ENVIRONMENTAL IMPACTS OF ONE PUPPY MILL AMONG MANY: A CASE HISTORY

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Abstract
In recent decades, the animal welfare aspects of irresponsibly-managed commercial dog-breeding businesses have attracted national attention, prompting legislative and regulatory actions. However, the environmental impacts of such businesses, also known as puppy mills, have received far less attention. Most puppy mills are secretive; therefore, it is hard to get documented information about their environmental impacts. Although the former Whispering Oaks Kennels near Parkersburg, West Virginia also kept secrets, reliable environmental information was available regarding its operation because in the summer of 2008, the facility was cited for violating the State’s water pollution and solid waste statutes. This report is based on the documented information generated by the legal actions and eventual settlement. A chronological list of events involving Whispering Oaks’ effects on the environment is appended.

On Saturday, August 23, 2008, a team of animal protection organizations and West Virginia’s Wood County Sheriff Department seized approximately 950 dogs from the former Whispering Oaks Kennels, an unlicensed, commercial dog-breeding facility in a wooded area near Parkersburg. “I am honored that we had the opportunity to rescue about 950 dogs from a future of certain misery,” said Maryann Hollis, Director of the Humane Society of Parkersburg.¹

Rich Crook, rapid response manager for Best Friends Animal Society, said “The dogs, most of them dachshunds, Chihuahuas, poodles, and other small breed dogs, were confined sometimes four or five to a cage, measuring just two feet by three feet.‘Many cages had feces in them. All had poor ventilation. The sheer number of animals was overwhelming, and the odor of urine in 90-plus degree heat was stifling.”²
SECLUDED AND SECRETIVE
The privately-owned kennel was not licensed by either a state agency, or by the U.S. Department of Agriculture (USDA) under the federal Animal Welfare Act (AWA).³ This meant that, without the owner’s permission, and without substantive citizen complaints, no agency was authorized to enter the property to check for compliance with animal welfare laws. The owner, Sharon Roberts, had minimized the likelihood of complaints about kennel conditions by limiting the number of face-to-face contacts with customers. She did this by selling most of her puppies via classified ads and the Internet. Another precaution was to meet the smaller number of customers who did come to her home at a building separate from the kennels.

GETTING A SEARCH WARRANT
It was Whispering Oaks’ violation of West Virginia’s Water Pollution Control Act and Solid Waste Management Act that justified a search warrant and authorized officials to inspect the kennels. In July 2008, acting on a citizen complaint, John King, an Environmental Inspector with the West Virginia Department of Environmental Protection (WVDEP), reasoned that if animal waste was being dumped over a hill near the kennels, as alleged in the complaint, it would result in water quality violations that could be substantiated through laboratory analysis. The question was whether animal waste from Whispering Oaks was being dumped where runoff would carry it into an intermittent, wet-weather stream. This unnamed stream is tributary to Berry’s Run, which enters the Little Kanawha River, within the Ohio River Drainage Basin. On July 22, 2008, a thunder storm produced surface water in the intermittent stream, enabling Mr. King to take a water sample. Laboratory analysis that same day showed the sample contained more than 80,000 total coliform bacteria per 100 milliliters of water⁴, far in excess of the 200 allowed by West Virginia water quality standards.⁵ The fact that total coliform bacteria exceeded West Virginia’s legal limit justified issuance of the search warrant for determining whether the waste discharge had in fact come from the kennels.

SERVING THE WARRANT
On August 23, 2008, Sergeant Robert Sims, Wood County Sheriff Department, served the search warrant on Ms. Roberts, who had owned and operated Whispering Oaks since 1961⁶.
Sims was accompanied by John King, Cynthia Musser who was Mr. King’s supervisor, and Ginny Conley, Wood County Prosecutor.

Having gained access to the Whispering Oaks Kennels, Mr. King and Ms. Musser further investigated the apparent source of the pollutants that had been discharged into the intermittent stream. The WVDEP investigative report said:

The concrete floors of the kennels had drains in them that discharged over the hillside into the ravine leading to Berry’s Run. Dye was put into the drain and water run to trace the discharge after Mrs. Roberts assured us that the drains had been “plugged.” The dye was traced to the end of the pipe where wastes were discharged into the southern drainage area.

The run-off from the nursery floor was traced to a four-inch discharge pipe on the north side that directed wastes and wastewater into the natural drainage area that then discharged into waters of the State, an unnamed tributary of Berry’s Run. Samples obtained from the discharge showed ammonia nitrogen of 694 mg/l and fecal coliform of > 60,000 colonies/100 milliliters.

A hose was found installed in a waste holding tank with the discharge end leading over the bank into the natural drainage area.

Once on the property, the group found hundreds of caged dogs and unsanitary conditions. This observation confirmed what animal protection organizations had suspected for years, and it resulted in rescue of the animals, beginning that same day.

Prosecutor Conley negotiated an agreement with Ms. Roberts that made legal the immediate rescue of the dogs. No animal abuse charges would be filed in exchange for her immediately transferring ownership of the dogs to the Humane Society of Parkersburg. Ms. Roberts would remain legally liable, but criminal charges would be “diverted” as long as she fulfilled the promises she made in the agreement. Without this diversion agreement, it could have taken weeks for authorities to gain custody of the
dogs and in the interim the animals probably would have continued to suffer; environmental impacts would also have continued. In addition to transferring ownership of the dogs, this agreement prohibited Ms. Roberts from owning or operating a dog-breeding business. The water pollution and solid waste issues were not part of the diversion agreement, which left the WVDEP free to pursue those matters.

THE SIZE OF THE PUPPY MILL PROBLEM
In 2008, there were 4,604 commercial dog breeders and 1,116 brokers in the United States that were licensed by the USDA under the AWA. These numbers do not include breeders who were exempt from the AWA because they possessed no more than three adult female dogs (the hobby breeder exemption), or those breeders who were exempt because of a loophole that allows marketing unlimited numbers of dogs as long as they are sold directly to individual citizens (the retail store exemption).

