5-29-2007

Dog Parks: Benefits and Liabilities

Laurel Allen

University of Pennsylvania, laurela2@pobox.upenn.edu

Follow this and additional works at: http://repository.upenn.edu/mes_capstones

Part of the Environmental Sciences Commons


http://repository.upenn.edu/mes_capstones/18

Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment of the Requirements for the Degree of Master of Environmental Studies 2007.

This paper is posted at ScholarlyCommons. http://repository.upenn.edu/mes_capstones/18

For more information, please contact libraryrepository@pobox.upenn.edu.
Dog Parks: Benefits and Liabilities

Abstract
Dog parks have emerged in the last decade or so as places for pet owners living in suburban and urban areas to exercise their dogs. Providing a safe environment for both dog and human is a tremendous challenge. If done correctly a dog park can be that place. In the 1950s and 1960s, some state and regional parks had liberal policies and permitted dogs to run free or off-leash on certain trails, but in most cities and other urban areas, dog owners were required to keep their dog on-leash when the animals left their own premises. The concept of a dog park, an enclosed area devoted exclusively to canine activity, evolved in California in 1979. Dog parks are now found in every state, but Alaska, and in at least six Canadian provinces. These parks generally consist of one or more acres of open grassland surrounded by a chain-link fence. Unfortunately, legal ramifications, design considerations, social and behavioral patterns of dogs, and environmental and health issues relating to dogs and humans have not been adequately addressed in the design of many of these dog parks.

The goal of this paper is to provide guidance for those who may want a dog park developed in their town. I have gathered and synthesized information from designers, veterinarians, environmentalists, dog trainers, and a dog behaviorist to develop an approach and tools that the novice dog park implementer will need to execute a project. Six dog parks have been used as case studies to demonstrate what problems may exist and what forethought should go into the design of an optimal dog park. A photographic study has been taken to help demonstrate some of the problems and solutions. Questions given to dog park patrons to help demonstrate the reasons why people take their dog to a dog park and what things can be done to improve the experience. Burlington City, New Jersey was used as a sample urban area that might be in need of a future dog park. Questions were given to a random sampling of Burlington City residents to help determine if a dog park might be needed in the town and what the residents’ opinions were about the concept.

Disciplines
Environmental Sciences

Comments
Presented to the Faculties of the University of Pennsylvania in Partial Fulfillment of the Requirements for the Degree of Master of Environmental Studies 2007.
DOG PARKS: BENEFITS AND LIABILITIES
ENVS 699 – MES Capstone Seminar
Laurel Allen
May 29, 2007

Photo credit, Laurel Allen
The author’s collies, from left to right, Ruby, Max and Jake.
# Table of Contents

I. Introduction  
II. History of Project  
III. Literature Review  
IV. Dogs Around the World  
V. Methodology  
   A. Surveys  
   B. Interviews  
   C. Investigation Photographic Documentation  
VI. Results and Discussion  
   A. Surveys  
      1. First Survey  
      2. Second Survey  
   B. Interviews  
   C. Analysis of Features in Six Dog Parks  
      1. Signage  
      2. Fencing  
      3. Seating  
      4. Surfaces  
      5. Paths  
      6. Parking  
      7. Lighting  
      8. Structures  
      9. Plant material  
     10. Dog activities  
     11. Water  
     12. Food  
     13. Waste disposal  
     14. Bathrooms  
     15. Maintenance  
     16. Additional Suggestion  
     17. Table 1: Summary of Observations  
VII. Considerations in Designing a Dog Park  
   A. Dog Health  
      1. Toxic and Weedy Plants  
      2. Parasites and Feces  
      3. Arthropod Pests  
   B. Reading a Dogs Expression and Posture  
   C. What a Dog Needs: A Good Diet and Exercise  
   D. Park Aesthetics  
      1. Aesthetic Quality  
      2. Functional Considerations  
   E. Legal Issues  
   F. Dog Training and Dog Parks  
VIII. Conclusion  
IX. References
Acknowledgements

I would like to thank Dr. Sally Willig for painstakingly taking the time to critique my capstone project and for all the insight she provided and her valuable comments. Your help was invaluable.

I also want to thank my father and mother Drs. Robert and Wendy Snetsinger who passed along their contagious passion for learning to their daughters and for all their help and insight during my College of General Studies journey.

Thank you to my three dogs Ruby, Max and Jake for inspiring me to research this topic.

Finally, thank you to my husband Richard Allen for his endless encouragement and support. I could not have done this without him.
Abstract

Dog parks have emerged in the last decade or so as places for pet owners living in suburban and urban areas to exercise their dogs. Providing a safe environment for both dog and human is a tremendous challenge. If done correctly a dog park can be that place. In the 1950s and 1960s, some state and regional parks had liberal policies and permitted dogs to run free or off-leash on certain trails, but in most cities and other urban areas, dog owners were required to keep their dog on-leash when the animals left their own premises. The concept of a dog park, an enclosed area devoted exclusively to canine activity, evolved in California in 1979. Dog parks are now found in every state, but Alaska, and in at least six Canadian provinces. These parks generally consist of one or more acres of open grassland surrounded by a chain-link fence. Unfortunately, legal ramifications, design considerations, social and behavioral patterns of dogs, and environmental and health issues relating to dogs and humans have not been adequately addressed in the design of many of these dog parks.

The goal of this paper is to provide guidance for those who may want a dog park developed in their town. I have gathered and synthesized information from designers, veterinarians, environmentalists, dog trainers, and a dog behaviorist to develop an approach and tools that the novice dog park implementer will need to execute a project. Six dog parks have been used as case studies to demonstrate what problems may exist and what forethought should go into the design of an optimal dog park. A photographic study has been taken to help demonstrate some of the problems and solutions. Questions given to dog park patrons to help demonstrate the reasons why people take their dog to a
dog park and what things can be done to improve the experience. Burlington City, New Jersey was used as a sample urban area that might be in need of a future dog park. Questions were given to a random sampling of Burlington City residents to help determine if a dog park might be needed in the town and what the residents’ opinions were about the concept.
I. Introduction

There are approximately seventy-three million dogs in the United States and 50 million owners (American Pet Products Manufacturers Association, 2005-2006); approximately 60% have one dog, 25% have two dogs, and 15% have three or more dogs (The Humane Society, 2007). One American family in three owns one or more dogs (Stecchi, 2006). Most authorities on pet behavior contend that dogs require an outlet for their energy in order to alleviate boredom and reduce destructive behavior. Play and exercise are not only important for the dog’s physical needs, but these physical outlets also help to cement the human-dog bond (Animal Planet, 2006).

In urban environments dogs are generally confined to a crate, portions of the home, or small sections of the yard most of the time. Typically, dogs are taken on daily walks, but because of strict leash laws, they cannot run free or easily socialize with other dogs. In nature dogs were pack animals and the need for domesticated breeds to interact with other members of its species remains a part of their nature (Society for the Prevention of Cruelty to Animals, 2006). A dog socializes through displays of subtle posturing and behavior and a leash inhibits communication with other dogs. A leash restricts a dog’s natural movements and a leashed dog can become territorial and protective (see Figure 1). In order to prevent unwanted barking, jumping, or nipping, some dog owners avoid contact with other people who are walking dogs. This common response only exacerbates the situation (Stecchi, 2006).
In many urban settings houses are tightly nestled together and front yards are large enough for a few prized shrubs surrounded by a rustic wrought iron fence (see Figure 2). Backyards generally consist of an area to park two cars, a small patio/sitting area, a few plants and trees, and a patch of grass. Lawns are so small that a non-motorized push mower can complete the job in a matter of minutes (see Figure 3).
Figure 2. Typical front yard in Burlington City, NJ.

Figure 3. Laurel Allen’s backyard, an example of a typical small yard in Burlington City, NJ.
Some dog owners defy local ordinances and permit their dogs to run off-leash in vacant lots or parks. These individuals risk receiving fines and other retribution. Dog owners are financially liable if their dog causes an incident such as biting an individual or causes a bicyclist to tumble and suffer injury; there is also the possibility their pet could be hit by a car. In an extreme case in 1983, a California truck driver and passenger were severely injured because they swerved to avoid hitting a dog that had run onto the road. The judge awarded the driver and passenger $2.6 million dollars (Randolph, 2005).

Ohlone Dog Park (recently re-named the Martha Scott Benedict Memorial Park), in Berkeley, California, is recognized as the first dog park in the world; it was established by the city of Berkeley as an experimental project in 1979. The park's steward, the non-profit Ohlone Dog Park Association (ohlonedogpark.org), has an ongoing partnership with the city to ensure the quality and historical significance of the facility. During the 25+ years since the establishment of the first dog park, “more than 1,100 dog parks in the United States and Canada combined” have been generated (Dogpark.com, 2002). “These parks generally consist of one or more acres of open grassland surrounded by a chain-link fence” (Shyan, 2003). Not all of these dog recreational arenas have achieved the eminence and desirable attributes of Ohlone Dog Park.

Most dog parks result from the perceived needs of a local dog owners' community without guidance or input from experienced park designers, veterinarians, or experts on dog behavior. There is no comprehensive reference manual outlining the requirements for the design of a safe and well-maintained dog park. The only available reference for
local dog park advocates is Susyn Stecchi’s (2006) *So You Want to Build a Dog Park?* which was written from the perspective of a Certified Canine Massage Technician (C.C.M.T.) and dog owner; Susyn operates a business that promotes festivals, logos, web-sites, desktop publishing, and other enterprises.

Untapped authorities who could be used to assist novices in the design of dog parks include livestock farmers, cattlemen and ranchers, game-farmers, veterinarians, kennel owners, and zookeepers most of whom have had decades of experiences with animal husbandry. Also, designers need to consider legal ramifications, social behavior of dogs and dog owners, environmental and health issues for dogs and people, and the costs of building, maintaining, and policing dog parks.

As a trained landscape designer and an owner of three dogs, I have become involved with the planning of a dog park in my home community of Burlington City, New Jersey a city of approximately 31,000 located northeast of Philadelphia on the Delaware River. Together with other local citizens, I am exploring the possibility of establishing a model dog park for the community. Burlington City has 11,272 households and, based on the estimate of one dog for every three households, has a population of more than 3000 dogs, with each requiring daily exercise.

There seems to be a real need to create more dog parks in urban environments in general and in Burlington City, New Jersey, specifically. Not only would a dog park in Burlington City, and other towns or cities, provide a designated safe place to take dogs to
play, exercise, and interact, but the dog owners would have the opportunity to interact and socialize with their neighbors. Residents who do not own a dog could also benefit because well exercised dogs are less likely to bark (Stecchi, 2006).

II. History of the Project

The inspiration for this capstone project came from three sources, a twenty-year career as a landscape designer, a trip to Japan, and the acquisition of three collie dogs.

As a residential landscape designer, I obtain great joy from listening to the homeowner’s needs and then transforming their needs into solutions. The entire process is exciting; from meeting with the initial customer, to measuring their property, to drawing a plan, to installing a pleasurable outside living space, and creating an extension to their home. Over the years I have noticed the need for well-designed areas for the homeowner’s dog to exercise, relieve itself, and to interact with other dogs. Many yards are enclosed within a six foot fence and generally there is not a specific enclosure for the family dog. Some homeowners install invisible electric fences whereby the dog is permitted to run in a defined area of the yard, but is given an electrical shock when it gets too close to a boundary. However, a newly landscaped yard can be quickly destroyed. Enormous holes are dug, ruining the sod, rose bushes are sprayed with urine and die, and unattractive piles of feces act as landmines to the unsuspecting visitor.

During a recent vacation to Japan, my husband and I traveled to Mt. Fuji by chartered bus. We learned that many communities and apartment buildings in Tokyo do not permit residents to own a dog. The Japanese dog enthusiasts have come up with a creative
alternative solution, renting a dog by the hour. Customers of this unique dog park may choose their favorite breed and partake in various dog activities such as playing fetch, walking the dog, and participating in amusing rides. The concept has become so popular that there are dog park franchises (see Figure 4). The Fuji Subaru Doggy Park in Mount Fuji, Japan has a website (www.doggypark.jp) that features photographs of the many amusement park activities one can participate in with their dog and mug shots of the various breeds of dogs that the dogless owners can rent for the day.

As a new owner of three collie dogs, I have quickly realized the huge challenge of owning so many dogs in an urban environment. A small yard does not provide an adequate amount of area to exercise three dogs and the small yard cannot handle the
excessive amount of wear and tear. Neighbors do not appreciate the amount of barking and walking three dogs long enough to provide them with the proper amount of exercise is also problematic. My interest in landscape design, environmental issues, and the well being of dogs has led me to want to learn more about dog parks. Information I gathered from books, trade journals, and websites will help to show what is currently available about the subject of dog parks.

III. Literature Review

From information gathered, there seems to be mixed opinions from the experts concerning dog parks. The World Wide Web is a great source for getting information about installed dog parks. Most dog park websites list details such as hours, rules, amenities, and directions. Before taking a dog to a dog park, it is important to become familiar with dog behavior, training, and health and there is plenty of information written on the subjects. It is possible that a dog or pet owner could contract an internal parasite from a dog park and there is literature describing how to prevent this from occurring. There are sources listing what kinds of plants are poisonous to dogs which can be helpful to dog park designers. Articles and websites are written addressing the issue of proper disposal of dog waste and the problems that occur if done incorrectly. There are several books written about dog law. Knowing some of the potential legal problems can possibly prevent problems for the dog park designer. There is not much written about designing a dog park, however there is plenty of information about designing parks and many of the same principles can be applied. Finally, it may not seem relevant to the design of dog parks, but it is important to become familiar with how dogs are viewed in other countries.
and how other countries treat their dogs. There is a lot of information on the subject and it interesting to get other perspectives about dogs.

**Dog Parks: Pros and Cons**

The book entitled *So You Want to Build a Dog Park? A Comprehensive Guide for Municipalities and Private Entities* 6th edition written by Susyn Stechi (2006) has some valuable information, but is far from complete. To its favor, the book has a state by state listing of laws pertaining to dogs, detailed plans on how to construct dog park equipment, an explanation of what a dog park is, worthwhile points on how dog parks add value and improve the quality of life for a community, and a useful section on what rules should be posted in a dog park. Information that is important, but lacking includes 1) the use of scientific plant names since common names change depending on the area in which one lives, 2) recommendations for specific plants to be used in a dog park as it would be helpful to know what trees and shrubs can withstand urine or heavy traffic, 3) a more extensive listing of pavement surfaces and the pluses and minus of each, and 4) references for the information given. The book undoubtedly is a step in the right direction even if the title overstates just how comprehensive it is.

There are some detractors (critics) of dog parks such as Ed Frawley, a dog trainer and producer of over 120 dog training videos and DVDs, who has written an article entitled “Dog Parks Why They are a Bad Idea” (Frawley, 2005) that appears on his website. He feels that dog parks are “well intended, but a bad idea” because most patrons do not understand the pack social structure. He states that many dog park patrons are
irresponsible because they spend too much time socializing with the other humans rather than paying attention to their pet. He is concerned because patrons bring aggressive dogs into the park that bully the other dogs and patrons often ignore the posted rules such as permitting small dogs into the large dog section. If a dog is taken to a dog park, Frawley gives the reader a list of sensible dog park advice such as “go to the park at off-peak hours to learn when the quiet times are” (Frawley, 2005). However, one of his suggestions is to purchase one of his remote training collars which will shock the dog into submission. I feel that there are better ways to control a dog’s behavior such as rewarding a dog with a treat or praise when it has done something good.

Another individual who is “lukewarm” on the idea of dog parks is Cesar Millan, author of *Cesar’s Way* and star of the National Geographic Channel’s Dog Whisper. He has written a book dealing with dog psychology, dog dynamics, dog aggression, and how to raise a balanced and healthy dog. It is hard to put this book down because it is so well-written, informative, and honest. Like Frawley, Millan is not a big fan of dog parks because he feels the dog owners do not understand “the power of the pack”. He thinks that a dog park should be a place to help increase or maintain a dog’s social skills and a place where a dog can spend time with other dogs. He does not think that a dog park should be a substitute for exercise and walking (Millan, 2006).

**Established Dog Parks**

There are many websites by local town groups who have started a dog park in their community. Each park that I visited for this project has its own website which contains
information such as park rules, photos and directions to the park. The list includes Camden County, NJ (www.camdencounty.com), Hamilton, NJ (www.hamiltonnj.com), Mount Laurel, NJ (www.mountlaurel.com), and Princeton, NJ (www.rockytopdogpark.com), as well as Tudek Dog Park, State College, PA (www.tudekdogpark.org), and Battery Park, NY (www.dogpublic.com).

