I) Executive Summary

Kentucky's Department for Environmental Protection's Division of Compliance Assistance has the Environmental Compliance Assistance Program (CAP). CAP is a relatively new program that has had little to no evaluation and measurement. However, with limited state resources to be distributed to departments, it is imperative that programs be able to justify their existence. Due to this fact, I chose to evaluate the CAP for my capstone project.

Because inadequate data on outcomes is available at this time, I was unable to conduct a traditional summative evaluation or include any statistical analysis. Instead I chose to conduct a formative, or process, evaluation that would allow me to utilize the mostly qualitative data available for the program.

The majority of this qualitative data is derived from internal program documents, a very small survey the program conducted twice in 2007, a logic model developed by program staff, comparison with benchmark states, and communication with relevant professionals. The major research questions to be answered include:

- What outputs have been produced by the program?
- How does Kentucky compare to its surrounding states?
- Do relevant professionals view the program as a success?
- Is the program being implemented as it was intended?
- Is this program being managed in a manner likely to lead to success?
- What changes need to be made to improve the program's operations?

In general, I have found that the program has done a good job attempting to implement the program as it was intended. However, the program appears to have fallen short of reaching its target population and achieving its mission and vision. Therefore I have suggested several improvements in order to manage this program more successfully. These improvements include:

- Give equal attention to program action items.
- Invite more entities who have received assistance to take the program survey and work to increase the response rate.
- Simplify the program's logic model.
- Set quantitative goals for the program to achieve each year.
- Focus on fine tuning a small number of services offered by the program.
- Diversify staff expertise.
- Provision of more educational opportunities and compliance tools for regulated entities.
- Improve communication between CAP and the Department for Environmental Protection.
- Continue documenting activities, outputs, and outcomes in order to conduct a summative evaluation in the future.
- Finally, after the previous improvements have been made, staff should secure additional funding sources in order to add staff and resources to reach more regulated entities.

II) Statement of the Problem

Kentucky's Environmental Compliance Assistance Program (CAP) helps entities regulated by the state, such as businesses, to understand and comply with environmental regulations. The CAP was created by former Governor Ernie Fletcher when he entered office in 2003. CAP is intended to work with small businesses and communities that do not have financial resources available to hire environmental consultants to help them stay in compliance with environmental laws and regulations. CAP offers free assistance information to any regulated entity via a compliance assistance hotline. Assistance information can also come in the form of training or written material such as manuals. CAP also conducts on-site compliance assistance evaluations to identify potential problems or violations and suggest ways to improve or come into environmental compliance.

The CAP often assists individuals or entities who voluntarily contact the program for help with compliance regulations. In many cases, these individuals or entities may suspect they have a violation, know they have a violation, or just want to make sure they are complying with all necessary regulations. In other cases, a state inspector has recommended that an individual or entity seek support from the CAP as a means of fixing a violation before penalties are imposed. Inspectors can use their discretion when choosing to either refer a violator to the CAP or directly assess a penalty. Because inspectors' case loads are so high, they are often unable to provide assistance to help entities achieve compliance. For this reason, compliance assistance support is very important, especially for small businesses with limited resources.

CAP is very young, and therefore, little evaluation has been conducted. The program seeks to achieve several short, intermediate, and long term goals. However, the main documentation of these achievements is through a survey that just started being utilized in July 2007. Although this survey provides some data on whether short (or perhaps intermediate)

program goals are being achieved, it is too soon to measure the program's effectiveness at achieving its long term goal of improving environmental quality. Furthermore, it is almost impossible to conduct an outcome, or summative, evaluation at this time. Therefore, I feel it will be most useful to conduct a formative evaluation that will show whether this program is being implemented as it was intended and whether any changes need to be made to improve its operations.

III) Research Design

I intend to answer several major research questions in order to focus this formative evaluation. Research questions include:

- What outputs have been produced by the program?

- How does Kentucky compare to its surrounding states?

- Do relevant professionals view the program as a success?

- Is the program being implemented as it was intended?

- Is this program being managed in a manner likely to lead to success?

- What changes need to be made to improve the program's operations?

Because CAP is such a new program, only preliminary data and results are available. Therefore, I have used the data available and have supplemented it with qualitative information to achieve a holistic view of the program. My primary sources of data are internal documents from the CAP, a CAP survey, CAP designed logic model, comparison with benchmark states, and personal interviews with several professionals directly or indirectly involved with the CAP. The majority of my findings and subsequent analysis come directly from these sources.

IV) Literature Review

For the past several decades, most environmental regulation fell under enforcement branches within state governments. Benefits of this regime can be seen in the EPA's Office of

Enforcement and Compliance Assistance report put out in 2007. This report states that in 2006, pollution decreased 890 million pounds nationwide compared to just 260 million pounds in 2002. (FY 2006 OECA Accomplishments Report 2007). Although the use of command and control through enforcement branches certainly works to a great extent, this approach has become somewhat outdated.

The old enforcement regime creates adversarial relationships between private entities and the regulating community, is expensive, and does not encourage innovation or provide incentive to exceed minimum standards (Fiorino 2006). Furthermore, the nature of environmental problems has changed, relationships between the private and public sector has evolved, behaviors and motivations of the private sector have matured, and lessons have been learned by our nation as a whole through experiences (Fiorino 2006). These limiting factors accompanied by the changing environmental landscape create a need for a modified system of environmental regulation. The new system should incorporate opportunities for collaborative efforts between public and private entities as well as encourage regulated entities to continually evaluate and improve their practices to better serve their goals while protecting the environment (Fiorino 2006).