Because most puppy mills are secretive operations, there are no regional or national databases of commercial breeders who operate without AWA licenses, but the figure could equal the number of licensed breeders. This ratio is arrived at by using the above USDA number of 4,604 licensed breeders and an estimate by the Humane Society of the United States that there are about 10,000 licensed and unlicensed puppy mills in the nation.

WHISPERING OAKS ENVIRONMENTAL IMPACTS ARE SEEN AS TYPICAL OF LARGE PUPPY MILLS
This case study has value because Whispering Oaks’ environmental impacts are judged to be representative of large puppy mills, which enables informed inferences to be made about the many other mills that conceal their impacts. Before beginning to write this paper, the author decided he would consider Whispering Oaks’ environmental impacts as representative if he studied numerous large puppy mills, including Whispering Oaks, and found their breeding and rearing practices to be very similar.

The author found that websites for many puppy mills report harmful management practices that are the same as the abusive practices that Whispering Oaks employed. Internet text and photos of many puppy mills reveal the same crowded conditions, stacked cages, accumulated
feces, unsanitary food and water bowls, and poor ventilation. No matter which puppy mill was reported on, rescue workers described the same ammonia stench and stacked cages with wire-mesh floors that allowed feces to fall onto the dogs caged below. The author concluded that the Whispering Oaks environmental impacts are typical of large puppy mills because the animal husbandry practices were virtually identical from one kennel to the next.

The 1984 federal court decision of Avenson v. Zegart defined a puppy mill as a “dog breeding operation in which the health of the dogs is disregarded in order to maintain a low overhead and maximize profits.” The court could have been speaking specifically of Whispering Oaks.

THE AWA LOOPHOLE THAT ENABLED WHISPERING OAKS TO ESCAPE INSPECTIONS

In 1966 -- long before the advent of the Internet -- when the AWA was enacted, Congress exempted retail dealers who sold directly to members of the public. The lawmakers apparently believed such breeders were more likely to provide good care for their animals than were the breeders who sold in larger numbers by dealing through brokers or by selling wholesale to pet stores. Congress apparently reasoned that a citizen buying a pet directly from a breeder was likely to visit the breeder’s facility and therefore would see the animal’s parents and its living conditions. In meeting face-to-face with the breeder, the buyer could judge how well the dog was cared for. Also, such meetings were likely to motivate the breeder to keep the kennel in good condition in order to maintain a good reputation.

In operating Whispering Oaks Kennels, Sharon Roberts exploited the AWA retail store exemption, which enabled her to sell many puppies via Internet and classified advertising without having to get a USDA license. Even though she sold dozens of dogs annually, the AWA considered her operation to be a retail store solely because she marketed directly to individuals. Absent the AWA regulations that would have been imposed on Ms. Roberts, there were no inspections of Whispering Oaks that might have prevented her from tampering with the onsite wastewater system and thus from polluting the nearby stream. Although environmental protection is not a purpose of the federal Animal Welfare Act, the USDA inspects commercial kennels for sanitary conditions and proper waste disposal.
RELATIONSHIP BETWEEN CANINE ABUSE AND ENVIRONMENTAL IMPACTS
The most serious environmental impacts of puppy mills result from canine abuse. A responsibly-managed breeding facility will impact the environment, but not nearly as much as a puppy mill with its abusive practices.

Broadly defined, any harm to a dog is an environmental impact, but animal protection organizations rightfully treat the harm as animal welfare issues, and government regulations address environmental impacts as being effects on water, land, and air quality. This case study report makes the same distinction, except that it suggests environmental impacts should include the effects on kennel workers caused by the unsanitary conditions of puppy mills.

Animal welfare issues such as genetic defects in dogs caused by overbreeding or inbreeding, lack of veterinary care, and dehydration and canine diseases are environmental impacts, but to avoid covering the exact same ground as animal welfare articles, this report addresses those problems only to the extent that they impact water, soil, air, or health of kennel workers.

WATER POLLUTION
Ecological Value of the Intermittent Wet-Dry Stream
The fact that a stream flows only during wet weather does not mean it has little ecological value. There are good reasons for designating such streams as waters of the State and the United States. They are part of a mosaic of waterways that make it possible for aquifers, snow melt, and rain to merge into rivers and to eventually enter an ocean.

These small feeder streams -- whether intermittent or year-around -- are ecologically valuable in their own right, providing habitat for many species, and without these streams, rivers would be less robust, and riparian areas less diverse. Small intermittent streams are essential parts of ecologically-diverse riparian and aquatic ecosystems.

Pollution introduced into intermittent streams can end up in major rivers below, in this case the Ohio River, and in someone’s drinking water. It is unwise to rely entirely on water treatment plants to capture all pollutants and provide clean potable water.
History of Whispering Oaks’ Water Quality Violations

Whispering Oaks Kennels had a long history of polluting the nearby, intermittent stream. The kennels began operation in 1961 and did not have a sewage treatment system until perhaps 2001, some 40 years later, when the Mid-Ohio Valley Department of Health, with offices in Parkersburg, ordered that a system be installed\(^{12}\). Because the Health Department did not answer the author’s inquiries, the installation date of 2001 is an educated guess based on records of when Ms. Roberts was cited for violating the West Virginia Water Pollution Control Act.

According to the August 2008 WVDEP investigation report, “In March 2001, Ms. Roberts was issued three tickets by WV Department of Natural Resources Conservation Officer Chris McKnight. On March 12, 2001, Ms. Roberts was fined $50 for stream liter, $100 for stream pollution, and $50 for a solid waste violation.” The author infers that these violations motivated authorities to require installation of the septic tank system referred to earlier. Regardless of the exact date when the system was installed, it is clear that Whispering Oaks Kennels operated for decades without a waste-treatment system.

The author could not find any records of Whispering Oaks violating the State’s water quality standards between the March 2001 offenses and July 2008 when a kennel worker contacted the U.S. Environmental Protection Agency (USEPA), which forwarded the complaint to the WVDEP. Concurrent with the complaint to the USEPA, three citizen complaints were made to the Wood County Sheriff Department.

