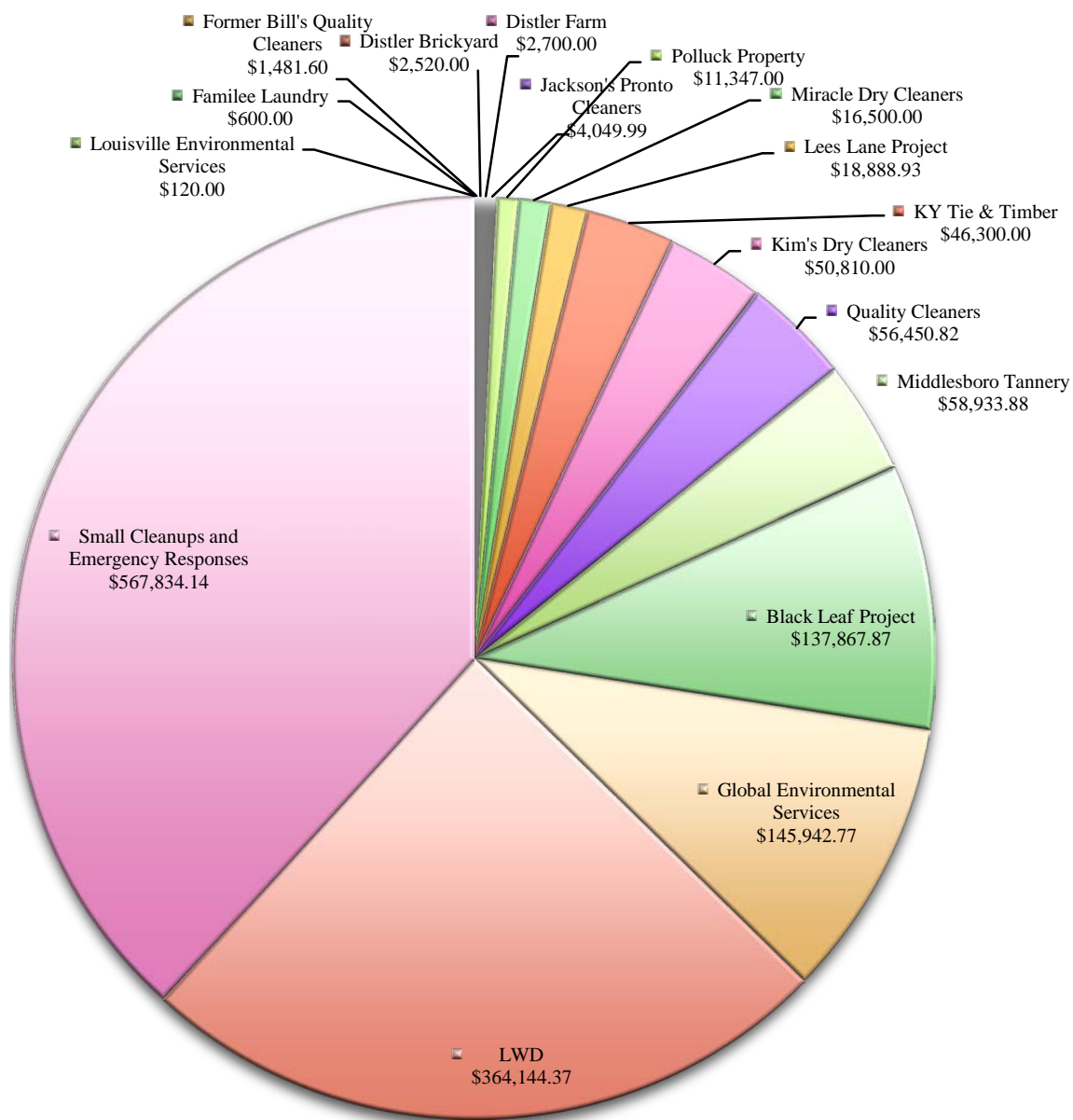
**Figure 5: Superfund and Emergency Response Site Expenditures per County, 2007-2016**



# CAPITAL PROJECTS

The following is a summary of the capital projects with expenditures during FY 2015 and 2016 (Table 4 and Fig. 6). These projects have ongoing remedial activities necessary to protect human health and the environment.

**Figure 6: HWMF Active Capital Project Expenditures FY 2015-16**



***Global Environmental Services (GES), LLC  
Scott, Harrison, and Clark Counties***

Global Environmental Services, LLC (GES) began operations in 2008 as an electronic waste (eWaste) materials recycling company. GES operated three facilities; warehouse/processing operations in Georgetown and Cynthiana and a warehouse location in Winchester. GES acquired the eWastes through recycling contracts with various entities, including the commonwealth, municipalities, and private businesses.

EWaste includes materials such as computers, printers, liquid crystal display (LCD) and cathode ray tube (CRT) monitors and televisions. EWastes contain considerable amounts of valuable metals including gold, silver, platinum, and base metals such as copper, iron, and aluminum. EWastes also contain significant amounts of toxic heavy metals such as lead, mercury, cadmium and chromium, and therefore are considered to be a hazardous waste if they are discarded rather than recycled. EWaste companies are required to recycle at least 75% of the materials they bring in or else they are classified as a hazardous waste.

The GES Georgetown and Cynthiana facilities primarily processed computer components and peripherals. Newer systems components were sorted and tested for possible resale as used equipment. Obsolete or damaged systems were broken down for recycling of the various component parts (mostly precious metals and plastics). The glass components for CRT screens which contain extremely high concentrations of lead were also ground into sand-size particles. The intended market for the ground glass was an overseas company that could smelt the glass to remove the lead before using the glass for making tiles.

The GES Winchester facility occupies approximately 50,000 square feet of a large warehouse space. This leased space is used solely for storage, primarily of CRT monitors and televisions. During October 2015, the cabinet was notified that eWastes, wooden pallets and other debris had been illegally buried at the Georgetown location. The cabinet inspected the facility to investigate the complaint as well as determine the facility's compliance with applicable waste regulations.



