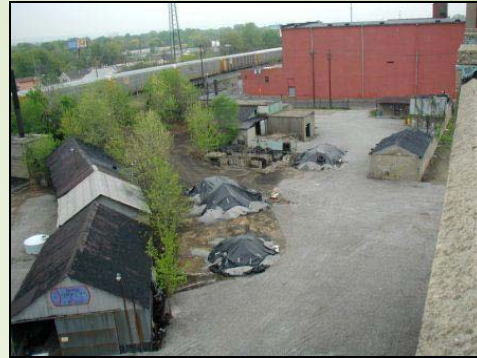


Kentucky Division of Waste Management *Annual Report* Fiscal Year 2010



Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division of Waste Management

<http://waste.ky.gov/Pages/AnnualReports.aspx>



FROM THE DIRECTOR



This is the fifth edition of our annual report and the information provided within represents activities and accomplishments for Fiscal Year 2010 (July 1, 2009 to June 30, 2010). As with nearly every sector, the poor economy has resulted in some fiscal challenges for the Division. In 2009, our general fund budget was reduced by nearly thirty percent, which most directly affected the solid waste program. That said, we have continued to maintain an effective solid waste program which is in large part due to the professionalism and work ethic of staff in that program. In fact, I would like to say how proud I am of the Division's staff as a whole as they continue to effectively manage their responsibilities of protecting human health and the environment and serving the citizens of the Commonwealth. I believe the information provided in this report bears that out.

During the year the Division has made significant progress in updating its Underground Storage Tank regulations, which we plan to begin sharing with stakeholders in Fiscal Year 2011. During Fiscal Year 2010, the Division also spent considerable time working with county stakeholders to streamline and hopefully improve solid waste grant processes associated with the Kentucky Pride program. The path forward for the future management of waste tires is another issue taken up during the fiscal year and one which will be a top priority for Fiscal Year 2011. There are seemingly an infinite number of opinions on this issue and the Division will continue working with affected stakeholders to see if common ground can be achieved moving forward.

In addition, the Division continues to implement its core responsibilities of 1) assisting in the minimization of waste generation and land disposal of wastes, 2) working to increase recycling and the beneficial reuse of materials that might otherwise be disposed, 3) continuing the closure and remediation of historic landfills, Superfund sites, hazardous waste sites and underground storage tank facilities, and 4) conducting timely review of permit applications for solid waste and hazardous waste facilities.

This report helps to show the progress made regarding the management of solid and hazardous waste and cleanup of releases to the environment. Also, the report identifies areas where we need improvement or additional focus. These are highlighted under the branch sections. These highlights will show accomplishments and progress made towards improvements in those areas.

Anthony R. Hatton, P.G., Director
Kentucky Division of Waste Management

Division of Waste Management Annual Report

Fiscal Year 2010

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EXECUTIVE SUMMARY

The largest division of the Department for Environmental Protection with 250 staff positions, the Division of Waste Management consists of seven branches: Solid Waste Branch, Recycling and Local Assistance Branch, Hazardous Waste Branch, Field Operations Branch, Underground Storage Tank Branch, Superfund Branch and Program Planning and Administration Branch.

Selected achievements and challenges for Fiscal Year 2010:

- *Curbside collection* – Participation in curbside garbage collection has remained steady following legislation in 2002 requiring waste haulers and recycling haulers to register and report to each county in which they provide service. The average participation rate for collection systems in 2009 was 86.2 percent.
- *Recycling* – Kentuckians recycled 29.7 percent of common household recyclables (aluminum, cardboard, steel, plastic, newspaper, glass, and paper) in 2009.
- Thirty-eight entities received recycling grants from the Kentucky Pride Fund in 2009 totaling over \$2 million.
- *Fewer illegal dump sites identified* – The number of new dump sites identified has declined 40 percent since 2003. More than 24,771 illegal open dumps have been cleaned since 1993 at a cost of over \$65.2 million dollars, an average cost of \$8,654 per dump site.
- *Litter along public roads decreases* – There has been a 5 percent decline in litter along public roadways since 2005. The Kentucky Pride Fund, Eastern Kentucky PRIDE, Bluegrass PRIDE, Transportation Cabinet, Adopt-A-Highway, and cities and counties contributed to the cleanup of 16,348,561 pounds of litter at a cost of \$7.1 million during Calendar Year (CY) 2009. The average cost per pound of litter picked up decreased 14 cents, from 58 cents in CY 2008 to 44 cents in CY 2009.
- *Waste Tire Program* – During 2009, Kentucky used funding from the Waste Tire Trust fund to recover more than 1.2 million passenger-tire-equivalents during waste tire “amnesties” across the state.
- *Crumb rubber grants awarded* – In 2009, the Waste Tire Trust Fund awarded 11 grants totaling \$199,457 to assist schools and communities in projects using crumb rubber from waste tires for athletic fields, gyms, parks, and community playgrounds.
- *The Division of Waste Management’s state government office paper recycling program thrives* – The government office paper recycling program serves more than 115 agencies in Frankfort collecting office paper, computer paper, newsprint, and cardboard. State employees recycled 3,184,274 pounds of waste paper in 2009, approximately 279

pounds per state employee. Confidential document destruction provides a zero cost alternative to state and local governments.

- The Finance and Administration Cabinet no longer outsources any document destruction or recycling in their buildings. The section is currently working with the Kentucky Retirement System to eliminate outsourcing of governmental waste paper for document destruction. The Government Recycling Section gives presentations to all new Energy and Environment Cabinet (EEC) employees on the importance and benefits of recycling waste paper.
- 201 Superfund sites, of varying sizes and complexities, have been characterized and/or remediated in Fiscal Year 10.
- The Division is in the process of performing a comprehensive review of its regulations in two major program areas: solid waste and underground storage tanks. In Fiscal Year 2011, the Division plans to propose new regulatory amendments to update the UST program to incorporate changes in response to the Federal Energy Policy Act of 2005.

Division of Waste Management Highlight

BOS 200® Trap and Treat Method and Product

By: Larry D. Hughes, P.G., CHMM – Kentucky Division of Waste Management

In Kentucky, clay and tight silty soils with related subsurface water represent the most predominant type of setting impacted by petroleum underground storage tank contamination. Cleanup efforts within this scenario can be the most challenging and time consuming due to the natural rate at which water can migrate through these tight soil types. Water movement through tight soils like clay and silt is extremely slow. This, on a positive note, is why subsurface contamination within them does not typically move very far and is limited to localized areas. However, if the contaminated soil cannot be removed through over-excavation for various reasons, the cleanup effort, by other means, can be extremely difficult and time consuming. Why? The driving challenge in the cleanup of soils on-site becomes how to get to the contamination itself within the soil and associated subsurface water for treatment or removal given the extremely slow movement rates.

Technologies and methods to clean up soils either treat or remove the contaminants themselves directly while leaving the soils in place. These two concepts use one of three methods to accomplish the goal; mechanical injection/removal, chemical treatment or biological treatment (or a combination thereof).

A relatively new method and product that has come onto the scene is the application of BOS 200® (a.k.a. “trap and treat”). This remedial concept is not just a technology or product, but a strategy that combines an injection plan and method with the BOS 200® product. The trap and treat method using BOS 200® has two primary strategies that work together: (1) the injection plan and method, and (2) the ability to use mass transfer while maintaining that dynamic well after application.

For the injection plan and method it is essential to identify the core vertical and horizontal mass of petroleum contamination (hydrocarbons) within the soil. This mass within the soil is serving as a source for most, if not all, of the dissolved phase contamination in the associated subsurface water. This mass is typically situated in the unsaturated and saturated soils, and supplies the more fluent groundwater with hydrocarbon contamination that may be dissolved into it. It is critical to locate this zone in order to best calculate the appropriate quantity to inject and to identify the appropriate zone in which to inject. Once this zone is identified, high pressure injections at appropriate vertical intervals, between strategically placed borings, spaced horizontally, creates an intertwined network of fractures within the clay or silt to more evenly distribute the BOS 200® where its chemical and biological process can work.

The BOS 200®'s chemical and biological process itself creates localized 'sinks' in the injected areas using carbon that is pre-saturated with microbes and nutrients. Hydrocarbons have a strong attraction to carbon which triggers the initial action of drawing in the hydrocarbons to the microbes within the pre-saturated carbon. The microbes, in turn, digest the hydrocarbons over time while increasing their own numbers. The hydrocarbon digestion of the microbes reactivates the spent carbon which pulls in more of the hydrocarbons to be digested. This cyclic action is regenerated rather than being depleted rapidly after an initial injection. This technology offers two continuous actions working together to decrease the hydrocarbons over time via mass transfer from the soils and associated subsurface water: 1. The carbon adsorbing the hydrocarbons onto itself. 2. The microbes digesting the adsorbed hydrocarbons that in turn recharge the carbon. Therefore, the "shelf life" of this technology is extended, based on this continuing cycle, as opposed to many other injected treatment agents that are spent soon after injection.

While all methods and products have their limitations, the appropriate application of the trap and treat strategy using BOS 200® shows promise as an effective remedial strategy. A critical element to the successful use of this technology is a sound and accurate conceptual model of the subsurface dynamics at play at a given site in order to design an effective application strategy. More importantly, however, it reveals a general methodology that can be more broadly applied with other injection products to increase their potential for success.

INTRODUCTION

The Division of Waste Management (Division) is one of six divisions of the Department for Environmental Protection in the Energy and Environment Cabinet (EEC). The departmental strategic plan, updated in June 2010, describes the mission of the agency:

“Protect and enhance Kentucky’s environment to improve the quality of life for all Kentuckians.”

To accomplish this mission, the department has developed a set of objectives to be implemented by each division. The objectives and tactics germane to this division are:

Department Goal #1: Reduce and/or maintain elimination of division permit and data entry backlogs.

Tactic 1.1: Maintain progress towards reducing and/or maintaining zero permit and data entry backlogs.

Department Goal #2: Protect human health and enhance Kentucky’s land resources.

Tactic 2.1: Restore or manage contamination at sites with known or suspected releases to soil or groundwater.

Tactic 2.2: Encourage reduced waste generation and disposal by promoting beneficial reuse, recycling, waste minimization and pollution prevention.

Tactic 2.3: Assure proper management and disposal of waste.

Therefore, the approach is to first minimize waste generation. Secondly, emphasis is placed on the reclamation and recycling of waste that is generated. Finally, requirements are designed to assure that the remaining waste is disposed of properly.

The strategic plan is also geared towards the restoration of lands that are impacted from releases when wastes are *not* managed properly. In the report sections that follow, Division activities designed to address these primary issues—waste generation, recycling, collection/disposal, and site remediation—are highlighted.

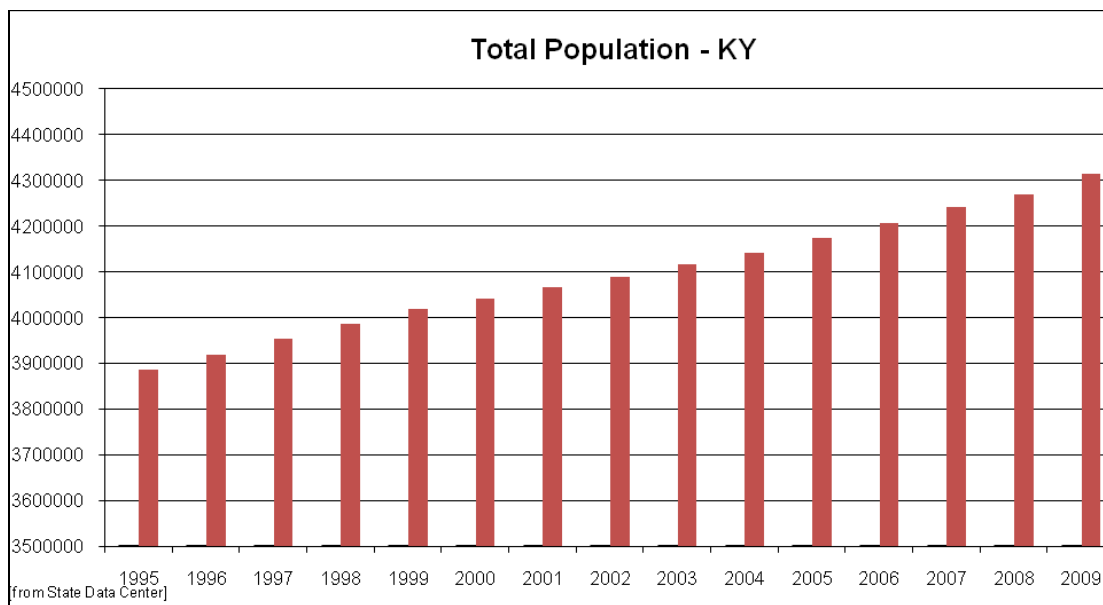
SOLID WASTE

<http://waste.ky.gov/SWB/Pages/default.aspx>

The mission of the Solid Waste Branch is to assure proper solid and special waste management practices through the implementation of comprehensive permitting, monitoring and training.