Enforcement agencies within state governments must continue to focus more on command and control tactics in order to ensure environmental regulations are followed. Because of this, another unit of government is needed to support and assist regulated entities in achieving and maintaining compliance. This unit could be especially useful for small businesses and communities that are unable to afford environmental consultants or high costs of enforcement actions. Once states and the federal government discovered this need, policy makers began setting regulations to create programs to help achieve and measure compliance assistance. For example, Congress inserted a Small Business Assistance Program into the 1990 Clean Air Act

Amendments requiring every state to have a program implemented by November of 1994 (Kennett 1994). Each state Small Business Assistance Program is required to have an ombudsman, a 7-member compliance advisory panel, and an assistance program that offers technical and administrative support (Kennett 1994). Furthermore, federal compliance assistance programs are required to measure their effectiveness under Congress's Government Performance and Results Act that was created in 1993 (Guide for Measuring Compliance Assistance Outcomes: Revised October 2007).

In light of such mandates, compliance assistance has grown dramatically over the past decade. Compliance affords many benefits to the entities that achieve and maintain it, such as saving money; improving business performance; reducing liability with enforcement in the form of fewer violations or penalties; better protection of employee's health and safety; and an improved environment. Compliance assistance also saves governments, and therefore society, money by reducing the amount of enforcement penalties assessed (Scholz 1984).

No matter how successful compliance assistance programs can prove to be, it cannot displace enforcement programs. This is true for a couple of reasons. First of all, there needs to be a different type of relationship between compliance assistance staff and enforcement staff with regulated entities. For example, in the past, enforcement provided compliance assistance, somewhat secretly, but received criticism for it nationally because many viewed it as a conflict of interest. The enforcement agencies must be unbiased in order to ensure regulations are met. If an enforcement officer or inspector has a primarily supportive relationship with entities, the lines where enforcement actions are necessary become blurred. Compliance assistance can provide a more hands on, collaborative approach so that enforcement can maintain a more authoritative role. Second, many entities will only abide by regulations when the financial repercussions of non-compliance outweigh the cost of compliance (Scholz 1984). Therefore,

enforcement actions that assess penalties to entities violating regulations are necessary to ensure that all will work to comply.

Agencies face many challenges when evaluating compliance assistance programs. Because state resources such as staff and money are usually very limited, it is necessary for programs to report on their effectiveness in order to justify their reason for existence. However, most public agencies do not have easily defined measurement tools like private organizations do, such as profits or revenues, to utilize. Therefore, many state programs are unable to measure their success because they simply have no financial or logistical means of evaluation. Data is difficult to collect and often ambiguous. For example, if the number of recorded violations has steadily increased over a specific time period, it may mean that there are more violators or it could mean that inspectors are doing a better job finding violators (Stahl 2004).

States have been collecting data, but it has either been numbers of activities or outputs such as violations, site visits, facilities inspected, or emission levels. However, there is much skepticism of utilizing outputs as a measurement leading to desired outcomes, such as reduction in pollution. This skepticism comes from the fact that there is no empirical data proving that compliance assistance is a force leading to environmental improvements (Harrison 2002). In light of this skepticism, some have suggested additional measures, but most states still rely on outputs for measurement.

One alternative several states have begun using is compliance rates to measure compliance assistance programs. Shewmake defines compliance rates as the number of facilities with violations divided by the total number of facilities inspected (2004). These rates can also be divided by sectors, geographic areas, or violation type in order to determine which areas may need more focused compliance assistance. Compliance rates also can be used to help management allocate scarce resources more effectively and efficiently (Shewmake 2004).

Another alternative for measuring these types of programs is to be realistic about the data available and simply focus on what can be measured. For example, Harrison suggests using soft effects like improvements in the relationship between business and government or the promotion of a more environmentally sensitive business culture (2002). As more businesses voluntarily seek assistance from government agencies, like the CAP, it can be inferred that the relationship between businesses in the sate and government has become more cooperative. Also, documented changes by businesses to decrease or prevent pollution, due to education from government agencies, lead to a more environmentally sensitive business culture.

In 1997, the US Environmental Protection Agency's (EPA) Office of Enforcement and Compliance Assistance, which works to ensure compliance with the nation's environmental laws, created a national performance measures strategy with input from stakeholders, experts, practitioners, studies, public hearings, and articles (Stahl 2004). Important principles of this strategy include using a combination of measures, that is outputs, outcomes, qualitative, and quantitative; understanding that because agencies may have an influence on outcomes but not necessarily control of such outcomes; performance measures should mainly be used to improve programs rather than merely to report success of a program; and studying short, intermediate, and long term outcomes (Stahl 2004). Long term outcomes are very hard to measure and even more difficult to attribute directly to compliance assistance. Furthermore, outputs could be used to measure the amount of effort a program is contributing; and states could hold these programs to a certain level of outputs (Stahl 2004).

In 2000 the EPA published seven suggested core performance measures for enforcement and compliance programs (Information Sources and Reporting for FY 2000 Enforcement and Compliance Assurance Accountability Measures 1999). These include:

1. Environmental and/or public health benefits achieved through concluded enforcement activities.

2. Rates of significant noncompliance (i.e. percentage of entities whose noncompliance may lead to an imminent threat to human or environmental health).

3. Percentage of significant non-compliers that have been returned to compliance.

4. Results of using state alternative compliance approaches and compliance assistance.

5. Total number of inspections conducted at major facilities.

6. Number of enforcement actions.

7. Number of entities reached through compliance activities.

Unfortunately, at this time, Kentucky does not compile the data necessary to calculate most of these measurements. Although some of these measurements could be attained using data in the Department for Environmental Protection's shared database, no one is compiling this data in order to compare or analyze it with past years or other states.

According to EPA's *Guide for Measuring Compliance Assistance Outcomes: Revised October 2007*, activities may include visiting sites, on-going facility-specific work, developing tools, providing workshops and training, delivering targeted or public outreach, and providing technical assistance. Outputs are the number of activities and the number of facilities reached by these activities. Outcomes are the changes in behavior or improvements in the environment or human health as a result of the outputs. A qualitative evaluation can be utilized to measure if a program has reached its target audience by documenting that lessons were learned and/or new techniques were utilized (Guide for Measuring Compliance Assistance Outcomes: Revised October 2007).