WVDEP staff determined that when kennels were cleaned, feces, urine, and bedding material were hosed down and put in a septic tank, which was disposed of by a waste management company that hauled the material to a landfill. This periodic emptying cost money that the kennel owner apparently did not want to spend. Weekly, an employee attached a hose to the septic tank and sent liquid into the intermittent stream to reduce the volume of material that had to be hauled away\(^{13}\).
The August 14, 2008 search warrant alleged that Ms. Roberts was discharging dog wastes into state waters and described the property to be seized as “a manual or mechanical style pump or hose system, attached or designed to be attached to a septic storage system.” The search warrant also authorized gathering evidence regarding “man-made or man-induced alteration of the chemical, physical, or biological integrity of the waters of the state, outside of the parameters allowable by law.”\textsuperscript{14}

Too Many Dogs, Too Much Waste Material
At the time of the 2008 puppy mill rescue, Whispering Oaks Kennels confined about 950 dogs, and had a staff of four full-time and two part-time employees.\textsuperscript{15} Ms. Roberts said her workers cleaned all the cages every day, a claim refuted by accumulated feces and urine, but nevertheless interesting for calling to mind the Fifth Labor of Hercules.\textsuperscript{16}

Significance of the Water Samples
As was noted earlier, on July 22, 2008, total coliform bacteria exceeded 80,000 per 100 milliliters of water and in a sample taken by the WVDEP. Also, fecal coliform bacteria numbered about 28,000 per 100 milliliters in that same sample. Concurrent with the dog-rescue of August 23, 2008, having gained access to the kennels, the WVDEP discharged dyed water through floor drains and traced the flow to the ravine. This time, water samples showed that fecal coliform bacteria exceeded 60,000 colonies per 100 milliliters of water, and ammonia nitrogen was analyzed at 694 milligrams per liter. These four water assays – two from the July 22, 2008 grab sample and two from the August 23, 2008 samples – showed that Whispering Oaks Kennels indeed were violating West Virginia water quality standards.

Pathogens
Three main groups of pathogens in dog feces can harm humans: bacteria, viruses, and parasitic protozoans. Total coliform bacteria are easier to test for than any of these groups, and total coliform bacteria usually are prevalent when pathogens are present. Therefore, in the Whispering Oaks case, the WVDEP interpreted total coliform bacteria to indicate that pathogens could be present in the discharges into the stream, and considered the large number
(more than 80,000 per 100 liters of water) to indicate that such pathogens might be present in concentrations harmful to humans.

The WVDEP also examined a second indicator of human pathogens, the fecal coliforms group, which is a subset of the total coliforms. Fecal coliforms are present in high numbers in the mammalian intestinal tract, which is considered their primary habitat. Exposure to fecal-contaminated water does not always translate into infection; but, the higher the fecal bacterial levels in water, the higher the chances that pathogens are present in significant numbers. The WVDEP also examined a second indicator of human pathogens, the fecal coliforms group, which is a subset of the total coliforms. Fecal coliforms are present in high numbers in the mammalian intestinal tract, which is considered their primary habitat. Exposure to fecal-contaminated water does not always translate into infection; but, the higher the fecal bacterial levels in water, the higher the chances that pathogens are present in significant numbers. The WVDEP also examined a second indicator of human pathogens, the fecal coliforms group, which is a subset of the total coliforms. Fecal coliforms are present in high numbers in the mammalian intestinal tract, which is considered their primary habitat. Exposure to fecal-contaminated water does not always translate into infection; but, the higher the fecal bacterial levels in water, the higher the chances that pathogens are present in significant numbers. The WVDEP also examined a second indicator of human pathogens, the fecal coliforms group, which is a subset of the total coliforms. Fecal coliforms are present in high numbers in the mammalian intestinal tract, which is considered their primary habitat. Exposure to fecal-contaminated water does not always translate into infection; but, the higher the fecal bacterial levels in water, the higher the chances that pathogens are present in significant numbers. The WVDEP also examined a second indicator of human pathogens, the fecal coliforms group, which is a subset of the total coliforms. Fecal coliforms are present in high numbers in the mammalian intestinal tract, which is considered their primary habitat. Exposure to fecal-contaminated water does not always translate into infection; but, the higher the fecal bacterial levels in water, the higher the chances that pathogens are present in significant numbers.

The total coliforms group and the fecal bacterial subset are used as surrogates for waterborne pathogens to assess human health risks instead of direct monitoring of pathogens because these indicators are easier to grow and are often present in higher numbers than pathogens. Detecting and counting most pathogens is time consuming, and quantification often is imprecise. The 28,000 colonies of fecal coliform per 100 liters of water confirmed that Whispering Oaks’ discharges could harm human health.

Fecal-waterborne human diseases include gastroenteritis, typhoid fever, salmonellosis, cholera, hepatitis, encephalitis, cryptosporidiosis, Giardiasis, and dysentery. Of these diseases, those causing dehydrating diarrhea are most important as they can lead to death within 48 hours after initial symptoms. Water fecal pollution is also responsible for skin, eye, and ear irritations.

Pollutants

The likely presence of pathogens was not the only reason for the WVDEP to have been concerned about water quality. Excessive nutrients also have human health implications. Water collected on August 23, 2008 was analyzed for the pollutant ammonium nitrogen.

West Virginia has a water quality standard for ammonia nitrogen due to its toxicity to aquatic life; however, the standard is not a simple number that represents the concentration that causes harm. This compound typically is present in two forms, un-ionized ammonia and ionized ammonia, the latter also called ammonium. Of the two, un-ionized ammonia is far more toxic to fish. The ratio of un-ionized ammonia-to-ammonium varies greatly with water temperature and pH (level of acidity). Violations of the aquatic life criteria for ammonia are determined in
West Virginia by using the tables, formulae, and procedures detailed in the federal EPA’s Ambient Water Quality Criteria for Ammonia\textsuperscript{18}.

Without accompanying temperature and pH data, the August 2008 concentration of ammonia nitrogen in water could not be interpreted as a toxic level; however, the pungent odor and the accumulated feces also indicated there were high ammonia nitrogen levels in the discharges of wastewater from Whispering Oaks.