The Solid Waste Branch is responsible for the review and issuance or denial of permits for solid waste and special waste landfills, landfarming and composting facilities and registrations for permit-by-rule facilities.

All counties in Kentucky offer a system of universal waste collection. Universal waste collection means that collection service is made available to households, either through curbside collection or through drop-off centers/collection centers/transfer stations for use by households. The total population in Kentucky is increasing, so the amount of waste generated in the state is increasing. The charts below show these trends of increasing population as well as increasing amounts of waste being generated.



In 2009, Kentucky experienced a 7 percent decrease in waste disposed in Kentucky landfills; a 5 percent decrease of waste generated in Kentucky and a 2 percent decrease in out-of-state waste. Kentucky exported 7 percent of its waste to out-of-state landfills, an increase from 5 percent in 2008.

Kentucky's recycling rate on common household items (aluminum, cardboard, ferrous and nonferrous metal, plastic, newspaper, glass, and paper) decreased from 34.7 percent in 2008 to 29.7 percent in 2009. The average recycling rate in the Southeast Region in

2006 was 22 percent, while the national average was 28.5 percent. The recycling rate in Kentucky continues to be above the national average. See Table No. 1 below.

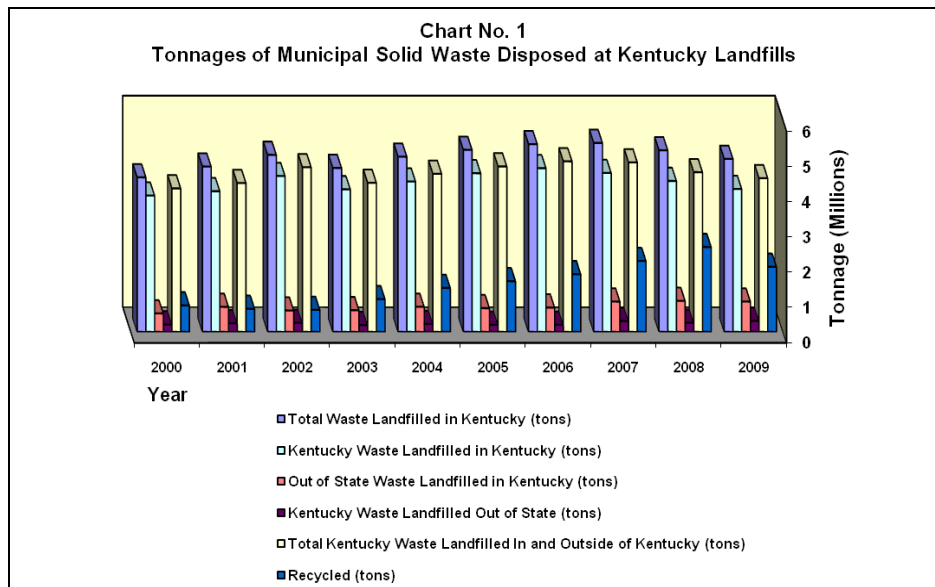
Table No. 1 Municipal Solid Waste Disposal in Kentucky (Tons).									
Year	Kentucky Waste Landfilled in Kentucky (tons)	Out of State Waste Landfilled in Kentucky (tons)	Total Waste Landfilled in Kentucky (tons)	Kentucky Waste Landfilled Out of State (tons)	Total Kentucky Waste Landfilled In and Outside of Kentucky (tons)	Recycled (tons)	Total Waste Generated in Kentucky	National Recycling Rate	Kentucky Recycling Rate
1994	3,621,623	191,742	3,813,365	133,505	3,755,128	191,684	3,946,812	23%	4.9%
1995	4,207,071	269,833	4,476,904	210,728	4,417,799	529,423	4,947,222	27%	10.7%
1996	3,429,983	270,849	3,700,832	277,638	3,707,621	474,415	4,182,036	28%	11.3%
1997	3,543,196	429,550	3,972,746	165,866	3,709,062	685,650	4,394,712	30%	15.6%
1998	3,615,890	373,291	3,989,181	496,424	4,112,314	1,150,620	5,262,934	31.5%	21.9%
1999	3,734,798	395,998	4,130,796	136,739	3,871,537	739,136	4,610,673	33%	16.0%
2000	3,860,516	515,136	4,375,652	202,029	4,062,545	742,398	4,804,943	32%	15.5%
2001	3,982,260	701,442	4,683,702	233,617	4,215,877	644,925	4,860,802	*	13.3%
2002	4,415,859	598,548	5,014,407	247,002	4,662,861	615,476	5,278,337	26.7%	11.7%
2003	4,036,800	605,760	4,642,560	184,159	4,220,959	919,802	5,140,761	*	17.9%
2004	4,259,181	702,295	4,961,476	217,761	4,476,942	1,237,294	5,714,236	*	21.7%
2005	4,493,499	663,686	5,157,185	191,923	4,685,422	1,429,490	6,114,912	30.0%	23.4%
2006	4,636,351	681,414	5,317,765	193,948	4,830,299	1,626,778	6,457,078	28.5%	25.2%
2007	4,500,843	851,055	5,351,897	299,852	4,800,695	2,005,249	6,805,944	33.1%	29.5%
2008	4,273,781	870,637	5,144,418	248,408	4,522,189	2,398,863	6,921,052	33.2 %	34.7%
2009	4,048,176	851,541	4,899,717	304,842	4,353,018	1,838,574	6,191,592	*	29.7%

* National data is not available for 2001, 2003, 2004, and 2009 percentages.

** 2003 and 2004 Kentucky percentage increases are partially attributable to better data, due to a new state law that took effect mid-2002 requiring recyclers to register and report amounts and types of materials recycled. Kentucky municipal solid waste recycled figures are for: aluminum, cardboard, steel, plastic, newsprint, glass and paper.

*** The reduction in the amount of waste disposed and the reduced recycling rate during FY10 is likely related to the depressed economy.

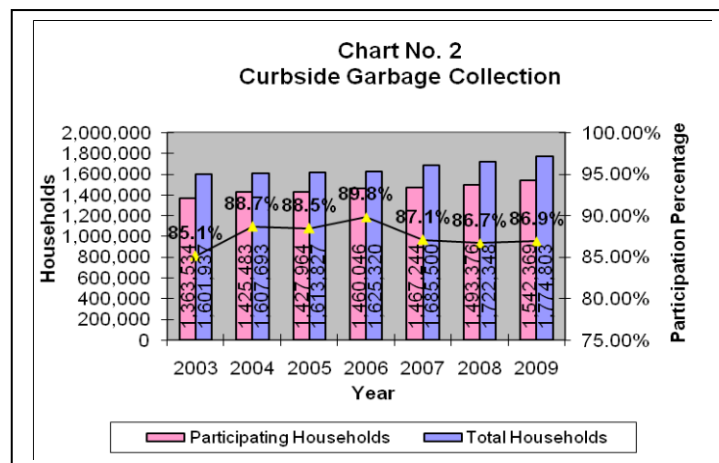
The average cost for waste disposed at Kentucky landfills in 2009 was \$32.44 per ton. Chart No. 1 illustrates the comparison of tonnages of in-state, out-of-state, and the combined total of municipal solid waste received at landfills and the amount in tons of recycled materials in Kentucky, beginning with the base year 2000.



Municipal Solid Waste Collection Programs

Participation in curbside garbage collection has remained relatively flat since 2003 with an average of 87.6 percent participation. Since 2003, waste haulers and recyclers have been required to register and report annually to the county the number of households utilizing collection service.

Chart No. 2 shows the number of households participating in collection systems from 2003 to 2009.

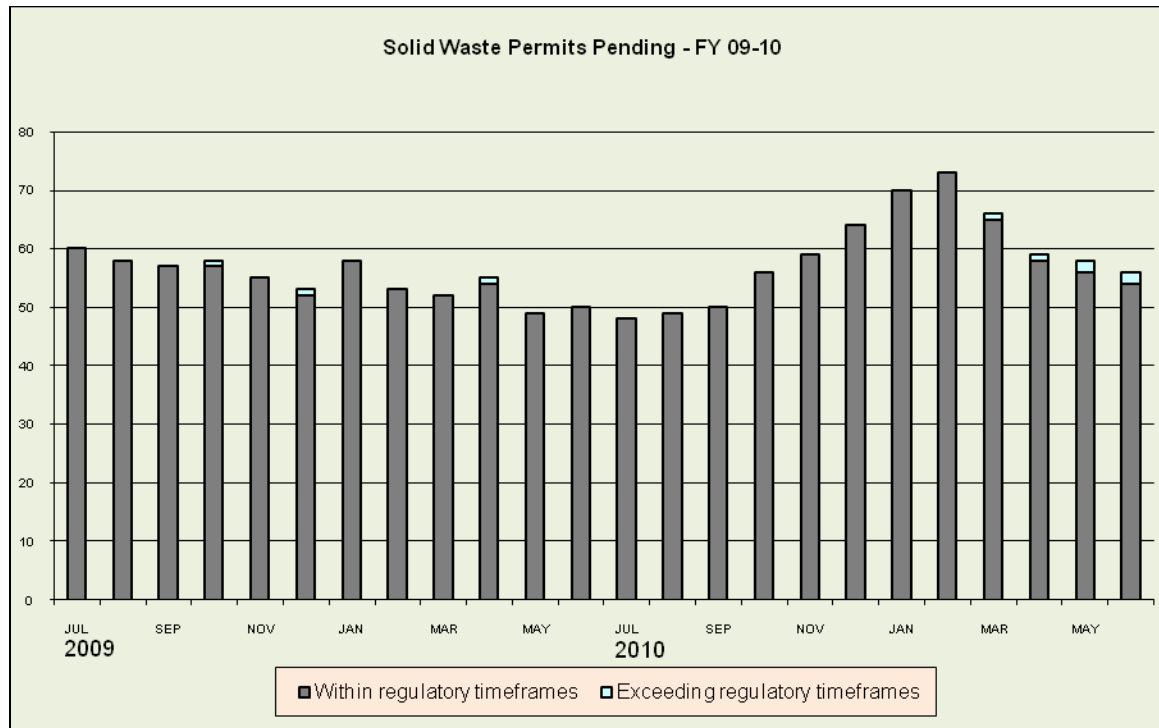


The average participation rate for collection systems in 2009 was 86.2 percent, which means approximately 13.8 percent of households (245,141 households) are not accounted for by current tracking methods. While some may be disposing of garbage illegally, self-haul to a transfer station or convenience center is a legal method of disposal that most counties have difficulty tracking. Increased reporting requirements from transfer stations

and convenience centers is needed to ensure adequate tracking for households participating in proper disposal of municipal solid waste. Multi-unit housing is also difficult to track and often overlooked.

Solid Waste Permitting:

The Solid Waste Branch continues to issue the majority of permits within regulatory timeframes.