Several federal governmental entities, non-profit organizations, and combinations of both have developed guidelines and published literature related to compliance assistance in order to

help state governments better provide and measure compliance assistance. The U.S. EPA is a major contributor. For example, the EPA recently created the Financing for Environmental Compliance website to help communities find resources to achieve environmental compliance (The CA Compass 2007). Other contributing entities include:

- The Environmental Council of the States, founded in 1993, which is a national non-profit, non-partisan association intended to help states exchange information among each other and with the federal government in order to improve overall environmental management (State Environmental Agency Contributions to Enforcement and Compliance: Report to Congress 2001).

- The Compliance Assistance Compass which is an EPA newsletter for environmental compliance providers. The newsletter focuses on issues related to compliance assistance as well as provides information on how to better offer compliance assistance (The CA Compass 2007).

- The National Compliance Assistance Centers website which has been created to assist small businesses and communities with very specific environmental regulations. The Centers website has information specific to 15 different sectors such as healthcare, construction industry, and printing. The information on the website also can be accessed via telephone assistance lines, fax-back systems, and e-mail discussion groups. Much of the information is peer-based, which allows businesses to see what has worked, or not worked, for similar entities (National Compliance Assistance Centers website 2008).

- The Environmental Compliance Assistance Clearinghouse which is a partner with the EPA and is intended to be a central place to find website links to compliance information for all 50 states (Environmental Compliance Assistance Clearinghouse website 2008).

- The Environmental Compliance Consortium which provides an opportunity for states to voluntarily collaborate via the web about compliance and enforcement programs. The goal is to improve overall effectiveness statewide and nationally. This allows states to learn from each other and in turn make fewer mistakes and have more successful programs. Unfortunately, Kentucky is not a member of the Consortium and, therefore, cannot access its resources (Environmental Compliance Consortium website 2008).

V) Program Overview

Under Kentucky's Environmental and Public Protection Cabinet, the Department for Environmental Protection's Division of Compliance Assistance has a Compliance Assistance Program (CAP). According to CAP's website, the Compliance Assistance Program's mission is to "assist regulated entities in understanding and complying with their environmental obligations, advocate for those entities underrepresented in the regulatory process, and facilitate moving 'beyond' compliance to environmental leadership" (Kentucky's Environmental Compliance Assistance website 2008). Also according to the CAP website, the program's vision is to "provide quality environmental compliance assistance to all stakeholders resulting in innovative environmental policies, the creation of an environmental ethic, and improved environmental performance" (Kentucky's Environmental Compliance Assistance website 2008).

The CAP can be utilized by any entity regulated by the Kentucky Department for Environmental Protection but focuses on assisting small businesses and communities who have limited resources. Most compliance assistance requests received by the CAP come through their toll-free hotline. Requests may come from an entity trying to self-correct a possible violation or from an entity that was referred to the CAP by a Department for Environmental Protection field inspector.

The latter case stems from the fact that previously, Kentucky's departments of air, water, and waste each had their own enforcement component but former Governor Ernie Fletcher reorganized and created the Division of Enforcement in 2004. Now, almost all of the Division of Enforcement's work is obtained through air, water, or waste department inspector referrals. The primary functions of the Division of Enforcement are to make sure entities that are not in compliance achieve compliance, make sure environmental damage is mitigated, and prevent future violations whenever possible (The 30th Annual Governor's Conference on the Environment 2006). Because compliance assistance is not intended to be a duty of inspectors, inspectors are supposed to refer entities in need of such assistance to CAP.

It is not the intention of the Kentucky Department for Environmental Protection to regulate anyone out of business. Officials have allowed the Department for Environmental Protection's inspectors to have a certain degree of discretion. In other words, inspectors can use their discretion when deciding whether to refer a violation for enforcement action right away or give an entity the chance to self-correct. The Division of Compliance Assistance has a set of standards that guide inspectors on when to apply discretion. According to this set of standards, enforcement action varies on a case by case basis, but are usually deferred or delayed when a violation is not an imminent threat to public health or the environment, is not part of a citizen suit, is not found during an investigation, has not been reported by a third party, or is not criminal. (Note: In order to avoid issues of favoritism or corruption, inspectors are still required to document all violations that have been deferred or delayed for action.) (Standards for Applying Enforcement Discretion During Compliance Assistance Activities 2008). When an entity is given the chance to self-correct, they have the opportunity to utilize CAP's services.

CAP staff can work with an entity seeking assistance in a variety of ways. For example, a CAP staff member could provide technical assistance over the phone hotline, inspect an entity

for possible violations through a site visit, or educate the entity on permitting and pollution prevention. Often times, CAP staff is able to help an entity reach compliance in less than two weeks. However, when CAP staff knows it will take an entity longer than two weeks to gain compliance they will draft a Compliance Implementation Plan with the entity. Compliance Implementation Plans provide an entity seeking assistance an opportunity to voluntarily correct violations within a specified time frame with an assurance that no enforcement action will be taken during the time frame (Compliance Implementation Plan 2008). The Compliance Implementation Plans is a document that must be signed by all parties involved and lists the areas of concern as well as the measures needed to be taken in order to remediate the areas of concern. However, the Compliance Implementation Plans is not a legally binding document (Compliance Implementation Plan 2008). Therefore, CAP can only encourage and support the entity in an effort to help them gain compliance. Although, once the specified time frame listed in the Compliance Implementation Plan has lapsed, if the entity has not gained compliance, CAP can refer the case to the Division of Enforcement for action.

VI) Findings and Analysis

What outputs have been produced by the program?

As stated in the *Kentucky Division of Compliance Assistance's 2008 Operational Plan*, CAP covers the division's objective to "help entities meet and exceed Kentucky's environmental requirements" (pg. 5). In order to measure the achievement of this objective, CAP has formulated seven action items and twelve core performance measures (which can be seen in Table 1 of Appendix A). Each action item is accompanied by one or more performance measures. Data for each performance measure, except those with action item five, is complied from CAP's database, internal documents, and staff knowledge.