AIR POLLUTION

The clandestine nature of most puppy mills makes it difficult to get information about their environmental impacts. This is true for impacts to water and soil, but even more of a problem for assessing effects on air. A citizen sometimes can see that a puppy mill is discharging waste into a waterway or dumping it on the ground, but cannot detect air pollution unless onsite at the kennel where ammonia or hydrogen sulfide irritates the nose and eyes.

The WVDEP enforcement action against Whispering Oaks Kennels produced information regarding water pollution and solid waste disposal that suggests how other puppy mills might affect water and land; but the WVDEP legal action had no regulatory need to investigate air pollution. Comments made by the animal welfare workers who rescued the dogs in August 2008 suggest that ammonia had at least a local impact on air quality. Those comments by the rescue workers along with a literature survey of the harmful effects of dog wastes enable us to infer how Whispering Oaks probably impacted air quality.

Impacts to water and air usually are connected; therefore, it is not surprising that the pathogens and pollutants that impacted the air at Whispering Oaks are the same ones that we discussed earlier as having impacted water.

**Aerosols**

To appreciate how feces and urine at puppy mills pollute the air, one must understand how aerosols react to environmental conditions. Aerosolization of microbial pathogens, endotoxins, odors, and dust particles is an inevitable consequence of the generation and handling of animal waste\textsuperscript{19}. 
Ammonia gas is produced when urea in urine combines with urease, an enzyme present in
feces and soil. As a gas, ammonia settles to the ground within a few kilometers from its
source, but once aloft in the atmosphere, ammonia may convert from a gas to particulates that
travel long distances. By combining with nitric acid or sulfuric acid, ammonia is changed from a
gas to microscopic particulates in aerosols. Due to their small diameter and increased
atmospheric lifetime of about 15 days, the fine particulates of ammonia can travel afar, mix
with other pollutants, and contribute to smog and human respiratory problems. In particulate
form, ammonia can be moved by air currents in the atmosphere up to 600 miles. For example,
ammonia generated in cities has been tracked hundreds of miles where it was deposited in
Rocky Mountain National Park and severely harmed native vegetation.

Aerosols can be produced in another way. When dog feces are allowed to remain in an area,
the material dries and becomes flaky, enabling lighter particles to be picked up by wind and
become airborne.

A bioaerosol is a suspension of airborne particles that contain living organisms or substances
that were released from living organisms. Bacteria and viruses exist as aerosols attached to
dust and other particles in the atmosphere. Potential pathogens of plants and animals are
commonly dispersed through the atmosphere, and can trigger allergic asthma and seasonal
allergies.

Puppy mills do not affect the air nearly as much as pig farms and cattle feedlots, but it would be
a mistake to conclude that their impacts are minor. Even when dogs are not confined in large
numbers, they can seriously impact the air, as Bowers and colleagues found when they
analyzed bacterial communities present in aerosol samples collected from cities in the mid-
western United States. They showed that fecal material, most likely dog feces, was a large
source of bacteria in the atmosphere at cities during winter. Their analysis suggested that dog
feces are likely the dominant source of aerosolized bacteria in winter in Cleveland, Detroit, and
to a lesser extent, Chicago.
Dog feces and urine contain pollutants that can harm canine health, human health, and the environment (through eutrophication or excessive enrichment of soil, water, and vegetation). The pollutants with the most impact on air quality are ammonia, hydrogen sulfide, methane, and carbon dioxide. The WVDEP did not measure the levels of any of these compounds at Whispering Oaks because there was no regulatory reason to do so, and ammonia was the only one of these pollutants that was conspicuously present.

People who rescued the Whispering Oaks dogs in August 2008 repeatedly complained about the stench of ammonia; however, without measuring the concentration of ammonia in the air, the offensive odor is insufficient reason to say that standards set by the Occupational and Safety Health Administration (OSHA) were violated. It cannot be said that the kennels violated the 50 parts per million (ppm) standard set by the OSHA for ammonia in general industry because the human nose is not calibrated to detect scientific or legal thresholds, and people will notice the sharp odor of ammonia at levels as low as 5 ppm. The most that can be said is that the threshold of 50 ppm could have been exceeded at Whispering Oaks in August 2008, based on the circumstantial evidence that rescue workers could not stay in some of the rooms for more than a few minutes unless they wore respiratory masks.

Other reasonable inferences can be made. Since ammonia at Whispering Oaks was present at levels that irritated the nose and eyes of the rescue workers, those levels would have similarly affected the kennel workers who had to endure the offensive air on a daily basis. Furthermore, it appears that ammonia levels violated the USDA standard for kennels inspected under the federal Animal Welfare Act, and this too would indicate at least serious discomfort for kennel workers. Regulations implementing the AWA do not set a limit on ammonia concentration that is to be detected with instruments; instead, the regulations set an upper limit on air temperature and require adequate ventilation. If the odor of ammonia offends the inspector’s nose, and a kennel is poorly ventilated, the USDA can cite the operator for allowing ammonia to build up.

USDA regulations for humane handling, care, and transportation of dogs are presented in the Code of Federal Regulations, *Ventilation Requirements in Housing Facilities,* as follows:
“Ventilation must be provided to minimize odors, drafts, ammonia levels, and moisture condensation in these housing facilities. Relative humidity must be maintained at a level that insures health and well-being of the dogs or cats housed in the facility. Auxiliary ventilation is required at temperatures equaling or exceeding 85 degrees F.”

We see that instead of imposing a parts-per-million standard for ammonia, the USDA relies on keeping ambient temperature below 85 degrees F and ensuring that ventilation is adequate. These measures are intended to make life bearable for the dogs, but they also make better conditions for kennel workers.

Ammonia can severely impair or kill aquatic life\textsuperscript{27}, and the pollutant does not have to be generated within the water body to be a problem\textsuperscript{28}. Since particulate ammonia can travel many miles, there are many opportunities for this compound to settle onto and mix with surface water somewhere.

Without more data, the author cannot say that ammonia generated at Whispering Oak seriously impacted the environment. But it is clear that the pollutant emitted strong odors in August 2008, that there was almost no ventilation, that air temperature was in the nineties, and that similar conditions must have existed repeatedly during the 47 years that the kennels operated.