Historic Landfills:

The following is a summary of the Historic Landfill program progress and results:

Ten landfill construction projects for closure/remediation have been completed. Three of the completed projects have been recognized with awards. Most recently, the City of Campbellsville Landfill project received a National Recognition Award from the American Council of Engineering Companies (ACEC) and also received a Grand Award from the Kentucky Chapter of the ACEC. Total costs associated with all ten closure projects, excluding Closure Section personnel direct and indirect expenses, was approximately \$32 million (\$32,275,842.32).

- Briar Hill Landfill—Scott County
- Sims Road Landfill—Scott County
- Perry County Landfill
- City of Campbellsville Landfill—Taylor County
- Old City of Leitchfield Landfill—Grayson County
- Floyd County Landfill

- City of Manchester Landfill—Clay County
- City of Leitchfield-Millwood Landfill—Grayson County
- City of Cynthiana Landfill—Harrison County
- Winchester Municipal Utilities/Old Clark County Landfill—Clark County

Two landfill closure projects are presently under construction. Total cost for both projects including site characterization, design, and construction is projected at approximately \$5.6 million.

- Harland County Fiscal Court Landfill
- City of Richmond Landfill—Madison County

Three landfill closure projects have completed the design phase and are scheduled in the next budget cycle for construction. The total construction cost estimate, including site characterization, design and engineering oversight, for the projects is approximately \$4 million.

- FIVCO Landfill—Carter County
- Raven Run Landfill—Fayette County
- Marion County Landfill

Four landfill closure projects are in the design phase. Preliminary cost estimates for the projects including site characterization, design, and construction is approximately \$8 million.

- Mercer County Landfill
- Johnson County Landfill
- Billy Glover Landfill—Jessamine County
- Bullitt County Landfill

Six landfills are under contract for full site characterization. These sites are in various stages from waiting for additional site characterization work to waiting on final reports from the consultants. At an assumed average cost of \$1 million per site for site characterization, design and closure/remediation, an estimated total cost for these six projects is \$6 million.

- Trigg County Landfill
- Barbourville Landfill—Knox County
- City of Fulton Landfill—Fulton County
- Marshall County Landfill
- City of Franklin Landfill—Simpson County
- City of Bardwell Landfill—Carlisle County

Three landfill owners have completed closure with the cooperation, direction, and support of the Solid Waste Branch Closure Section. Permit termination letters were issued and final closure accepted. Total cost to the Historic Landfill program is estimated at \$10,000.

- Wayne Hurst Landfill—Fleming County
- Happy Hollow Landfill—Bell County

- Multi-County Services—Rockcastle County

Five landfill owners are currently working with the cooperation, direction and support of the Solid Waste Branch Closure Section to perform remediation and closure of their landfills. Total Cost to the Historic Landfill program is estimated at \$15,000.

- Shelby County Landfill—Shelby County Solid Waste Commission
- Bell County Garbage & Refuse Disposal—Bell County Private Owners
- City of Owensboro Landfill—Davies County
- Butler County Landfill—City of Bowling Green—Butler County
- Glen Lily Landfill—Warren County

Site characterization work at two sites has determined no further action is warranted.

- City of Bowling Green Inert Landfill – Warren County
- Letcher County Fiscal Court Landfill

Initial characterization of 159 sites is complete. The reports and data are reviewed. The sites have been ranked based on the perceived threat posed to human health and the environment. It is anticipated an additional three contracts will be advertised in 2010 to fund the initial site characterization of an additional 85 sites in 16 counties. Total estimated cost for the initial site characterizations excluding direct and indirect personnel expenses is \$750,000.

Solid Waste Branch Highlight

The Solid Waste Branch continues to operate essentially backlog free. On average, the branch issues 3 or 4 permits per week, and has an average of 60 permit applications under review at any given time. These numbers are almost evenly split between landfill permits and Registered-Permits-by-Rule activities.

The Historic Landfill Program was established as a section within the Solid Waste Branch in 2003 to address the closure and remediation of historic landfills – commonly known as “old town dumps.”

In addition to the remedial work performed by the Historic Landfill Section with Kentucky Pride funds, the Branch has also become more active in closing sites with money from the Solid Waste Restoration Fund. The first successful closure of a Less-Than-One-Acre Construction and Demolition Debris Landfill from forfeited financial assurance was recently completed at the Bogard Trucking Landfill in Calloway County. Closure of several more Less-Than-One-Acre Construction and Demolition Debris Landfills is underway.

The Solid Waste Branch is also initiating contracts using forfeited financial assurance to perform post-closure monitoring and maintenance at the Jones Landfill in Fulton County. Post-closure activities at contained solid waste landfills span a period of 30 years. While

some of these obligations had been met before forfeiture of financial assurance, the Branch is planning for a long-term commitment at this site.

Many permits in the Solid Waste Program, such as Registered-Permits-by-Rule, are issued for the life of the facility. There is no firm regulatory mechanism to close out permits which are no longer in use. The Solid Waste Branch, in conjunction with the Field Operations Branch, has begun evaluating old permits with the intent of closing out those which are no longer in use. The goal is to ensure that TEMPO, DEP's database of facility and permitting information, is as accurate as possible.

The Solid Waste Branch has also been involved with the review and comment of the EPA proposal on Coal Combustion Residuals. In the wake of the 2008 Kingston, TN coal ash impoundment failure, the federal EPA has proposed new regulations concerning coal combustion wastes. One option is to regulate coal ash under the hazardous waste provisions of the Resource Conservation and Recovery Act (RCRA) Title C. Another option is to have states impose new regulatory requirements under RCRA Subtitle D, the solid waste provisions. While the rule is proposed at this time, either option will likely increase the design requirements for landfills disposing of coal combustion waste. This nation-wide effort has already led to new developments, such as the introduction of a Geosynthetic Clay Liner (GCL) specifically designed for leachate from coal ash. The branch anticipates working with the power generation industry to meet all new regulatory requirements.

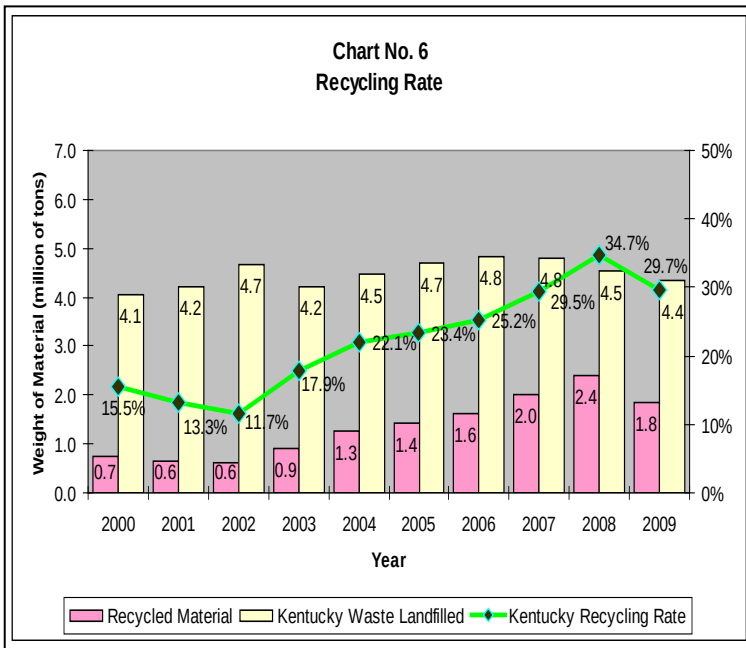
RECYCLING

<http://waste.ky.gov/RLA/Pages/default.aspx>

The Recycling and Local Assistance Branch (RLA) provides continuous technical assistance and training to public and private entities on solid waste issues and regulatory requirements and promotes individual responsibility and accountability for proper solid waste management.

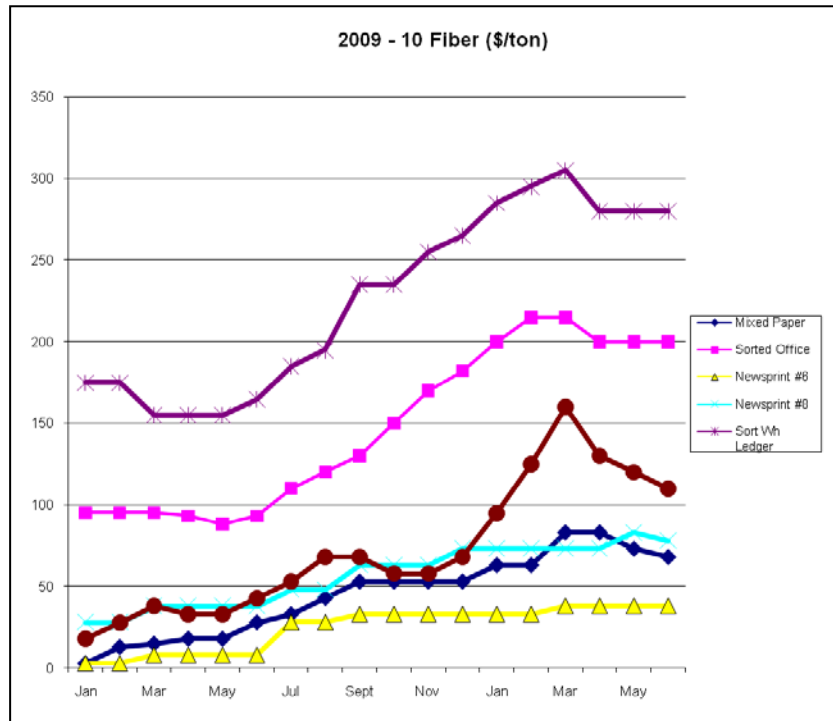
County Recycling and Recycling Education Programs:

County recycling data illustrate a steady increase in the statewide recycling rates of common household items such as glass, aluminum cans, newspaper, mixed and white office paper, cardboard, metal, and plastics through 2009. Chart No. 6 reflects the amount, in tons, of common household items recycled in Kentucky since 2000.



Beginning March 1, 2004, recyclers were required to report the amount of municipal solid waste collected by volume, weight or number of items recycled to the county on an annual basis.

Through publication of its *Marketplace* newsletter, the Division reports on the prevailing prices paid for aggregate recyclable materials. The following charts show the trends for various commodities.



Note: "Newsprint #8" means baled sorted newspaper, with no sun exposure, with less slick advertising inserts.

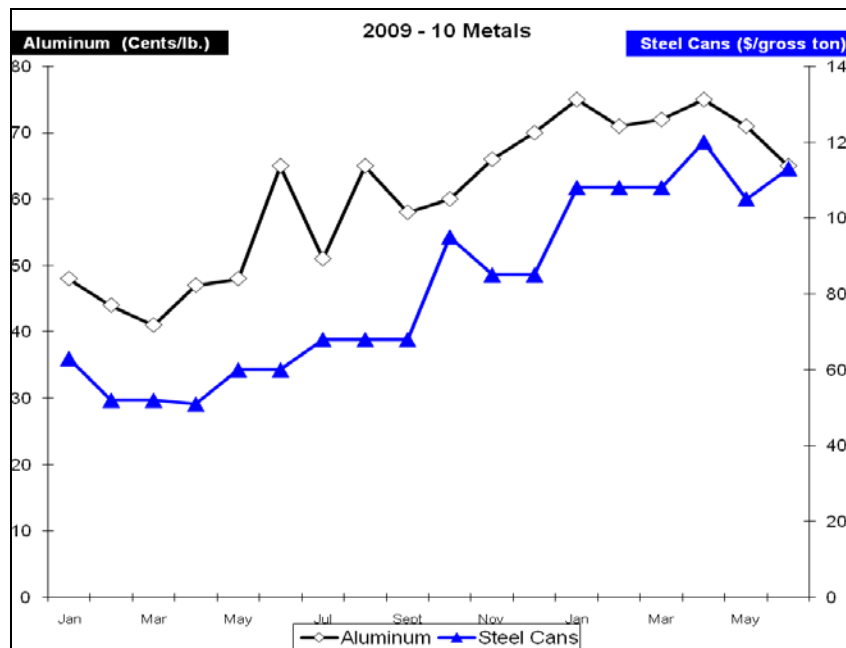
"Newsprint #6" means baled newspaper that typically has advertising slicks in it.