A client satisfaction survey designed by CAP staff was implemented in July of 2007. Table 1 in the Appendix A depicts how CAP staff is using the results from the July 2007 survey as well as from the same survey conducted in the fourth quarter of 2007, to provide data on the level in which action item five, "Develop performance measures that allow the program to determine if their efforts are improving the environment.", and several core performance measures related to action item five are being achieved (Operational Plan 2008).

CAP Survey

The survey used by CAP staff consists of twenty questions (the questions and response choices can be seen in Appendix B). Three months after the program assists an entity, CAP staff sends that entity either a letter or e-mail inviting them to go to a website and take a survey regarding their satisfaction with the program as well as any changes they may have made as a result of the assistance. However, CAP is only able to send the survey to entities with which they have contact information. Because much assistance is given anonymously over the phone, CAP has contact information for a limited number of the entities they assist.

The survey conducted in July 2007 (3rd quarter) invited 77 entities resulting in 14 responses. The fourth quarter survey was sent to 135 entities resulting in 18 responses (3rd Quarter 2007 Evaluation Results 2007 / Keatley, Aaron. Personal Communication. March 17, 2008). The combined response rate is 15% for the third and fourth quarter surveys. Unfortunately, a 15% response makes the results statistically unsound. The Handbook of Practical Program Evaluation states that response rates need to be above 50% in order to avoid non-response bias (Wholey 2004). Therefore, the results provide no definitive measure of client satisfaction or changes made as a result of assistance. Generalizations based on the survey results cannot be made because of the possible bias. In other words, we do not know if the entities who did not respond chose not to do so because they were unsatisfied. The survey's

major weakness is its low response rate which is only exacerbated by the limited number of

entities who can be invited to participate in the survey. Although, the survey instrument itself is

designed well and could gather important outcome information for the program if implemented

appropriately. Because the survey results are not statistically sound, the results documented for

action item number five in Table 1 in Appendix A are not valid. However, the results for the

other six action items can be trusted because they are output numbers recorded by CAP staff.

To date, CAP has and continues to take action for all seven items identified. However,

although data has been collected for all twelve performance measures, not every measure appears

to be adequate. Because no standard numbers or results exist for programs like CAP,

performance measures can only be compared to each other and over time within a program.

When just looking at the raw data for action item one, and considering the fact that CAP

currently has four staff members, seeing that they collectively assisted 689 entities in 2007 is

impressive. Upon closer look, 689 requests divided between four staff members equates to each

staff member assisting a little over three entities a week every week of the year. Although I

know the amount of time it takes to assist an entity varies greatly and technical assistance is not

the only duty the staff performs, three entities being assisted per week per staff member seems

inefficient. Surely conducting a site visit would take much more time than assisting someone

over the phone, however, most of the assistance CAP provides is over the phone and CAP only

conducted site visits at 3% of the entities assisted in 2007. Additionally, Mrs. Stump, the CAP

Coordinator, stated that there are approximately 44,379 entities currently regulated by the

Kentucky Department for Environmental Protection (Stump, Kenya. Personal Communication.

February 5, March 17 and April 1, 2008). Therefore, CAP assisted less than 2% of the regulated

community in 2007. However, as can be seen in Figure 1 in Appendix A, the number of

assistance requests received by CAP has grown steadily since the programs inception.

Several other 2007 outputs also appear to be insufficient. For example, concerning action item two, program staff only created two tools and held two training events in 2007. In regards to action item three, the number of small businesses assisted is also low (18% of all entities assisted) and there is no data on the number of small communities assisted. I feel that each of the seven action items should receive equal attention from CAP staff. If the staff intended for one action item to be more important than another, they should have ranked them and stated their amount of importance explicitly in CAP's Operational Plan. It appears that the action items are not treated as equally important. Judging by the 2007 results alone, action items two and three have poor results compared to the other five action items. Action items four, six, and seven have positive results due to the CAP supplying ombudsman services, program staff engaging in professional development, and providing outreach in a variety of ways. Although action items one and five seem to be getting a lot of attention from the staff (staff feel technical assistance is their greatest strength and that the survey proves client satisfaction), their results are not indicative of the extra attention.

As stated in the literature review, outputs do not necessarily lead to outcomes. Therefore, just because 100 people attended the two training events, does not mean knowledge was gained by those people that resulted in improvements to their businesses and in turn the environment. However, one way to measure whether knowledge is gained by attendees would be to administer a pre and post test at the beginning and end of each training session. Also, staff attending thirteen professional development events, does not confirm that the knowledge gained improved the program. Lastly, just because outreach efforts attempted to contact 3,000 entities, does not mean that communication between CAP and the Department for Environmental Protection community increased. Although, because this is a formative evaluation, the fact that the program is making these efforts shows that many of the intended activities and outputs are being

achieved. Perhaps every person who attended training or received outreach did not gain knowledge, but without these efforts there wouldn't even be the possibility of an increase in knowledge.

CAP Logic Model

The logic model that CAP staff has developed (Appendix C) depicts the flow of resources, activities, outputs, customers, and outcomes intended for the program. The outcomes are divided as short-term, intermediate, long-term, and ultimate goal. Because the program is relatively young they have only begun to meet short and possibly intermediate outcomes. However, because this is a formative evaluation, I will not focus on assessing whether the program is achieving the intended outcomes.

Based on the knowledge I have gained from communication with CAP staff and internal program documents, I believe that the program is utilizing resources to produce activities and outputs for customers as depicted in the logic model. Although the logic model is very detailed and complex, it appears that most of the activities and outputs are in line with the program's action items. Many of the activities and outputs are the same as the program's performance measures. However, as stated earlier, many of the performance measures were not adequate in 2007. In other words, although the program is producing the activities and outputs listed in the logic model, many are not being produced efficiently or effectively. For example, the second activity listed on the logic model is "develop compliance assistance tools", but the program only developed two tools in 2007 (Logic Model 2007). Although I am sure it takes a good bit of time to create a tool, such as a guide for restaurants to reduce solid waste, I would think that every staff person should be able to develop at least one tool per year.

How does Kentucky compare to its surrounding states?