Compliance inspections were subsequently conducted at the other two GES locations. The cabinet's inspections verified that eWaste materials were buried at the Georgetown location. As the market prices for eWaste materials had dropped in recent years, GES had only been recycling the most valuable portions of their eWastes, while stockpiling large amounts of lesser value components like CRTs. This led GES to bury the material at the Georgetown facility in an effort

to reduce their storage costs. Large stockpiles of the ground leaded-glass were stored outside at both the Georgetown and Cynthiana locations. The cabinet sampled the material and verified it was a hazardous waste. Inspections found that the Cynthiana location stored approximately 300,000 square feet of whole and ground CRTs in large boxes stacked about eight feet high. The GES Winchester location holds approximately 50,000 square feet of unprocessed CRTs. GES was cited for the illegal disposal of hazardous wastes and for the release of lead to the environment. The company soon filed for bankruptcy. The hazardous waste materials were accessible to the public once the business shut down. Therefore, the cabinet declared an environmental emergency in November 2015 and contracted the services of an environmental firm to dispose of the material.



The contracted firm, Chase Environmental Group, Inc. (Chase), conducted additional testing and determined that a waste treatment additive would dramatically reduce the lead's ability to leach into ground glass, thereby decreasing disposal costs. During January 2016, thirty-seven tons of the treatment additive were used to treat the 433 tons of ground glass which was then disposed at a nearby sanitary landfill. The cabinet paid \$135,848.77 from the HWMF.

During the waste removal operations, cabinet personnel collected soil data to define the area of lead-impacted soil at both locations, and contracted Chase to estimate the volume of remaining eWastes and impacted soils and to provide remedial methods and cost estimates for removing these materials.

- The estimated cost for removing the approximate 900 tons of buried eWaste at Georgetown, depending on the methods selected to treat and/or dispose of the excavated material, ranges from \$170,000 to \$233,000.
- The estimated cost for removing, treating, and disposing the approximate 750 tons of impacted surface soil at the Georgetown and Cynthiana locations is \$154,000.
- The cost for addressing the estimated 12,810 tons of eWastes remaining at the Cynthiana and Winchester warehouses, depending on the methods selected to treat, recycle and/or dispose of the material, ranges between \$3.3 million to \$7.1 million.

The materials remaining inside Georgetown were not inventoried. The trustee is currently attempting to liquidate these assets as part of the bankruptcy proceedings. Therefore, it is unclear what percentage of the eWaste material may remain following the bankruptcy case and require proper disposal.

***Familee Laundry (Dry Cleaners)  
Hodgenville, Larue County***

The former Familee Laundry site is a high concern due to its proximity to the Hodgenville water intake on the Salt River. Historic site characterization work was conducted by the responsible party's consultant and then by the division after the responsible party became nonviable. Chlorinated solvent contamination seems to be localized on-site with one well containing high levels of perchloroethylene (PCE). Monitoring wells have been placed along the Salt River just up-gradient of the Hodgenville water intake, which is also routinely sampled to ensure water quality. To date, no contamination has been detected in these wells. While the plume appears limited, chlorinated solvents often migrate; allowing contamination to migrate would increase the threat of human exposures and drive up cleanup costs. A request for proposal for additional site characterization was submitted to the Finance Cabinet on October 15, 2015. To date, the Finance Cabinet has not posted the proposal nor selected a committee to review the proposal.



The goals of the pending characterization work are to define site conditions and then develop a remediation plan. This effort will define the extent of historic releases at the site with an emphasis on source reduction, groundwater remediation and cost effective containment or management strategies.

A Capital Construction Account has been established with a balance of \$48,022.09 to conduct site characterization. Additional monies are available, up to \$195,567.80 for corrective action once a corrective action plan is developed.

***Walgreens Hogan Project  
Owensboro, Daviess County***

The Walgreens Hogan Project site is one of several dry cleaning sites that were addressed with HWMF monies during FY 2014-2016. There were historical releases of chlorinated solvents that resulted in a large contaminant plume migrating off-site. Previous remedial actions were successful in removing contaminated ground water from the upper shallow aquifer in proximity to the contaminant source area.

The final phases of the investigations were completed during 2015. Additional areas where solvents adsorbed to aquifer materials were delineated for future remedial efforts. An in situ pilot study injection of aerobic bacteria, nutrients, and enzymes was conducted for the lower aquifer in an area where off-site properties have been affected. The contaminant concentrations decreased by 50 percent within the study area; indicating that a larger scale remedial effort would succeed, which could allow deed restrictions to be removed from these properties. Additionally, the off-site properties were assessed for vapor intrusion from the contaminated groundwater. Vapor intrusion testing was negative for all properties. A final corrective action is in the design phase.



***Former Bill's Quality Cleaners  
Owensboro, Daviess County***

Contaminated groundwater was discovered at this former dry cleaning facility while investigating a nearby site. The property owners allowed access for further investigation which confirmed significant chlorinated solvent contamination in both soil and groundwater. The owners then installed monitoring wells and assessed the possibility for vapor intrusion into nearby buildings and homes at the request of the cabinet. Soil gas levels beneath the structure required the installation of passive vent to protect human health, and the cabinet took a state-lead



action involving an in situ injection of a biological slurry to remediate the affected shallow and deep groundwater aquifers, as the owners exhausted their financial resources and entered into a cost sharing agreement with the cabinet.

The shallow aquifer is now near acceptable groundwater levels while the deep aquifer has less than 50 percent reduction in contaminant concentrations. Continued sampling of the groundwater is occurring to assess progress and to determine if a secondary small scale injection will further reduce levels in the

deep aquifer.

***Jefferson Forest Drum Site  
Louisville, Jefferson County***

The Jefferson Forest Drum Site was discovered during a visit to A.L. Taylor (Valley of the Drums) on November 13, 1992. Exposed drums, paint waste and metal scraps were discovered, in an area not thought to be affected by Mr. Taylor's dumping activities. However, it was later determined that Mr. Taylor owned this parcel of land and was presumed the original location of Mr. Taylor's operation. The site had been donated to the Jefferson Memorial Forest by a subsequent property owner.

Since the October 20, 1994, preliminary assessment, there have been numerous site visits, sampling events, and correspondence to various agencies and associated parties. Initial evaluations identified uncontrolled disposal of approximately 45 drums appearing to contain paint and petroleum related wastes, and indicated conditions which met the EPA's low priority removal action criteria. On May 18, 1993, EPA determined that the site should be addressed under the authority of the Commonwealth of Kentucky.

The most extensive site work conducted to date was completed by Shield Environmental Associates (Shield). The findings, conclusions and recommendations were presented in a site investigation report dated December 2011. Analytical results from groundwater, surface water and sediment did not indicate contamination above Regional Screening Levels (RSLs); however, waste soil samples exceeded both the residential and industrial RSLs for arsenic, hexavalent chromium, lead, and aroclor 1260. Additionally, two or possibly three of the waste soil samples indicated that the samples were characteristically hazardous waste.