"Sorted office" means mostly white and colored, groundwood-free copier and printer paper.

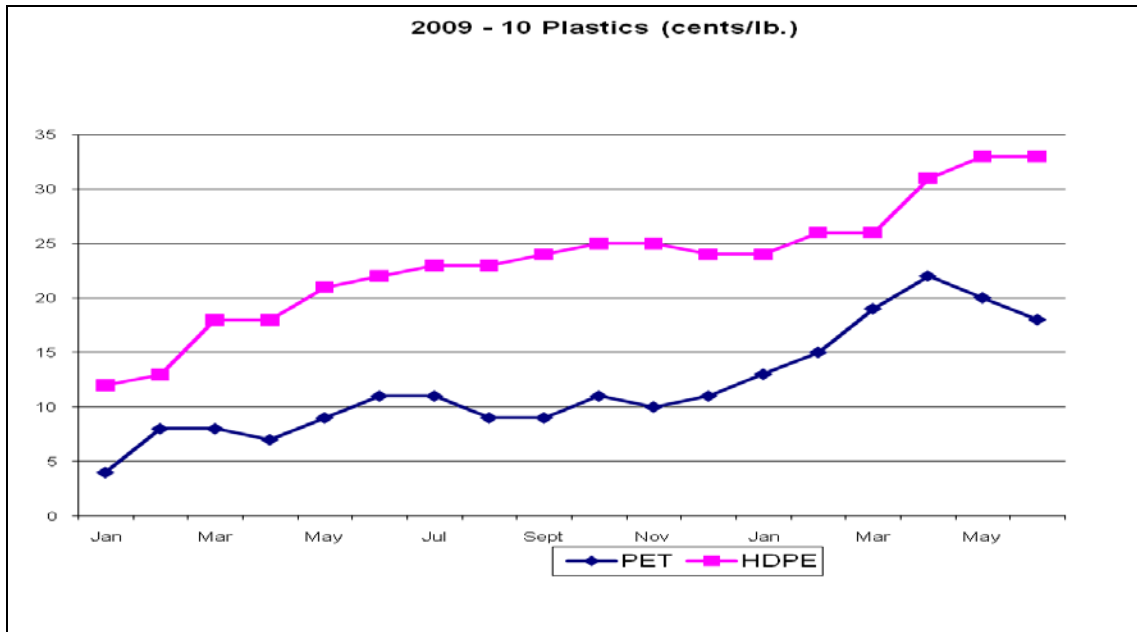
"Mixed paper" means a lesser-grade of material that can include slick advertising inserts, envelopes and other things with gummy surfaces.

"Sorted white ledger" means higher class white paper such as stationery (free of groundwood fiber)

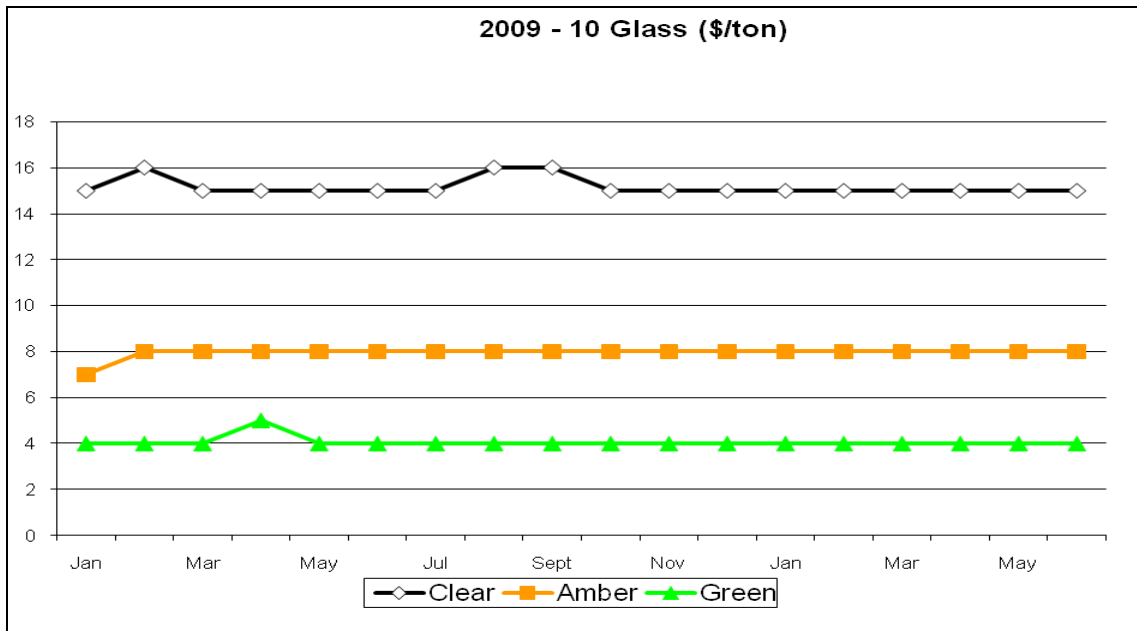
"Corrugated containers" means, typically, cardboard boxes.



Recycling prices for aluminum cans has decreased while the prices for steel cans has increased in the last fiscal year.



The price paid for number one and two plastics, PET typically known as soda bottles and HDPE typically known as milk jugs, has generally increased over the last two years.



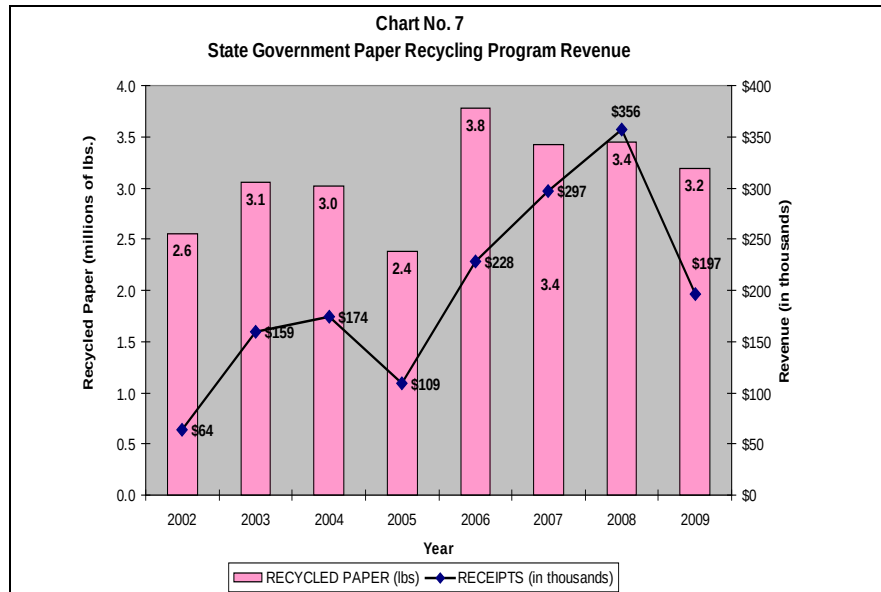
Glass prices have remained relatively constant over the last fiscal year.

The State Government Recycling Program

The Government Recycling Section of RLA continues to operate the state paper recycling program serving more than 115 agencies in Frankfort. The Government Recycling Section offers free pickup and free document destruction of governmental office paper. The Government Recycling Section moved to its new location on Northgate Drive in June 2006. The new facility offers a secured environment to address confidentiality issues. Office paper represents approximately 80 percent of the waste stream in the office environment. The cabinet has been tracking the amount of governmental waste

paper recycled since 1993, with more than 34.5 million pounds of paper being recycled through this program.

In 2009, government offices recycled 3,184,274 pounds (1,592 tons) of paper, newsprint, and cardboard – approximately 279 pounds per state employee. Chart No. 7 reflects the pounds of governmental waste paper recycled for calendar years 2002–2009.



The recent dramatic price drops in recycle commodities (paper, plastic, metals) were in direct correlation with the world-wide economic downturn. When demand weakens; it creates excess supply causing prices to fall. Without demand from manufacturers' inventories of materials pile up causing a glut on the market, resulting in reduced prices.

In general recycle commodities market fluctuations tend to lead the general economy by about 3 to 6 months, due to the time it takes to collect, process, convert into new products and get on retailers shelves the recovered materials. This is especially true for cardboard boxes as the sequence of events is:

- Old corrugated containers (OCC) are collected and sold or given to recycling operations (both commercial and community)
- The OCC is baled and shipped to kraft paper mills
- The OCC is pulped and made into kraft linerboard or medium rolls
- The rolls are shipped to box plants where they are cut, corrugated and glued into boxes
- The boxes are shipped to manufacturers to put their finished products into.
- The boxed goods are shipped to wholesalers' warehouses or retailers' stores.
- Items are unboxed and put on shelves for sale.
- The cycle begins again

Waste Tire Trust Fund - The Waste Tire Trust Fund was created in 1998 to address waste tires in the state. Funding comes from a \$1 fee on the sale of all new motor vehicle tires sold in Kentucky. The fund is used to conduct waste tire amnesty programs, award crumb rubber grants, and facilitate market development for the use of waste tires.

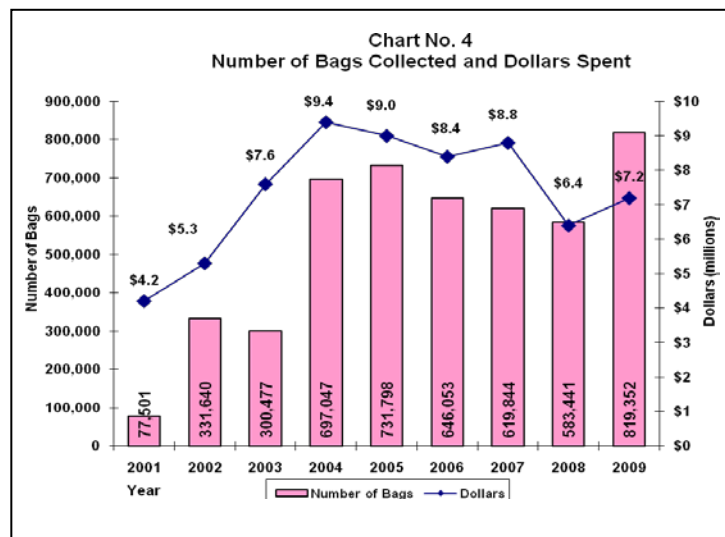
In 2009, tire amnesties were conducted in 33 counties in the Bluegrass, Pennyryle, Barren River and Lincoln Trail Area Development Districts (ADDs.) A total of 1,196,816 “passenger-tire-equivalents,” or PTEs, were recovered and recycled through these amnesties at a cost of \$1,182,945. This represents less than a one percent decrease in PTEs recovered for these same ADDs compared with the last amnesties, conducted in 2004-2005.

Crumb Rubber Grants - In 2009, the cabinet awarded eleven grants totaling \$199,457 for crumb rubber projects to be completed during the year.

Kentucky Pride Fund:

The environmental remediation fee of \$1.75 per ton of waste disposed in Kentucky is placed into the Kentucky Pride Fund. This money is used for closure of historic landfills, debt service, remediation of illegal open dumps, recycling grants, and household hazardous waste management grants.

Litter Abatement - In 2001, the Division began tracking the cost of litter activities and the number of bags of litter collected. State litter abatement grant funding (Kentucky Pride Fund) began in fiscal year 2002. The \$5.0 million received annually from the Transportation Cabinet is distributed to counties and incorporated cities for litter abatement activities.