External Benchmarking is often used in formative evaluations in order to compare one program to others that are similar. For this evaluation, I chose to compare whether Kentucky offers as many compliance assistance features as its surrounding states.

Across the nation, states are focusing more on compliance assistance programs in order to reduce pollution. In fact, most states have a compliance assistance program that either provides assistance through state agencies or a third party contractor. (FY 2006 OECA Accomplishments Report 2007).

As depicted in Table 2 in Appendix A, when looking at ten compliance assistance features, Kentucky offers all ten. No other state that surrounds Kentucky offers as many features of compliance assistance. (Note: Kentucky's CAP does not necessarily offer all ten of the features in Table 2. In some cases another Kentucky program may offer the feature.) However, it is possible that states with fewer programs have better quality programs because they can focus more time and resources on their limited number of assistance features.

Do relevant professionals view the program as a success?

I gathered additional information from personal communication with several professionals who directly or indirectly work with the Compliance Assistance Program. As often done with formative evaluations, I summarized and synthesized this information in order to establish perceived strengths and weaknesses of the program as well as contradictions in opinions. Program strengths, weaknesses, and contradictions of opinions indicated by the professionals I interviewed can be seen in Table 3 in Appendix A.

I communicated with six professionals, including:

1. Mr. Jeff Cummins, the Acting Director of the Division of Enforcement in the Kentucky Department for Environmental Protection.

2. Mr. Lloyd Funkhouser, the Division of Waste Management Field Operations Supervisor in

the Kentucky Department for Environmental Protection.

3. Mr. Wes Hardegree, the U.S. EPA's Region Four Compliance Assistance Coordinator.

4. Mr. Aaron Keatley, the Director of the Division of Compliance Assistance in the Department for Environmental Protection which the Compliance Assistance Programs operates under. Mr. Keatley is also the ombudsman for the Kentucky Small Business Assistance Program.

5. Mrs. Kenya Stump, Coordinator of the Compliance Assistance Program under the Division of Compliance Assistance in the Kentucky Department for Environmental Protection.

6. Mr. Jonathan Trout, Assistant Director of the Louisville Metro Air Pollution Control District. Mr. Trout also chairs the panel that advises the Kentucky Small Business Assistance Program.

Almost all of the professionals I communicated with felt that the program had several strengths. The small staff works hard to provide assistance to an increasing number of entities especially in the areas of air and wastewater with technical and permit assistance through their phone hotline. Figure 2 in Appendix A shows that most of the assistance CAP provides is related to technical assistance or permitting. Due to the work of the program staff, many regulated entities have increased their compliance knowledge. However, almost all of the professionals also pointed out areas of weakness in the program. Because the staff is so small and their financial resources are limited, the program is unable to provide adequate assistance in many areas. Areas of particular concern for the professionals I communicated with include water, hazardous waste, solid waste, field work, and pollution prevention as well as limited educational opportunities and electronic resources available to the regulated community. Figure 3 in Appendix A shows that most of the topics CAP staff address are related to air or wastewater, presumably because those are the staff's areas of expertise.

An additional weakness, which was pointed out by a professional, is the poor communication between CAP and the Department for Environmental Protection (DEP) as a

whole. I feel that this poor communication is the major contributing factor to several of the

contradictions in opinions. In general, CAP internal staff felt that inspectors do refer cases to the

program relatively often. However, the professionals who do not work directly with CAP felt

that inspectors rarely refer cases to the program. Although the external professionals indicated

that they support CAP, for the most part, they felt that the program staff's lack of expertise in

many areas made inspectors uncomfortable referring cases to the program. In fact, the external

DEP staff indicated that most inspectors provide compliance assistance on their own. Through

communication with Mrs. Stump, I learned that although only 46% of all assistance requests

have a known referral source, 17% of that 46% come from inspectors (Stump, Kenya. Personal

Correspondence. February 5, March 17 and April 1, 2008). Although this number is not quite

statistically sound enough to make a generalization, it leads one to believe that inspectors do not

refer cases to CAP as often as CAP staff would like to believe. Considering that inspectors are

encouraged to refer violators to CAP, I would think that closer to half of the entities CAP works

with would come from inspector referrals.

Similar to the contradicting opinions on referral rates, is the opinions of whether CAP has

lead to a decrease in the number of environmental violations issued in the state. CAP internal

staff believes that their efforts have lead to a decrease in violations, but external professionals do

not agree. Mr. Cummins stated that the number of violations has stayed relatively constant over

the past four years (Cummins, Jeff. Personal Communication. February 5 and March 11, 2008).

But internal staff feels that the work they have been doing has brought many entities into

compliance that would not have been without their assistance. CAP staff support their beliefs

with the client satisfaction survey which indicates that many of the entities who received

assistance claimed to have increased their knowledge of environmental responsibility and

assistance resources. Unfortunately, the CAP survey results are not statistically sound due to its

low response rate. Therefore, not only is it unclear if entities who have received assistance are increasing their knowledge, it is also unclear if clients are satisfied with the program in general.

Internal CAP staff believes that the program is meeting the intended mission, vision, and target population. However, as depicted in Figure 3 of Appendix A, cases related to water, hazardous waste, and solid waste do not receive adequate assistance from the program. Therefore, any regulated entity with such a case is not being reached, which means the whole target population is not being reached. Without reaching the target population, the program cannot meet its vision and mission.

Is the program being implemented as it was intended?

Is this program being managed in a manner likely to lead to success?

The findings of this evaluation, which include the survey, logic model, comparison to benchmarks, and professional opinions suggest the program is being implemented as it was intended in most ways. To be clear, the program is reaching a portion of the target population and is trying to stay in line with the mission and vision but has not been completely successful to date. The work that the staff is doing to try and assess client satisfaction is a good sign that the program is being managed in order to continually improve. However, because the staff is relying heavily on a survey tool that is not sound, it may not be steering the program in a direction that will lead to success.

Limitations

The major limitations with this evaluation are related to a lack of quantitative data. This is due to the fact that CAP is so new, and much of the data that is available only dates back to July of 2007 and is not statistically sound. Furthermore, no standard results exist for programs like CAP to be measured against. Therefore, a holistic and qualitative analytical approach was followed to address limitations.