There is also evaluation and ranking of the many dog parks that now exist. The Helping Animals website (www.helpinganimals.com) lists People for the Ethical Treatment of Animals (PETA) top ten dog parks in the country. Included in the list is Rocky Top Park in Princeton, NJ which is one of the dogs parks I studied for this project. To get the results, PETA polled hundreds of visitors of their website (www.helpinganimals.com) to find the best dog parks in North America.

Author Christine Matturro McLaughlin (2005) wrote a handbook on places dog owners can take their dog in the Philadelphia region. She lists some of the dog parks I studied for this project and she rates each park. She also includes hotels that accept pets as their guests.

There are many websites that provided dog park statistics and locations of dog parks. The website dogpark.com is comprehensive and contains lists of many of the dog parks in the United States and Canada. It is helpful because it states the hours of operation, size of the park, and it posts features such as parking, access for the disabled and type of surface that the dogs will be playing on. The website also provides great information on
how to start a dog park, what things to consider before instituting a park, dog park rules, and dog park etiquette. The Humane Society website (www.hsus.org) posts statistics from the American Pet Products Manufacturers Association (APPMA) 2005-2006 National Pet Owners Survey and contains information about animal abuse and neglect and how to choose a pet. American Pet Products Manufacturers Association (APPMA) has its own website (www.appma.org) that posts pet statistics such as how many pets are owned in the United States and how much money the average American spends yearly on his or her pet(s). Dog owners spend from $650 to $1500 per year per dog for food, medical care, licenses, supplies, and other items.

**Dog Behavior, Training and Health**

There is an incredible amount of information on dog behavior, dog training, and dog health which is important in the discussion of dog parks because an aggressive dog can severely injure or harm the other dogs or people at a dog park and a sick dog could spread diseases. Brian Kilcommons (1999) has written *Good Owners, Great Dogs*, a training manual on how to care for puppies and adult dogs and how to understand and solve canine problems. A properly trained dog will come when it is called which will prevent possible conflicts at a dog park with other dogs. His book is easy to read and is a good, basic how-to guide for training a dog. Patricia B. McConnell, Ph.D. (2006) has written several books including *The Other End of the Leash* which helps to explain how to properly play with your dog, training techniques, and how to better communicate with your dog. In her book *For The Love of A Dog*, Dr. McConnell discusses a dog’s emotions and how to read a dog’s facial expressions and posturing which is critical for
those planning to take their dogs to a dog parks. *The Dog Whisper* by Paul Owens (1999) gives a non-violent approach to training a dog and provides a list of essential things a dog needs for optimal health and growth. Owens explains how to train a dog and discusses the importance of a good diet and exercise. The American Kennel Club's book entitled *The Complete Dog Book* (2006) is a reference book about the hundred and fifty-three breeds of dogs recognized by the club, the history of each breed, dog health, and nutrition information. A dog that is unhealthy is thought to be weak and is more vulnerable to attack by the other dogs at a dog park. The Animal Planet website (www.animal.discovery.com) gives basic pointers on how to exercise and properly care for a dog. On the subject of dog health, fitness professional and dog groomer Shawn Hamilton (2007) wrote a charming article on how to stay fit by “Working Out With Your Dog”.

In the article entitled “Bark Parks – A Study on Interdog Aggression in a Limited-Control Environmental”, the authors Shyan, Fortune, and King (2003) observed and recorded the aggressive behavior of the dogs in one dog park over an eight-month period. The conclusion was that out of the 177 dogs observed, only 9 dogs were aggressive, which seems to indicate that aggressive behavior was not a major concern in a controlled dog park setting. The Animal Benefit Club of Arizona website (www.animalsbenefitclub.com) posts two excellent illustrated handouts. The first one deals with interpreting the meaning of common dog postures and the other focuses on how dogs communicate with one another.
**Dog Health with a Focus on Internal Parasites**

There is an abundance of information about dog health and internal parasites which are important to understand as dogs can spread these to one another at dog parks. The American Veterinary Medical Association has produced an easy to understand pamphlet entitled “What you should know about Internal Parasites in Cats and Dogs” which describes the most common parasites, how to detect if your dog has parasites, and preventative tips. Robert M. Corwin and Roderick C. Tubbs (2005) wrote an article for the University of Missouri’s Extension Agency concerning “Common Internal Parasites of Swine”. Many of the same parasites that are contracted by dogs effect the swine population. The article describes the lifecycle of various parasites and ways to destroy the eggs to prevent further infestations. David Harden (2006) who works in the College of Veterinary Medicine at the University of Missouri wrote an article for the Extension Live and Learn about “Controlling Internal Parasites of Horses”. Again, some of the same types of parasites that infect horses also infect dogs. The article includes descriptions of the parasites’ lifecycle and prevention and control measures. Internal parasite transmission is a serious concern at a dog park to those dogs that are not current on their medical vaccinations.

**Dog Health with a Focus on Poisonous Plants**

The dog-pack website ([www.dogpack.com](http://www.dogpack.com)) lists plants that are poisonous to dogs. The Company of Animals is a business that studies and tests pet products for quality and safety and the website posts their philosophy. On February 10, 2007, employee Fiona Whelan did a pod cast for PodVet in which she went into detail on how consumers know
if they are picking a safe toy for their dog. Many dog park patrons bring dog toys such as
tennis balls to a park. This is dangerous because poorly made or improperly sized toys
could be swallowed and cause the dog to choke.

**Dog Waste: A Perennial Problem of Dog Parks**

There is a limited amount of information regarding the environmental concerns
associated with pet waste pickup. The United States Environmental Protection Agency’s
website ([www.epa.gov](http://www.epa.gov)) article “Source Water Protection Practices Bulletin Managing Pet
and Wildlife Waste to Prevent Contamination of Drinking Water” discusses various ways
the general public can protect source water by implementing a management plan to pick
up pet waste. In the article entitled “Picking Up After Your Pet” from the website
([www.warringah.nsw.gove.au](http://www.warringah.nsw.gove.au)) the author shows how a dog park in Warringah, Australia
creatively solves its dog waste problem by having a special “pooch patch” area. In the
piece called “Public Open Space and Dogs” from website ([www.petnet.com.au](http://www.petnet.com.au)), the
reader learns dog waste disposal methods and guidelines for dog park design and
management. The “Pollution Prevention Fact Sheet” is a scientific journal that describes
dog park design qualifications and posts statistics on dog owners’ waste pickup habits. In
the article entitled “Responsible Dog Ownership” from the website ([www.somdog.org](http://www.somdog.org)),
the author posts a top ten list of reasons to pick up after your dog and a list of proper dog
owner etiquette.
**Dog Parks and the Law**

There are several books dedicated to legal issues concerning dogs which are relevant to the discussion of dog parks because of the potential for dogs biting one another and, more seriously, people. Mary Randolph (2005) has written two easy to read legal guides for dog owners entitled *Every Dog’s Legal Guide* and *Dog Law*. Both books address dog owner liability, dog bite statutes, and basically any legal issue that concerns a dog. To prevent possible legal problems, designers should be aware of the potential risks and liabilities and design accordingly.

**Park Design**

There is not much information written about dog park design; however there is a considerable amount written about general park design. Much of the same information can be applied to dog parks. Landscape Architect and author, Albert Rutledge, ASLA (1971), describes to the readers how to effectively critique a park in his book *Anatomy of a Park*. Great graphics drawn by the author help to further explain his points. In the book *People Places*, the editors Clare Cooper Marcus and Carolyn Francis (1998) who have both taught at the Department of Landscape Architecture at the University of California, Berkeley, discuss how urban open spaces are used and offer ways to create pleasurable park experiences. The book includes photographs, a section that focuses on the American Disability Act (ADA) regulations, and a short discussion on dog park design. They suggest that rather than banning dogs from all parks that “most cities have at least one park that could accommodate a “dog only” section”.
Jack Schwartz (2004) is a dog park patron who studied ten dog parks in the San Francisco area for over ten years. From his years of observations, he compiled a list of dog park design principles and wrote a helpful article called “Best Dog Park in the World”. He explains the importance of gate placement, what types of surfaces work best in a dog park, and the benefit of separating the large dogs from the small dogs. Scott Loosley (1994) explains in his article “The One True Path: Decomposed Granite Pathways Require Proper Installation” the benefits of using decomposed granite and how to actually install the product. Decomposed granite works well as a dog park surface because it is soft on the dog’s joints, can be easily brushed off the dog’s fur, and it is environmentally friendly. The K9 Grass ™ website (www.foreverlawninc.com) describes the value of using this particular type of artificial grass over natural grass at a dog park and the site includes drawing specification for installation. K9 Grass ™ is a better alternative than grass as a surface at a dog park because it can withstand the heavy traffic and requires less maintenance. The tree pit guard website (www.treesny.com) presents photos of creative and attractive ways to protect urban trees from dog urination which is a serious problem in dog parks.

**Dog Treatment around the World**

There is an endless amount of information describing Americans’ extravagant way of pampering their beloved dogs which also might include regular visits to the local dog park. Editorials such as “Boutiques Allow Pets to Live in the Lap Of Luxury More Owners Spending Money on Pet Pampering” (Gerasole, 2006) and “A Dogs Life Upgrade” (Baranauckas, 2006) prove how over-the-top Americans have become with
their dogs. The piece called “Rome Dogs Win Right to Daily Walk” (BBC News, 2007) demonstrates how the laws in Italy have been changed to improve the quality of life for dogs. On the other end of the spectrum, “S. Korea Dog Meat Row Deepens” (BBC News, 2001), “McCartney Attacks China Over Fur” (Adrian, 2005), and “The Dogs of Mexico” (Yucatan, 2000) demonstrate how differently other countries value dogs. It is interesting to point out the different ways other countries value dogs and how the concept of a dog park might be interpreted by foreigners.

IV. Dogs Around the World

In surveying the topic of dog parks, it seems pertinent to mention that dog treatment around the world ranges from luxurious care to cruel abuse. Dog parks exist where dogs are respected and prized. Most Americans go over the top when it comes to their dogs and some may consider constructing a specific park just for dogs extravagant. American dog owners consider their canines as members of their families, and some owners tend to primp and over-pamper them. According to the 2005 - 2006 American Pet Products Manufacturers Association (APPMA) National Pet Owners Survey, Americans spend an estimated $38.4 billion a year on their dogs.

Basic annual expenses for a dog owner include:

- Surgical Vet Visits $574.00
- Food $241.00
- Kennel Boarding $202.00
- Routine Vet $211.00
- Groomer/Grooming Aids $107.00
- Vitamins $123.00
- Treats $68.00
- Toys $45.00

Note: The participants were not asked in total what they spent on their dog annually and each category was asked separately (APPMA, 2006).
Jean Beuning opened Top Dog’s Country Club in 2000, which she describes as a “Club Med” for dogs.” The kennel’s amenities include heated tile floors, swimming pool, and a furnished “bungalow”. Dog activities include hiking, listening to music, watching television, dining on gourmet meals, and receiving a pedicure, complete with polish. Owners are lining up and paying well beyond $100 a night (Baranauckas, 2006) (see figure 5). Pamela Kuhn is a certified animal message therapist and charges $50 an hour to relieve aching dog’s muscles (Gerasole, 2006). Cesar Millan author of Cesar’s Way, feels that “Many dogs in America are not as happy or stable as they could be” (Millan, 2006) because he thinks they are unable to just be dogs.

Elsewhere dogs are not treated with kindness or dignity. An extreme example is in China where currently there is a portion of the population of dogs and cats in China that are being slaughtered and skinned for their fur. The animal welfare group People for the Ethical Treatment of Animals (PETA) believes that many of the animals are still alive as their skins are peeled away. “Campaigners estimate that over two million dogs and cats
are killed for their fur in China every year” (Addison, 2005). The process is horrific and unbelievable. The animals are packed by the dozens into small wire cages, stacked onto trucks, and transported to the slaughter house where the cages are tossed onto concrete floors. “The screaming animals, many with their paws now smashed from the fall, are then lifted out with long metal tongs and thrown over a seven foot fence” (Addison, 2005).

The fur is produced mainly and ironically for the United States and European fashion market. It is not illegal to trade dog and cat fur in the United Kingdom and most of Europe. Once the fur enters Europe from China, it is difficult to identify where the fur came from or what kind of fur it is, and the free trade policy makes it difficult to police. “The British Fur Trade Association, which represents the booming fur industry in the UK, insists that its members do not knowingly use dog and cat fur and have introduced a fur labeling system to try to guard against its use” (Addison, 2005). European Military Police Struan Stevenson says, “It is cheaper to make products from cat and dog than it is to make synthetic fur.” Stevenson has confiscated items such as a pelt made from four golden retrievers and a blanket made from around seventy cats (Addison, 2005).

Even though it has been banned from restaurants since the 1988 Seoul Olympics, dog meat has long been a traditional food choice in South Korea. Spicy dog soup is still a popular summertime dish especially for older men because it is considered to improve strength and virility. New regulations require the dogs to be instantly killed electronically. However, in the past, the animals were hung and beaten with baseball bats
to soften the meat before they were slaughtered (Herran, 2001). A dog meat restaurant owner from south of the capital of Seoul Park Seo-ho feels “Its my country’s own food culture; South Koreans will continue to eat dog meat no matter what other countries say against it” (Herran, 2001) (see figure 6). These two examples demonstrate that the idea of designing a dog park in China or South Korea might be an unlikely idea and an absurd concept to visitors to the United States.

Small packs of five to seven dogs live in the poor farming communities of Mexico. The dogs protect the land and take care of the women. They scavenge for their food and are permitted occasionally into the family home and tossed an occasional treat (Millan, 2006). In urban areas, due to the large number of homeless dogs, many Mexicans feel the dogs are a nuisance and services have been established to roundup and poison the animals. “Although the dogs are rarely aggressive, more often they are pathetically starved for both love and food. They are routinely shooed away as one does a fly, or bluntly kicked. They have thin, heads always to the ground hoping to sniff out some bit of edible garbage, and often diseased or injured” (The Dogs of Mexico, 2000).
In the poorer areas of Russia dogs run wild in packs and are even dangerous to humans (Millan, 2006).

“The reality is, in most of the world, dogs are not cherished in the same way they are in North America and Western Europe” (Millan, 2006).

At the other end of the spectrum, in cities like Helsinki, Finland the dog is welcome and can choose from more then 80 dog parks. As mentioned previously, in Mt Fuji, Japan, dog enthusiasts can go to a dog amusement park. Dog owners can enjoy rides and activities with their dog or if a patron does not own a dog, he can rent one by the hour. In Mexico, wealthy dog owners often walk their pets in parks or permit them to run off-leash in open spaces such as the grounds of the University of Mexico. In Rome, Italy new rules have been instituted that crack down on careless pet owners. Rules were drafted by the city of Rome’s Office for Animal Rights which order better treatment for all pets. The rules include a $625 fine for those who fail to take their dogs out on regular walk, fines for docking the ears and/or tails of a dog for cosmetic reasons, a ban on electric and pointed dog collars, and pet stores may no longer display animals in the store window. The Italian street police are undergoing specialized training to better understand the needs of animals (Wilkinson, 2005). “The rules are aimed at giving millions of pets, wild birds and other animals who live in the Italian capital - including 150,000 dogs and 300,000 cats - a dignified existence, compatible to their biological needs” (BBC News, 2005).
The concept of a specific area that a dog can exercise and socialize with other dogs may not make sense to a person from a different culture or, background, or even a non-dog owner. When trying to establish a new dog park, it is important to simply be aware of different viewpoints about dogs.

In summary, there currently is not a totally comprehensive source concerning dog parks with a focus on dog behavior, training, health, design, and environmental and legal issues. However, there is enough written information that can be combined to create such a document.

V. Methodology

For this study, in addition to reviewing the literature, I have gathered data in the following ways:

- Conducted two informal surveys with dog park users to determine why and how they use the dog parks.
- Conducted ten in-depth interviews with experts in various related fields about dog care and practices.
- Analyzed six dog parks in New Jersey, New York, and Pennsylvania to study their physical make-up, amenities provided, and visual appeal with accompanying photographic evidence for visual documentation.
A. Surveys

I conducted two informal surveys to gather information concerning the planning and development of environmentally sensitive dog parks in urban environments. In the first survey, I asked seven patrons of the Camden Dog Park two qualitative questions: What are the benefits of going to a dog park and what might help to improve the experience? Information gathered from this study has given supporting evidence as to why people bring their dogs to a particular dog park and how the experience could be enhanced. In the second survey, I asked fifteen residents of the city of Burlington City, New Jersey five questions as a means of assessing the need for a dog park in that city. The questions were:

1. Do you own a dog and, if so, how many?
2. How do you currently exercise your pet?
3. Have you ever had problems with another neighbor’s dog?
4. Do you feel that there is a need for a dog park in Burlington City, New Jersey?
5. In what ways would a dog park benefit you?