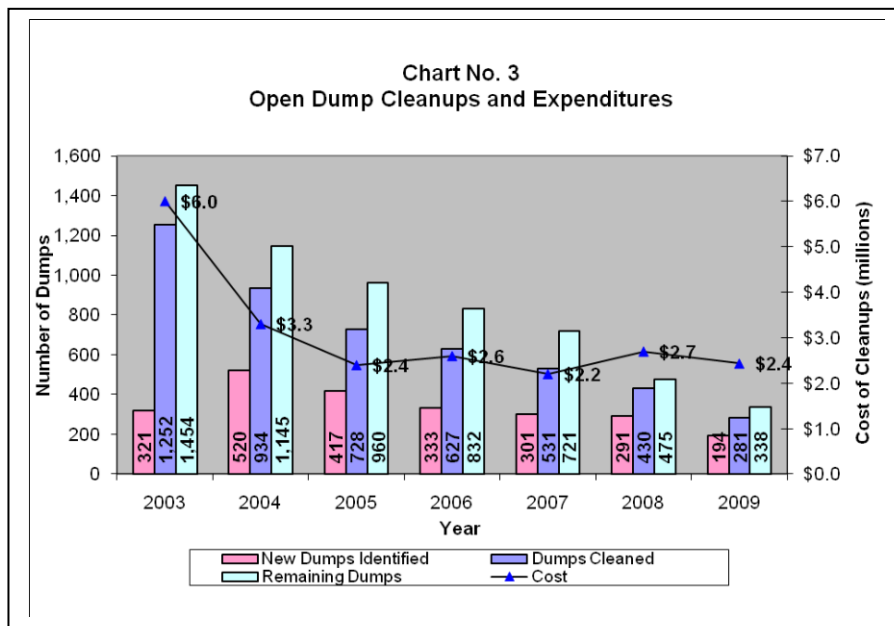


In 2009, counties cleaned 819,352 bags of litter on 425,898 miles of roadways. Litter collection costs totaled \$7,193,367, an average cost of 44 cents per pound (\$902.02 per ton). Most of the items found on roadways are plastic bottles and food containers. Litter is costly at \$878 per ton when compared to the average landfill disposal rate of \$32.44 per ton.

Chart No. 4 reflects the number of bags of litter collected and the amount spent on litter for calendar years 2001-2009.

Cleanup of Illegal Open Dumps:

Since 1993, more than 24,711 illegal open dumpsites have been cleaned at a cost of \$65.2 million. Chart No. 3 shows the number of dumpsites cleaned since 2003. In 2009, counties cleaned 281 illegal open dumps at a cost of \$2.4 million. The average cost to clean each dumpsite was \$8,654. There were 338 known dumpsites remaining at the end of 2009.



Financial assistance, through the Kentucky Pride Fund Illegal Open Dump Grant program, has provided counties the incentive and the necessary financial help to identify and rid their communities of their old dump sites.

Since 2002, the Kentucky Pride Fund illegal open dump remediation program has funded the cleanup of 1,292 dumpsites at a cost of more than \$7 million. The fifth round of illegal open dump grants was awarded in January 2009 for the remediation of 253 dumpsites at a cost of \$2.9 million.

Recycling and Household Hazardous Waste:

In 2006, the Kentucky Pride Fund was amended to provide grants for the development and expansion of recycling programs and household hazardous waste management. In 2009, 38 recycling grants were awarded for a total of \$2.0 million. Thirty-eight recycling grants were awarded to cities, counties, and universities in 2009; three of the recycling grants awarded were for regional efforts that included two or more counties. The new recycling grants and education efforts by local governments should result in continuing increases in the recycling rates.

In 2009, household hazardous waste (HHW) grants were awarded to nine counties, with one event serving three counties. Materials collected included E-scrap, pesticides, solvents, mercury and other HHW products found around the home. Mercury collection events were held by 8 counties, with one event serving 3 counties. The program's goal is

to encourage recycling and HHW management events in areas where few of these opportunities for citizens exist, with an emphasis on regional cooperative efforts.

Kentucky Recycling and Marketing Assistance Program (KRMA):

The Kentucky Recycling Interest Group (KRIG) reorganized in 2007 and joined with the Kentucky Pollution Prevention Center to facilitate a much-needed statewide program to further develop the recycling infrastructure of the state. Composed of individuals from state and local governments as well as industry, KRIG met during the 2009 Governor's Conference on the Environment to discuss business "best practices" and how much material is recycled in Kentucky. Also, the KRIG Steering Committee met in Lexington to discuss goals and directions for the group to pursue in the near future, such as a state-wide recycling directory and America Recycles Day preparations. The annual KRIG spring meeting took place in Frankfort.

E-scrap collection is growing in the state, with approximately 48 counties offering some type of e-scrap collection. Year-round e-scrap drop-off programs are increasing across the state with 19 counties now offering them. Another 21 counties offer some type of e-scrap collection, whether periodic or an annual event. More than 2,341 tons of e-scrap was collected in 2009. The Finance and Administration Cabinet awarded an e-scrap recycling contract to a national vendor which became effective January 1, 2009. This "all-agency" contract allows the executive, judicial, and legislative branches of government, school districts, universities, and any other public (not-for-profit) convenient access to recycling. The contract provides for statewide pickup and recycling services; with effectively zero percent (0%) of the scrap going to commonwealth landfills. This contract is unique in that the vendor pays the agencies/school districts/universities/local governments for selected items aggregated for recycling. Since the contract took effect, over 1,500 tons of e-scrap have been collected from 482 agencies/locations and refurbished or recycled in an environmentally sound and data secure manner year to date (January 2009 to January 2010). Payments to generators have netted over \$58,000.

The Glass Pulverizer Loan Program has taken a new direction since the demise of the loaner machine that produced over 110 tons of pulverized glass aggregate (PGA) across the Commonwealth in a 4 year span. Now, several counties have taken advantage of the Recycling Grants program and have purchased higher capacity pulverizers (capable of pulverizing up to 3,000 pounds of glass per hour). The following entities are actively setting up pulverizing and PGA use programs: Regional Recycling Program (Washington, Marion and Nelson counties), The Murray State University, City of Murray and Calloway County Recycling Consortium, and the Pennyrile Recycling Corporation (Eddyville). Several other community recycling programs are planning to apply for grants to purchase pulverizers so they can continue to recycle glass containers in an economical and effective manner.

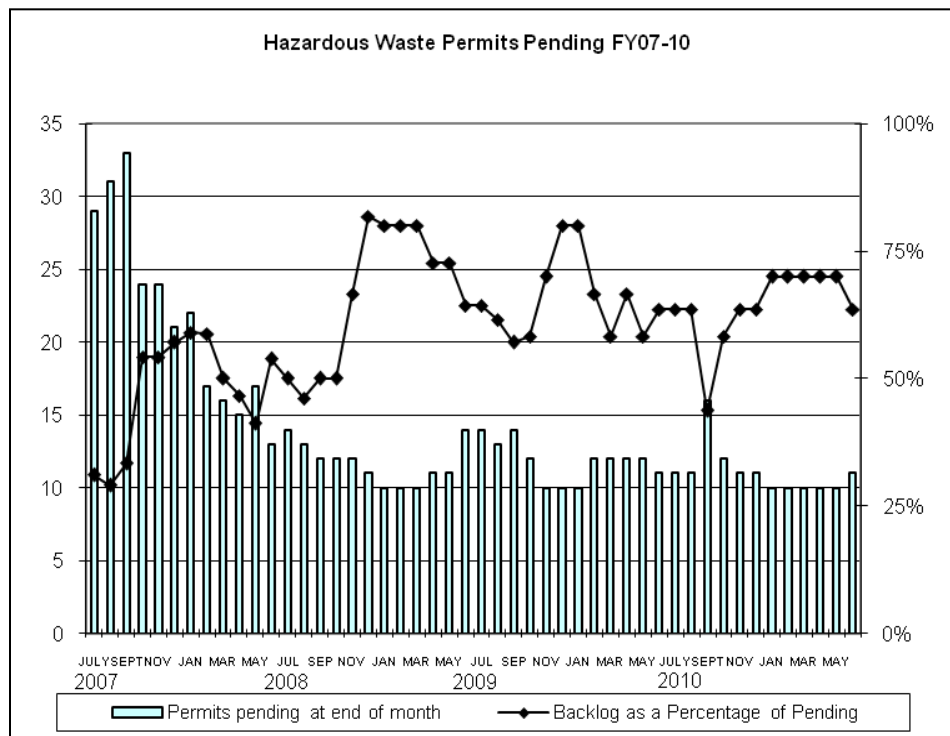
The End of Life Vehicle Solutions – 2009 (ELVS) targets mercury-containing switches removed from automobiles before the autos are salvaged for scrap metal. The 105 participants collected 17.75 pounds of mercury from 8,066 switches.

HAZARDOUS WASTE

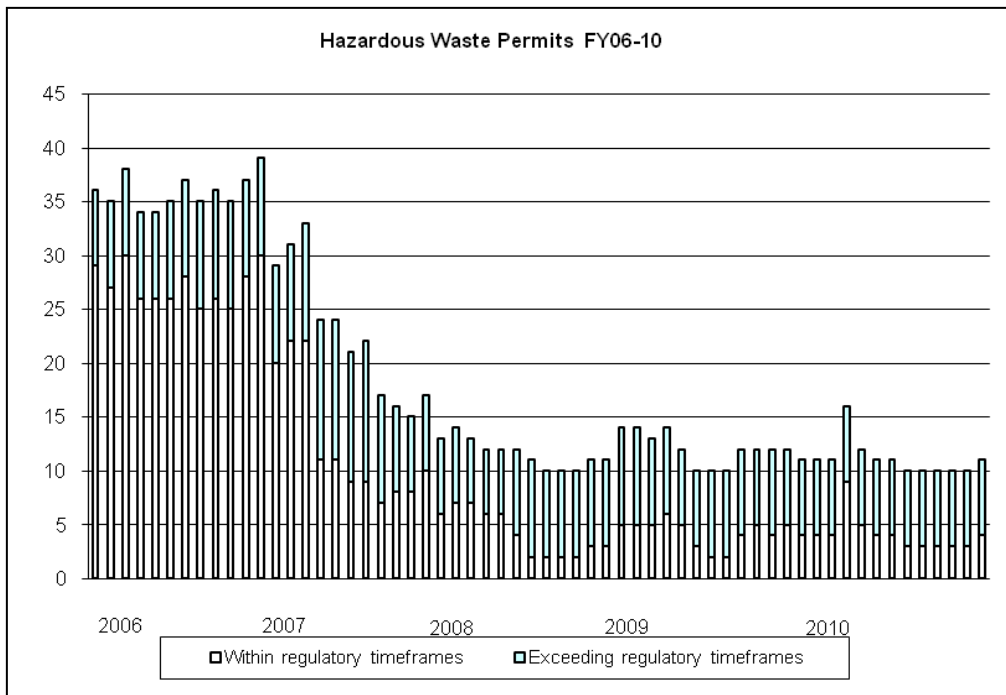
<http://waste.ky.gov/HWB/Pages/default.aspx>

The Hazardous Waste Branch oversees the management of hazardous waste from generation to disposal. This involves the promotion of hazardous waste minimization, hazardous waste management and remediation of hazardous waste releases. These activities are accomplished through permitting, corrective action, registration and reporting requirements.

Hazardous Waste Permitting:



Procedures were changed for processing the permit applications. The number of pending permits at the end of each month declined steadily as the backlog declined. This resulted from the Division initiative to reduce or eliminate the number of permits exceeding the regulatory timeframe.



The above chart illustrates the total number of pending permit applications has remained steady since the initial reduction effort began.

The American Recovery and Reinvestment Act (ARRA):

The American Recovery and Reinvestment Act (ARRA) provided \$78 million dollars for clean-up at the Paducah Gaseous Diffusion Plant (PGDP) located in Paducah, Kentucky. To date, approximately \$36 million has been spent.