The cabinet has reviewed the remedial evaluations included in the site investigation report submitted by Shield. Evaluations provided costs, projected goals, and closure options based on site conditions and the nature and volume of the affected area. Remedial methods will be based on relative risks and available budget in the cabinet's plan to move the property towards closure.

***Kim's Valley Station Dry Cleaners (Valley Commons Shopping Center)  
Louisville, Jefferson County***

In 2002, Kim's Valley Station Dry Cleaner's property and surrounding parcels were part of an environmental site assessment conducted by land owners and prospective purchaser Wal-Mart. This property was privately owned, but leased to various dry cleaning businesses dating back to the mid-1960s. The site assessment determined that soils and groundwater were contaminated by dry cleaning solvents. Additional assessment indicated that the groundwater contamination extended onto adjacent business parcels and likely under Dixie Highway and beyond. Wal-Mart declined purchasing the property, and the cabinet directed the property owner to conduct a site investigation and remedial/management plan. However, the property owner was financially insolvent and work was unable to be conducted.

In 2006, the Nicklies Development Company (Nicklies) indicated interest in redeveloping the property into a retail shopping center. Nicklies proposed to acquire the property as a “bona fide prospective purchaser” (BFPP) through EPA’s Small Business Liability Relief and Brownfield Revitalization Act. Nicklies worked with the cabinet and developed a Property Management Plan (PMP) specifying the land use, construction safety measures, institutional controls, and monitoring well access/preservation that would be incorporated in the development. Nicklies began the initial demolition work during late 2007 and the final PMP was approved by the cabinet during March 2008.



The construction project included a Kroger anchor store, with road front parcels, including the former dry cleaners, to be sold or leased for development of supporting businesses such as restaurants or banks. The parcel formerly occupied by the dry cleaners is to be developed into a Taco Bell restaurant.

During 2015, the cabinet set aside funds in the HWMF to conduct additional assessment and possible corrective action.

Groundwater sample results indicate a shift in plume concentration, but further sampling is required to determine if this is a form of plume migration or due to seasonal fluctuations. A geophysical study, a non-intrusive method to measure subsurface conditions, may be performed to learn more about the subsurface hydrogeology and extent of the contamination for *in situ* treatment.

***Kroger L-315***  
***Lexington, Fayette County***

As part of a renovation and construction project at this location, Kroger Limited Partnership I (Kroger), monitoring wells were installed in 2013 and subsequently sampled. Groundwater analytical results exhibited elevated levels of tetrachloroethylene (PCE). It was determined by Superfund personnel that Kroger was not the responsible party contributing to the presence of contamination at the site. The PCE is believed to have originated from one or more of three commercial dry cleaning operations within a quarter of a mile radius from the Kroger property.



Initial investigations included completion of ten (10) soil borings and three (3) groundwater monitoring wells. Soil and groundwater samples were analyzed for the presence of Volatile Organic Compounds (VOCs), Semi-volatile Compounds (SVOCs) and RCRA 8 Metals. Further site characterization is necessary in order to identify the source of PCE, define the extent of contamination, and to determine the most effective strategy to remediate or manage environmental impact.



A geophysical study of 12 surrounding properties, that the cabinet has obtained access to, is planned to gather data on the-sub-surface conditions that would affect hydraulic conductivity, flow direction, and contaminant transport rates. A date to begin geophysical activities and the designated contractor that will conduct this study is currently being sought through Superfund personnel.

### ***LWD***

#### ***Calvert City, Marshall County***

LWD is a former hazardous waste treatment and storage facility that stored and incinerated hazardous waste. In 2004, the company filed for Chapter 11 bankruptcy protection. Monies posted prior to bankruptcy as financial assurance to operate a hazardous waste treatment and storage facility were collected by the Hazardous Waste Branch. This money, \$1,789,296, was later placed in a restricted fund to reimburse the Hazardous Waste Management Fund when actions were taken.

In 2006, EPA determined wastes and contaminated structures constituted a hazard that required a time critical removal action. Former customers of the former LWD facility entered into an Administrative Order on Consent (AOC) with the EPA to which the former customers (LWD PRP Group) conducted removal actions and investigations of hazardous substances remaining in soil, sediments and groundwater. In 2009, the LWD PRP group completed all work under the AOC with EPA and in 2013, paid EPA for reimbursement of costs incurred by that agency.

In August of 2013, the LWD PRP Group submitted its Scope of Work and Operation and Maintenance Plan to the cabinet, outlining additional remediation, monitoring and maintenance activities. The scope of work was formally approved by the cabinet on September 17, 2015, after the LWD PRP Group was able to secure an environmental covenant with the legal property owner.

In April of 2016, fieldwork commenced to demolish remaining on-site structures, improve some existing monitoring wells; construct and install a 40-mil high-density polyethylene geomembrane supported geosynthetic clay liner over contaminated media and hazardous waste debris, place flowable fill in areas not suitable for traditional fill methods, and abandon existing water lines. This work will be ongoing throughout the remainder of 2016.

The assurance monies set aside and placed into a restricted account in the HWMF is utilized to reimburse expenses incurred by the LWD PRP Group. These reimbursements are paid via invoices provided to the cabinet for the development and implementation of the Remedial Action Plan. This process is authorized via an Agreed Order between the cabinet and the LWD PRP Group filed on December 4, 2015, with the Office of Administrative Hearings. To date, \$368,545.19 has been repaid from the Hazardous Waste Management Fund. The LWD PRP Group will remain the responsible entity for 30 (thirty) years.

***Parish Avenue Dry Cleaner  
Owensboro, Daviess County***

A former dry cleaner facility which released chlorinated solvents into soil and groundwater is located at this site. The Parrish Avenue site recently housed two buildings. The former drycleaner was located in the Fraternal Order of Eagles (FOE) building; FOE left the premises in 2015. The building closer to Parrish Avenue, a former shopping center, was razed by order of Owensboro/Daviess County Building and Planning in 2015. Vapor intrusion prevention



measures have been taken by the current owner, Winn Leasing, to insure health and safety of occupants in the FOE building. Winn Leasing qualified for the KRS 224.1-415 Brownfield program and is not required to conduct any further investigation. The Superfund Branch is conducting a state-lead site investigation and developing a corrective action/management plan for the remaining contamination. Adjacent residential properties create a vapor intrusion exposure concern. To determine if there are any preferential pathways for contaminant migration leading to vapor

intrusion, Ensafe Incorporated has been chosen through the Finance Cabinet's Request for Proposal (RFP) process to conduct geophysical surveys in the area. The survey is expected to be performed early summer 2016.