B. Interviews

I conducted four qualitative interviews with people who are knowledgeable in the fields of veterinarian sciences, dog training, dog daycares, and owning a dog park. This information provides an over-view on how professionals in the field of dogs view dog parks.

C. Investigation and Photographic Documentation

I conducted an analysis of six dog parks in three states (The Camden, NJ, Hamilton, NJ, Mount Laurel, NJ, Princeton, NJ, State College, PA and Battery Park, NY) to obtain first-hand information on the amenities and design features of each. From this data, I intend to
develop a handbook on the functional aspects and the visual layouts of dog parks for prospective park developers to use as a resource. I include suggestions for additional services, conveniences, and design aspects that could enhance the overall experience of the dog park users and their pets, such as ideas to boost the park’s appearance and suggestions on how to create an environmentally-friendly setting. I took photographs of the local and regional dog parks to record the amenities offered and to provide a visual description. I also took photographs of interesting interactions between dog owners and their pets. In addition, I gathered photographs from web sources and printed material. Some of the photographs are featured throughout my paper.

The features I examined were the following:

1. Signage
   a. Are rules posted?
   b. Are the rules easy to read and understandable?
   c. Do the rules seem to be followed?
   d. Do the rules appear to be enforced and how?
   e. Location of signs
   f. Legibility of signs (i.e. color, size, etc.)

2. Fencing
   a. What type?
   b. How high?
   c. Configuration?
   d. Size of area that is fenced?
   e. Is there a separation between large and small dogs?
   f. What kinds of gates are used?

3. Seating
   a. Does the park provide adequate seating?
   b. What kind?
   c. Is there enough?

4. Surfaces
   a. What types of surfaces do the dogs run on?
   b. Are the surfaces durable?

5. Paths
   a. Are there paths through the dog park?
   b. How are they constructed?
   c. Are they effective?
6. Parking
   a. Is there parking available?
   b. Is it easy to park?
   c. Are there enough spaces?
   d. Is there handicap parking?

7. Lighting
   a. Is there night lighting and is it energy efficient?
   b. What type?
   c. Location?

8. Structures
   a. Are there buildings to protect users from the elements?
   b. What type?
   c. How many?

9. Plant material
   a. Is the park landscaped?
   b. Are there trees that provide shade?
   c. What kinds of plants are used?
   d. Are the plant species native?
   e. What is the condition of the plant material?
   f. Are any of the plants poisonous to dogs?

10. Dog activities
    a. Is there equipment provided such as jumps, tunnels or A-frames?
    b. Are there interesting areas for the dog to explore?
    c. Are there toys for the dogs to play with?

11. Water
    a. Is there a water fountain for both dogs and humans?
    b. Do the water fountains appear sanitary?
    c. Is there an area where the dogs can swim?
    d. Is there a place for dogs to shower off?

12. Food
    a. Is there a place to purchase food for both dogs and humans?
    b. Types of food offered?

13. Waste disposal
    a. Are there trash cans?
    b. Are there enough?
    c. Are they being used?
    d. Are they being maintained?
    e. Does the park provide bags for clean up?

14. Bathrooms
    a. Are there bathrooms provided?
    b. What kind?

15. Maintenance
    a. What is the overall condition of the park?
    b. Is it maintained?
V1. Results and Discussion

A. Surveys

1. First Survey

I asked seven patrons of the Camden Dog Park two questions each:

Question #1: What are the benefits of having a dog park in this city?
Question #2: What might help improve the experience for you?

Responses to What are the benefits of having a dog park in this city?

1. “I go to a dog park because I get to meet other people who are just as passionate about dogs as I am.”

2. “It helps to have a dog park in my neighborhood because it increases the property value of my home.”

3. “I decided to purchase a dog since there is a dog park that is walking distance from my condo.”

4. “I moved in this area because of the dog park.”

5. One person responded that he “liked coming to the park because he likes to watch the dog fights.”

6. “I live in a small apartment and I come to exercise and socialize my dog.”

7. “To give my dog some exercise and so it can meet other dogs.”

The number one response was that their “dog benefited from the exercise and was able to socialize with other dogs.” There are many reasons why people go to a dog park and it is not surprising that the main reason is to exercise and socialize their dog. However, it was
quite interesting how many other benefits a dog park has to a community. Most people found that the dog park was beneficial for “good” reasons with only one person favoring it for a “sick” reason.

Responses to “What might help improve the dog park experience for you?”

1. “The water fountain should be installed inside rather than outside the dog park. Don’t shut off the water supply the winter months.”

2. “It would be better if the park had more trees.”

3. “I wish there was better consideration for water drainage. The dog park is located on the lowest point, and when it rains the water has no where to go. The place is always muddy and I don’t like bringing home a dirty dog.”

4. “I wish the park was more private. It would have helped if they added more trees.”

5. “The park is located right next to a busy street and I am afraid if my dog got loose, he might get hit by a car.”

6. “It would be nice if they added some kind of obstacles that my dog could play on.”

7. “Keep waste bag dispensers filled.”

It is clear from the responses that often not enough thought has been put into the experience of both the patron and the dog. For instance, an open area next to busy traffic does not make for a relaxing experience and it is unsettling for the dogs and patrons to watch cars zipping by. Simply adding a few objects that the dogs can climb on and jump
over can make for a richer experience and it can be done very inexpensively. Trees will help make the park feel more intimate and provide protection from the harsh sun. Finally, it would be helpful if there was a water fountain available, especially a water fountain that was reliable and not periodically turned off.

2. Second Survey

I asked fifteen residents of Burlington City, NJ five questions each:

Question #1: Do you own a dog and, if so, how many?
Question #2: How do you currently exercise your pet?
Question #3: Have you ever had problems with another neighbor’s dog?
Question #4: Do you think that there is a need for a dog park in Burlington City, New Jersey?
Question #5: In what ways would a dog park benefit you?

Summary of Responses

1. Of the 15 people I interviewed, only three people owned a dog.

2. Those who did own a dog walked their animal or allowed it to exercise in its own backyard or fenced off doggy area of their property. Occasionally, these dog owners would play fetch with their dog.

3. None of the people surveyed had problems with their neighbor’s dogs, but one woman mentioned that her neighbor’s cat comes into her yard and leaves “little presents and she is tired of it!”

4. All but one participant surveyed felt it was an excellent idea to have a dog park in Burlington City, NJ.

5. Some of the benefits included:

   a. “Residents won’t be startled by an unleashed dog running up to them.”

   b. “It might make the city a little cleaner.”
c. “It would be great for people who don’t have backyards.”

d. “A dog park could possibly reduce some of the noise in the town. When one dog starts barking, all the dogs join in and it always seems to happen when I finally get my daughter to go to bed.”

e. “Hopefully, I won’t have to step in dog poop anymore.”

f. “It would be nice for the dogs to have a specific spot just for them.”

g. One gentleman who owns two dogs and is not in favor of a dog park said that, “it is a waste of time going to a dog park and it is a huge liability if someone gets bitten.”

Basically, most people were in favor of the idea. It was surprising that only three people surveyed had a dog since according to the 2006 American Pet Products Manufacturers Association statistics, one out of every three people own a dog in the United States. It was also interesting to see that non-dog owners saw a benefit of having a dog park and were generally in favor of the idea.

**B. Interviews**

The following four interviews provide some insight on how professionals such as a dog obedience trainer, veterinarian, doggy day care owner, and dog park owner view dog parks. Dog Obedience Trainer, certified Dog Behavior Consultant, and owner of The Jersey Dog, Ms. Renee Premaza “hates” dog parks, however she does see there is “a real need out there for places to bring dogs to play and get exercise.” She has a problem “when there is nobody there to supervise, the dogs are left to their own devices and all
too often fights break out which can be disastrous.” She feels that the cause of the problem is when the 

“idiot owner with his badly behaved dogs brings his untrained and wild dog to the dog park. Once there, he thinks it’s time to socialize and doesn’t pay a bit of attention to his own dog. Suddenly, his dog is bullying someone else’s dog and then all hell can break loose. Sometimes there are bad fights where dogs get injured. Sometimes young dogs get attacked by the bully dog and that sets them up for a lifetime to be fearful of dogs or that particular type of dog forever. Bully dogs can come in all breeds, sizes and colors. Labs can be bullies, collies can be bullies, pit bulls can be bullies. Usually, when you see a dog bullying another dog and the owner is completely unconcerned about it, the owner takes on the attitude that ‘hey deal with it’” (Renee Premaza, personal communication, February 16, 2007).

The only time Ms. Premaza recommends dog parks to people is “if they can’t or won’t spend the money for their high-energy dog to go to a daycare or they can’t or won’t hire a dog walker to exercise their high-energy dog.” Anytime she recommends a dog park she “always tells them: ‘This is NOT social hour for the humans!’” She recommends “watching your dog like a hawk to make sure (1) the dog is safe, and (2) the dog is not bullying other dogs.” She also warns dog owners to “keep a watch on all the other dogs to make sure they’re all behaving because if they’re not, chances are good that your own dog could be affected by the one who is making trouble” (Renee Premaza, personal communication, February 16, 2007).!
Renee does not like the dog parks that do not separate the large dogs from the small ones. She feels that

“large dogs behave differently, and while some small dogs are quite capable of handling themselves with larger dogs, stuff still happens and nobody is watching closely enough. There are cases of German Shepherds behaving towards little dogs as though they are prey. There’s a condition called “predatory drift.” German shepherds can be playing with a little dog and quite suddenly attack the small dog”. She does not think “there’s a good explanation for this, but it does happen” (Renee Premaza, personal communication, February 16, 2007).

Ms. Premaza does approve of bringing a dog to a doggy day care because “the dogs are always supervised 100% of the time.” She does say that, “even with supervision, fights can break out because dogs are dogs.” She also says she does not “claim to be an expert on dog parks,” but she said she has heard enough and seen enough that she would “avoid this situation for any of her own dogs” (Renee Premaza, personal communication, February 16, 2007).

Veterinarian Dr. Magi Casal, a specialist in Genetic Reproduction and Pediatrics at the University of Pennsylvania, feels that dog parks are both a good and bad idea. She says that dogs six to twelve weeks of age need to socialize with other dogs, however, puppies have not been given all their shots at that young age. The puppies are very susceptible to diseases such as distemper, parvo, parasites, corona virus, campylobacter, and infections.
She says that a dog will contract the disease from its feet and then licks its paws. The most typical ailment she sees from a dog park is vomiting or diarrhea and suggests wiping off the dogs feet after returning home (Magi Casal, Ph.D., personal communication, February 16, 2007).

Dr. Casal is from Europe where as a child she remembers that dog owners were permitted to take their dogs everywhere including restaurants. She says because dogs are included in so many activities, the European dogs are better socialized. She says that generally most people who go to a dog park love their dogs and are good about policing the situation; however, dogfights do take place and some dogs should not be permitted into a dog park. Other problems she has seen include homeless people sleeping in the park at night and discarding their unwanted bottles. These broken glass bottles then become a danger to the patrons of the park. She feels that there should be a small and large breed section because the larger dogs could definitely hurt the smaller ones (Magi Casal, Ph.D., personal communication, February 16, 2007).

Another concern is an overcrowded park because this could lead to aggressive behavior and possible fighting. A park in which a dog can swim is a wonderful idea. Swimming is especially great exercise for older dogs because it strengthens the dog’s muscles without the constant pounding of running. The ultimate dog park she saw was made for a dog research center at Ciba Geigy Company in Switzerland. The surface was made of Astroturf and could be hosed down everyday and cleaned with a mild soap and light beach solution. It came complete with plastic fire hydrants which could also be sterilized (Magi Casal, Ph.D., personal communication, February 16, 2007).
Scott Russell is the owner of Dog Days which is a doggy daycare located in Marlton, New Jersey. Potential patrons must provide Scott with up to date vaccination records and dogs are screened for their behavior before they are permitted to attend. Once accepted, the small and large dogs are separated and may enjoy various indoor activities such as playing fetch, running, socializing with other dogs, and playing on the jungle gym. On the rare occasion a dogfight breaks out, the dogs are pulled apart and are placed in a separate “timeout section”. After work, patrons pick up their pets and are greeted with a calmer and more relaxed dog. Owners pay as much as $29 a day for this service (Scott Russell, personal communication, February 16, 2007).

Scott is not a big fan of dog parks because he feels they are unsupervised and even though there are posted rules, people don’t always follow them. He thinks that after a township dog park is opened, it usually lacks the resources to be properly maintained. A few of his clients’ dogs have been bitten by aggressive, dominant dogs. He also has concerns about the sanitation of dog parks because many are muddy and dirty with unemptied trash cans overflowing with feces. His doggy daycare is subjected to a yearly visit from the Board of Health yet he does not think that township-run dog parks are held to the same standards. Everyday he and his staff must disinfect the 3/4” rubber flooring, walls, dog toys, and equipment with a product called Neutral Quat that is used by veterinary hospitals. It is safe for the animals and kills any potential disease. The flooring is detail-cleaned once a week with the aid of his leased $5000 floor cleaner (Scott Russell, personal communication, February 16, 2007).
Mr. Russell is, however, a fan of a privately owned dog park located in Princeton, New Jersey. At this facility, the dogs are medically and behaviorally screened, supervised, and the property is properly maintained. He thinks it is a financially brilliant idea because the owner of the dog park does not have the expense of maintaining a building like he does. The only downside he sees is that it is a seasonal business (Scott Russell, personal communication, February 16, 2007).

Gretchen Zimmer wanted a safe, enclosed place for her two Brittany Spaniels to run off-leash. At the time, there was not a designated area where she could take her dogs to exercise, so she would run the dogs off hours in the fenced in fields of her local high school. Unfortunately, the school officials found out what she was doing and kicked her out. This is when she decided to open up her own dog park and now she is the owner and manager of Rocky Top Park in Princeton, New Jersey. She purchased 5.75 acres of land, cleared the brush, installed seven-foot high fenced in areas, a pond, night lighting, a large gravel parking lot with handicap access, an outdoor privy, a gazebo, and benches (Gretchen Zimmer, personal communication, February, 24, 2007).

Metal boxes generously supplied with poop bags are attached to some of the stately, seventy-foot tulip poplar *Liriodendron tulipifera* and sweet gum *Liquidambar styraciflua* trees. Members are required to pick up after their pets and they must deposit the used bags into one of the many strategically placed trash cans. Ms. Zimmer was surprised that many of her new clients did not even know how to use the poop bags and were at first disgusted about the idea. Since the clients now have been educated about the importance of picking up after their dogs and are used to the concept, she feels that they are more
likely to use poop bags when they take their dogs to other locations. At first, Ms. Zimmer would put all the fecal trash into a rented dumpster, but after complaints from neighbors about the noisy, weekly 6:00 AM trash pick-ups, she decided to simply take the trash home with her. She now places the approximately three large bags of feces out with her regular home trash (Gretchen Zimmer, personal communication, February, 24, 2007.)

Gretchen said that some of the beautiful trees died soon after she opened because of the heavy construction equipment that compressed the clay soil. Lately, more of the older trees have died and a tree expert told her that the cause was the constant traffic of dogs and humans. The continuous amount of dog urine on the tree roots does not help the situation. The surface of the dog park pens are covered in approximately three inches of chipped wood which she gets for free from the township. She keeps a large pile of wood chips nearby to constantly maintain the pens (Gretchen Zimmer, personal communication, February, 24, 2007).

This privately run facility is open seven days a week from 6:00 AM - 9:00 PM. Members are charged a fifteen dollar registration fee, and can choose from a variety of plans including unlimited (seven days a week), weekly, or weekend. Rates are dependant on the number of dogs owned and there are three, six, or twelve month options. The signup fee is waived for the six or twelve month option which also entitles participants to a one-time “freeze” to their account. With advanced notice, members may hold their account from one month to a year before resuming the remainder of their membership. Members are given a special key to access the triple gates. The triple gates prevent the dogs from
escaping and non-members from entering. Depending on the plan, the price can range from $32 a month for one dog up to $56.50 a month for four dogs a month (Rocky Top, 2007).