In determining which projects would receive ARRA funds, the emphasis was placed on those projects which could start quickly and those which would have lasting value. In order to meet the first criteria, projects with defined existing scope, costs, and schedules were selected. The Federal Facility Agreement parties (U.S. Department of Energy (DOE), U.S. Environmental Protection Agency (USEPA), and Kentucky Division of Waste Management) selected to accelerate the demolition of three facilities at the PGDP, two large chemical processing facilities and one contaminated metals smelting facility.

The specific accomplishments for 2010 were the completed demolition of the C-746-A East End Smelter (21,000 square feet) in September 2010. Infrastructure removal from the C-410 Uranium Hexafluoride Production Complex is presently occurring with completion scheduled for 1st quarter of 2011. Complete structural demolition of the C-410 Complex (200,000 square feet) is anticipated for 3rd quarter of 2011. Two support facilities to the C-340 complex were demolished in June 2010. The C-340 Uranium Metal Production Complex will be completely dismantled and all major systems and large process equipment contained within the building will be disposed in 3rd quarter 2011 (77,000 square feet). All debris has been and will continue to be appropriately disposed.

By demolishing these facilities before their scheduled date, money will be saved by freeing the public from the burden of maintaining antiquated, surplus facilities. This project is projected to save \$34 million. Part of this savings will be available to sustain clean-up schedules. Subtracting the dollars that will be spent preserving clean-up schedules from the \$34 million will leave about \$10 million as a net savings to the public.

The first recipient of ARRA funds was the primary contractor for the DOE at the PGDP, Paducah Remediation Services, LLC (PRS). As of July 25th, 2010 Los Alamos Technical Associates (LATA) replaced PRS as the primary remediation contractor. Approximately 42 million dollars was transferred to the LATA contract. Local businesses, vendors, and material suppliers benefited from the increased purchases required to support ARRA work and will continue to benefit as these ARRA activities are completed.

Hazardous Waste Branch Highlight

C-400 Groundwater Remedial Action

On August 9, 2005 a major milestone was achieved in the ongoing process of cleaning up contaminated groundwater at the Paducah Gaseous Diffusion Plant (PGDP). On that day, representatives from the state Energy and Environment Cabinet, the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) signed and approved a Record of Decision to implement a multi-million dollar interim remedial action that will serve to address a subsurface source of Trichloroethene (TCE) and other volatile organic compounds present near the C-400 Cleaning Building, a former parts cleaning facility located at the PGDP. This source continues to fuel large groundwater contaminant plumes that eventually discharge to the Ohio River.

The PGDP, an EPA federal Superfund site, is currently the only operating uranium enrichment facility in the United States. The facility is owned by DOE and leased and operated by the United States Enrichment Corporation, a wholly owned subsidiary of USEC Inc. The facility was built in 1952 by the U.S. Atomic Energy Commission at the site of the former Kentucky Ordnance Works, a TNT production facility used during World War II. Its original mission was production of highly enriched uranium to fuel military reactors used to produce nuclear weapons. Today, the PGDP produces low-enriched uranium fuel for commercial nuclear power plants.

The C-400 Building was identified in 1999 as being the most significant source of TCE to groundwater present at the PGDP. This building was constructed early in the PGDP's history to serve as its primary parts cleaning facility. For decades, large quantities of TCE (a degreasing agent and probable human carcinogen) were used to clean parts and equipment. Over time, an estimated 75,000 gallons of TCE leaked from the building and entered the subsurface as a Dense Non-Aqueous Phase Liquid (DNAPL).

TCE DNAPL, being heavier than water, typically sinks after being spilled onto the ground or discharged into subsurface soils. As it sinks, the DNAPL leaves residual traces

of itself in the shallower soils. Eventually, the DNAPL reaches a relatively impermeable geologic unit and begins to pool at the top of that unit. If enough DNAPL collects in a particular location, its weight may allow it to continue into deeper units. This is what has occurred at the C-400 Building. Near this facility, DNAPL is known to be located within the shallower geologic deposits as well as at the bottom of a deeper gravel aquifer. Unless it is removed, the DNAPL will continue to slowly dissolve into the surrounding groundwater and will continue to contaminate this resource for hundreds or even a thousand years into the future.

The remedial action to address subsurface contaminants at the C-400 Building is without question the most aggressive attempt to date to substantially curtail the PGDP's significant groundwater contamination problem. The primary goal of this action is to remove TCE DNAPL from as deep as 100 feet beneath the surface. Once removed, the DNAPL will no longer be able to continue to pollute the groundwater. It is hoped that this action will remove in excess of 90% of the TCE known to be present near C-400, thereby serving to significantly reduce the amount of time that the groundwater located beneath and north of the plant remains contaminated.

The remedial action uses Electrical Resistant Heating (ERH) technology to heat the subsurface, vaporizing and mobilizing the TCE so that it can be captured above ground. ERH relies upon numerous subsurface electrodes to heat the surrounding soil and groundwater. Once temperatures reach the boiling point of TCE (189 °F near the surface), TCE vapors will be extracted from the subsurface using strategically located vacuum extraction wells. This vapor will be condensed (turned into a liquid) at the surface and will then be managed as hazardous waste. The remedial action design was approved by the Division of Waste Management in July 2008 and will be implemented in two phases.

Phase I is currently operational and consisted of installing electrodes, downhole sensors, and vacuum extraction wells at the southwest corner and to the east of the C-400 Building. Heating will be initiated first in these areas. Lessons learned during Phase I of the action will then be used to improve system performance during Phase II. Following Division approval of the Remedial Action Work Plan for the ERH remedy, a total of 110 electrodes were installed in 42 boreholes within each of the two Phase I areas to be treated. Also installed were the 9 extraction wells that will pull heated TCE vapor from the ground. Testing of Phase I aboveground water and vapor treatment units began in November 2009. However, the electrodes were not energized until March 2010. Following several tests to insure that all system components were working as planned, a ribbon cutting ceremony was held in April at which time the system was fully operational. Operations will be governed by an Operations and Maintenance Plan approved by the Division in July 2009.

Phase II of the remedy will consist of installing ERH elements at the southeast corner of C-400, the area known to harbor most of the TCE contamination. The treatment system will be deactivated once a point of diminishing returns is reached as determined through TCE vapor phase measurements and TCE levels in groundwater. Barring any unforeseen

problems with Phase I, Phase II is to be installed during the summer of 2010 with operations beginning during the later part of the year.

FIELD OPERATIONS

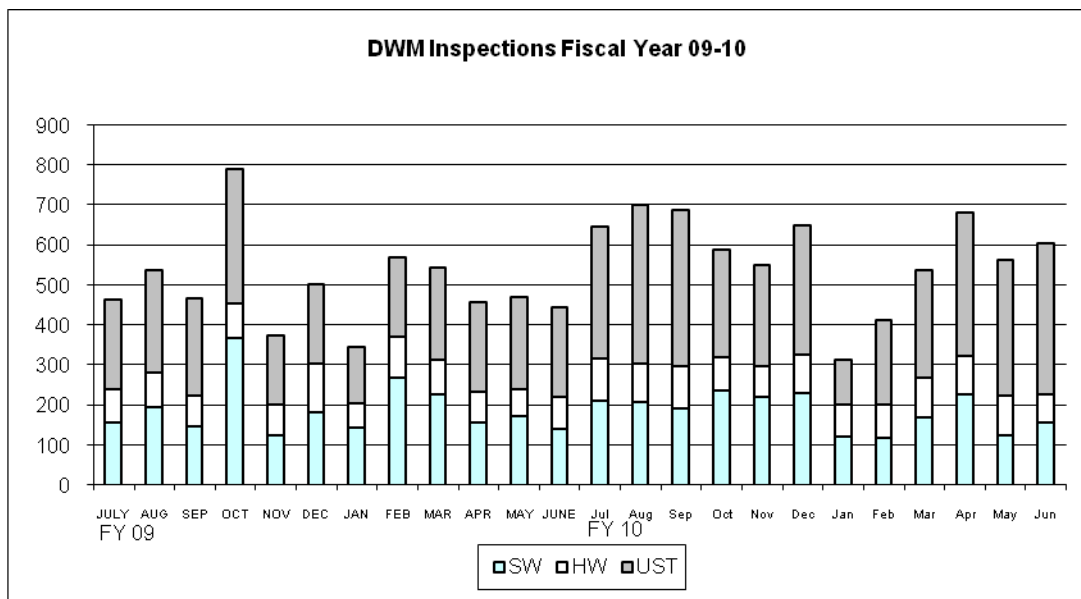
<http://waste.ky.gov/FOB/Pages/default.aspx>

The mission of the Field Operations Branch (FOB) is to identify and abate imminent threats to human health and the environment through fair and equitable inspections, technical assistance and education.

The branch performs inspections at sites managing solid waste, hazardous waste, underground storage tanks and PCBs. The primary duty of a regional inspector is to check the compliance of waste facilities.

The branch includes a central office and 10 waste management regional offices located throughout Kentucky. Staffs from these offices are familiar with the local waste management issues and can respond to questions and concerns.

Compliance and Enforcement:

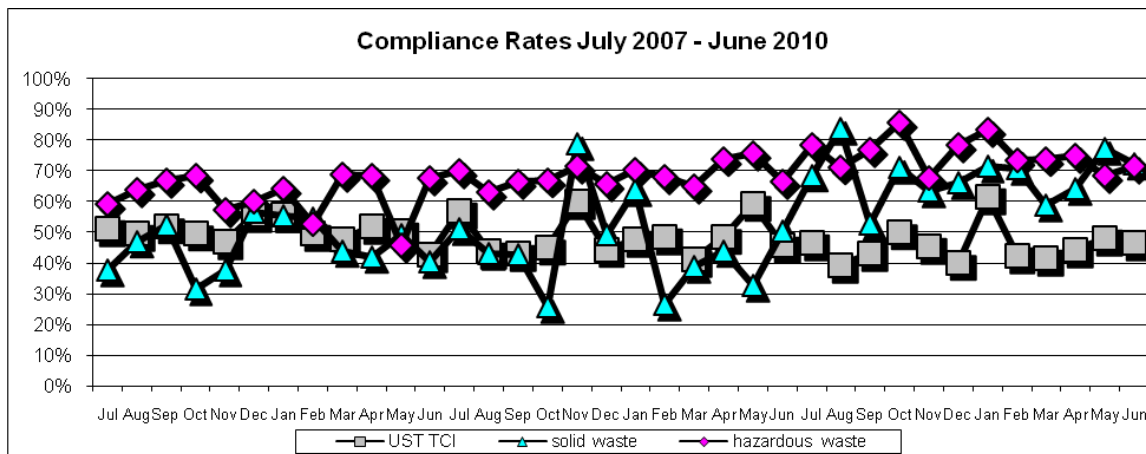


Note: SW=Solid Waste, HW=Hazardous Waste, UST=Underground Storage Tanks

Note: Inspection totals include “complaint investigations” in addition to typical inspections of regulated entities

During 2009 the Division of Waste Management’s Field Operations Branch conducted 7,188 inspections in the Hazardous Waste, Underground Storage Tank, Solid Waste and the Toxic Substance Control Act (TSCA) and polychlorinated biphenyl (PCB) programs. The Underground Storage Tank program made up 49% or 3,547 of the Branch’s total inspections with 1,510 Notices of Violations issued. There were 2,504 inspections

conducted under the Solid Waste program. Violations were found during 447 inspections which resulted in 251 Notices of Violations being issued. The Hazardous Waste Program had 1,069 inspections. Violations were found at 234 facilities and 128 Notices of Violations were written. The TSCA PCB program conducted 68 inspections during 2009. Under the TSCA PCB program the United States EPA takes enforcement action against violators. The Field Operations Branch also investigated 2,162 complaints in 2009. A total of 9,350 inspections and investigations were conducted during the year.



Note: "Compliance rate" means the percent of total inspections where an inspector noted that no violation had occurred; does not include investigations triggered by citizen complaints.