***Quality Cleaners  
Benton, Marshall County***

As a former dry cleaning facility, Quality Cleaners' operations resulted in releases of chlorinated solvents to groundwater and soil. Multiple rounds of soil and groundwater sampling have taken



place to determine the extent. Subsurface injections of an in-situ enhanced bio-remediation product have had a major, positive impact on site-wide groundwater contamination and successfully degraded the remaining source area contamination. Superfund Branch staff will continue annual sampling until site remediation is deemed complete and the wells are decommissioned.

***Polluck Property Tank Site  
Hartford, Ohio County***

This site was discovered while investigating a complaint by a former nearby property owner who indicated breeding dogs raised on the nearby property were sterile and had numerous tumors. The neighboring property was shown to have high levels of arsenic contamination and is currently under evaluation by EPA. The Polluck Property Tank site was discovered to have two weathered tanks of unknown content and origin. The tank contents were sampled by the cabinet in October 2014, and determined to contain 50% (fifty percent) arsenic. The tanks and their contents were removed under small purchase agreement in March 2015.



The cabinet performed a limited state-lead site characterization investigation, completing soil borings and surface samples, which indicated arsenic contamination, had migrated off-site along a drainage ditch. The cabinet has recently contracted with Lineback Funkhouser Incorporated to complete a full-site characterization, including the drainage ditch and adjacent areas that may have been impacted.

Residential properties exist near the location where the ditch line enters Little No Creek, making this site a high priority. An estimate to remove arsenic contaminated soil and sediment will be attained upon completion of characterization.

# **BROWNFIELD REDEVELOPMENT PROGRAM**

Kentucky's Superfund program takes a balanced approach of stewardship while protecting human health and the environment. The program's approach also takes into account both the economic uses and reuses which, at sites, can provide for the material welfare of its citizens while preserving the state's natural resources and beauty. The Superfund program has found success by utilizing the synergy between economic development and site reuse in a way that incorporates realistic and achievable goals for both. Through these actions, protection of human health and the environment occurs simultaneously with beneficial reuse and preservation of existing green space in the commonwealth.

Under KRS 224.1-400 and 224.1-405 contaminated properties are identified, assessed, and remediated to unrestricted residential, or restricted commercial/industrial reuse. Undesired properties with superfund environmental liabilities are made more attractive through Kentucky's Brownfield Redevelopment Program (BRP) pursuant to KRS 224.1-415, which provides an opportunity for new, non-responsible owners to redevelop land and businesses without the fear of superfund reprisal; as long as they appropriately manage the site through an approved environmental site management plan. A number of old superfund and brownfield sites exist in areas that have attractive infrastructure, transportation venues, population, and/or other economically attractive features (as opposed to new green space locations). The BRP provides the statutory and regulatory framework for new ownership, property redevelopment, and land management while generally increasing or sustaining the value of the property. Through the BRP, the new use and management creates another layer of protectiveness at sites through their good stewardship, which in turn aids the original intent of Superfund's cleanup program. The economic viability of property and neighborhoods help drive its reuse and value toward cleanup. Under this program a greater level of protection of human health is provided; through the course of redeveloping the property potential exposures are given consideration and often some level of voluntarily clean up occurs. The BRP has been highly successful across the state and provides a collaborative and multilevel approach to the clean up and reclamation of brownfield and former superfund sites.

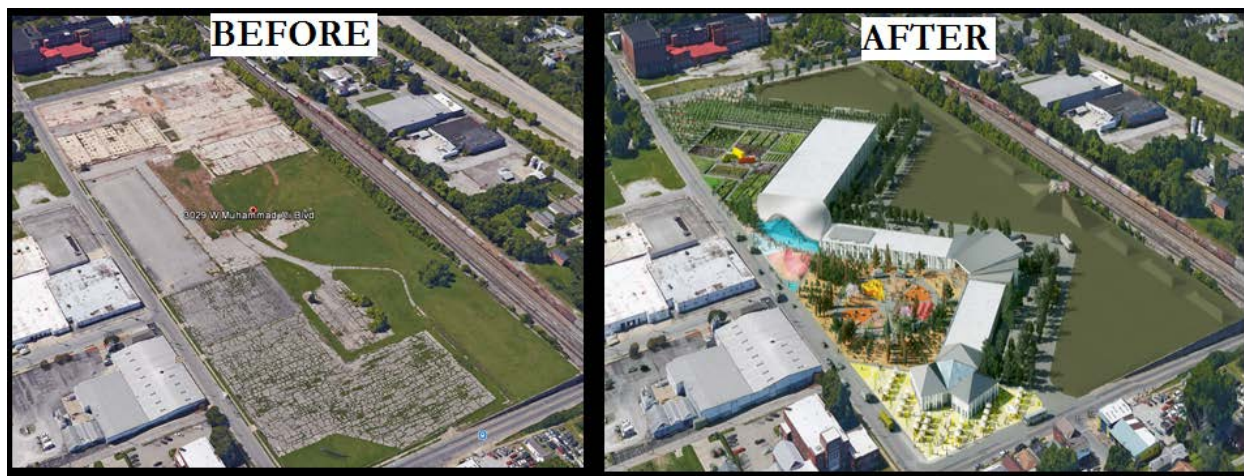
## ***West Louisville Food Port- Seed Capital Kentucky Louisville, Jefferson County***

The West Louisville Food Port site is located on West Muhammad Ali Boulevard, Louisville, Jefferson County, Kentucky. The property is approximately 24 acres in a mixed-use residential and commercial/industrial area. The property has been unoccupied since 2010 but was historically a tobacco product manufacturing and storage facility. All the site structures have been demolished to only debris and slab foundations remaining, with asphalt and concrete covering over approximately 70 percent of the property.

A 2015 Environmental Site Assessment identified a number of recognized environmental concerns including aboveground storage tanks, an old railroad spur, former barrel storage areas, and a former gasoline station with underground tanks that were removed in 1990. Potential

petroleum hydrocarbon and metals impacts were identified. Samples collected indicated mostly PAH concentrations exceeding both residential and industrial RSLs.

Due to the property's ideal location, Seed Capital Kentucky proposed to purchase and redevelop the property under KRS 224.1-415, with the goals of reconstructing the entire property into a West Louisville FoodPort. The food port would take produce from Kentucky farmers; then, aggregate, process, and distribute it from the port. Redevelopment will include urban community farming with controlled-environment growing such as hydroponics, aeroponics and aquaponics; a Jefferson County Extension demonstration farm with traditional gardening, farming with high and low tunnels, and raised beds; a community kitchen; storage, retail for on-site vegetable products; a juicery, café and bakery; recycling; supermarket; offices; educational programs; and a visitor's center.