On Saturdays and Sundays from 12:00 PM until closing, a non-member may bring their dogs for a visit at a cost of $10 dollars and are charged an additional $2 dollars for a second dog. Non-members may bring puppies to the weekend Puppy Play Group for $4 dollars and small dogs can attend the Small Dog Social in the Garden area of the park for $5 dollars. Before being admitted to the park, patrons must provide a written proof of current vaccinations i.e. rabies and DHLPP (also called distemper combo) (Rocky Top, 2007).

Rules include that visitors must be eighteen years old to bring a dog alone, children must be eight years of age and need to be supervised by their guardian, dogs must be at least four months old, all dogs should be on a preventive heartworm program year round, female dogs in heat are not allowed, and sick dogs are not permitted. Dogs must be on leash at all times outside of the park. The collar must be a regular type collar and no choke or prong types are permitted inside the park (Rocky Top, 2007). To stop dogfights, owners must pull their own dogs away from the other dog(s.) Dogs should be discouraged from crowding around the gate and the number one rule is to be aware of what your dog is doing at all times. Ms. Zimmer encourages her patrons to walk around and play separately with their dogs. Outside the fenced in area, she even built a path that weaves through the woods where patrons could walk their leashed dogs. However, the
patrons did not use this feature and she has now allowed the path to grow over. Ms. Zimmer says it is hard to get the owners to move around. They like to stand around and talk to each other, which in turn causes the dogs not to move around as much as they should (Gretchen Zimmer, personal communication, February, 24, 2007).

Toys are permitted and there are tennis balls and remnants of toys scattered around the park. Ms. Zimmer warns not to bring toys if the dog is the least bit possessive. If one decides to bring a toy, she warns that the toys may not come back in the same condition. She also permits treats into the park, but suggests caution. She suggests bringing treats in air-tight containers, being discreet, restricting treats to small bite sizes, and to only give a treat when there are no other dogs nearby (Rocky Top, 2007). The dog does not need to be exercised before coming to her park. One time she encouraged an owner of an overly active dog to exercise his dog prior to entering and it did not seem to make a difference (Gretchen Zimmer, personal communication, February, 24, 2007).

By the time Zimmer finally opened her business, two new township operated dog parks opened up near her facility. She said that the “free parks” did not seem to compete with her business because the township run businesses were not well maintained and did not offer as much land and amenities as her park does. Her main competition is doggy daycare. She says that even though she only charges $35 a month, dog owners feel guilty leaving their beloved dog home alone all day and will pay as much as $35 a day for a daycare. On the weekends, dogs that have gone to a daycare all week are too tired to participate at her park. Unlike Scott Russell’s indoor doggy day care mentioned
previously, Zimmer is not required to a yearly board of health inspection. Zimmer gets most of her business from her website, people driving by and seeing the sign, word of mouth, and local trainers who recommend her facility. People for the Ethical Treatment of Animals (PETA) voted her park as the number four top dog park in the country. PETA posts the list on their website which is great advertising for her as well (Gretchen Zimmer, personal communication, February, 24, 2007).

The four professionals agree that more supervision and better maintenance practices are needed at dog parks. Paying for admittance into the dog park (even if just a nominal amount of money) and requiring patrons to provide current vaccinations should be required. Having to pay for the privilege of entering a dog park gives the dog owner more of a sense of ownership and requiring medical documentation helps to eliminate some of the irresponsible dog owners and helps to keep the dogs healthy.

C. Analysis of Features in Six Dog Parks with Photographic Documentation

1) **Signage**

a. Are rules posted?
b. Are the rules easy to read and understandable?
c. Do the rules seem to be followed?
d. Do the rules appear to be enforced and how?
e. Legibility of signs (i.e. color, size, etc.)

In the two privately owned dog parks I visited in Princeton, NJ and at Battery Park, NY, no rules were posted that had to be followed. However, in all four of the public dog parks I visited a large sign was posted outside each of the parks indicating the rules to be followed while in the park. The policies listed were similar in nature to each other.

Below is the set of rules for the Laurel Acres Dog Park in Mount Laurel, New Jersey:

- All Dogs must remain on a leash until they are inside of, and before they leave the pre-entry area.
- Keep pre-entry gates closed at all times.
- Dogs 40 lbs. and over must be in the LARGE run. Dogs under 40 lbs. must be in the SMALL run.
- Owners must carry a leash at all times.
- Owners must remain with and monitor their dog(s) at all times.
- If your dog becomes aggressive, put it on a leash and remove it immediately.
- If your dog eliminates, you must scoop the poop. Failure to do so may result in a fine and/or expulsion from the park.
- If your dog digs, it must be interrupted and the hole filled.
- Children under the age of 12 must be accompanied by an adult.
- Dogs in heat, ill, and/or dogs with internal or external parasites (fleas, ticks, worms...) are not allowed in the dog run.
- All dogs must have current rabies shots and other vaccines required by state, county and local law. All dogs must have a current municipal dog license displayed at all times.
- All dogs must be at least six months of age.
- There is a maximum of three (3) dogs per person allowed at any one time.
- No food, rawhide, bones, toys or other personal items may be brought into the dog run.
- If your dog barks excessively, it must be removed.
- OWNERS: You are responsible for your dogs! Failure to obey any of these rules may result in a fine and/or expulsion from the park (see Figure 7 and 8)
Information about Signage at Dog Parks

At the entrance of a dog park, it is important to clearly post the rules so visitors understand how they and their dogs are expected to behave; however the rules are of no
use if they are not followed and enforced. Only at the privately run dog park in Princeton, New Jersey were the patrons required to show proof of vaccinations, and the person who enforced the rules did so on only the weekends. At all the parks, the patrons had to police the area themselves. Visitors would remind the other patrons when their dog was pooping. Dog owners would even pick up after other owners’ dogs. One patron said “I am sure there are plenty of times I just missed picking up after my own dog and someone has done it for me. I am simply returning the favor, and I certainly don’t want to accidentally walk in it.”

It is best to introduce a new dog to a pack when the pack is already worn out (Millan, 2006.) Dog fights are usually stopped by the owners by pulling the dogs away from each other by their hind legs. If there is a particularly aggressive dog at the park (and that dog is not yours), it is just best to leave and come back at a later date. Toys are not permitted into the parks I visited, with the exception of the Princeton dog park. However, this rule was not enforced and I saw tennis balls and half-eaten toys scattered around all the parks. Some of the rules seemed ridiculous to me. For instance, no one comes to a park with a shovel to fill in the holes that their dog may create. It was a common occurrence to see small dogs in the large dog section. This policy really needs to be enforced because the smaller dogs could easily get injured or even killed by an overly excited larger dog. The main problem with all the parks was that no one monitored the dogs or their owners or enforced the policies. Ideally, the patrons need to know that they won’t be permitted back into the park if they break the rules and/or receive a fine if the rules are broken.
There are typically three types of signs that could be posted at a dog park. The list includes: regulatory, advisory, and warning signs. The size and location of the sign is dependent on the type of information that is to be presented. It is important not to post too many signs because they will not be read. A sign should be installed at every entry point and between access zone areas. The message should be simple and clear and symbols should be easy to recognize. To better improve the relations with the patrons, keep a positive tone to the rules and regulations. When the access zone changes, it is best to provide a map and, in order to report damage or make a complaint; it is good to have a sign posted that provides a contact name and address (Petnet, 2007). Signs that have a light background with dark lettering are the most legible combination. If possible, place signs just below eye-level at approximately four feet high and follow the ADA guidelines (Marcus & Cooper, 1998).

2) Fencing

a. What type?
b. How high?
c. Configuration?
d. Size of area that is fenced?
e. Is there a separation between large and small dogs?
f. What kinds of gates are used?

Tudek Park in State College, PA used chicken wire with a wooden frame as an enclosure. Stainless steel fencing was used on two sides of Battery Park, NY and on the other two sides a combination of interlocking paving stone created the base of the enclosure with a piece of two foot high stainless steel fencing was attached to the top of the wall. The Princeton, NJ dog park used chain link for the major portion of the dog park and a small
section of fencing was made of wood. All the other dog parks visited used chain link fencing.

Four foot high fencing was used in the small dog section at Mount Laurel, NJ, Camden, NJ, and at Battery Park, NY. Additionally, Battery Park, NY used four foot high fencing for the large dog section. State College, PA and Hamilton, NJ dog parks used five foot high fencing and Princeton took no chances topping off its fencing at seven foot high. Four feet will restrain most dogs (Petnet, 2007), but to prevent the dogs from escaping, the seven foot height is recommended, especially for the larger dogs. If the park is near a busy public road or near residential properties that are concerned with runaway dogs, a seven foot fence is the best choice (Petnet, 2007).

All the parks installed their fencing in a rectilinear configuration. When it comes to configuration, most often a linear shape is ideal (Petnet, 2007).

Battery Park, NY was the smallest dog park at a quarter of an acre in size and the Princeton, NJ was the largest at two and a half acres for the large dog section and an acre for the small dog section. All the other parks were around one acre in size. The larger the fenced in area for a dog park, the better; however, most often the designer must make the best use of the land available to him or her. A large area gives the dogs more of an opportunity to explore without becoming bored, provides the room needed for dog owners to play one-on-one with their pets, and is less stressful on the dogs because they are not squeezed into a tight space.
All the parks divided the large dogs from the small ones. The Camden, NJ dog park had a five foot grass strip in between the chain link fencing that further separated the large dogs from the small ones. Princeton, NJ used a seven foot privacy fence to visually divide the dogs. The large and small dogs must be separated from each other and two enclosed areas should be provided. This is not only a rule at all the parks, but it is recommend by all the experts including Cesar Millan (2006) and Paul Owens (1999). The Camden Pooch Park requires its patrons to separate the large dogs from small ones. However “There was one incident in which a small dog was attacked and killed by a much larger dog” (McLaughlin, 2005). The small dog died because its owner did not follow the rules and permitted his small dog to play in the large dog area. Additional space in between the two fences is best because it allows the dogs to concentrate on the group they are currently playing with and causes less stress to the dogs. For additional coverage, plants and trees can be planted in between the two dog areas. It would not be a bad idea if the fencing where the large and small dog sections meet was made of a solid material like the wood stockade at Rocky Top Park (see Figure 9). Plastic slats can be purchased to put in between the links of the chain to fill in the holes, but it is possible the dogs might chew on the plastic part of the fence. Also, make sure that dogs cannot crawl under the fence.
When selecting fencing material, try to have the fence blend in with its surroundings. Even though it was just chicken wire frame in wood, the State College, Pennsylvania, dog park looked attractive in its country setting. The benefits of chain link are that it is relatively inexpensive, easy to install, and very durable. It allows patrons to see how many dogs are in the park and to view the dynamics of the group before entering. Chain link gives a more open feeling to the park, but visually does not provide an overall rich look (see Figure 10). A park should be softened on the outside with plantings and trees to break up the monotony of the fencing, especially at the fence corners. Evergreen trees or larger specimen trees work well as corner anchors.
The Princeton, NJ park used a triple gate with a swipe entry (see Figure 11) and all the other dog parks had a double gate entry. A triple gate system that is properly fitted with a spring self closing lock (Petnet, 2007) is recommended because the dogs are less likely to escape. A swipe type entry system is great because it can help regulate access and improve the park security. Jack Schwartz (2006) suggests installing the gates on the straight run of the fence and far from the main activity so the dog is not boxed in when entering the park. Placing the small dog and large dog gates away from each other on the run of the fence rather than at the corners is recommended because it can eliminate barking and fights (Schwartz, 2006).
3) Seating

   a. Does the park provide adequate seating?
   b. What kind?
   c. Is there enough?

There was adequate seating at all the parks visited. The benches at the Camden County, Pooch Park, the Hamilton Vetera ns Park, and the Mount Laurel, Laurel Acres Park were made of hard plastic with metal legs. Wood park benches were installed at the Rocky Top Park and patrons could also sit on one of the many boulders that were scattered around the park as well as reclining on a stump of a tree. The State College dog park had movable plastic chairs that were very unattractive and sunk in the mud, but were nice for flexible seating options. Battery Park had two long, two and a half foot high walls that provided seating for the patrons. Stainless steel attachments were secured to the top of the wall which helped to support the back for additional seating comfort.
There was only one bench in the large and small dog sections of the Mount Laurel Park. Patrons did not even use the single bench because it was located at the lowest point of the park and rainwater puddled around the benches making it impossible to sit without getting wet and muddy feet (see Figure 12). All the other parks had enough benches for its patrons.

Placement is a big consideration when installing benches. It is nice to place some benches in the shade and some in the sun because it gives the patron’s options. At the Hamilton, New Jersey dog park the benches were very close to the entrance which made for a more chaotic entrance of the newly arriving dogs. Dogs at all the parks would jump or run on top of the benches so dirty seats are another problem to contend with or solve.

Photo credit Laurel Allen

Figure 12. Example of poor choice of bench location at Mount Laurel, NJ dog park.

The tight spacing in between the faux wood slats made it difficult for the dog’s paws to get stuck. The plastic was a better choice than metal because if a dog accidentally ran into it the blow would be less harmful then metal (Schwartz, 2006). Benches that surround trees are a good choice for dog parks because the bench helps protect the tree
from dog urination and mechanical damage provide from blades of lawn mowers or weed-whackers. The trees, in turn, shade the benches. Besides movable chairs, three foot by six foot wooden, backless benches provide the most flexible seating arrangements for park goers (Marcus & Cooper, 1998) (see Figure 13).

Illustration credit, People Places
Figure 13. The many seating arrangements on a three foot by six foot wooden bench.

4) Surfaces

a. What types of surfaces do the dogs run on?
b. Are the surfaces durable?

Ms. Zimmer of the Rocky Top Park used wood chips that she got for free from the township to surface her dog park in Princeton, NJ, Battery Park, NY surfaced its dog park in a product called Stoneclad GS. Hamilton, NJ, dog park used a combination of grass and pea gravel in the heavy traffic areas and all the other parks used only grass. Because of the high use at the Camden, State College, and Mount Laurel dog parks, grass proved to be an ineffective choice and basically the entire park was muddy. The dogs came home filthy. One gentleman who was about to enter the park commented “I can’t
go in there. My wife will kill me if I came back with a dirty dog” (see Figure 14).

The Hamilton Park was much less muddy because it installed pea gravel in the high traffic area which included the entrance area and around the benches. The pea gravel does compact after a while and needs to be replenished, but it does not require the maintenance like grass (see Figure 15).
If Stoneclad GS is properly applied and maintained, it can withstand the abuse of a dog park. Unfortunately, this was not the case at Battery Park, NY and huge cracks have appeared allowing dog urine to compromise the longevity of the product. The wood chips at the Princeton, NJ dog park proved to be less muddy than the grass, but they are high maintenance because they must be replenished every few weeks.

Grass is an inexpensive option initially, but someone must mow it, water it, and reseed and repair the holes and ruts. The soil becomes compacted which makes for poor drainage and the swampy areas then become breeding grounds for gnats and mosquitoes.

Urine and feces have a high concentration of nitrogen, the result of protein breakdown. Dogs are carnivores and ingest a lot of protein. Urine is more damaging to lawns because it is a liquid and is very concentrated. Feces take longer to break down and release the waste products into the lawn (Stecchi, 2006). Dog urine and feces on the grass can further exacerbate the problem. Small amounts can act like a fertilizer and have “green up” effect, while large quantities can burn the lawn and create dead patches. Usually, the burned area will grow back, however, the dead areas will require reseeding or resodding. “Lawns are susceptible to nitrogen burns, especially those to which commercial fertilizers are applied” (Stecchi, 2006). Grass within the area can really only successfully grow well when there is an ample area of land to dog ratio and a regular maintenance plan is carried out (Schwartz, 2006). Dogs do like the ability to smell their surroundings. Dogs prefer soft surfaces like grass and grass retains odors more than hard surfaces (Petnet, 2007).
For optimal health of the dogs and the sod, Dr. Robert Snetsinger, Emeritus Professor of Entomology in the College of Agriculture at Pennsylvania State University, thinks it is best to have several fields, which can be rotated each year like a crop, as is recommended for livestock pastures (Dr. Robert Snetsinger, personal communication, February 3, 2007). For example, there would be two large dog and two small dog run areas and only one run for each size would be used a year.

Wood chips that one would get from their local township are not high quality and generally come from diseased trees and contain a large amount of softer wood. Softer wood decomposes quicker than hard woods and must be replenished more often. Soft wood is lighter and is more likely to run off slopes during a heavy rain fall. Mulch keeps the soil moist and the weeds down, but can also rob the trees of their proper nutrients. Chips installed six inches higher than the neck of the tree, could cause a tree to die from suffocation. Small rodents like to nest around the neck of heavily mulched trees because they can chew on the bark when food supplies are low. The injured cambium layer can also stress the tree. Thickly installed mulch can knit together making it difficult for water to penetrate the roots. If mulch gets too thick, it is suggested to break the large sheets of mulch apart and/or remove it and install new mulch. The best mulch for trees is compost or shredded leaves, but it is not a nice dry surface for the dogs and their owners.