Note: "UST TCI" means a technical compliance inspection for a facility's underground storage tanks.

Kentucky's compliance rate for underground storage tanks has risen from 42% to 46% which is still below the 68 % average compliance rate for other states in EPA Region 4. The Division is continuing to make strides in improving Kentucky's UST compliance rate. Compliance for USTs should increase when the regulations incorporating the Energy Policy Act of 2005 are passed. These regulations are intended to increase the requirements for leak prevention protection. There has also been an effort to work with UST owners during inspections to help improve compliance. This involves scheduling inspections at times the owner can be present.

Emergency Response:

KRS 224.01-400 establishes the cabinet as the lead agency for hazardous substance, pollutant or contaminant emergency spill response. The Department for Environmental Protection maintains a roster of field staff who serve as part of the Environmental Response Team (ERT). They are the first to respond to environmental emergencies.

In FY10 the ERT received 12,776 notifications; 455 of which required a response.

Field Office Branch Highlight

In January 2009 Kentucky experienced its largest environmental disaster in over 150 years. An ice storm blanketed Kentucky and resulted in 93 counties being declared a federal disaster by the federal government. 12,000 utility poles unable to bear the weight of 1 ½ inches of ice were snapped, many of which had PCB transformers attached to them. Residents in the hardest hit counties of western Kentucky were without power or phone service for over three weeks.

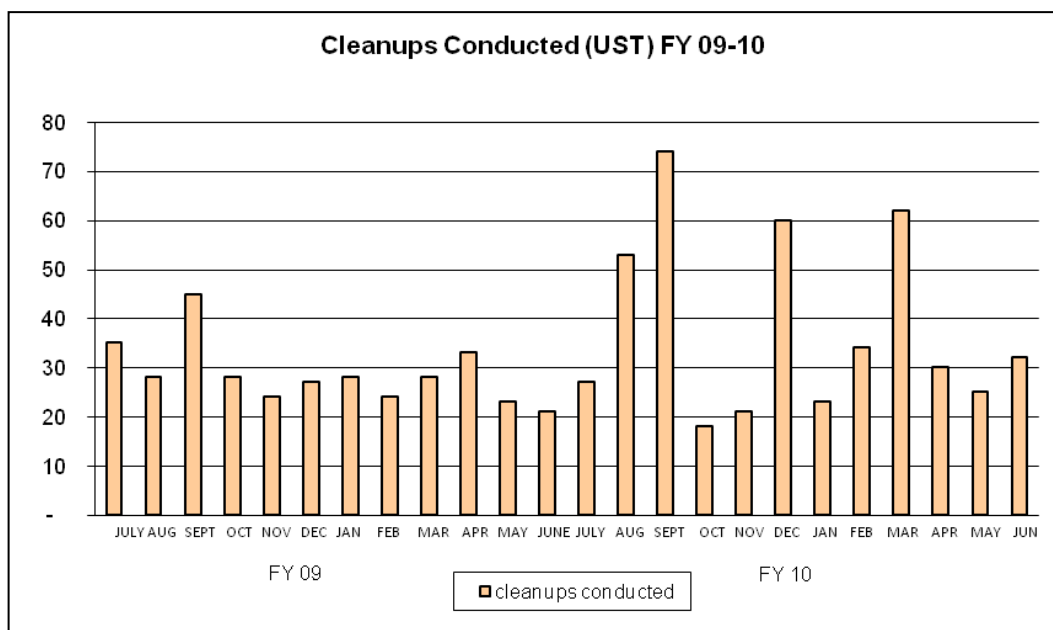
The FOB and Kentucky Department of Transportation (DOT) began cleanup efforts even before the ice began to melt. The FOB worked with local county officials and DOT to locate acceptable areas where vegetative material such as limbs and uprooted trees could be taken for proper management. The trees were chipped for disposal at a permitted landfill, burned on site or reused for fuel at charcoal manufacturers or power plants. Approximately 575 sites were approved for handling the estimated 2 million tons of vegetative storm debris.

UNDERGROUND STORAGE TANK

<http://waste.ky.gov/UST/Pages/default.aspx>

The mission is to provide for the prevention, abatement and control of contaminants from regulated underground storage tanks (USTs) that may threaten human health, safety and the environment.

The Underground Storage Tank Branch (USTB) regulates the registration, compliance, closure, inspections and corrective actions of UST systems.



The above chart includes sites that have received a No Further Action letter from the Underground Storage Tank Branch. Currently, the UST program has funding and is issuing a significant number of directive letters requiring cleanup.

The Underground Storage Tank Branch has been working on an overhaul of the UST regulations. The changes will incorporate the Energy Policy Act of 2005 and make the process as streamlined as possible.

Underground Storage Tank Branch Highlight

The annual report for Fiscal Year 2009 included an article highlighting DWM's efforts in addressing vapor intrusion, a condition created when vapor from subsurface contaminant spills are swept into overlying structures. This article serves as an update to the ongoing work by members of the DWM Vapor Intrusion Workgroup.

Last year, the following objectives were set for the Vapor Intrusion Workgroup:

- Determine the volume and distribution of sites regulated by the division where vapor intrusion is being actively assessed.
- Develop action levels for emergencies and investigations.
- Identify values that are representative of background contaminant values.
- Develop a consistent approach for identifying sites that should be assessed for vapor intrusion.
- Developing a consistent approach for vapor intrusion investigations and remediation.
- Provide training to technical staff within the division.

During Fiscal Year 2010, ongoing and new vapor intrusion investigations were handled in the Superfund Branch and the Underground Storage Tank Branch. The Superfund Branch is currently overseeing 2 projects with substantial VI components. Other sites are under review for the need for a vapor intrusion investigation.

The Underground Storage Tank Branch completed reviews or investigations of potential VI concerns at 9 sites statewide. The USTB is also engaged in 14 ongoing VI investigations. Approximately 20 additional sites have been identified as having potential vapor concerns and will require further investigation.

Emergency Response Threshold Values and End of Investigation Values have been drafted to address the second objective of the VI Workgroup, developing action levels for emergencies and investigations. These draft values are based on background contaminant values, both empirical and modeled, that were reviewed by risk assessors in the Superfund Branch. The draft values have met the approval of division management and will be included in a set of recommendations to department management this year.

In order to develop a consistent approach for vapor intrusion investigations and remediation, standard operating procedures (SOPs) are currently being drafted that will provide criteria for the review of sites with potential vapor intrusion concerns. SOPs will address chlorinated vapor intrusion (CVI) and petroleum vapor intrusion (PVI) separately. Screening criteria for regulated sites that exhibit free phase or high concentrations of chlorinated solvents or petroleum hydrocarbons are also in development and will help identify sites with potential VI concerns within ongoing investigations. Our approach will focus on the identification of sites that may pose a health risk to those working and living in nearby buildings.

VI investigations within the division are being executed with an emphasis on "multiple lines of evidence." That is to say that the division is looking for correlations within data

from soil gas sampling, sub-foundation or near-foundation sampling and indoor air sampling, together with groundwater and free product data in order to determine whether or not VI poses a risk to building occupants.

The U.S. Environmental Protection Agency's Office of Solid Waste and Emergency Response (OSWER) is currently revising the 2002 OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soil (Subsurface Vapor Intrusion Guidance). A timeline for completion of the guidance has been established, with a goal of final guidance in 2012. In addition, the Office of Underground Storage Tanks (OUST) is drafting a separate guidance that will address petroleum vapor intrusion (PVI). Sarah Jon Gaddis, P.G., Underground Storage Tank Branch, is currently serving on OUST's Petroleum Vapor Intrusion Workgroup that will provide assistance in drafting the PVI guidance. The completion of these guidance documents will provide a great resource for DWM and the VI Workgroup as we move forward.

Our final objective has been addressed with providing training opportunities to division staff and others. Sarah Jon Gaddis, P.G. of the Underground Storage Tank Branch, has presented on the basics of VI investigations and remediation to the Brownfields Advisory Council and Department for Environmental Protection, with a combined attendance of approximately 75 individuals. Sheri Adkins and Jeri Higginbotham, both of the Superfund Branch, received scholarships to attend introductory VI training hosted by the Interstate Technology and Regulatory Council.

Looking forward, the VI Workgroup will have the following objectives:

- Establish action levels for regulatory use in emergencies and investigations.
- Finalize SOPs that provide a consistent approach for identifying sites that should be assessed for vapor intrusion.
- Finalize SOPs that provide a consistent approach for vapor intrusion investigations and remediation.
- Continue to provide training to technical staff within the division.
- Provide support and assist with VI investigations and remedial plans.

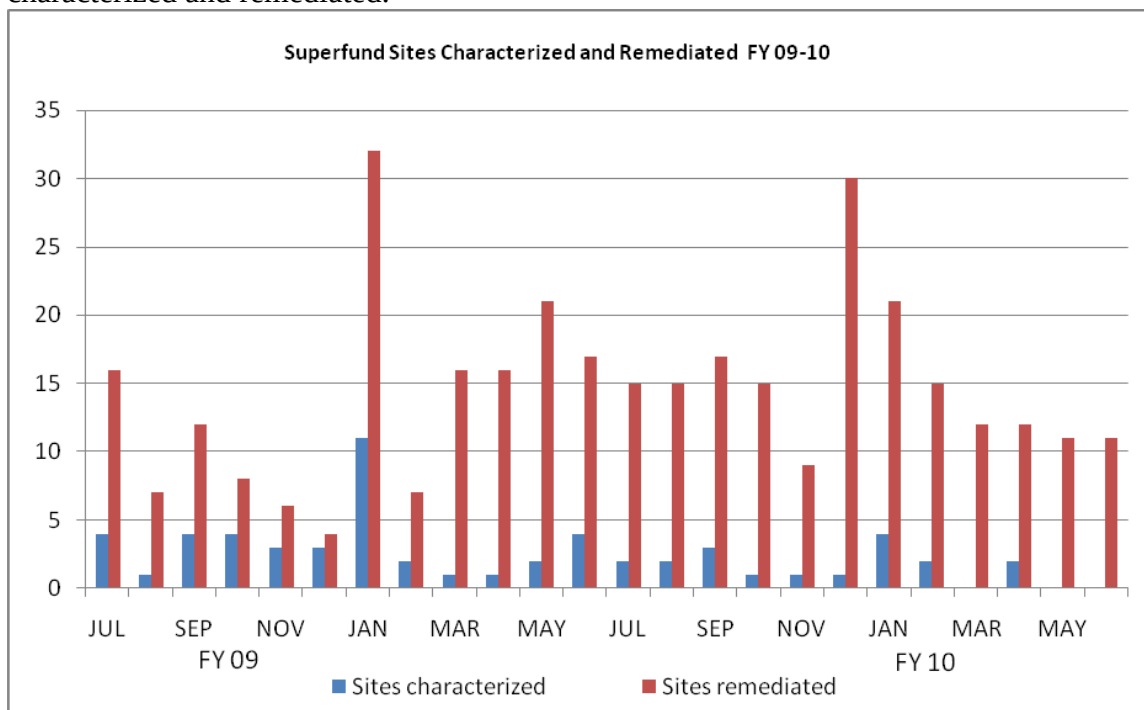
Training will be offered in October 2010 when the Division will host national experts, Dr. Blayne Hartman and Mrs. Louise Adams, for a seminar introducing the basics of VI as well as investigative and remedial techniques. The seminar will be open to DEP staff as well as contractors and other parties in the private sector that will benefit from awareness and education about VI.

SUPERFUND

<http://waste.ky.gov/SFB/Pages/default.aspx>

The program seeks to ensure that contaminated sites are evaluated and cleaned up in a timely manner to reduce risks to human health and the environment. In most cases this means overseeing companies or individuals who have taken responsibility for cleaning up contamination found on their property. In cases where a responsible party cannot be found or is unable to act, the Superfund Branch may take a direct role in cleaning up a site.