VII) Recommendations

What changes need to be made to improve the program's operations?

I would like to propose several recommendations in order to improve this program.

- Every action item should receive equal attention from CAP staff. If one or more items cannot adequately be covered, the program should reconsider it as a priority. The target population will be better served by a limited number of services provided well as opposed a myriad of services provided poorly.

- The survey must be improved in two ways. The survey is useless as is with such low sample size and response rate. First, CAP staff must find a way to obtain the contact information for more of the entities they assist. Collecting contact information could be as simple as asking every person who calls the hotline for assistance if the staff could send them a basic information brochure on CAP services. This would increase knowledge to the regulated community on CAP services as well as increase the number of entities that can later be surveyed by obtaining their contact information. Second, CAP should follow simple survey methods to improve the response rate. For example, whether entities are contacted through regular mail or e-mail, the entities should be contacted more than once. The Handbook of Practical Program Evaluation suggests that at least one, if not two, follow up mailings or e-mailings go to the entities to remind them to take the survey, to tell them why the survey is important, and thanking them for their time (Wholey 2004). It would be really great to get a well-known figure head, such as the Governor, to endorse the survey as well with a signature on one of the mailings (Wholey 2004).

- The logic model should be simplified. It is hard to be sure you are following a model that is cumbersome just to read. The small CAP staff does not have the time or resources to

adequately produce all of the activities and outputs listed in the model. The Coordinator of CAP should meet with the Director of the Division of Compliance Assistance and work together to simplify the model, as these two people should have the best understanding of what is most important for the program to accomplish and what is actually feasible. Each activity and output should be re-assessed, and only the most important should be kept in the model. If an activity or output does not directly relate to an action item, the activity or outcome should be eliminated. For example, the current model lists "assist economic development projects" as an activity; however, this is not related to any action item or core performance measure (Logic Model 2007). Therefore, CAP staff should not assist businesses with their economic development.

- Rather than simply listing performance measures or outputs in a logic model, CAP should set quantitative goals that are attainable. For example, if the program developed two compliance tools in 2007, perhaps they could aim to develop four in 2008. This will allow the program to measure its progress on the basis of if it is increasing outputs over time.

- It is great that Kentucky provides many programs in order to help regulated entities in the state achieve environmental compliance. However, due to limited resources, some of these programs may be inadequate. Therefore, it would be beneficial for programs like CAP to work on fine tuning a small number of programs and then add additional programs once that small number has become successful.

- CAP staff need to become more diverse in their areas of expertise. In order for the target population to be properly served by the program, staff must be able to assist entities from any sector. Specifically, staff need to increase their knowledge related to water, hazardous waste, and solid waste.

- CAP needs to increase the number of educational training events and compliance tools provided. Although training and tool development are part of a program action item, only two training events and two compliance tools were offered to the regulated community in 2007 by CAP. If an entity does not understand the need and benefits of regulations, it is not going to be proactive about following the regulations. Education can bridge the gap between understanding and changes in behavior. Staff should work to increase the number of training events and compliance tools offered in 2008 and each year following. Suggested tools would be additional resources available electronically. For example, CAP could create the opportunity for regulated entities to apply for and submit applications online. Other informational resources could be uploaded to the CAP website for easy access. Electronic resources would likely cut down on the number of phone calls received by the CAP hotline which would allow the staff to have more time to assist additional entities.

- CAP staff needs to continue educating and communicating to the entire Department for Environmental Protection about the work that program does. Inspectors might be more likely to recommend that entities utilize CAP's services if they fully understand the program. Furthermore, an open dialogue among the Department for Environmental Protection's agencies could help CAP staff understand external concerns and identify their own shortcomings. It is counterproductive, as well as a conflict of interest, for inspectors to give compliance assistance. If inspectors have confidence in the support CAP can provide they may be more likely to refer cases to the program.

- In general, CAP needs to market itself better to the regulated community. If less than 2% of the regulated community is currently utilizing CAP services, it is likely that the majority of regulated entities in the state are completely unaware of CAP. Although

many regulated businesses probably do not need assistance from CAP because they are able stay in compliance on their own, surely more than 2% could benefit from the program's assistance is some way.

- CAP should continue documenting activities, outputs, and outcomes in order to monitor their progress. Over time, data collected can be used to conduct a summative evaluation of this program. CAP could work with other agencies within the Department for Environmental Protection to combine data in order to try and measure long term outcomes related to improvements in the state's environment. Attempting to follow EPA's seven core performance measures for enforcement and compliance programs would be a great place to start.

- Finally, after the aforementioned improvements have been made, existing staff should secure additional funding sources in order to add staff and resources that will allow the program to assist a larger number of regulated entities as well as adequately meet all action items.

In closing, this evaluation has found that the program has done well attempting to implement the program as it was intended. However, the program appears to have fallen short of reaching its full target population and therefore completely achieving its mission and vision. If this program is managed to build on its strengths, continually evaluates itself, and be proactive about making improvements; CAP can successfully increase compliance with regulations and thereby improve the environment in Kentucky.