The proper installation for Stoneclad GS goes as follows: First, install concrete subfloors three to four inches in thickness, then, the concrete should be shot blasted to
expose the substrate and to create a porous surface. Next, an epoxy-based, moisture tolerant primer needs to be applied followed by a quarter inch of Stonclad GS. This must be troweled and the slope has to be kept at an eighth of an inch to insure easy cleaning. Next, a product called Stonekote is applied which helps to prevent chemicals from penetrating. Then an aluminum oxide aggregate is broadcasted to prevent slips and falls and lastly, a final sealer should be applied (Stonehard, 2007).

As mentioned earlier, regrettably, the flooring at Battery Park was not done to specifications and large cracks are appearing in the flooring allowing dog urine to penetrate. According to Michael Galie, Director of Architectural/Engineering Sales of StoneCor Group, Inc., “This greatly compromises the job and the surface will not withstand the test of time. Unfortunately, the job usually goes to the lowest bid and steps are missed in order to cut installation costs” (Michael Galie, personal conversation, March 25, 2006). According to Mr. Galie, the concrete sub-flooring can run four to six dollars a square foot and then add an additional six dollars a square foot for the this sealing process.

None of the parks I visited used decomposed granite, which is the most durable dog park surface (Schwartz, 2006). Decomposed granite is weathered granite that can range in size from a sand particle to 3/8 inch. It is devoid of organic material and microbial life and is more sterile than soil. A limited amount of water is required to manage dust carried by wind or heavy use traffic areas. Depending on the weather, watering the decomposed granite three times a week is suitable and is more energy efficient than
maintaining grass. Another benefit of decomposed granite is that it can be easily brushed off of the dog’s fur (Schwartz, 2006), is inexpensive to install, and has good porosity which will allow for water to penetrate to the soil below. This is especially important when paving in close proximity to older trees (Loosey, 1994).

There are several drawbacks to decomposed granite use. First, decomposed granite can cause a sandpaper effect to hardwood floors so shoes must be taken off and dog paws must be wiped down before returning home. Second, if the decomposed granite has been wet for a period of time, puddling can occur and the area can become quite soupy. Third, decomposed granite on a hillside is prone to erosion. Decomposed granite is not difficult to install. However, installation requires some skill in order to create a long lasting and solid surface. The treatment area needs to be excavated and at least three inches of granite should be applied in thin layers. Each layer should be moistened and should sit for approximately eight hours before compacting with a heavy roller or vibration plate compactor. If all the granite is applied at once, the surface will not compact and the upper crust will crack and cause a sandbox effect (Loosey, 1994). In order to maintain an even surface, plan to fill ruts and replenish compacted, high traffic areas.

Except for the four foot wide curving path at the Mount Laurel Acres dog park, concrete was not used for the main surfacing in any of the parks. The problem with concrete is that it is guaranteed to crack. However, the problem is lessened when the cracks occur at the expansion joints. Concrete is hard on a dog’s joints and is not good for the environment because water does not have the ability to penetrate it. The benefits are that
concrete can be easily hosed off when it gets muddy and it can naturally file the dogs’ nails. Dr. Tom Nolan, Ph.D., parasitologist at the University of Pennsylvania, believes that a concrete surface at a dog park would be best for parasite control because it can be sanitized. However, he also notes that the surface might not be the best for the dog (Dr. Tom Nolan, Ph.D., personal communication, February 9, 2007). Parasites on concrete can be destroyed by sunlight and high pressure steam (Corwin, 2005).

None of the parks I visited used artificial grass. However, there is a new product on the market called K9Grass™ which is marketed for use in kennels, veterinary clinics, and homes. It claims to be “durable, drainable, cleanable and safe for dogs.” It is made of Polyethelene and Nylon monofilament with Alphsan. According to Bob Bast, the New Jersey representative and installer of the product, K9Grass™ has an anti-microbial agent so bacteria cannot grow. The only maintenance that is required is an occasional good rain and/or it can be hosed down. The blades are 2.25” in height and have a Flow-Through backing for drainage and cleaning ease. It has an eight year warranty and is UV protected. Mr. Blast says “it has only been on the market for three years but he is sure it could last for fifteen years.” The only problem he foresees with it is that eventually “it will fade in color and the edges could become damaged where it is mounted to the nailer board” (Bob Bast, personal communication, March 2, 2007).

K9Grass™ can be installed on concrete, but requires a one inch air grid in between the concrete and K9Grass™ layer. A perimeter nailer board must be attached to the concrete with tapcon screw or ramset nails. It can also be installed on top of a 3” - 4”
crushed aggregate base and every four feet, a perimeter nailer-board that is secured by rebar is required (K9Grass™, 2007). This is obviously the most expensive and most time consuming surface to install and sells retail for $6.35 a square foot not including its base. However, it is very attractive and durable option. K9Grass™ does not have to be mowed, is soft on a dog’s feet, and is more sanitary and easier to care for than grass (see Figure 16).

![Figure 16. Dog on an artificial grass product designed for dogs called K9Grass™.](Photo credit K9Grass™)

Based on experience in using local materials and local soils, local and state government authorities may have a paving preference. Local materials generally are less costly and blend well with the local environment (Petnet, 2007).

5) Paths

a. Are there paths through the dog park?
b. How are they constructed?
c. Are they effective?
Four of the dog parks studied had paths. The Mount Laurel, NJ and Camden, NJ dog parks had a four foot wide walkway that weaved through the middle of the large and small dog areas. Hamilton, NJ had a walkway that led through the double gates and to the benches. Princeton, NJ had a 1’ x 1’ step stone path that went through the triple gates. It was not necessary to include a path in the Battery Park, NY dog park design because the entire surface is paved with Stoneclad GS. The State College, PA dog park did not have any paths.

The paths at the Mount Laurel, Camden, and Hamilton, NJ dog parks were made of concrete and the Princeton, NJ dog park used 1’ x 1’ bluestone steppers.

At the Mount Laurel, NJ dog park the concrete walkway gets a lot of use because it is one of the few places where patrons can stand and not get their feet muddy from the overly used, poorly maintained grass. “Unless you have no problem with a dirty, smelly dog trashing your car interior, it’s advisable to stay away from the dog park the day after it rains because the mud can get extreme” (McLaughlin, 2005). To alleviate muddy feet, it would have been better to have the concrete walkway extend to the bench. Concrete was effectively used as a walkway at the Hamilton, NJ dog park. However, due to heavy traffic, the Camden dog park should have extended the concrete walkway through the gates. The Rocky Top Park in Princeton, NJ used 1’ x 1’ step stones through the small dog area; however, the stones are too small to insure proper footing. A heavy 2’ x 3’ bluestone stepper spaced every 6” would have been a better choice because it is very substantial and does not rock when treading on it. Instead of placing the stones on top of
the soil, it is better to bury the edges. This helps to alleviate the possibility of tripping and it anchors the stones. In a public space, it is best to make paths at least four feet in width so that two people can walk side by side.

People tend to travel the most direct route possible. So in order to avoid having traffic deviate from the path, make the path go directly to where you want it to go. The American Disability Act (ADA) suggests changing paving material when the grade changes, a path intersects or use changes. In order to best maneuver a wheelchair, the path slope should not exceed 1:20 and the cross-slope should not be greater than 1:50 (Marcus & Cooper, 1998).

6) Parking

a. Is there parking available?

b. Is it easy to park?

c. Are there enough spaces?

d. Is there handicap parking?

All the parks I visited provided an adequate amount of parking except for the Battery Park, NY dog park. Battery Park, NY did not provide parking to its patrons because the park is used by the neighboring condominium dwellers that already have parking. Of the five dog parks that provided parking, access was easy, there were enough spaces for the patrons, and all had handicap accessible parking.

The Camden dog park used asphalt in the center of the road and the parking stalls were covered with ¼” crushed red stone. Each parking space was finished with a concrete
bumper (see Figure 17). In contrast to asphalt, the gravel is a better choice environmentally because the water can percolate through the stone. Each year a fresh layer of stone should be applied to the compacted and rutted areas. ¾” limestone gravel was used at the Princeton Park and the edges were adorned with 3’ – 5’ boulders that were found when excavating the site (see Figure 18). The other sites used asphalt to surface the parking lot.

Photo credit, Laurel Allen
Figure 17. A combination of asphalt and gravel parking lot at the Camden, NJ dog-park.
Consideration should be given to the potential traffic and parking in the surrounding area. The accessibility and increase capacity of the existing road will improve if there are several access points from different streets. To prevent circulation and congestion problems, stay away from installing the park access on a dead end-street. It is advisable to consult a traffic engineer or town planner for instruction about parking and traffic (Petnet, 2007).

The American Disability Act (ADA) requires public parks to provide accessible parking (one parking space for every twenty-five up to one hundred spaces). The spaces need to be as close to the entrance as possible and the space must be nine-feet wide with a five-foot adjacent access isle. There must also be an area reserved for van parking with an eight-foot access isle. The ADA prefers a limited amount of curbing and curbing should be painted to increase its visibility (Marcus & Cooper, 1998).

7) Lighting

   a. Is there night lighting and is it energy efficient?
   b. What type?
   c. Location?

Except for the State College, PA dog park, all the parks provided lighting for their patrons, however none were energy-efficient. Inside the Camden, Princeton, Mount Laurel, and Hamilton dog parks a typical colonial style street lamp was chosen and in the parking lot area, industrial style, high voltage lighting was selected. Battery Park used
modern stainless steel light fixtures that blended well with its modern design. The modern lights were nestled in the planting bed and shone into the park.

The colonial style lighting at the Princeton Park simply did not fit well with its woodland setting. A better choice would have been to install low voltage lighting that can be attached to some of the many seventy-foot trees. Low voltage lighting creates a romantic and dramatic moonlight effect by casting shadows of the branches and leaves on the ground and it is more energy efficient (see Figure 19). Lighting should be installed in the parking and entrance areas and is needed if heavy use at night is anticipated (Petnet, 2007). Try to select lighting that is energy efficient and blends in well with its surroundings. Remember to light parking lots, entrance ways, and the dog run area. Besides illuminating an area, brightly lit areas help to secure the property against vandalism and trespassers.
8) Structures

   a. Are there buildings to protect users from the elements?
   b. What type?
   c. How many?

An enclosed gazebo type structure was only provided to the patrons of the Princeton Park. It had screens so that the dog owners could be protected from insects in the summer and the roof provided protection from rain or intense sun. The enclosed sides offer protection from gusting winds. The Mount Laurel and Hamilton dog parks had open style gazebos, but they were located approximately a mile from the dog park and
were rarely used by the patrons. A structure is not a critical amenity to a dog park, but is a nice feature to include.

9) Plant Material

a. Is the park landscaped?
b. Are there trees that provide shade?
c. What kinds of plants are used?
d. Are the plant species native?
e. What is the condition of the plant material?
f. Are any of the plants poisonous to dogs?

Battery Park, NY was the only dog park that had a well thought out landscape plan. The Camden, NJ, Hamilton, NJ, and Battery Park, NY, dog parks had few newly planted trees and the Princeton, NJ dog park had many established trees. Camden, NJ planted pin oak *Quercus palustris*, Hamilton, NJ planted American sycamore *Platanus occidentalis*, and Battery Park, NY planted Honey Locus *Gleditsia triacanthos* form inermis. Established seventy-foot tulip poplar *Liriodendron tulipifera* and sweet gum *Liquidambar styraciflua* were scattered throughout the Princeton, NJ dog park and were the only trees from all the visited dog parks that could provide shade at the current time. The sweet gum *Liquidambar styraciflua* trees drop seed balls about two-inches in diameter that can be quite painful on a dog’s paws. There is a seedless variety of sweet gum called *Liquidambar styraciflua* 'Rotundiloba’ which would be preferable but can only grow to forty feet in height. Below is a list of poisonous plants to dogs that should be avoided at a dog park: Hydrangea *Hydrangea species*; Japanese andromeda *Pieris japonica*; Rhododendron *Rhododendron species*; Heavenly bamboo *Nandina domestica*; yew *Taxus species*; Foxglove *Digitalis species*; Morning glory *Ipomoea nil*; Holly *Ilex*
species; yucca Yucca species; daffodil Narcissus species; clematis Clematis species; English ivy Hedera helix; lilies Lilaceae species; daylily Hemerocallis species; Lily-of the Valley Convallaria majalis; tulip Tulipa species; and iris Iridaceae species to name a few (Plants Poisonous to Dogs, 2007).

The Hamilton dog park had two juniper topiaries shaped as dogs that were planted outside the park in a raised railroad tie planter (see Figure 20). The raised planters made it difficult for dogs to urinate on them. Battery Park cleverly placed all of its plantings behind the walls and fencing. Dense yew Taxus densiformis, skirted the bottom of the honey locust Gleditsa triacanthos form inermis while cranberry cotoneaster Cotoneaster apiculata and big blue lily turf Liriope muscari ‘Big blue’ soften the hardscaping at the park’s entrances.

Instead of clearing the land, Princeton, NJ effectively used its native and established tulip poplar Liriodendron tulipifera and sweet gum Liquidambar styraciflua to create an impressive woodland dog park. Hamilton, NJ, used native American sycamore
Platanus occidentalis and the Camden, NJ planted native pin oak Quercus palustris. All the plant material was in good condition at Battery Park, NY, and Hamilton, Camden, and Princeton, New Jersey. All the other dog parks did not include plants. Battery Park, NY was the only dog park to have planted a shrub that was poisonous to dogs, however, the dense yew Taxus densiformis was cleverly landscaped and was out of the way.

Unfortunately, there are not any shrubs that can be suggested that can take the abuse caused by a dog’s urine and the constant activity and traffic. Trees inside the park are wonderful because they provide shade, interest, and a habitat for other animals; however, it is quite challenging to get any tree to grow in such a stressful environment. Many of the street trees in New York City use tree pit guards to help effectively protect the health of the city trees. A tree pit is a low fence that is generally made of wood or iron that protects the tree pit (see Figures 21 and 22). A tree pit helps to prevent dogs from eliminating near the neck of the tree, reduces pedestrians from compacting the soil, protects against mechanical damages such as lawn mowers, and prevents chemicals such as lawn pesticides from flowing into the tree (Tree Pit Guards, 2007). Seating that surrounds the tree is another way to encourage healthy growth for a tree in a dog park.
It is best to plant the shrubs and trees in between the small and large dog sections of the park (screening so the big dogs don’t see the little ones) and in places where dogs and people are less likely to stand or congregate. Be sure to pick plants that are indigenous to the area and tough, but not invasive. Many tough plants sold at local nurseries are invasive and not indigenous. Some examples in New Jersey include: multiflora rose (which have thorns that can injure dogs) or burdock (*Arctium sp.*), cockleburs (*Xanthium*) and sticktight (*Hackelia sp.*) plants that have seeds which can attach to the dog’s fur.

Many times consumers choose low quality trees because they are cheap and offer instant gratification due to their rapid growth. Generally trees that grow quickly do not withstand the test of time. For example the Bradford pear (*Pyrus calleryanais*) is the most common street tree in North America and has been chosen time and time again for street tree plantings. The Bradford pear (*Pyrus calleryana*) grows two-feet a year and has
beautiful white flowers in the spring, lovely clean foliage in the summer, fantastic fall color, an attractive shape, and handsome winter bark, but its branches snap off in the first ice or wind storm because it grows so fast and can not support its own weight. There are newer varieties of pear such as the Bradford pear (Pyrus calleryana) ‘New Bradford’ that are slightly stronger. However, if possible, it is better to choose a slower growing indigenous tree. Examples of some good choices in New Jersey include pin oak (Quercus palustris), sugar maple (Acer saccharum), willow oak (Quercus phellos), and thornless honey locust (Gleditsia triacanthos) form inermis. These trees don’t have as many seasons of interest but they are strong and tough.

Some good planting rules of thumb include planting trees and shrubs in odd numbers because odd numbers are more pleasing to the eye. When designing, choose a combination of deciduous and evergreen shrubs. Planting only evergreens makes for a heavier appearance while choosing exclusively deciduous shrubs may not be substantial enough in the wintertime. Create a rhythm in the design by planting in groups and repeating colors and textures so the eye flows smoothly through the garden.