Methane is a powerful greenhouse gas, some 30 times more effective at trapping heat than carbon dioxide\textsuperscript{29}. Whispering Oaks unnecessarily enabled methane to enter the atmosphere by dumping dog feces on the ground. Less methane as well as ammonia and hydrogen sulfide, would have been volatilized if the kennel operator had used the waste-treatment system in the manner intended by the Mid-Ohio Valley Health Department who years earlier had required its installation.

At Whispering Oaks, pathogens that can harm dogs and probably humans were dispersed into the air from the feces of some 950 dogs that were allowed to accumulate, but no data exist to identify which pathogens and their relative prevalence. Perhaps the most important lesson
from this lack of data is that environmental impacts of puppy mills must be monitored so that regulators and the public do not have to guess about the consequences of canine husbandry.

SOLID WASTE
Whispering Oaks Kennels might have strewn solid waste on the nearby hillside over a period of years, judging from the amount accrued. Although Ms. Roberts owned the land, this dumping violated the State’s Solid Waste Management Act. Moreover, the dumping violated the State’s Water Pollution Control Act because feces were dumped where they could be carried by runoff into the unnamed tributary to Berry’s Run.

Solid wastes included plastics in various forms such as plastic sheeting and feed-supplement bags, as well as building materials like boards and concrete chunks. A kennel worker had alleged to the WVDEP that dog carcasses had been disposed of on the hill, but the agency found none.30

Perhaps the worst environmental impact of the illegal solid waste disposal at Whispering Oaks was the pathogens that the feces would have transferred to the soil and were thus available to later infect animals and humans. Of the substrates that serve as pathways by which pathogens can invade a host, soil contamination has the longest and most persistent potential for harboring a pathogen.31 Roundworm eggs, tapeworms, and hookworms are some of the pathogens easily transmitted to humans from soil contaminated with dog feces.32

The Center for Disease Control and Prevention (CDC) counsels pet owners to immediately remove dog feces from the ground because “hookworm eggs can develop into infective stage larvae in the soil in as few as 5 days.”33

The CDC describes the ability of ascarid parasites (nematode worms) to contaminate the environment, explaining how “in one infected puppy, a single female ascarid can produce more than 100,000 eggs per day, resulting in millions of potentially infective ascarid eggs per day spread throughout the area a puppy is allowed to roam. Once the eggs become infective, they can remain infective in the environment for years.”34
HAZARDS TO KENNEL WORKERS

Kennel workers were exposed to unsanitary conditions at the Whispering Oaks Kennels. Clean conditions were not possible because of the large number of dogs in relation to the small staff. Disease-causing organisms that can be transmitted from dogs to humans include cryptosporidium, Giardia, hookworms, tapeworms, and roundworms. Ammonia was at levels high enough to irritate the nose and eyes, and no one seems to know just how high the ammonia levels were in the hot, poorly-ventilated buildings. The risk of asthma and other respiratory problems was present. Cuts or abrasions of the skin could have become infected when the workers performed tasks such as cleaning the kennels. The recurrent dumping of feces mixed with bedding material would have led to infective-stage parasites in the soil.

SETTLEMENT OF ENVIRONMENTAL CHARGES

One year from issuance of the search warrant, Whispering Oaks and the State of West Virginia reached a legal settlement documented in a final consent order effective August 14, 2009\textsuperscript{35}. This final order included nine findings of fact and an “Order for Compliance.”

The order instructed Ms. Roberts on procedures for removing both animal wastes and solid wastes. Within 120 days of the document’s effective date, she was to “remove and properly dispose of all animal wastes produced from the past operations of the dog kennel. This shall include cleaning and disinfecting the concrete pads, dumping out the holding tank, and removing all contaminated bedding disposed of on the hillside.”

The consent order also required that “all solid waste shall be removed from the site and properly disposed of. Receipts documenting proper disposal shall be provided by the third day of each month until all solid waste is removed.”

Ms. Roberts complied with this cleanup order and the State considered the matter resolved, but it came to light over time that she did not comply with the August 23, 2008 diversion agreement to not operate any dog kennels in the future.
VIOLATION OF THE DIVERSION AGREEMENT

On August 23, 2008, Ms. Roberts had avoided animal cruelty charges for inhumane operation of Whispering Oaks Kennels by agreeing in writing to not breed, raise, or sell dogs in the future. The author has not seen that diversion agreement, but the prohibition against operating a new kennel apparently was not limited geographically to West Virginia. The author makes this inference because the State of West Virginia filed charges against Ms. Roberts that appear to have been in response to her starting up a kennel just across the Ohio River from her defunct Whispering Oaks Kennels.

According to an Internet article, on June 26, 2009, the Auditor for Washington County, Ohio -- in response to an application -- issued a kennel license to Sharon Roberts at 700 Tick Ridge Road, Vincent, Ohio. In other words, Ms. Roberts obtained an Ohio kennel license some 50 days before the August 14, 2009 effective date of the final consent order for closing down her West Virginia Whispering Oaks Kennels. This violation of the diversion agreement apparently caused the Wood County (West Virginia) Prosecutor to file new charges against Ms. Roberts even though the charges did not allege animal cruelty. Perhaps the Prosecutor believed it would have been too difficult or expensive to prove cruelty, but believed it was necessary to penalize Ms. Roberts for having violated the diversion agreement. It appears the Prosecutor decided the legal claim most likely to succeed in court was that, while operating Whispering Oaks, she had not registered some dogs with the Wood County Assessor.