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IX) Appendix

## A) Tables and Figures

Table 1: CAP Performance Results

	Action Item	Performance Measure	2007 Results/Outputs
1	Operate a free help desk	Number of assistance requests received	689
		Number of site visits conducted	23
2	Provide training, information, and interactive tools to help regulated entities meet and exceed regulations	Number of compliance assistance tools developed	2: Environmental Compliance Assessment Workbook & the 2008 Dry Cleaner Calendar
		Number of training events conducted and the number of attendees	2: Hospital training & the Independent colleges and university training. ~100 attendees
3	Provide compliance and technical assistance to regulated entities, particularly for small businesses and communities	Number of small businesses and communities assisted	124/689 known small businesses assisted (438 have an unknown business size) & community sizes are unknown
4	Provide ombudsman services	Number of requests for ombudsman services	27
		Number of areas of concern identified for ombudsman	3: Fugitive dust, regulation of evaporators at dry cleaners, & clerical error on discharge monitoring reports
5	Develop performance measures that allow the program to determine if their efforts are improving the environment	Customer satisfaction of assisted entities, based on survey results	100% indicated a rating of neutral to excellent
		Change in client knowledge, based on survey results	72% indicated that their knowledge of environmental responsibilities increased
		Number of documented positive behavior changes, based on survey results	87.5% indicated positive behavior changes*
6	Provide training opportunities for program staff	Number of staff professional development events attended	7 cross media professional development seminars; 6 CAP staff professional development events

7	Increase communication with all Department for Environmental Protection staff, partners, and public on program outputs and outcomes	Number of outreach events and the estimated audience reached	13 events that reached ~3,000 entities

* Behavior changes = submitted a permit/registration application, installed a control device, installed more efficient process equipment, changed recordkeeping procedures, made material substitutions, reformulated a raw material/product, implemented or changed energy efficiency program, implemented or changed recycling program, and other.

Source: 2008 Operational Plan. 2008 / 2007 Rewind, Fast-Forward 2008: Environmental Compliance Assistance Program. 2008 / Environmental Compliance Assistance Program 2007 Performance Results. 2007.

Figure 1: CAP Assistance Requests
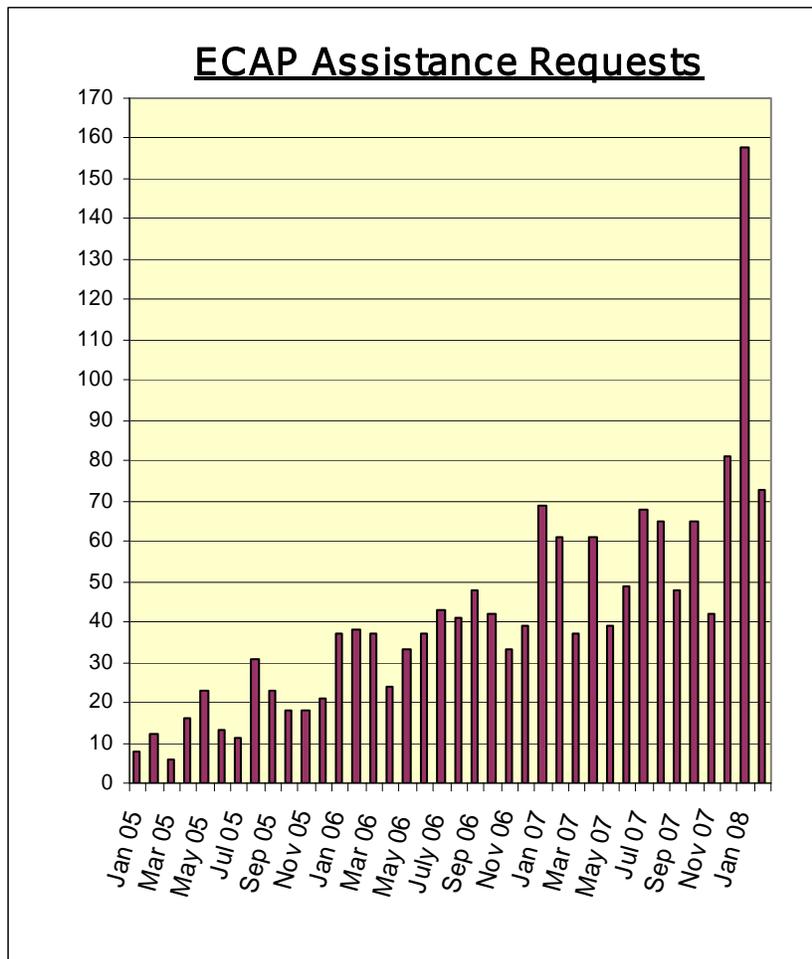
Source: Compliance Assistance Requests Data. 2008.

Table 2: Kentucky Compared to Benchmark States

	IL	IN	*KY*	MO	OH	TN	VA	WV
Assistance for Permits		X	X		X	X	X	
Assistance via a Phone Hotline		X	X		X		X	
Assistance via Site Visits	X	X	X		X			
Award System	X	X	X			X		
Brownfield Program			X	X				X
Education Opportunities	X		X		X	X	X	
Pollution Prevention	X	X	X		X	X	X	
Small Business Assistance	X	X	X		X	X	X	
Technical Assistance	X	X	X	X	X	X	X	X
Voluntary Program	X		X	X			X	X

Source: Illinois, Indiana, Kentucky, Missouri, Ohio, Tennessee, Virginia, and West Virginia State government websites.

## Table 3: Professional Opinions on CAP

Program Strengths	Program Weaknesses	Contradictions in Opinions
Staff possess expertise in air and wastewater	Staff lack expertise in water, hazardous waste, solid waste, and field work	Achieving mission and vision
Staff are working to diversify areas of expertise	Staff is unable to provide adequate assistance regarding water, hazardous waste, solid waste, and field work	Target population is being reached
Increase in the number of entities utilizing CAP every year since its inception	Staff is too small to adequately assist the state's regulated community	Client satisfaction
Staff provides excellent technical/permit assistance especially via the phone hotline and site visits	There is poor communication between CAP and DEP as a whole	How often DEP inspectors refer cases to CAP
Increase in compliance knowledge among the regulated community due to CAP provided training	Program does not offer adequate educational opportunities to regulated entities	DEP Inspectors support CAP
Hard working staff	Program does not provide adequate pollution prevention efforts	CAP's work has lead to a decrease in the number of environmental violations in the state
Staff are searching for additional funding sources	Program does not have adequate funding to make many improvements	