10) Dog Activities

a. Is there equipment provided such as jumps, tunnels or A-frames?
b. Are there interesting areas for the dog to explore?
c. Are there toys for the dogs to play with?

The Hamilton, NJ dog park was the only park that had agility equipment for the dogs. The park had two wooden A-frames that the dogs could climb up and over. The A-frames were made of plywood and had two-inch strips attached every foot to prevent the
dogs from slipping. A brightly painted concrete sewage pipe approximately ten feet long and two foot in diameter, created a tunnel that the dogs could run through. Dogs could also run and jump through a suspended hoop that was mounted on a wooden frame. The dogs that went to the park were not interested in playing on the obstacles without encouragement from their owners. Once they learned not to be afraid of the apparatus they seemed to really enjoy it (see Figure 23 and 24).

Photo credit Laurel Allen
Figure 23 and 24. Examples of activities dogs can participate in at the Hamilton, NJ Veterans Park.

The Princeton, NJ dog park did not have any equipment that the dogs could play on, but it did have hundreds of established trees that the dogs could run around, a pond designated for swimming, and a walking trail. All the other parks were barren and uninteresting. Toys were not permitted into any of the dog parks, however, I observed tennis balls and pieces of tennis balls in all the dog parks.
Having equipment in a park is preferred because it encourages a dog owner to spend one-on-one time with his pet and it gets the owner to move around and be more actively involved. Dogs will learn new skills and become more confident and agile. In the book *So You Want to Build a Dog Park?* by Susyn Stecchi, the reader can learn exactly how to construct the various obstacles mentioned above, as well as weave poles and barrel jumps.

Dog toys especially tennis balls are not permitted in most dog parks because they are unsanitary, could be accidentally swallowed, and could cause fights. Unfortunately, the rules are frequently broken. In 1979 Dr. Roger Mugford who is a renowned animal psychologist in the United Kingdom founded The Animal Behaviour Center which specializes in the treatment of difficult and even life-threatening behavioral problems of pets. The Center’s goal is to test new pet products and training techniques especially for dogs. The Company of Animals was then established in 1984 in order to market the products that Dr. Mugford invented. He wants to promote behavioral and training aids that make a difference in the lives of people and their pets. All the products are tested for one year at The Animal Behaviour Center to ensure quality, safety, and value to the potential customer (The Company of Animals, 2007).

Fiona Whelan who is the head trainer and behavioral specialist at The Company of Animals tests new dog products. From an interview conducted on February 27, 2006 on PodVet.com, she mentions that most dog toys are made of low quality rubber that uses fillers such as sawdust. She discusses the importance of paying the extra money for dog
toys such as the Kong brand toy which is made of 100% rubber. The lower quality toys are easy to destroy and can be accidentally swallowed. The Kong product is harder for a dog to rip apart and contains a red dye that if accidentally swallowed can be detected by x-ray equipment. She warns that most dog owners mistakenly purchase too small a toy for their pet because it is cheaper in price. In order to avoid expensive vet bills, she believes that spending the extra money for the correct size toy will be worthwhile in the long run. Fiona is not a fan of tennis balls which are commonly found in many dog parks. She says that they can be chewed apart and quickly swallowed. Additionally, the cotton from the tennis ball can remove the enamel off the dog’s teeth (Whelan, 2006).

Dr. Tom Nolan, Ph.D. who is a Parasitologist at the University of Pennsylvania believes that “sharing a tennis ball will add no more risk to the dog’s chances of getting a disease. A tennis ball that gets contaminated in the park can be a source of parasites, but the dog will most likely get the same parasites whether or not he played with the tennis ball. The biggest risk factor is just walking in the park” (Dr. Tom Nolan, Ph.D., personal communication, February 9, 2007).

11) Water

   a. Is there a water fountain for both dogs and humans?
   b. Do the water fountains appear sanitary?
   c. Is there an area where the dogs can swim?
   d. Is there a place for dogs to shower off?

The State College and the Mount Laurel dog parks did not supply water for the dogs, however at the Mount Laurel Park, one could walk approximately one mile to use the public drinking fountain. A public water fountain with a lower level for dogs was
provided at Hamilton, NJ, Camden, NJ and Battery Park, NY dog parks (see Figures 25, 26, 27, and 28). However, in the winter months, the township shuts the Hamilton, NJ and Camden, NJ fountains off so that the pipes won’t freeze. Owners make do by bringing their own gallon jugs filled with water and drinking bowls and allowing all the dogs to share. Swimming was only available to Princeton, NJ dog park patrons and the pond was twenty foot by seven foot by two foot deep. Even though a hose is provided at the Princeton dog park, owner Gretchen Zimmer has lost many of her patrons because her clients don’t like bringing home a dirty or wet dog (see Figure 29). Battery Park, NY also had a hose to wash off the hot or dirty dogs (see Figure 27).
Figure 26. Hamilton NJ, Veterans park drinking fountain for humans and dogs.

Figure 27. Battery Park, NY drinking fountain for humans and canines and a hose for washing off the dogs.
Figure 28. Dog using drinking fountain.

Figure 29. View of the frozen swimming pond at Princeton NJ.
Water must be offered at a dog park so that the dog does not become dehydrated. Providing a fountain for dogs year round is more sanitary than having the dogs share jugs of water. However, the fountain needs to be cleaned regularly. Veterinarian Dr. Magi Casal at the University of Pennsylvania feels that swimming is an especially great exercise for older dogs because it strengthens the dog muscles without the constant pounding of running (Dr. Magi Casal, Ph.D., personal communication, February 16, 2007). A separate area where the dogs can hose off is a nice feature. Consider installing one on a hard surface so the dogs do not get muddy. Adding a drain will help to eliminate the excess water.

12) Food

a. Is there a place to purchase food for both dogs and humans?
b. Types of food offered?

None of the parks sold food for the patrons or the dogs. This is actually good because the rules of the park state not to bring food into the dog park. Food is not permitted because fights could occur among the dogs. Parks should be promoting good health and exercise and if food were available to its patrons, it really should be healthy in nature.

13) Waste disposal

a. Are there trash cans?
b. Are there enough?
c. Are they being used?
d. Are they being maintained?
e. Does the park provide bags for clean up?
All the parks provided a place to deposit waste and there were enough trashcans for the number of patrons of the parks. The trashcans at the Camden Dog park were being used, however they were not emptied frequently. Due to poor park maintenance, the patrons left rows of bags filled with excrement next to the exit fence. Luckily, I made my observations in the winter because in the warmer months the stench would be overwhelming. All the other dog parks visited did a good job at removing their trash. At one time, bags were provided at all the parks, but Camden, Hamilton and Mount Laurel, NJ dog parks did not replenish the supply so patrons brought their own grocery bags and shared the recycled bags with the other patrons (see Figures 30, 31, and 32)

Photo credit, Laurel Allen
Figure 30. Patrons leave shopping bags because the dispenser was not replenished at the Camden, NJ dog park.
Figure 31. Empty dispenser at the Hamilton, NJ, Veterans Park bag dispenser.

Figure 32. Bags are filled at the opening of the Mt. Laurel NJ dog park, but now patrons must bring their own bags.
Storm water runoff that contains pet waste can be a problem to stream water quality. The water supply can become contaminated with fecal bacteria and cause eutrophication of the lakes. “The release of nutrients from the decay of pet waste promotes weed and algae growth, limiting light penetration and the growth of aquatic vegetation. This in turn can reduce oxygen levels in the water, affecting fish and other aquatic organisms” (Pollution, 1999). In a study done in the watershed of Seattle, Washington, researchers found that 20 percent of the bacteria found in the water samples taken came from dogs. Pathogens are found in animal waste and are a health concern if consumed by humans. Some of the pathogens can include Cryptosporidium, Giardia lamblia, and Salmonella (EPA, 2001) which can cause skin sores and even chest pain. E. coli can cause problems such as diarrhea and abdominal gas and virulent strains can even cause death (EPA, 2001).
Some alternative waste disposal ideas include the introduction of dung beetles into the soil. Dung beetles break down feces and there are three species that pick dog feces as their food source. The beetles carry pieces of the dog dung into their tunnels and lay their eggs in the dung. The beetles help to protect the environment because they stop the feces from being washed away by a heavy storm. However, this approach has not been readily tried by park management (Warringah, 2006) nor is there supporting entomological literature that dung beetles adequately decompose wastes.

Doggy loos are disposal units that are installed in the ground and decompose dog waste. The Pooch patch is a concept taken from the Warringah Council in Sidney, Australia. The idea is to put a pole in the ground near the entrance to the park and surround the area with sand. The owners encourage their pet to smell the pole, and since most dogs like to mark their territory near the pole, they will most likely defecate near the pole (Petnet, 2007). Dog waste can also be buried by simply digging a hole at least one foot deep and laying three to four inches of pet waste on the bottom. The layer must then be mixed into the soil and topped with eight inches of soil. This helps to prevent rodents and other animals from digging it up. This practice should never be done in vegetable gardens and/or food-growing locations. Pet waste should not be used for backyard compost piles because the feces can carry parasites and diseases harmful to humans (EPA, 2001.) (See section entitled “Parasites and Feces.”)

The “Long Grass Principle” is a way to help prevent source water contamination. Dogs like to defecate in taller grass. “Long grass helps to filter pollutants and the feces can
decompose naturally while minimally causing pollution runoff” (EPA, 2001). An area of the dog park could be set aside that is mowed less often and the feces can decompose naturally. The height of around 10 cm is recommended (Petnet, 2007). The best way to prevent source water contamination is to simply pick up the pet waste and seal it in an environmentally friendly bag that decomposes (EPA, 2001). The bags are lightweight and are less cumbersome than steel pooper scoopers. However, the pooper scoopers are amenable for use by the frail and those who have bad backs (Petnet, 2007). Providing a scooper in both the large and small dog pen would be a nice and inexpensive amenity. However, long grass makes removing feces more difficult.

14) Bathrooms

   a. Are there bathrooms provided?
   b. What kind?

Except for Battery Park, toilets were available to patrons at all the parks. Mount Laurel and Hamilton dog parks had permanent facilities that were clean and had running water, but were not heated. The State College, Princeton and Camden dog parks provided temporary bathrooms (See Figure 34). Patrons appreciate knowing that there are bathrooms available if needed. Whether temporary or permanent, it is important to include bathrooms in the park.
15) Maintenance

a. What is the overall condition of the park?
b. Is it maintained?

Clearly the privately owned dog park in Princeton, New Jersey did the best job with maintenance, from its fresh layer of wood chips to its planter box filled with annuals, to its overall tidy appearance. It was a little muddy at the exit area where patrons would hose off their dogs because of poor drainage. Battery Park, NY kept its pavement free of waste, hedges clipped, trash emptied, and poop bags replenished. A close third would have to be the Hamilton Township Park. Clipped topiary dog-shaped trees, well-groomed grass, nicely maintained stone, and freshly painted dog agility equipment made for a pleasant experience.

The State College dog park graciously supplied poop bags and insured that the trash was picked up, but the grass was overused and the ground was extremely muddy. Mount
Laurel did not replenish the poop bags and there was no consideration to drainage when building the park. Patrons could not sit on the benches even if they got tired because they were surrounded by a moat of water. The Camden Park was the worst. The ground which was once grass mainly consisted of mud. The poop bag dispensers were not replenished and bags of waste were piled up. It was unsanitary and disgusting (see Figure 35). When designing a project, too many times proper maintenance is only considered after the project has been completed or not at all. Too often a beautiful park will become overgrown or turn into a victim of neglect because not enough funding was earmarked for this phase of the plan. Maintenance should always be an integral piece of the development process.

Photo credit, Laurel Allen
Figure 35. Poorly maintained Camden, NJ dog park.

16) Additional Suggestions

In would be ideal, if dog parks were within walking distance of dog owner’s home (400 to 800 meters); however, this is not practical. Their utility can be enhanced if the dog park can be placed near local shopping, community facilities, or along street routes that are already popular dog walking routes (Petnet, 2007).
When dog parks were first introduced to the public it was acceptable to simply to have an area of lawn enclosed by chain link fencing where an urban dog could run off leash. We are now learning the potential problems to constructing a dog park with little or no thought. The six sites visited help to give an overview of additional ways a dog park could be designed and what things work and what do not. Posted rules can help to protect the patrons from the potential dangers. The configuration of the fence and placement of a gate can reduce the possibility of a dog fight. Choosing seating that has

<table>
<thead>
<tr>
<th></th>
<th>Camden</th>
<th>Hamilton</th>
<th>Mt. Laurel</th>
<th>Princeton</th>
<th>State College</th>
<th>Battery Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rules posted</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Type of fencing</td>
<td>Chain link</td>
<td>Chain link</td>
<td>Chain link</td>
<td>Chain link</td>
<td>Chicken wire</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Enough seating</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Type of Surface</td>
<td>Grass</td>
<td>Grass &amp; gravel</td>
<td>Grass</td>
<td>Wood chips</td>
<td>Grass</td>
<td>Stoneclad GS</td>
</tr>
<tr>
<td>Paths</td>
<td>4’ Concrete</td>
<td>No</td>
<td>4’ Concrete</td>
<td>1’ x 1’ Blue stone</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Parking</td>
<td>Asphalt &amp; gravel</td>
<td>Asphalt</td>
<td>Gravel</td>
<td>Gravel</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Lighting</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Structures</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Plant material</td>
<td>Young trees</td>
<td>Young trees</td>
<td>No</td>
<td>Established trees</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Dog activities</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Water fountain</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Food</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Waste disposal bags</td>
<td>Not replenished</td>
<td>Not replenished</td>
<td>Not replenished</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Bathrooms</td>
<td>Port-a-potty</td>
<td>Permanent</td>
<td>Permanent</td>
<td>Port-a-potty</td>
<td>Port-a-potty</td>
<td>No</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Poor</td>
<td>Above average</td>
<td>Poor</td>
<td>Above average</td>
<td>Average</td>
<td>Above average</td>
</tr>
<tr>
<td>Overall grade</td>
<td>D</td>
<td>B</td>
<td>C-</td>
<td>B+</td>
<td>C</td>
<td>B+</td>
</tr>
</tbody>
</table>
several functions such as a bench that surrounds and protects a tree or like at the Battery Park, NY dog park where the seat also functions as a wall. These ideas make for clever and effective designing. At first thought, grass might be the easiest and cheapest surface solution, but as seen at the Mount Laurel, NJ, Camden NJ, and State College, PA dog parks, it was a muddy maintenance nightmare. Expensive initially to install, new products such as K9 Grass™ or surface applications such Stoneclad GS are better able to withstand the abuse of dogs and may even pay for themselves in the long run. Decomposed granite is another great alternative surface material because it has the ability to allow surface water to percolate. Another effective solution could be combining different surfaces. At the Hamilton, NJ, dog park, the designer cleverly installed pea gravel in the heavy traffic areas and grass in the less used portions.

Paths need to be substantial and wide enough for the patrons. The Princeton, NJ 1’ x 1’ step stone walkway was both unsafe and dangerous to its clients. Even though it is requires a little more maintenance, gravel parking lots (like the ones at Princeton, NJ and Mount Laurel, NJ) are better for the environment because they don’t cause storm water runoff. Selecting low voltage lighting and lighting fixtures that blend in well with its setting makes good sense. Battery Park, NY did not use low voltage lighting but it did do the best job in selecting lighting fixtures that mixed well with the modern stainless steel fencing. The Princeton, NJ dog park was the only park that provided a protective building for its patrons. It would be nice if more dog parks would include an area to shield its patrons from the elements, but it is not a totally necessary feature. Battery Park, NY did the best job overall including plant material in the design of the park. The plants
helped to soften the hard edges of the walls and the trees offered shade to the dog park patrons. The planting design of Battery Park, NY was exceptional because the plants were attractively placed and located in such a way that they could not be destroyed by dog traffic and urine. Many times contractors clear all the trees from a site to make way for a new project. The established trees remained at the Princeton, NJ dog park and made for a wonderful woodland experience. The Hamilton NJ, dog park did the best job providing agility activities to its patrons. Brightly painted sewer pipes and wooden planks made for a festive and fun excursion for the dogs and their owners. As mentioned earlier, food was not offered at any of the dog parks. All dog parks should provide a drinking fountain to the dog owners and especially for the dogs. It would be best if it was located in the dog park and kept on all year long. An area where the dogs can swim would be nice, however, it should be in a separate fenced in location. Dog owners would then have the option of taking home a wet or dry dog. A snack bar that offered nutritious food for both dogs and their owners would be a nice addition to the park. The money made from the snack bar could help to defray the costs of maintaining the park.