The demand analysis indicates that this redevelopment would add 350 million dollars of commercial revenue to the City of Louisville, and 800 million dollars value of added revenue food supply to the area.

***Mellow Mushroom (Former Miracle Dry Cleaners)  
Louisville, Jefferson County***

The former Miracle Dry Cleaners property is located at 1023-1025 Bardstown Road in Louisville. The site had dilapidated buildings on approximately .13 acre, in which former PCE solvent-based dry cleaning operations occurred from 1947 through 1999. This property is located in a mixed residential/commercial and industrial area in north-central Jefferson County. Recognized environmental conditions were identified during due-diligence investigations related to the dry cleaning operations. Additionally, the site was under the KRS 224.1-400 Superfund program, with identified soil and groundwater contamination associated with the former dry cleaning operations. Subsequent Phase I and Phase II investigations confirmed these impacts to the soil and groundwater, in addition to identifying the potential for vapor intrusion into the on-site buildings.

The developer’s goal was to demolish and remove the on-site structures, constructing a new building for commercial use as a pizzeria. To address potential vapor intrusion concerns, a seamless vapor barrier system was put into place on the concrete slab with all footers and other structural support features sealed. The vapor barrier system acts as an engineering control for the building interior to protect human health and thereby allow the commercial venture to operate protectively.



The Miracle Dry Cleaner/Mellow Mushroom brownfield redevelopment project is a great example of how the KRS 224.1-415 Brownfield Redevelopment Program helps develop not just large business ventures with vast financial resources to fund a project, but also small business ventures. BRP removes the high cost liability associated with becoming a superfund responsible party as an “owner/possessor”, and the redevelopment eliminates existing risk pathways in the immediate area under a managed closure plan.

***Retreat at Louisville  
Louisville, Jefferson County***

This property encompasses 20.55 acres located on the southern portion of the former American Radiator and Standard Sanitary Corporation (American Standard) at 620 W Shipp Avenue, American Standard operated from 1928 until 2006. Prior to American Standard, Standard Oil/Chevron operated the site from 1892 to 1928. The site had urban-fill associated with 150 years of development with lead, arsenic, cadmium and polycyclic aromatic hydrocarbons exceeding residential RSLs.

Retreat at Louisville, LLC, has developed the property into a multi-building, cottage-style student rental housing complex. The property is less than one-half mile from the center of the University of Louisville campus. Access to the University of Louisville is provided by means of a pedestrian bridge over the active CSX rail line; Retreat at Louisville, LLC, owns both sides of the bridge. The property containing the east-side of the bridge was also purchased and qualified for the KRS 224.1-415 program.

The KRS 224.1-415 Property Management Plan (PMP) drew largely from an approved 2007 Risk Management Plan submitted in accordance with KRS 224.1-400 that included an Environmental Covenant on the property. Protective measures in the redevelopment design included placement of one (1) foot of non-impacted soil or fill material for foundations and pavement, to act as an exposure barrier. Green spaces had soil cover/fill of at least 1.5 feet, no future excavation permitted on the property, no disturbance of soils without prior cabinet approval, paved areas (sidewalks and parking lots) may not be disturbed without cabinet approval, installation of vapor intrusion barriers beneath buildings unless otherwise approved by the cabinet and a groundwater use prohibition or restrictions.



***Superfund Brownfield Redevelopment Program Applicant and Stakeholder Responses:***

*“I can’t thank you enough for your prompt attention to the designation [Notice of Concurrence] for this property. On behalf of Precision Strip, we appreciate your commitment to the process and for doing what you could to meet our deadlines.”<sup>1</sup>*

*“...Thanks to all of you guys. Finally something good will happen – jobs and tax revenue – on prime property that has just sat dormant for almost 10 years. Nice work, all of you. Very best, Roy.”<sup>2</sup>*

*“I have been very impressed with the state of Kentucky,” Weyland said. “They have been very professional over the last couple of years in delineating past responsibility vs. future responsibility for cleaning up a site. The system works for the first time as far as I’m concerned.” He described the process as a “line drawn in the sand” between past use and future use of a brownfield site that helps redevelopment proceed.”<sup>3</sup>*

<sup>1</sup> Drees, Tracy. “Re: AI# 128569 Precision Strip, Inc. (417 Scotty’s Way, Bowling Green, KY 1-415 Application Property) NOE Issued.” Message to Hughes, Larry. 26 January, 2016. Email.

<sup>2</sup> Funkhouser, Roy V. “Re: AI# 103116 NOE Issued.” Message to Hughes, Larry. 13 January, 2016. Email.

<sup>3</sup> Klayko, Branden. “How redeveloping the Louisville Chemical Building fits with Bill Weyland’s grand vision for Nulu”. *Broken Sidewalk*. Courier-Journal. 17 November 2015. Web. 18 April, 2016.



## COSTS OF CLEANUP

Kentucky's Superfund program currently has a total of 588 active superfund sites which may all become state-lead. There are an additional 269 to 384 "impending" dry cleaners' sites that could also become state-lead<sup>4</sup>; totaling 680 to 972 potential state-lead sites which may not have a viable or financially solvent responsible party.

Many variables affect cost to complete cleanups, which further depend on site-specific characteristics such as amount and location of spill, geology and general location. Site cost ranges from \$10,000 to greater than several million dollars. Historic Kentucky superfund cost demonstrates and supports this estimate as well. Studies including: Federal Department of Defense, EPA, and national dry cleaner insurers' estimates, and Kentucky's historic database from 1993 to 2013 indicate a trending range from \$200,000 to over \$700,000 per site. Using an average from these studies, an estimated cost per site can be made for the total active superfund sites and impending dry cleaner sites. An estimated cost for the 680 to 972 active superfund and impending dry cleaner sites ranges from \$390,662,864 to \$558,089,806.

Similar to cost, numerous variables control the time to complete a site's cleanup. Programmatic assessment of how long it would take to decrease the Superfund backlog and expected backlog of sites can be made based on current funding levels, number of known sites and ranges of costs-to-complete. After the annual fiscal year fixed costs are subtracted from the HWMF, approximately \$323,883 of funding per year is available to apply toward state-lead capital projects. This does not include cost recovery which is unpredictable and generally decreasing over time. Based on present funding levels, an estimate of time to complete the cleanup of the known sites ranges from 1,206 to 1,723 years.