Kentucky has a state Superfund program which handles oversight of cleanup of hazardous substance releases and non-UST petroleum releases across the commonwealth. The chart below shows the number of sites that the state Superfund program has characterized and remediated.



Note: There were 403 sites that were characterized and remediated in FY 09 and FY 10.

The Superfund Branch must maintain a list of any sites where waste is managed on site through some form of engineering control (such as a cap or structure) or institutional control such as an environmental covenant or deed restriction. There are currently 115 sites where waste is managed on site. These sites require some form of reporting such as an annual report or five year review as established in statute. For sites that are being managed by using institutional and/or engineering controls, the obligations to continue to manage the releases are indefinite. Therefore, the numbers of total managed sites in Superfund will be constant or continue to increase as new sites are approved for closure under this option. As noted above, the only way a site can be removed from the managed

site list is if additional cleanup is performed to restore the site to safely allow for unrestricted residential use.

Brownfields:

During federal fiscal year 10 (October 1, 2009 - September 30, 2010), 12 applications were submitted by communities, of which 5 applications were successful. The total value of these grants was \$1,200,000 for brownfield redevelopment.

Brownfields are abandoned, idled, or under used industrial and commercial facilities/sites where expansion or redevelopment is complicated by real or perceived environmental contamination. They can be in urban, suburban, or rural areas. The Brownfield redevelopment is a joint effort between the Division and the Division of Compliance Assistance (DCA). For more information on DCA, see the agency's Web site at <http://dca.ky.gov/brownfields/Pages/default.aspx> or call 800-926-8111.

Another outreach program has been to assist communities by providing free Target Brownfield Assessments (TBA), which is a program, designed to help states, tribes, and municipalities minimize the uncertainties of contamination often associated with Brownfields. During this year, three properties have been chosen to receive this service.

Superfund Branch Highlight

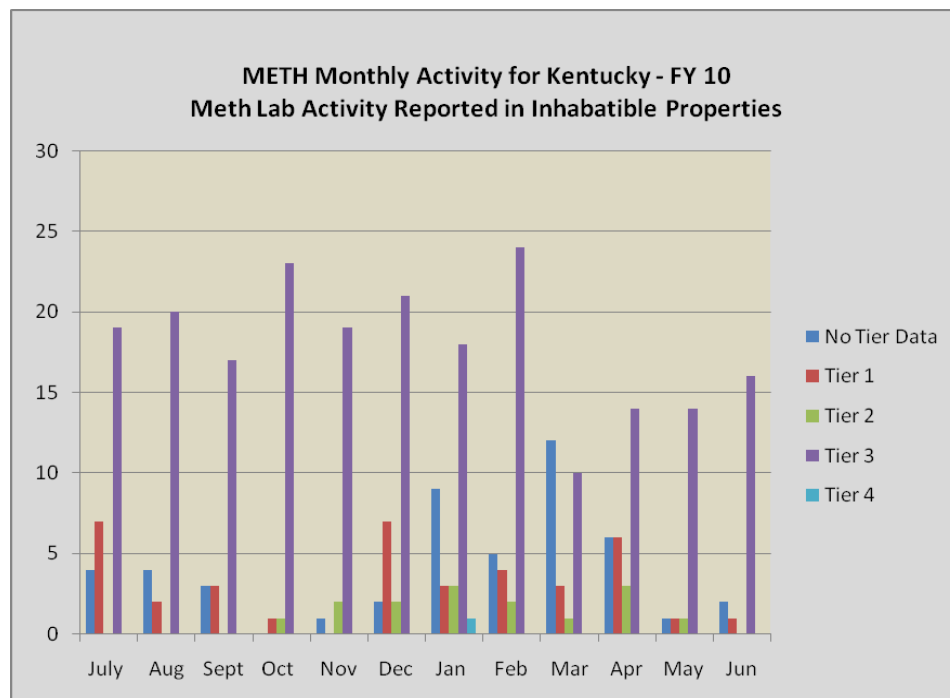
Methamphetamine Cleanup Program Handles Heavy Workload in 2010

The Superfund Branch's, Methamphetamine Cleanup Program, under authority of KRS 224.01-410, established a reasonable, appropriate and protective tiered response system to address the level of decontamination services required for a property contaminated by methamphetamine (meth) production. The tiered response system is based on the extent of meth production and the degree of potential contamination resulting from meth production. There are four tiers in the tiered response system, with Tier 1 being the least contaminated and Tier 4 being the most contaminated.

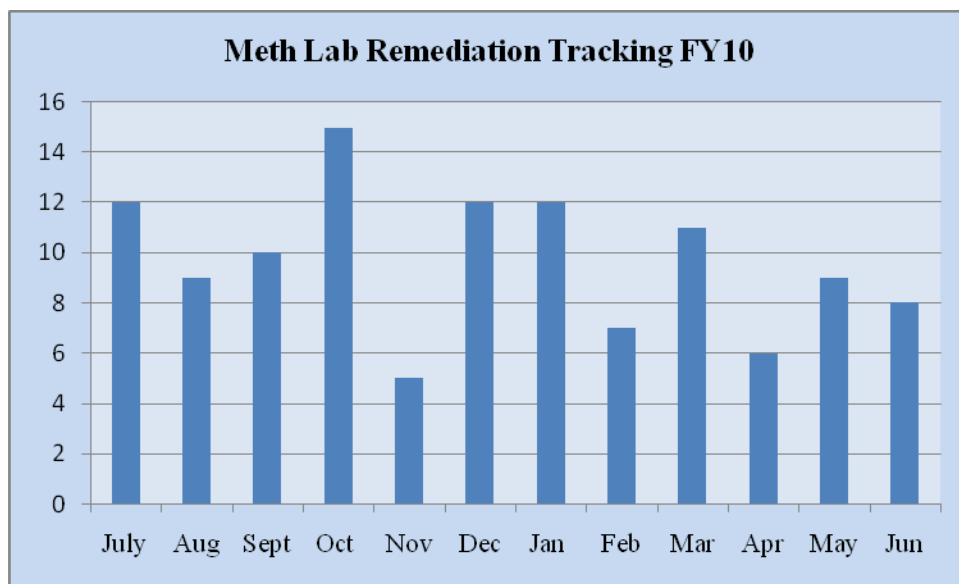
This program works as a liaison between the cleanup contractors, state and local law enforcement and the local health departments. Superfund staff is in constant communication with law enforcement and health departments, providing guidance on remediation. Time is spent providing property owners with guidance and education about the dangers of meth contamination and how to properly remediate their contaminated property. Superfund's web page explains meth dangers, as well as the process required to clean up their property. This program also provides guidance to the certified contractors on meth lab remediation. At properties where clandestine methamphetamine labs were operated, waste from the lab may be dumped into burial or burn pits. These wastes impact the environment and human health. The Meth Cleanup Program is also involved in addressing environmental crimes that involve meth lab wastes.

The Meth Cleanup Program within the Superfund Branch, maintains the Tier Assessment Intel/Remediation Database. This database is compiled from reported meth lab activities occurring in residential properties in the Commonwealth of Kentucky since July of 2008. The database is a resource for staff to assist property owners with various questions about the remediation of their contaminated property. Detailed information is collected from the Tier Assessment Form, which is completed by law enforcement during the drug bust. Information tracked in the database includes: the property location, type of meth lab, observations and evidence of hazardous materials spills, and other contamination inside the property. The meth cleanup contractors are able to obtain that information from DWM staff very quickly and adapt their cleanup plan to focus their remediation efforts on the meth lab cleanup itself, keeping the overall costs of remediation down for the property owner.

The database tracking receives 15-30 meth lab reports monthly. There have been 293 meth contaminated properties recorded for 2009 and 179 for the first half of 2010. In total, 533 residential meth labs have been reported since the beginning of the program in 2008. One hundred and six (106) meth labs have been remediated to habitable conditions or demolished in 2009 and 52 cleanups occurred during the first part of 2010; with a combined effort in remediating 198 properties since the program began. The database also records communication with constituents, property owners and any meth related questions that come into the branch on a daily basis. Averages for inquiries are at about 15-25 inquiries per week. Cleanup information, decontamination reports and release letters are stored in TEMPO, and the public is able to access the addresses of locations of properties decontaminated through a Kentucky Open Records Act (KORA) list. See the chart below for an illustration of monthly meth lab activity during FY 10.



The trend in meth contaminated properties reported to the division has increased over the last two years, presumably due to the depressed economy and an increased effort by law enforcement to control the manufacture of the illegal drug. During the spring of 2010, the division received more lab reports than in the spring of 2009, with the first Tier 4 reported in January of 2010. Remediation tracking has slowed slightly from the same reporting period of 2008-2009, possibly reflecting property owner's lack of available funding. Kentucky Housing Corporation (KHC) earmarks funds available for qualifying innocent property owners whose family member contaminated their residence. However, no funds were awarded by KHC during 2009-2010 due to restrictions of funding applicability. Currently, these funds are not available for rental property, where the majority of contaminated properties are located. See the chart below for meth lab remediation during FY 10.



The graph above illustrates the number of inhabitable properties that were remediated each month during the past fiscal year. These numbers do not correlate to the numbers of properties discovered in the METH Monthly Activity for Kentucky – FY 10 chart above because there is always some time lapse between discovery of an inhabitable property and remediation and release of the same property.

PROGRAM PLANNING and ADMINISTRATION

<http://waste.ky.gov/PPA/Pages/default.aspx>

Regulation Development:

The Division is in the process of performing a comprehensive review of its regulations in the areas of underground storage tanks, solid wastes, and special wastes. The underground storage tank regulations will incorporate the requirements of the Federal Energy Policy Act. The solid waste and special waste regulations will incorporate federal and statutory changes that have occurred since the last promulgation effort.

The Division has also spent an extensive amount of time evaluating existing approaches related to grant programs established in the Kentucky Pride Fund. The programs have been streamlined in an effort to make the grant process more efficient.

The Hazardous waste authorization is still in progress and in review with the EPA.

Legislative:

The Division compiled two legislative reports in FY 10. The Waste Tire Trust Fund report was submitted in December 2009 to the Legislative Research Commission. The report documented revenues and expenditures from the fund, as well as successes of the program. The Division also pointed out the challenges associated with the waste tire program in the Commonwealth. The Division also submitted the Hazardous Waste Management Fund (HWMF) report in July of 2010. This report covered revenues and expenditures of the HWMF, and the status of sites in the commonwealth that are overseen by the Superfund Branch.

The Division proposed reauthorization of the Waste Tire Trust Fund during the 2010 Regular Session. Several different bills were written affecting the Waste Tire Trust Fund. The new tire fee was not extended during the regular session. In the 2010 Extraordinary Session, the fee was extended as part of the budget bill. The fee will continue to be collected until June 30, 2012.

HB 124 extended the deadlines associated with the Petroleum Storage Tank Environmental Assurance Fund. The deadline for registration was extended to July 15, 2013. The deadline for payments from the petroleum storage tank account was extended to July 15, 2016. The deadline for participation in SOTRA was extended to July 15, 2013.

HB 378 prohibits the PSTeAF from placing a tank-number limit on operators who wish to qualify for SOTRA.

The Division of Waste Management, along with all of state government, is facing significant budget difficulties and there is the strong potential for additional budget cuts. Previous cuts have not allowed the Division to fill vacant positions thus decreasing the number of staff that deliver services to the regulated community, implement programs and protect the environment. These cuts have also allowed fewer dollars to be utilized within programs as it takes funds to administer programs. The Division of Waste Management has planned to minimize these impacts as much as possible while protecting the environment and providing good customer service. The Division tries to utilize every dollar as efficiently as possible and to maintain competent, well trained staff to serve the public better and to protect the environment.

ACKNOWLEDGMENTS

Governor Steve Beshear

Secretary Leonard K. Peters
Deputy Secretary Henry “Hank” List

This *Annual Report* is intended to provide a concise set of facts and measurements to support environmental decision-making. We welcome your questions and comments to the contacts below:

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Printed with state funds on recycled paper / September 2010



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