There needs to be a frequent schedule for the removal of the trash at a dog park and it is especially necessary in the hotter months of the year. Replenishing the dog waste pick up bags is also important. If the dog park manager doesn’t seem to care about the condition of the park, the patrons will be less likely to care. The poor condition of the Camden, NJ dog park demonstrates this point. Providing handicapped accessible, heated bathrooms with running water, is a wonderful amenity at a dog park, however, if money is an issue, a port-a-potty is an acceptable alternative. Mount Laurel and Hamilton, NJ dog parks
definitely had the nicest bathroom facilities. The privately owned Princeton, NJ dog park, Hamilton, NJ, and the Battery Park, NY did a great job of maintaining their parks. As a dog park owner or park manager, a well maintained park is critical to the enjoyment, health, and safety of the patrons. A maintenance plan should be part of the initial planning process and money needs to be set aside yearly for upkeep. From the six dog parks visited, Princeton, NJ and Battery Park, NY scored the highest grade on maintenance, aesthetics, and functionality and Camden, NJ scored the lowest. Hopefully the days of the chain link and a grass dog parks are coming to an end and making way for an era of more thoughtful designed areas where a dog can run off leash.

VII. Considerations in Designing a Dog Park

A. DOG HEALTH

I will now apply what I’ve learned from my surveys and dog park analysis to discuss important considerations in the design of a dog park.

1. Toxic and Weedy Plants

A survey of the vegetation should be undertaken before a dog park is established to determine what species may be harmful or toxic to dogs. Certain bulbs are poisonous, such as members of the lily family; and should not be planted as ornamentals near a dog park. Thorny plants such as Multiflora Rose may cause injury and should be removed if present. Poison Ivy should also be removed as dogs can readily transfer its oily sap to humans causing the people to have a rash or a severe allergic reaction. Plants bearing “burs” such as sticktight and cocklebur should be removed. Burs such as sticktight seed pods and cocklebur fruits can become embedded in a dog’s fur and are difficult to
remove. Obnoxious and invasive weeds, such as thistle and ragweed, need to be controlled in dog parks.

2. Parasites and Feces

When it comes to the design of a dog park, it is important to consider some serious health issues to humans and dogs. Soil can quickly become contaminated if dog droppings are not immediately picked up. Some of the most common worms include roundworms *Toxocara canis*, hookworms *Ancylostoma caninum*, whipworms *Trichuris vulpis*, and tapeworms *Dipylidium caninum*. Single-celled parasites such as coccidian *Isospora canis* and Giardia *Giardia lamblia* are also a frequent health risk problems (American Veterinary Medical Association, 2006).

The most common intestinal parasite in dogs is the roundworm *Toxocara canis*. The eggs of *Toxocara canis* develop into larvae and are found in the infected dog’s feces. The parasite can spread to other dogs by ingesting soil or drinking water and licking paws and fur that is contaminated. A female dog can pass the infection on to her unborn puppies. They are highly susceptible because the roundworm feeds on nutrients in the food the puppies eat. The puppy can develop intestinal problems and become malnourished as the larvae develop in the puppy’s body. Serious respiratory problems such as pneumonia can then result (American Veterinary Medical Association, 2006).

Roundworms *Toxocara canis* are zoonotic, which means that the disease may be passed to humans. Humans are at most risk when they have direct contact with an infected dog.
because the larvae can enter through the skin and also may be accidentally ingested. Children can get roundworm by playing in sand or soil that is contaminated. If roundworm is not treated in a human, the larvae can find its way into the organs and tissues causing damage to the lungs, brain, and liver. Partial or even permanent blindness can occur if the larva enters the eyes (American Veterinary Medical Association, 2006).

Eggs of *Toxocara canis* can survive for ten years or more in the soil and are unaffected by cold temperatures and many disinfectants. The eggs are sticky and can be easily transported by flies, birds, clothing, and shoes. They can be destroyed by sunlight and high pressure steam heat (Corwin, 2005).

The second most common parasite to dogs is the hookworm; the larvae of *Ancylostoma caninum* can infect dogs by penetrating through the skin or mouth lining. Mothers can pass the parasite to their puppies from their impure milk. The hookworm *Ancylostoma caninum* will suck blood from the lining of the intestine causing weakness, malnutrition, and blood loss. As with roundworm *Toxocara canis*, the hookworm *Ancylostoma caninum* is most serious to puppies and is also zoonotic. Again, the larvae may enter through the skin or can be accidentally ingested (American Veterinary Medical Association, 2006).

While visiting Puerto Rico, my mother noticed that the bottom of her foot had become itchy, red, and sore. When she returned home to Pennsylvania, it took several visits to her primary care doctor and a few trips to a specialist to finally get the correct diagnosis of migrant hookworm *Ancylostoma caninum*. She contracted the disease through an open cut from walking barefoot on a beach that was contaminated with the feces of feral dogs.
When the worm would move or grow, the itchiness would become quite unbearable. After several applications of a special prescribed ointment, the problem disappeared.

Whipworms *Trichuris vulpis* are whip-like in shape hence the name. Similarly to the roundworm *Toxocara canis* and hookworm *Ancylostoma cani*, an infected dog can spread whipworms *Trichuris vulpis* once the worm eggs develop into larvae and are passed in the feces. Other dogs become infected by licking contaminated fur and paws and drinking contaminated water. According to an article from the University of Missouri Extension Agency (2007), whipworms *Trichuris vulpis* eggs can survive long periods in soil and even concrete. These worms bury their heads into the dog’s intestine and suck the blood. Generally, whipworms *Trichuris vulpis* are less harmful to dogs than the two previous parasites and only severe cases can cause weight loss, diarrhea, and blood loss. Humans are rarely infected by the worm (American Veterinary Medical Association, 2006).

Tapeworms *Dipylidium caninum* are thin and flat and actually look like strips of tape or flattened grains of rice. They are different from the worms previously mentioned because their bodies are not smooth and round, but are made up of joined segments; they belong to a different class of parasites. Dogs can contract tapeworms *Dipylidium caninum* from eating infected feces, being bitten by infected ticks, or even contacting rodents. The tapeworm *Dipylidium caninum* lives in the small intestine and survives by ingesting the food the dog consumes. Tapeworms *Dipylidium caninum* are rarely a risk to people (American Veterinary Medical Association, 2006).
After newly purchasing my dog Ruby from the breeder, I noticed white specks in her feces. The veterinarian determined that Ruby had contracted tapeworm *Dipylidium caninum*. Ruby was given a deworming medication which quickly resolved the problem. The vet also prescribed that I immediately remove all feces from the yard to prevent the disease from spreading to the other dogs.

A good monthly heartworm preventive prescribed by a veterinarian is the best way to inhibit infection by roundworm *Toxocara canis*, hookworm *Ancylostoma caninum*, whipworm *Trichuris vulpis* and tapeworm *Dipylidium caninum*. Immediate cleanup of the dog’s feces and providing fresh water is also important. A fecal test can detect if worm eggs or adults are present. To prevent worm infections to humans, it is critical to practice good hygiene and sanitation. Parents should prevent their children from playing in soil or sand especially when there is a possibility of the presence of feces. Washing hands after having contact with a dog and wearing shoes to prevent the larvae from penetrating the skin are also vital (American Veterinary Medical Association, 2006).

The Coccidia *Isospora canis* and Giardia *Giardia lamblia* are single-celled parasites that are undetectable to the naked eye. Once ingested by a dog, the parasites will damage the lining of the intestine and make it difficult for the dog to absorb the nutrients from its food. Both parasites can be a source of infection within a dog and cause diarrhea and dehydration. The dog simply loses too much water from its stool and can not drink enough to balance it out. It is more problematic to puppies because their immune system
is not strong enough to fight off the disease. Both parasites are very contagious so is it important to provide good hygiene and sanitation especially when there is more than one dog (American Veterinary Medical Association, 2006).

All the parasites in the area mentioned pass out in the droppings and many can live long periods of time in soil and concrete. David K Harden of the College of Veterinary Medicine at the University of Missouri recommends the following practices to reduce the spread of infection to horses. The same practices can be applied to dogs (Harden, 2006).

1. Quickly remove feces
2. Pasture management
   a. Avoid having too many animals in a designated space
   b. Frequently mow the grass
3. Rotate pastures/pens
4. Do not feed off the ground
5. Provide a clean water supply
   (Harden, 2006)

Dr. Tom Nolan, Ph.D., who is a parasitologist at the University of Pennsylvania, considers a dog park to be a worthy endeavor, but suggests the following precautions.

“An owner should have their dogs under a veterinarians’ care, especially younger dogs because they are more likely to become infected with *Toxocara* and water-borne parasites such as *Giardia*. Older dogs generally have been infected and remain immune to re-infection.” Dr. Nolan prescribes “keeping up to date with the dog’s vaccinations, having the dog on a monthly heartworm drug that will kill parasites common in local dog populations (talk to the vet about the best choice for the area), and picking up feces (from your dog and any other feces that you
see). If the feces are picked up before the parasites have had a chance to get to of the fecal mass and into the soil, then you greatly reduce the likelihood of transmission taking place. Be sure any water source is not contaminated by feces. The source should be above ground level to prevent run off from the soil from entering the water, and the water should be changed regularly.”

So, the take-home message is that waste removal and proper disposal is absolutely essential. Furthermore, educational signage explaining the types of parasites present in waste, their potential harm to dogs and humans, as well as adverse environmental effects would be extremely helpful. Brochures with key websites would also be helpful in educating dog park visitors.

3. Arthropod Pests

Insects, mites, and ticks are common pests of dogs and are vectors of canine and human diseases. Also the wastes produced by dogs may become the source of flies and other pests that can be a nuisance to park users and neighbors. It should not be overlooked that insects recycle and expedite the breakdown of organic wastes, which is an important environmental service. A proposed site for a dog park should be inspected and surveyed by a qualified entomologist to determine what problems, if any, need to be addressed before a site for dog park is selected. To some degree, the existing vegetation may predispose what arthropod pests are present and the management of the grounds establishes what pests can become problems and may need to be controlled. Problems may arise with the following species.
Chiggers (Acari) are the larvae of Trombiculid mites and their bites cause an itch and dermatitis of dogs, cats, and humans. In dogs, chiggers attach around the ears, mouth, and abdomen. They feed on cell tissue for 3-5 days and then drop-off. They may be common in margins of wasteland, seepage meadows, or woodland edges inhabited by small rodents.

Ticks (Ixodidae) feed on the blood of mammals and birds and are the vectors of Piroplasmosis of dogs and Rocky Mountain Spotted-Fever and Lyme Disease in man and dog as well as Tularemia in rabbits, humans, and rarely in dogs. Ticks have a variety of host animals and may feed on different species at each developmental stage. Dogs running in vegetation frequently collect ticks and they may remain and feed on the dog or may be transferred to the owner of the pet. Species of greatest concern to pet owners include:

- Brown Dog Tick (*Rhipicephalus sanguineus*)
- American Dog Tick (*Dermacentor variabilis*)
- Blacklegged Tick=Deer Tick (*Ixodes scapularis=dammini*)
- Rabbit Tick (*Haemaphysalis leporis-palustris*)

Fleas (Siphonaptera) are small, brownish, wingless insects that as adults feed on the blood of dogs, cats, humans, and other animals. Adult fleas are able to jump while the larval stage feed on debris in animal dens and may survive many months. Adult fleas may transfer from an infested dog to another during the course of play and interaction by two individuals. Also a summer population of fleas may become established in areas where there is a great deal of dog activity such as a dog park. The most common species associated with dogs are:

- Dog Flea (*Ctenocephalides canis*)
Cat Flea (*Ctenocephalides felis*)

Flies (Diptera, Muscidae and other families) may “breed” in dog wastes and dog parks and can be a contributing factor to fly nuisance and health problems in a community.

Mosquitoes (Diptera, Culicidae) are two-winged as adults and feed on the blood of mammals and birds; they are the vectors of many diseases, but for the most part are nuisances. The larval stages of many species of mosquitoes “breed” in puddles and standing water, which may develop in dog parks.

Bees and Wasps (Hymenoptera) are stinging-insects, which can be residents of dog parks.

Prospective dog park designers should consider adding educational signs and a kiosk with brochures discussing arthropod pests. Plan to offer occasional lectures by entomologists and veterinarians to help inform the public on these concerns and, when installing the dog park, make sure the land is properly graded to prevent puddle formation.

B. Reading a Dog’s Expression and Posture

Before taking a dog to a dog park, it is important to understand some of the dog’s expression and postures. Having even a basic knowledge, could help to prevent a dog fight or even worse, injury to a dog or human. Dogs have many of the same emotions and expression as we humans do. We will never really know exactly what a dog is thinking, but if we pay attention we might be able to better read what they are trying to communicate. If we know some of the signs, we could possibly alleviate a stressful situation and prevent dog aggression from escalating.
An open, relaxed mouth of a dog is a generally good indication of a happy and relaxed animal. Dogs will also open their mouth to cool down. A dog will close its mouth when it is on alert or is serious about something. For example, a dog will close its mouth if it sees a squirrel or another dog in the distance. Pay attention to a dog whose mouth is closed and its entire body is frozen. This means a dog is on high alert and its next move may be to lunge forward (McConnell, 2006).

Dogs will use the “freeze” position as a signal to other dogs. When two dogs freeze for more than a second or two, it is important to alleviate the tension so as not to escalate the emotion. Patricia B. McConnell, Ph.D., certified Applied Animal Behaviorist and author of the book *For the Love of a Dog Understanding Emotion in You and Your Best Friend*, suggests clapping your hands together and/or saying something like “Who wants dinner or do you want to go for a walk?” in order to redirect the dog’s focus. It is important that the dog owner remains calm and relaxed and does not stiffen or become immobile. This will only make the situation worse.

Dogs might at first interact with other dogs with a loose, relaxed body and then one of the dogs might stop and freeze. The freeze posture might also include a head turn directly to the other dog’s face. This should be taken as a warning to not repeat a particular action. Dogs will exhibit the freeze with a head turn to humans as well. For example, a dog groomer might see this occur when they are clipping a dog’s nails. The groomer should try to keep their body relaxed and fluid to avoid being bitten (McConnell, 2006).
Aggression is a dog’s survival tool and is used to establish and maintain a dog’s place in a group. It is also needed to protect a dog’s territory, food, and itself, earn a mate, and react to a threat. When puppies six months or younger are seriously snapping, growling, or biting it usually means the aggression came with the pup. There is not much that can be done with this type of behavior and the dog is most often euthanized. Breed can also influence aggression. A dominant, assertive pup will grow to be an assertive adult unless it is properly trained. Around the age of nine months, behavioral aggression can occur and if it is not addressed quickly, a growl can quickly escalate to a bite (Kilcommons, 1999). “As dogs mature, they become increasingly interested in “territory”. Urination on objects is the canine way of saying ‘This is mine!’ Any other dog found within a dog’s territory is considered an intruder. This leads to dog-to-dog aggression in the city, as ten or more dogs may consider a single block theirs. Neutering helps to lessen this problem” (Kilcommons, 1999).

People tend to approach other people head on. Rather than a straight head-on approach, polite dogs will greet each other by approaching from the side following a curved line toward the other dog’s flanks. When meeting a new dog, it is wise to turn your body slightly sideways in order to receive a positive response from the dog (McConnell, 2006).

Much can be learned about how a dog is feeling by observing the corners of its mouth. The corners of a dog’s mouth are called the commissure and a dog will pull it back when it is afraid, defensive, or submissive. Humans will move the corners of their mouth in the opposite direction of a smile forward when they are angry. Dogs will make a similar
gesture, but this does not necessarily mean they are angry. This is a good indication that the dog is ready to go on the offense. If a dog lunges at another dog with his commissures back, he is in a different state than if he retracts his commissures in a fear grimace. In both cases the dog could be barking and lunging, but by paying attention to the position of the mouth, it will make for an easier determination of what the dog is feeling (McConnell, 2006).

Another expression that is common to dogs is the tongue lick or tongue flick. Tongue licking is a when the tongue moves quickly in and out of the mouth in a straight line. Tongue flicks are an expression of low-level anxiety, or are gestures of appeasement from a subordinate dog to a higher ranking one. The more the tongue sticks out, the more extreme the emotion. This should not be confused with the side-to-side motion of a dog’s tongue that is drooling or anticipating its dinner (McConnell, 2006).

A yawning dog may not only mean that he is sleepy, it may also be a sign that a dog is slightly anxious or even trying to calm another dog. Tuid Rugaas who is the author of On Talking Terms with Dogs says that many times a dog will yawn when he is in a stressful situation such as a veterinary clinic. This brings about the point that the same movement may have many meanings as it does in humans.