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<sup>4</sup> Gary Keyes, "Cleaning Up After Dry Cleaners," CIRE Magazine, CCIM Institute, <http://www.ccim.com/cire-magazine/articles/cleaning-after-dry-cleaners> (accessed 23 Jun. 2014).

# SUPERFUND SITES NEAR YOU

Typical historical superfund sites are: large industrial complex sites, large caches of illegally buried drums by large companies, or otherwise highly visible and news making sites (e.g. “Love Canal”, “Maxey Flats” and “Valley of the Drums”). Such sites usually either have potential responsible parties (PRPs) with large sustainable financial resources or federal funding through the NPL program to address the problem. While these types of sites still exist they no longer reflect the greater more ubiquitous threat to human health and the environment in the commonwealth. The more common type of sites that are entering into superfund are smaller sites that have geological, technical or chemical/contaminant characteristics that are complex and financially difficult to address. There is general agreement among practicing remediation professionals in government and private industry that this substantial population of sites (which are being recognized across the U.S.) are unlikely to achieve restoration within the next **50 to 100** years. By far, it is the smaller entity sites which pose the greatest and increasing threat to human health and the environment, and mainly comprise the growing number of sites to the state Superfund program.

The concern over the impact of these sites is increased by the fact that smaller contaminated properties are generally located where we live, eat and play; in commercial urban, suburban and rural settings throughout our state. There is not usually controlled or restricted access that is common to larger industrial locations. Because of the small lot-size of these sites, many times contamination extends off-site under neighboring properties, including residential homes, schools, recreational areas and other locations that a person would generally not consider to be an environmental problem. Many of these small sites from which hazardous substances have been released into the environment, such as dry cleaners, are “mom and pop” small businesses. Most dry cleaning operators do not have adequate assets or insurance to pay these cleanup costs, which easily could exceed the equity in the entire retail center.

Most hazardous substances and contaminants released into the environment have scientifically-proven persistence as a risk to human health and the environment for 50 to 100 plus years and in many cases (such as metals) exist forever. Large multi-national S & P Fortune 500 companies have upper life spans of 40 to 50 years<sup>5</sup>, while most U.S. S & P Fortune 500 companies have upper life spans of only 15 years<sup>6</sup>. These represent the most financially solvent types of companies and their lifespans, which greatly outlive most local or regionally owned companies, like dry cleaners, that release hazardous substances into the environment (i.e. a “best case scenario” analogy). With most contaminants lasting 100 or more years, the “best” of businesses averaging 15 years of financial solvency and most “mom and pop” dry cleaners are already financially insolvent as responsible parties. The state increasingly becomes the “steward” of these issues, in addition to annual clean up issues that are a result of a modern society using hazardous substances as part of its product production. This issue increasingly taxes the state’s

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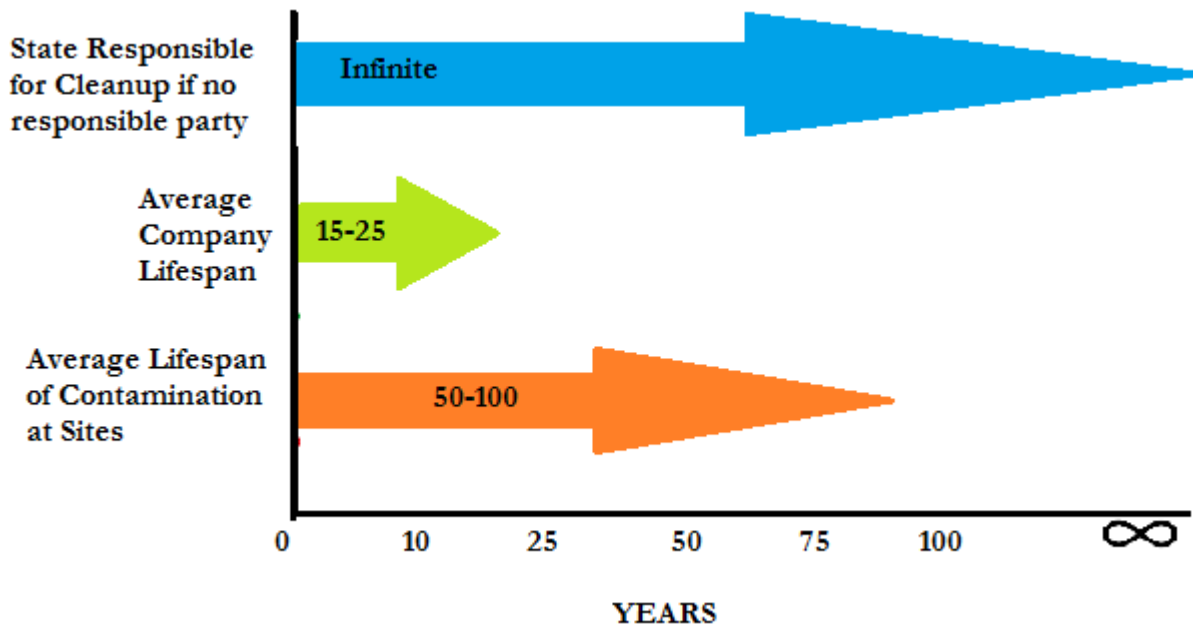
<sup>5</sup> Crainer, Stuart. “The Living Company by Arie de Geus”. *Third Quarter 1998, Issue 12*. Strategy+Business. <http://www.strategy-business.com/article/18728?gko=8c8f1>

<sup>6</sup> Gittleson, Kim. (2012). “Can a Company Live Forever”. *BBC News, New York - Business*. <http://www.bbc.com/news/business-16611040>. (accessed May 2016)

resources both in personnel and funding well beyond the point of being able to realistically address this increasing environmental problem.

The responsible party financial solvency or company longevity for most of these existing and potential Superfund sites is dubious. The state Superfund program and HWMF is the only remaining entity with any charge, authority and sufficient longevity to maintain protection of human health and the environment<sup>7</sup>. Due to their number, difficulty, and lack of financial resources, these sites place the greatest increasing burden on the HWMF (Fig. 7).

**Figure 7: State Cleanup Responsibility Outlives Company Responsibility by 400%**



<sup>7</sup> KRS 224.10-100 Powers and duties of cabinet.