According to a different Internet article, on August 20, 2009 the State of West Virginia charged Ms. Roberts with “51 misdemeanor counts stemming from an alleged illegal dog breeding operation in August 2008.” This article went on to say that she pleaded guilty to 10 counts of failure to register a dog with the assessor’s office. In November 2009, she was sentenced by Wood County Magistrate Judge Donna Jackson. Fines and fees totaled $2,000.00. According to the article, Ms. Roberts entered a plea agreement. Her attorney, George Cosenza, said she pleaded guilty for failure to register ten dogs older than six months.
THE ULTIMATE OUTCOME FOR THE ROBERTS’ PUPPY MILL ACTIVITIES IS UNCLEAR

There would be a good, tidy end to this case history if the proprietor of Whispering Oaks Kennels had honored the diversion agreement. Whispering Oaks would have ceased to operate on August 23, 2008. An orderly cleanup of the buildings and grounds would have followed, no additional dogs would have been subjected to inhumane treatment, and -- of most relevance to this report -- the environmental impacts would have ended. But, as we have just seen, even before meeting her legal requirements in shutting down Whispering Oaks, Ms. Roberts had obtained a license to operate a new dog-breeding business in Ohio; therefore, the environmental impacts did not end with closure of Whispering Oaks. The author was unable to learn exactly how and when puppy mill operations ended. Following is what he did learn, along with a few inferences that seem fair to make.

On July 1, 2009, Washington County, Ohio sheriff’s deputies investigated whether Sharon Roberts was running a puppy mill at 700 Tick Ridge Road, Vincent, Ohio. They searched her residence after neighbors reported foul odors and continual barking. The deputies discovered 68 puppies, of which one was dead. Later, when they again checked on the dogs, 23 were missing, according to Larry Mincks, Washington County Sheriff.38

Sheriff Mincks said he was writing a report that would recommend three charges against Ms. Roberts in Washington County: animal cruelty, violating a license requirement, and – because of the 23 missing dogs -- tampering with evidence.39 In September 2009, a Washington County grand jury determined there was not enough evidence to indict her on any of the recommended charges.40

By this time, September 2009, Sharon Roberts was 73 years old and had experienced several legal scrimmages. To avoid animal abuse charges in West Virginia, she had surrendered ownership of the dogs housed in Whispering Oaks Kennels and had agreed to not operate another dog-breeding business. Her violation of the diversion agreement had resulted in her being charged with not registering dogs in Wood County, West Virginia. Thousands of citizens, many of them dog lovers, had learned from news media and the Internet about the inhumane Whispering Oaks operation and the huge August 2008 puppy mill rescue. Law enforcement
agencies in both West Virginia and Ohio and many animal protection organizations knew her history as a dog breeder, and at Vincent, Ohio, complaints from neighbors made clear that a puppy mill would not be welcome there.

These facts suggest that the Roberts’ puppy mill business probably ended sometime in late 2009. Washington County Auditor records do not show her as having a kennel license in Ohio in 2010-2013. However, worrisome questions linger. What happened to the 68 dogs that the Washington County Sheriff Department documented as having found at the new Ohio kennel in July 2009? Did Ms. Roberts pass her business to a successor who continues to operate? Such questions are germane to an environmental case history because it is unclear whether environmental impacts have ended.

A NEW STATE LAW AIMED AT PUPPY MILLS
For decades, a combination of factors enabled Whispering Oaks Kennels to operate in an irresponsible manner, and therefore to impact the environment far more than a responsible operation would have. Chief among those combining factors was the kennel owner placing more value on low overhead than on welfare of the dogs under her control. An additional factor was the customers’ insufficient knowledge of puppy mills and their inability to resist buying puppies on impulse. Finally, the laws that should have established safeguards either did not exist (at the state level) or were ineffective (the Animal Welfare Act at the federal level).

After years of work by animal protection organizations, citizens, and some legislators, and partly because Whispering Oaks tainted the State’s reputation in 2008 and 2009, West Virginia enacted a much-needed law aimed at ending existing puppy mills and preventing establishment of new ones. In May 2013, West Virginia enacted two laws affecting companion animals: Senate Bill 202 establishing a spay-neuter assistance program and fund, and SB 437 which is aimed directly at puppy mills. An Internet article by the Humane Society of the United States (HSUS) described the new anti-puppy-mill statute as follows:
SB 437 requires anyone keeping more than 10 intact dogs for the purpose of breeding to provide each dog with solid flooring, protection from the elements, adequate lighting, food, water, veterinary care, and sanitary conditions.

SB 437 also bans the keeping of dogs in stacked banks of cages and requires that dogs can only be euthanized by a licensed veterinarian. Commercial dog breeders must only breed dogs after receiving a certification from their veterinarian that the dog is healthy.

The author obtained the following HSUS\textsuperscript{42} statement on how Whispering Oaks may have influenced the new legislation:

The Parkersburg raid in 2008 was the largest puppy mill rescue in West Virginia state history. In recent years we have seen very few similar rescues because, due to lax laws, most puppy mills in West Virginia have continued to operate behind closed doors. But the issue was brought to light again last year 2012 when 31 purebred, intact dogs, who appeared to be breeding dogs, were abandoned by the side of a rural road in Doddridge County. The dogs were in horrific shape, some of them nearly hairless due to advanced mange, while others suffered from secondary skin infections and other advanced veterinary issues. These cases helped shine a spotlight on the nature of unregulated breeding facilities in West Virginia. This year the State passed a strong new law that will require licensing, inspections, and basic standards of care at commercial breeding facilities, helping to prevent severe problems such as these.

**SUMMARY**

Even with the powerful new West Virginia law improving canine welfare and coincidently lowering environmental impacts, the history of the former Whispering Oaks Kennels suggests that environmental impacts of puppy mills deserve far more oversight. The lessons taught by Whispering Oaks should be applied in other states which have less progressive laws than the new statute in West Virginia. Canine abuse and environmental impacts are inextricably linked;
therefore, better environmental regulation would not only improve the quality of the water, air, soil, and perhaps the health of kennel workers, but also would improve the welfare of the thousands of dogs held in puppy mills across the nation.
LITERATURE CITED AND NOTES


3 Congress passed the Laboratory Animal Welfare Act (P.L. 89-54) in 1966, and changed the name in the Animal Welfare Act in a 1970 amendment (P.L. 91-579).


5 Warrant authorizing search of grounds and buildings at 301 Whispering Oaks Lane, Parkersburg, West Virginia, issued by a Wood County magistrate on August 14, 2008.