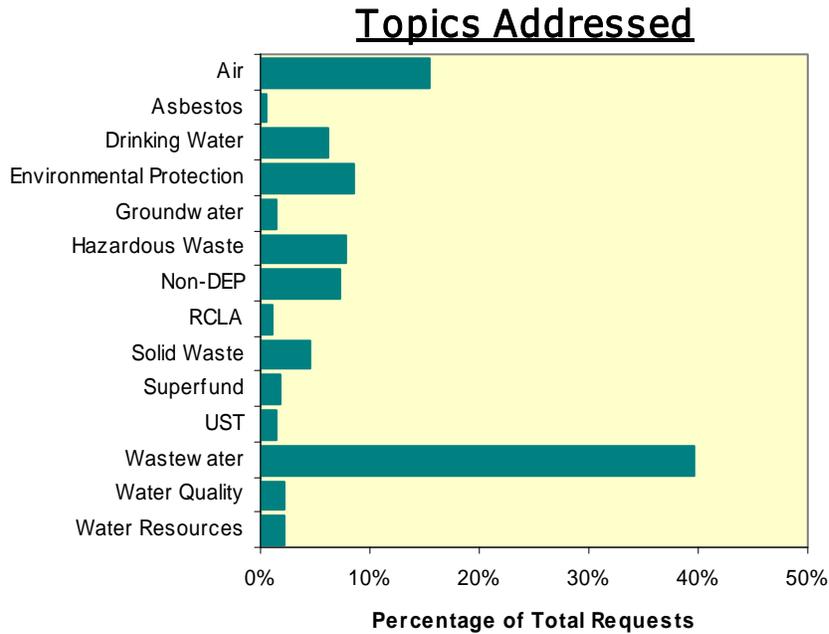|		Program does not offer electronic resources	

*DEP = Department for Environmental Protection

Source: Personal communication with the six professionals listed on pages 17-18.

Figure 2: CAP Assistance Types

Assistance Types
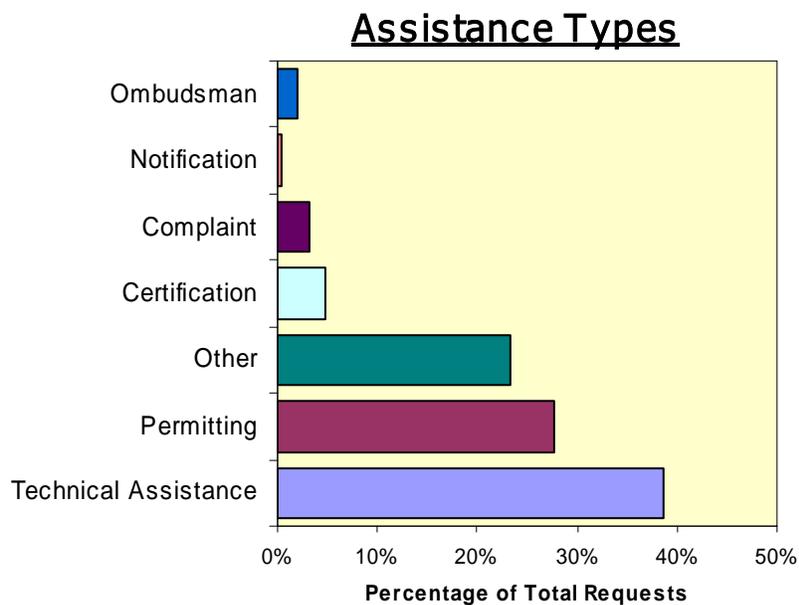
Source: Compliance Assistance Requests Data. 2008.

Figure 3: CAP Topics Addressed with Assistance

Topics Addressed

Source: Compliance Assistance Requests Data. 2008.

B) CAP Survey Questions and Response Choices

1. What sector best represents your operations?

   Government, construction, transportation, tourism, health care, education, service, manufacturing, other.

2. Are you a small business with less than 100 employees?

   Yes, no, unknown.

3. What was your primary reason for contacting Division of Compliance Assistance (DCA)?

   Air quality, water, wastewater, solid waste, hazardous waste, other.

4. What type of assistance did you receive?

   Training, technical information, compliance information, on-site evaluation, application assistance, publication, other.

5. Please rate the DCAs knowledge of environmental regulatory issues.

   Excellent, good, neutral, fair, poor.

6. Please rate DCAs timeliness of responses.

   Excellent, good, neutral, fair, poor.

7. Please rate DCAs overall performance.

    Excellent, good, neutral, fair, poor.

8. Will you contact DCA again if needed?

    Yes, no, unsure.

9. Would you recommend DCA to other regulated entities for assistance?

    Yes, no, unsure.

10. After working with DCA, has your understanding of your environmental responsibilities changed?

    Increased, decreased, remains unchanged.

11. After working with DCA, has your understanding of the environmental assistance resources available to you increased?

    Yes, no, remains unchanged.

12. After working with DCA, has your awareness of your facility's air emissions changed?

    Increased, decreased, remains unchanged, N/A.

13. After working with DCA, has your awareness of your facility's waste generation changed?

    Increased, decreased, remains unchanged, N/A.

14. After working with DCA, has your awareness of your facility's water discharges changed?

    Increased, decreased, remains unchanged, N/A.

15. Based on the assistance you received from DCA, did you make any of the following changes?

    Submitted a permit/registration application, installed a control device, installed more efficient process equipment, changed recordkeeping procedures, made material substitutions, reformulated a raw material/product, implemented or changed energy efficiency program, implemented or changed recycling program, other.

16. Based on the above changes, did you reduce any air emissions, waste generation, or water discharges?

    Yes, no, unknown.

17. If yes to #16, were any of these toxic?

    Yes, no, unknown.

18. What training topics would be beneficial to you?

> *Environmental management planning, recordkeeping and reporting, air emissions calculations, sector specific, pollution prevention, other.*

19. Are there additional services that would be beneficial to you?

> *OSHA, indoor air quality, sampling/testing, drafting/surveying, modeling, other.*

20. Would you like to receive additional information regarding other DCA services?

> *KY EXCEL (Kentucky's environmental leadership program), Brownfield Program, Water and wastewater: Operator certification.*

Source: Operational Plan. 2008

C) CAP Logic Model

Source: "Logic Model." Compliance and Technical Assistance Program. 2007.