## FUTURE OF THE FUND

The HWMF was created to provide the Energy and Environment Cabinet with the funds necessary to protect the health of the citizens and natural resources of the commonwealth from threats associated with releases of hazardous substances, pollutants and contaminants. The cabinet uses the HWMF to provide technical reviews, oversight of responsible party driven, and state-lead remediation projects. The HWMF is the Commonwealth's sole source financial support for contaminated sites where there is either no known responsible or financially solvent party available to take action. The HWMF finances regulatory oversight, emergency responses, state-lead and time-critical remediation projects at sites across Kentucky. These projects range from large industrial sites and persistent dry cleaner's plumes to small projects such as roadside drums, orphan wastes and transformers. Presently there are no other available funding sources to conduct emergency response, state-lead cleanup actions, or regulatory oversight.

As a result of decreases to the HWMF through exemptions, decreases to general and federal funds available to the cabinet since 2008, increased costs to cleanup, and increasing number of non-viable and financially insolvent responsible parties from which to cost recover, the HWMF cannot credibly address the existing and projected superfund backlog, let alone sustain sufficient funding to mount large scale emergency remedial projects that arise unpredictably year to year.

# CREDITS AND ACKNOWLEDGEMENTS

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**Energy and Environment Cabinet**  
Secretary Charles G. Snavely  
Deputy Secretary R. Bruce Scott, P.E.

**Kentucky Department for Environmental Protection**  
Commissioner Aaron Keatley

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*The mission of the Kentucky Division of Waste Management is to protect human health and the environment by minimizing adverse impacts on all citizens of the Commonwealth through the development and implementation of fair, equitable and effective waste management programs.*

July 2016

# APPENDIX OF TABLES

**TABLE 1: Hazardous Waste Management Fund Revenues FY 2015-16**

	Assessments Collected	Cost Recovery	Interest	Return on Investment Account & Capital Closeouts	Brownfield Redevelopment Application Fee	Transfer from PSTEAF per KRS 224.46-580	TOTAL
FY93-FY02	\$26,497,996.00	\$3,623,784.00	\$ 1,114,921.00	\$ 5,663,178.00			<b>\$36,899,879.00</b>
FY03	\$ 1,831,535.00	\$ 579,544.00	\$ 81,162.00	\$ 65,735.14			<b>\$ 2,557,976.14</b>
FY04	\$ 1,876,572.00	\$ 293,420.00	\$ 37,370.00	\$ 1,295,046.00			<b>\$ 3,502,408.00</b>
FY05	\$ 1,766,239.12	\$ 311,827.28	\$ 17,565.74	\$ 812,841.38			<b>\$ 2,908,473.52</b>
FY06	\$ 1,871,802.74	\$ 119,138.54	\$ 11,916.21	\$ 404,327.01			<b>\$ 2,407,184.50</b>
FY07	\$ 1,804,954.42	\$ 407,829.27	\$ 28,873.17	\$ 457,975.78			<b>\$ 2,699,632.64</b>
FY08	\$ 1,760,870.25	\$ 331,372.35	\$ 16,201.64	\$ 711,505.58			<b>\$ 2,819,949.82</b>
FY09	\$ 1,506,853.23	\$ 126,314.75	\$ 8,238.64	\$ 178,204.44			<b>\$ 1,819,611.06</b>
FY10	\$ 1,205,801.18	\$ 309,757.11	\$ 10,645.88	\$ 300,000.00		\$ 318,346.77	<b>\$ 2,144,550.94</b>
FY11	\$ 1,325,342.34	\$ 715,588.96	\$ 6,512.49	\$ 1,597,180.97		\$ 637,062.05	<b>\$ 4,281,686.81</b>
FY12	\$ 1,764,288.24	\$ 410,100.86	\$ 16,362.73	\$ 335,760.36		\$ 554,562.44	<b>\$ 3,081,074.63</b>
FY13	\$ 1,515,949.68	\$ 725,993.60	\$ 1,098.03	-		\$ 170,697.75	<b>\$ 2,413,739.06</b>
FY14	\$ 1,415,327.98	\$ 704,332.51	\$ 683.31	-	\$ 38,500.00	\$ 450,932.31	<b>\$ 2,609,776.14</b>
FY15	\$ 1,413,123.93	\$ 536,705.15	\$ 1,052.53	\$ 303,833.88	\$110,131.00	\$ 582,465.64	<b>\$ 2,947,312.13</b>
FY16 through 4/12/16	\$ 1,612,788.65	\$ 143,713.98	\$ 1,218.62	\$ 188,137.62	\$ 70,000.00	\$ 599,253.59	<b>\$ 2,615,112.46</b>
<b>TOTAL</b>	<b>\$49,169,444.76</b>	<b>\$9,339,422.36</b>	<b>\$1,353,822.02</b>	<b>\$12,313,726.16</b>	<b>\$218,631.00</b>	<b>\$3,313,320.55</b>	<b>\$75,708,366.85</b>

**TABLE 2: Hazardous Waste Management Fund Expenditures FY 2015-16**

	<b>Capital Projects Remediation of Hazardous Waste Sites</b>	<b>Maxey Flats Site</b>	<b>WKU Geophysical MOA</b>	<b>Superfund &amp; ERT Technical/Professional Oversight</b>	<b>Kentucky Pollution Prevention Center</b>	<b>HWMF Audit Fee</b>	<b>Budget Reduction</b>	<b>TOTAL</b>
FY93-FY02	\$19,800,000.00	\$6,258,654.00	-	\$ 7,131,214.00	\$ 3,514,900.00	-	-	<b>\$36,704,768.00</b>
FY03	\$ 1,000,000.00	-	-	\$ 797,991.00	\$ 420,000.00	-	-	<b>\$ 2,217,991.00</b>
FY04	\$ 2,200,000.00	-	-	\$ 1,215,955.00	\$ 420,000.00	\$11,033.00	\$128,600.00	<b>\$ 3,975,588.00</b>
FY05	\$ 1,684,853.34	-	-	\$ 809,567.75	\$ 420,000.00	-	-	<b>\$ 2,914,421.09</b>
FY06	\$ 853,900.00	-	-	\$ 1,055,581.73	\$ 420,000.00	-	-	<b>\$ 2,329,481.73</b>
FY07	\$ 1,734,387.89	-	-	\$ 606,379.41	\$ 362,080.00	-	-	<b>\$ 2,702,847.30</b>
FY08	\$ 1,338,707.98	-	-	\$ 772,847.34	\$ 351,793.85	-	\$313,600.00	<b>\$ 2,776,949.17</b>
FY09	\$ 500,000.00	-	-	\$ 929,296.70	\$ 299,705.39	-	-	<b>\$ 1,729,002.09</b>
FY10	\$ 850,000.00	-	-	\$ 1,100,956.70	\$ 247,078.50	-	-	<b>\$ 2,198,035.20</b>
FY11	\$ 2,544,731.00	-	-	\$ 897,226.30	\$ 300,000.00	-	-	<b>\$ 3,741,957.30</b>
FY12	\$ 2,100,000.00	-	-	\$ 693,369.49	\$ 360,000.00	-	-	<b>\$ 3,153,369.49</b>
FY13	\$ 737,000.00	-	-	\$ 773,016.63	\$ 360,000.00	-	-	<b>\$ 1,870,016.63</b>
FY14	\$ 1,142,160.94	-	-	\$ 886,037.02	\$ 360,000.00	-	-	<b>\$ 2,388,197.96</b>
FY15	\$ 1,706,300.00	-	-	\$ 994,676.38	\$ 360,000.00	-	-	<b>\$ 3,060,976.38</b>
FY16 through 4/12/16	\$ 855,500.00	-	\$29,830.35	\$ 758,065.20	-	-	-	<b>\$ 1,643,395.55</b>
<b>TOTAL</b>	<b>\$39,047,541.15</b>	<b>\$6,258,654.00</b>	<b>\$29,830.35</b>	<b>\$19,223,505.69</b>	<b>\$8,195,557.74</b>	<b>\$11,033.00</b>	<b>\$442,200.00</b>	<b>\$68,702,624.96</b>