8 A classic example of the difficulties and expenses caused by a puppy mill owner not surrendering dogs to authorities is the 2007 case of the defunct J’aime Kennels in Buxton, Maine. After many failed attempts to persuade the owners to improve the care of their dogs, authorities raided the kennels on August 20, 2007. It was not until November 15, 2007 that a judge signed papers that gave ownership of the animals to the State. During those almost three months, animal welfare organizations cared for approximately 300 dogs and other animals at the site of the kennels, as the owners had fled to avoid prosecution.


12 The author was unable to learn the date that the Mid-Ohio Valley Department of Health ordered Whispering Oaks to install its wastewater treatment system. The WVDEP August 2008 Report of Investigation regarding Whispering Oaks says “the Health Department” required the installation, but despite the author’s repeated requests, the Mid-Ohio Valley Health Department would neither discuss the subject nor give a reason for withholding the information. The order to install a septic tank system might have been issued in 2001 because March 2001 is when the owner of the kennels was required to pay court fines for polluting waters of the State, according to the WVDEP Report of Investigation.


14 Search warrant issued by a Wood County magistrate on August 14, 2008.


16 In Greek mythology, King Eurystheus ordered Hercules to clean up King Augeas’ stables, which housed hundreds of cows, bulls, goats, sheep, and horses, and which had not been cleaned in 30 years. Hercules accomplished the feat in one day by diverting two rivers through the stables.


U.S. Department of Agriculture. Regulations for humane handling, care, treatment, and transportation of dogs and cats. 9 CFR part 3, subpart A. Ventilation requirements in housing facilities – Sections 3.2(b), 3.3(b), and 3.5(b).


Personal communication in April 2013 with John King of the West Virginia Department of Environmental Protection.


35 Consent Order Issued to Whispering Oaks Kennels and Sharon Roberts under the Water Pollution Control Act, West Virginia Code, Chapter 22, Article 11, and the Solid Waste Management Act West Virginia Code, Chapter 22, Article 15. Order Number 6767. The date on the face of the document is July 24, 2009, but the State signed the order on August 14, 2009.


42 Personal communication in May 2013 with Kathleen Summers, Director of Outreach and Research, Puppy Mills Campaign, in the United States.
Many Internet reports describe the animal welfare aspects of the rescue of approximately 950 dogs on August 23, 2008 from Whispering Oaks Kennels near Parkersburg, West Virginia. Although canine abuse and environmental impacts are inextricably linked, this timeline focuses on environmental effects, especially pollution of an intermittent, wet-weather stream and solid wastes dumped on a hillside.

1961
Sharon Roberts began to operate Whispering Oaks Kennels, a commercial dog breeding business near Parkersburg, West Virginia.

February 2000
Dachshund Rescue of North American (DRNA) accepted 35 dachshunds from Sharon Roberts because she allegedly could not document their breeding for the American Kennel Club (AKC) and wanted to be rid of them. The Pittsburgh Post-Gazette quoted Jill Blasdel-Cortus, President of DRNA, as having said this in August 2008 when she participated in the rescue of dogs from Whispering Oaks.

September 2000
*The AKC’s Management Disciplinary Committee has suspended Sharon Roberts (Parkersburg, WV) from all AKC privileges for a period of five(5) years, effective September 11, 2000, and*
imposed a $1,000 fine for having submitted or caused to be submitted, two litter registration applications which she knew, should have known, or had a duty to know, contained false certification (Multiple Breeds).

Source: American Kennel Club September 2000 Board Minutes

**March 2001**

Conservation Officer Chris McKnight of the West Virginia Department of Natural Resources issued three tickets to Sharon Roberts.

Source: Report of Investigation prepared by Cynthia Musser of the West Virginia Department of Environmental Protection (WVDEP) in August 2008

**March 21, 2001**

Ms. Roberts was fined $50.00 for stream litter, $100.00 for stream pollution, and $50.00 for a solid waste violation.

Source: August 2008 Report of Investigation, WVDEP

**June 18, 2008**

WVDEP received an email message from the U. S. Environmental Protection Agency (USEPA), which forwarded an anonymous complaint from a Whispering Oaks kennel worker.

Among other things, the employee’s complaint said, “Dead dogs were thrown over the hill,” and “Dog manure is swept out of the kennels and runs down over the hill into the creek.”

Source: June 18, 2008 email from USEPA to WVDEP

**July 3, 2008**

WVDEP sent a reply email to the USEPA, saying that WVDEP and the West Virginia Health Department had sometime in the past jointly inspected the kennels and the Health Department had ordered the kennels to install a wash system and a holding tank.
Source:
July 3, 2008 email reply from WVDEP to USEPA

**July 22, 2008**

John King, WVDEP Environmental Inspector, took a water sample from the intermittent wet-weather stream that the kennel worker had identified in reporting discharges of dog waste from Whispering Oaks. Mr. King delivered the sample to Bio-Chem Testing in Hurricane, West Virginia.

Source:
WVDEP Analysis Request Form dated July 22, 2008. Also personal communication with WVDEP’s John King.

Bio-Chem analyzed the water sample that same day, and found total coliform bacteria to be greater than 80,000 colonies per 100 milliliters of water and fecal coliform to be 28,000 col/100ml.

Source:

**August 14, 2008**

Sergeant Robert Sims of the Wood County Sheriff Department gave a sworn affidavit to a County Magistrate Judge and obtained a warrant to search the Whispering Oaks residence, grounds, structures, and enclosures as shown on tax plat 40/T3.

The affidavit noted that Sergeant Sims had received three anonymous complaints (that were in addition to the one the USEPA had emailed to the WVDEP on June 18, 2008). The affidavit also said that the State maximum allowable fecal coliform count was 200 colonies per 100 milliliters of water, (which was far below the greater than 80,000 colonies that Bio-Chem Testing had found).

Source:
Search Warrant and supporting Affidavit and Complaint for Search Warrant, August 14, 2008
August 23, 2008

Sergeant Robert Sims served the search warrant on Sharon Roberts. Accompanying him were John King and Cynthia Musser of WVDEP, and Ginny Conley, Wood County Prosecutor. They found equipment, including a hose, that a kennel worker had alleged was used to discharge dog wastes from a septic tank to the unnamed tributary of Berry’s Run.