**Table 3: Cumulative Expenditures on Active Capital Project Accounts**

	<b>Engineering</b>	<b>Construction</b>	<b>TOTAL</b>
Small Cleanups and Emergency Responses	\$ 984,325.23	\$ 4,589,799.46	<b>\$ 5,574,124.69</b>
Kerschner Property	\$1,020,553.04	\$ 1,045,601.52	<b>\$ 2,066,154.56</b>
Black Leaf Project	\$ 0.00	\$1,582,761.24	<b>\$ 1,582,761.24</b>
LWD	\$ 3.00	\$ 378,545.19	<b>\$ 378,548.19</b>
Louisville Environmental Service	\$ 260,930.10	\$ 0.00	<b>\$ 260,930.10</b>
KY Tire & Timber	\$ 179,067.25	\$ 37,685.25	<b>\$ 216,752.50</b>
Distler Brickyard	\$ 10,954.72	\$ 168,287.21	<b>\$ 179,241.93</b>
Distler Farm	\$ 992.60	\$ 147,690.39	<b>\$ 148,682.99</b>
Walgreens Hogan Project	\$ 130,700.00	\$ 0.00	<b>\$ 130,700.00</b>
Global Environmental Services	\$ 0.00	\$ 89,151.23	<b>\$ 89,151.23</b>
Jefferson Forest Drum Site	\$ 88,631.00	\$ 0.00	<b>\$ 88,631.00</b>
Quality Cleaners	\$ 35,292.91	\$ 33,676.82	<b>\$ 68,969.73</b>
Lees Lane Project	\$ 33,788.06	\$ 34,169.81	<b>\$ 67,957.87</b>
Miracle Dry Cleaners	\$ 16,500.00	\$ 0.00	<b>\$ 16,500.00</b>
Jackson's Pronto Cleaners	\$ 9,350.00	\$ 2,999.99	<b>\$ 12,349.99</b>
Familee Laundry	\$ 3,277.71	\$ 832.20	<b>\$ 4,109.91</b>
Former Bills Quality Cleaners	\$ 1,247.60	\$ 234.00	<b>\$ 1,481.60</b>
Kim's Dry Cleaners	\$ 810.00	\$ 0.00	<b>\$ 810.00</b>
Clark and Riggs	\$ 0.00	\$ 0.00	<b>\$ 0.00</b>
Holiday Inn Express	\$ 0.00	\$ 0.00	<b>\$ 0.00</b>
IKORCCPF Property	\$ 0.00	\$ 0.00	<b>\$ 0.00</b>
Kroger L-315 Euclid Ave, Lexington, KY	\$ 0.00	\$ 0.00	<b>\$ 0.00</b>
KY Plating	\$ 0.00	\$ 0.00	<b>\$ 0.00</b>
Parrish Avenue	\$ 0.00	\$ 0.00	<b>\$ 0.00</b>
Polluck Property	\$ 0.00	\$ 0.00	<b>\$ 0.00</b>
Schendley Distillers	\$ 0.00	\$ 0.00	<b>\$ 0.00</b>
West KY Wildlife Area Burn Site	\$ 0.00	\$ 0.00	<b>\$ 0.00</b>
(Former) West Point Bank Property	\$ 0.00	\$ 0.00	<b>\$ 0.00</b>
<b>TOTAL</b>	<b>\$2,776,423.22</b>	<b>\$8,172,395.55</b>	<b>\$10,948,818.77</b>

**Table 4: Active Capital Project Account Expenditures for FY 2015 -2016**

	<b>2015</b>	<b>2016</b>	<b>TOTAL</b>
Small Cleanups and Emergency Responses	260,166.91	307,667.23	<b>567,834.14</b>
LWD	-4,400.82	368,545.19	<b>364,144.37</b>
Global Environmental Services	0.00	145,942.77	<b>145,942.77</b>
Black Leaf Project	137,867.87	0.00	<b>137,867.87</b>
Middleboro Tannery	58,933.88	0.00	<b>58,933.88</b>
Quality Cleaners	56,450.82	0.00	<b>56,450.82</b>
Kim's Dry Cleaners	50,000.00	810.00	<b>50,810.00</b>
KY Tie & Timber	46,300.00	0.00	<b>46,300.00</b>
Lees Lane Project	13,334.43	5,554.50	<b>18,888.93</b>
Miracle Dry Cleaners	0.00	16,500.00	<b>16,500.00</b>
Polluck Property	0.00	11,347.00	<b>11,347.00</b>
Jackson's Pronto Cleaners	2,999.99	1,050.00	<b>4,049.99</b>
Distler Farm	2,700.00	0.00	<b>2,700.00</b>
Distler Brickyard	2,070.00	450.00	<b>2,520.00</b>
Former Bill's Quality Cleaners	1,247.60	234.00	<b>1,481.60</b>
Familee Laundry	0.00	600.00	<b>600.00</b>
Louisville Environmental Services	0.00	120.00	<b>120.00</b>
<b>TOTAL</b>	<b>627,670.68</b>	<b>858,820.69</b>	<b>1,486,491.37</b>

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