Upon entering the property, the search party saw that hundreds of dogs were crowded into unsanitary cages. Feces and urine had accumulated and the pungent odor of ammonia was pervasive.

Prosecutor Conley negotiated an agreement with Sharon Roberts that made it legal for rescue of the dogs to begin at once. Ms. Roberts would not be charged with animal abuse if she immediately surrendered ownership of her dogs to the Humane Society of Parkersburg (HSOP) and agreed to never again operate a dog-breeding business. This contract between the State and Ms. Roberts is called “the diversion agreement” because it diverted criminal charges of animal abuse.

As soon as the diversion agreement was signed, the search party notified animal protection organizations standing by near the Whispering Oaks property that indeed there were many dogs in need of rescue and that it was legal for the organizations to enter the property for that purpose.

Sources:
December 15, 2008

Pursuant to the West Virginia Solid Waste Management Act, the WVDEP issued an *Order for Compliance* to Whispering Oaks Kennels and Sharon Roberts. The order referred to the August 23, 2008 search of the dog kennels and said, “Several areas were discovered that constitute an open dump. The solid waste improperly disposed of included waste materials (fecal matter and bedding) from the dog kennel operation, construction, and demolition materials, tires and plastics.”

The compliance order required Whispering Oaks Kennels to submit to the WVDEP “a proposed corrective action plan and schedule for review and approval.”

Source:

*Order Issued under the Solid Waste Management Act, West Virginia Code, Chapter 22, Article 15 to Whispering Oaks Kennels and Sharon Roberts on December 15, 2008. Order Number SW-0093*

June 26, 2009

In response to an application, the Auditor for Washington County, Ohio issued a kennel license to Sharon Roberts at 700 Tick Ridge Road, Vincent, Ohio.

Source:


July 1, 2009

Washington County, Ohio sheriff’s deputies investigated whether Sharon Roberts was running an illegal puppy mill at 700 Tick Ridge Road, Vincent, Ohio. On July 1, deputies searched her Vincent residence after receiving reports from neighbors about foul odors and constant barking.

They discovered 68 puppies, of which one was deceased. When deputies returned to the house to check on the condition of the dogs, 23 were missing, police said.

Source:
August 14, 2009
This is the effective date of the final consent order that the WVDEP issued to Whispering Oaks Kennels and Sharon Roberts under the West Virginia Water Pollution Control Act and the Solid Waste Management Act. This final order was the culmination of a settlement agreement that had been worked out between the State and Ms. Roberts.

The consent order stated findings of fact, including the following.

On August 23, 2008, WVDEP personnel identified sites that contribute to discharges to waters of the state including the concrete floors beneath the kennels and nursery, outside kennels, holding tank, and bedding wastes disposed of on the hillside.

A drain in the floor of one of the kennels was sampled. The fecal coliform count was > 60,000 colonies per 100 milliliters and ammonia nitrogen was 694 mg/l.

On December 15, 2008, WVDEP issued Whispering Oaks Kennels Order No. SW-0093 requiring the proper disposal of solid wastes including fecal matter and bedding from the dog kennel operation, construction, and demolition materials and plastics.

On December 23, 2008, WVDEP filed a criminal complaint for violations of the West Virginia Water Pollution Control Act by Roberts.

On March 17, 2009, WVDEP received a letter from Roberts’ attorney, George Cosenza, stating that the required cleanup of Ms. Roberts’ property had been completed. Disposal records provided showed 1.58 tons of municipal solid wastes, 1.22 tons of construction and demolition wastes, and two (2) tires had been removed between September 22, 2008 and March 15, 2009.

On June 5, 2009, WVDEP personnel conducted a follow-up inspection of Roberts’ property. Some of the solid wastes, including waste materials beneath the dog kennels had not been removed.
as required by Order No. SW-0093. Storm water continued to contact contaminated wastes prior to being discharged from the site.

On June 9, 2009, Wood County Assistant Prosecuting Attorney, Ashley Mullinex, on behalf of WVDEP, and Ms. Roberts’ attorney, George Cosenza, agreed the criminal allegations against Ms. Roberts would be withdrawn if a consent order was agreed to by Roberts that would address the elimination of sources that lead to water pollution.

Source:
Consent Order Issued under the Water Pollution Control Act, West Virginia Code, Chapter 22, Article 11, and the Solid Waste Management Act, West Virginia Code, Chapter 22, Article 15.

This order was issued to Whispering Oaks Kennels and Sharon Roberts as Order number 6767 and was signed by WVDEP on August 14, 2009.

August 20, 2009
The Wood County Prosecutor’s Office charged Sharon Roberts with 51 misdemeanor counts stemming from an alleged illegal dog breeding operation in August 2008.

Source:
http://www.newsandsentinel.com/page/content.detail/id/523808.html?nav=5061

September 2009
A Washington County, Ohio grand jury determined there was not enough evidence to indict Ms. Roberts for allegedly running an illegal puppy mill in Ohio (as discussed in the July 1, 2009 account above).

Source:
http://www.newsandsentinel.com/page/content.detail/id/523808.html?nav=5061
November 17, 2009

Sharon Roberts, 73, living at 700 Tick Ridge Drive in Vincent, Ohio, pleaded guilty to 10 counts of failure to register a dog with the Wood County, West Virginia assessor’s office. She was sentenced by Wood County Magistrate Judge Donna Jackson. Fines and court fees totaled $2,000.00.

Ms. Roberts, who entered a plea agreement, was represented by attorney George Cosenza who said she pleaded guilty for failure to register 10 dogs older than six months with the Wood County assessor’s office.

Source:
http://www.newsandsentinel.com/page/content.detail/id/523808.html?nav=5061

May 2013

West Virginia lawmakers enacted two companion animal statutes. Senate Bill 202 establishes a spay-neuter program and fund while SB 437 is aimed at puppy mills, requiring commercial dog-breeding facilities to meet humane standards. Some good eventually came from Whispering Oaks Kennels because, according to the Humane Society of the United States, the facility’s history galvanized people to press for compassionate legislation.