To prevent possible problems, it is critical to be aware of the amount of physical and mental stimulation permitted to a dog. Providing ample periods of rest for a dog will help to prevent situations where a typically good dog will snap or bite because he is
cranky and has just had too much. “A dog needs you to protect him from mental as well as physical exhaustion. It’s a wise and loving owner who gives his dog a break long before he has had enough” (McConnell, 2006). Paul Owens the author of the book *The Dog Whisperer* mentions the importance of providing a quiet area so the dog can remove themselves from the over stimulation (Owens, 1999).

Just as a human’s eyes crinkle with delight, wrinkles around a dog’s eyes mean it is glad to see you. Dogs whose eyes are rounded indicate that they are on alert, surprised, or frightened. The term “whale eye” coined by Sue Sternberg an expert on canine aggression, describes a dog whose head is pointed forward and its gaze is focused to the side. The whites around the entire eye can be seen, similar to a whale’s eye. A dog might display this emotion when it is afraid of another dog or is anxious about something. The dog wants to turn its head but is too fearful to look away. It is a similar feeling to viewing a scary movie and wanting to look away at the frightening part yet having to watch anyway so that nothing will be missed. Unless a dog is familiar and comfortable with another dog, it will generally avoid eye contact. This is also done to defuse tension with another dog (McConnell, 2006).

These are just a few of the many expressions a dog makes. In order to prevent possible injury to another dog or human, it is important to at least be familiar with the signals a dog gives. Being aware and alert will also help to improve the relationship of the dog and its owner. Paying attention to the details will pay off. Patricia B. McConnell, Ph.D. certified Applied Animal Behaviorist and author of the book *For the Love of a Dog Understanding Emotion in You and Your Best Friend* says, “We’re bounded to dogs not
just because we are both emotional beings, but because we express our emotions so freely, and are so good at interpreting them on one another’s faces. (Although she suspects our dogs are better at reading our faces then we are at reading theirs!)” (McConnell, 2006.) (See diagram below.)

Since dogs are allowed to run free and interact with other dogs in a dog park, it is essential that dog owners have a fairly good understanding of dog behavior and of the responses of their own pet in particular. Such knowledge would reduce considerably the risks of aggression and fighting among the regular canine patrons of the park. The community of “dog park advocates” and users should consider having periodic meetings to discuss problems and to educate each other about canine behavior and other matters relating to dogs.
Dog-to-Dog Communication

When dog meets dog, they signal their status in relation to each other. Actions like raising a forepaw, looking away, licking or nudging at the other’s muzzle or bowing with the forelegs are submissive gestures. Mounting, raising up stiffly on one’s toes, or placing one’s head over another’s withers (the place where the neck meets the back) indicates the more dominant individual of that interaction.

**GREETING POSTURE**
- ears and tail up forward and alert in the more dominant dog
- ears back on more submissive dog

**GREETING BEHAVIOR**
- eyes semi-closed, soft ears back
- nudes mouth area of dominant dog, may lick or tongue flick
- tail down
- raised front paw

Dogs sniff each other’s genital region when greeting to gather information on sexual status. A submissive dog may greet a more dominant dog with a muzzle nudge as an appeasement (pacifying) gesture.

**PLAY SOLICITATION**
- tail up, loosely wagging
- ears up
- eyes soft
- mouth open and relaxed, tongue exposed
- front end lowered, ready to leap forward

**MATERNAL CORRECTION**
- mother quickly snarls and places mouth around muzzle or head of puppy
- puppy submits by flattening to the ground and whimpering
- tail tucked
- paw raised

The play bow is a combination of dominant and submissive gestures. It is offered to invite another to play or as part of courtship behavior.

Source: ASPCA

ANIMALS BENEFIT CLUB of ARIZONA
3111 E. St. John Road • Phoenix, AZ 85032 • 602-867-2169 • www.animalsbenefitclub.com

Chart credit Animal Benefit Club of Arizona

Figure 36. Example of ways dogs communicate with each other.
Reading Canine Body Postures

While dogs do not speak they do display their state of mind via their body language. By taking careful note of ear position, pupil dilation, facial tension (particularly around the muzzle and forehead), tail carriage and body weight distribution, an observer can detect whether a dog is relaxed or fearful, or acting in a submissive or dominant manner toward the observer.

**NEUTRAL RELAXED**
- head erect
- ears up
- mouth relaxed, slightly opened
- tail relaxed, wagging
- weight evenly distributed over all four feet

**AROUSAL**
- eyes large, hard staring
- muzzle tense, lips lifted to display teeth
- stiff-legged, weight over front legs
- tail up, bristled, stiff wag

**AGGRESSIVE ATTACK**
- ears erect, tilted forward
- eyes staring
- lips curled
- teeth bared, snarling
- charging, weight forward

The dog has been stimulated by something in his environment. When the dog is excited by something pleasurable, the hackles will be down and the tail will be carried a little lower and will loosely wag. The muzzle will be relaxed and the tongue may be seen. This posture may be displayed to subordinates in order to express higher ranking pack position.

**DEFENSIVE AGGRESSION**
- ears back, pupils dilated
- hackles may be up
- tail down and tensed
- posture mildly crouched, weight over legs
- muzzle tense, wrinkled and snarling, teeth exposed

When fearful, a dog will give warning signals to indicate he does not wish to be approached. If unheeded, he will bite to protect himself.

**ACTIVE SUBMISSION**
- eyes half closed, blinking
- mouth nearly closed, tongue tip darts out
- raised paw

This pacifying posture is used when a dog acknowledges another dog or human's higher social ranking, or to inhibit another's aggression.

**PASSIVE SUBMISSION**
- on back, belly exposed
- tail tucked, release of urine droplets
- ears back
- head turned away, indirect gaze

Belly-up indicates surrender, a pacifying gesture offered to a more dominant or aggressive individual.

Chart credit Animal Benefit Club of Arizona

Figure 37. Example of various dog postures and what they possibly mean
C. What a Dog Needs: A Good Diet and Exercise!

To maximize the dog park experience for the dog and its owner, it is helpful to understand a little bit about proper diet and exercise for a dog. Paul Owens, author of *The Dog Whisper* and a recognized leader in nonviolent dog instruction, feels that there are nine key ingredients to a healthy and well-adjusted dog. His list includes a high quality diet which incorporates raw food. He even suggests preparing a homemade diet including brown rice, free-range turkey (not reared in cages), raw zucchini, steamed broccoli, virgin olive oil, and vitamin and mineral supplements. He believes that most of the commercial grade pet food contains low quality meat and some of the nutrients are destroyed during the processing. He thinks that many behavior problems can be due to a poor diet and that a homemade diet could significantly add years to the life of a dog. Although, wonderful for the dog, this suggestion is a challenging task to implement for most dog owners, especially if they own more than one dog. A more practical solution might be to include some raw food in the dog’s diet along with high quality processed foods (Owens, 1999).

The second ingredient includes play which a dog park can provide. “Play affects the development of the physical, mental and emotional life of your dog. Proper play helps to develop your dog’s coordination, timing and the skills needed for hunting and self-defense” (Owens, 1999). Owens suggests at least two fifteen minute periods devoted to nonviolent play daily. Games usually come in two groups: the chase category or the mock fight category (Kilcommons, 1999). In the chase type game, one or more dogs pursue the “prey”. The pursuers strategize ways of getting the other dog and the pursued
avoids trying to get caught. When the “prey” is caught, he might be grabbed by the neck or spun around then he might then be the one to pursue next. This game could go on for hours if the dogs are equally matched. Overexcitement can cause this game to escalate, so watch out for the “hunter” being too rough on the “hunted”. Small or younger dogs can become frightened and this, in turn, causes larger dogs to become more aggressive. This makes sense because the smaller dog is then acting more like prey. Once this happens simply separate the dogs (Kilcommons, 1999).

Mock fighting involves teeth flashing, play growling, wrestling, and pinning the other dog down. The dogs should exchange roles, one on top and then the other with both moving around. Be concerned when one dog is constantly mounting the other dogs or putting his paws on their shoulders and backs of the other dogs. Most adult dogs will take offense to this action and will fight the under socialized, dominant dog. A fight is likely to take place if two dogs rear up on their hind legs pawing each other. Neither one is willing to submit nor are they trying to get above the other. All is well, once one dog submits by lowering his head, avoiding eye contact, and putting ears back. If a fight erupts, grab a rear leg or the base of the tail and pull up and back. This will stop the fight and help to keep the owner in a safe position. To prevent being bitten, avoid grabbing the collar (Kilcommons, 1999).

The third ingredient is socialization. A dog must learn how to interact with its human family and neighbors as well as other animals. A dog will learn to adapt to social situations through the use of its five senses. There are two kinds of socialization
applications which include active and passive. Active socialization is learned by introducing a dog to new people, activities, and toys. Passive socialization is learned while away from its owner by smelling, touching, seeing, and hearing other animals, plants, and environments. Exposure to both will give a dog confidence and it is suggested that the more exposure to new things the better (Owens, 1999).

The fourth ingredient is to provide the dog with quiet time. The dog owner should provide a place where the dog can go to get away from it all such as a pillow, mat, or kennel (Owens, 1999). Exercise is also an essential ingredient. The exercise regime should include aerobic exercise such as running or vigorous walking, strength training which would include running up a hill, balance training like the use of agility equipment, and stretching which can be done by gently messaging the dog. In addition to play time, two fifteen-minute exercise periods should be included each day (Owens, 1999).

As a certified personal trainer and fitness professional for humans, I wholeheartedly believe in these four forms of physical activity. It is as important to the health of the dog as it is to its owner and the dog can encourage increased fitness in its owner. My husband and I enjoy walking, but would not normally choose to walk when it is raining or late at night if it were not so important to our pets.

Obviously, a dog should not be exercised strenuously during hot weather except for perhaps a swim because they overheat quickly. When it is hot it is best to choose cooler times of the day to take the dog out. Owners of dogs with short noses require additional
caution during hot weather and should carry water and a chemical cool pack to prevent possible overheating. In order not to stress their still growing bodies, large dogs who are under the age of eighteen months should not be jogged for long distances or encouraged to jump (Kilcommons, 1999).

According to Shawn Hamilton, who is certified in dog grooming and CEO of Peppers Place an online pet supply store, “Most dogs are not affected by cold temperatures the way humans are, but in geographical areas that experience freezing temperatures, it may be necessary to clothe your dog in a sweater or dog boots for a winter workout.” Shawn says that “the best way to determine if your dog needs winter workout wear is to watch for signs of shivering either during or after a workout.” If de-icing salt bothers the paws of your dog’s feet, Shawn recommends dog shoes (Hamilton, 2007).

Brian Kilcommons author of Good Owners, Great Dogs a Training Manual for Humans and Their Canine Companions states that “If one single factor is responsible for problems between dog and owner it is insufficient exercise. Dogs are active. If you give them an outlet, they will burn off the excess energy running and playing. If you don’t, they will make your life miserable. They’ll bark, chew, dig or be constantly in motion. Pent-up energy makes anxiety and stress problems worse and adds housebreaking mistakes and whining to the list of optimal ways to spend time.” He does not consider putting the dog in the backyard while the owner drinks a cup of coffee proper exercise (Kilcommons, 1999).
The benefits of exercise to your dog include:

- Stronger circulatory and respiratory system
- Prevention of obesity
- Better flexibility in muscles and joints
- Improved digestion
- Increased oxygen flow
- Relief of boredom
- An active and alert mind
- Quality time with its owner

(Hamilton, 2007)

Dogs are naturally social and become stressed by the hours waiting for their owner to return home. Exercise and play provide an outlet for that stress and “playing with other dogs is one of the best and easiest ways to exercise your pet” (Kilcommons, 1999). In order to reduce stress, it is best to increase the amount of a dog’s activity prior to an especially hectic schedule of the owner (Kilcommons, 1999).

The sixth ingredient is employment. A dog will be stimulated and have a sense of purpose and pride if he has a job to do. The training technique called “nothing in life is free” is a common teaching tool in nonviolent obedience classes. My dog Jake was introduced to this method in his dog training class. The premise is to simply make the dog work for everything he gets. For example, the dog must sit before receiving his dinner, or lay down before permitted to go outside. It takes a lot of consistency on the owner’s part, but it really does work (Owens, 1999).

The seventh ingredient is rest. A typical dog needs up to sixteen hours a day of sleep and it is best for the health of the dog if the rest is undisturbed, quality sleep (Owens, 1999).
Training is the eighth ingredient and Owens suggest implementing several small training sessions of three to five minutes throughout the day rather than two long sessions. “Any behavior that is rewarded increases the probability that the dog will repeat that behavior” (Owens, 1999).

The final ingredient is health care. This includes weekly grooming of the coat, ears, nails, and skin. Some veterinarians suggest daily brushing of the dog’s teeth. Heath care also consists of checkups to the veterinarian and the administration of necessary vaccinations and shots. Owens takes a more avant-garde and holistic approach. He suggests taking the dog to an herbal medicine doctor, chiropractor, and even acupuncture specialist (Owens, 1999).

Most of these suggestions do work if implemented, but can be quite time consuming and costly. Obviously, the more time and effort put into training, exercising, and socializing the dog, the better the dog will behave at a dog park. Certainly, a specially prepared gourmet dog meal is better than Kibbles and Bits™. Even before purchasing a dog, it is important to consider the cost and time it will take to care for the dog. The dog owner should stay informed about proper dog care and then choose a plan that is reasonable for both the homeowner and dog’s life. Taking an unhealthy or overly tired dog to dog park can be detrimental to the dog. The unhealthy or tired dog might be viewed by the other dogs as weak and is more likely to be attacked by a healthy, aggressive dog.
D. PARK AESTHETICS

1. Aesthetic Quality

When it comes to aesthetic quality of a dog park, “a designer applies not only principles of art composition but his powers of intuition as well” (Rutledge, 1971). Rutledge states that even untrained designers are able to discriminate between the pleasing and the displeasing by simply sharpening awareness skills. To determine if something is pleasing, Rutledge suggests using the “excellence scale”. The “excellence scale” is simply imagining for example two dog parks; one that lacks amenities, is muddy and is not properly maintained, and a second dog park that includes beautiful shade trees, strategically placed benches, interesting structures for the dog to play on, and exciting eye flow that pulls the visitor into the park. One park is on the lowest point of the “excellence scale” and the other is on the top. In order to hone this skill, continue to look for what could be possibly be the worst case and best case scenario (Rutledge, 1971).

Since everyone has a different opinion of what is beautiful, Rutledge suggests that it is better to evaluate a design’s order and variety rather than its beauty. To be able to generate a pleasurable response, both order and variety must be present. Variety provides stimulation and excitement and is needed to combat boredom in a design. Order gives the feeling of tranquility and a logical correctness. However, too much variety creates a chaotic feeling and an overabundance of uniformity results in a monotonous atmosphere.
“In a successful design, both order and variety are present in fragile equilibrium” (Rutledge, 1971).

2. **Functional Considerations**

The attractiveness of a dog park is irrelevant if it is not functional. “Functional efficiency can be judged almost entirely on the weight of the tangible evidence, for in contrast to aesthetics, where much qualitative analysis depends upon sensing the feel of the thing, the functional effect of design action is predictable” (Rutledge, 1971). The “excellence scale” which was mentioned earlier can be used to judge the functionality as well. For example, is the height of the fence tall enough to prevent dogs from escaping the park, are the benches withstanding the wear, and is the surface selected holding up to the heavy traffic? To design a functional dog park, imagine how all the various users will utilize the park such as the maintenance crew, the disabled, the patrons, and the dogs. Is there enough space for a lawn mower to fit? Is the surface smooth enough to allow a wheelchair to maneuver? Are there enough benches for the patrons to sit comfortably? Are the visitors protected from the elements or are they baking in the sun? Is there enough space for the dogs to run (Rutledge, 1971)?

The goal is to find a product that is the best quality and has no weakness. This is not always possible because the best product might exceed cost requirements, time constraints or a site that dictates what is possible. Compromises are then necessary and creative solutions (Rutledge, 1971).
E. Legal Issues

Many cities set a limit for the number of dogs permitted per household. Most commonly, no more than three dogs are allowed; however, Burlington City, New Jersey does not have a limit. Even if there is not a limit, neighbors can still sue if they are bothered by a dog or dogs, or if an animal interferes with the enjoyment of their own property. The dog owner might be required to get rid of his pet (Randolph, 2005). People are no longer allowed to open up their back doors to let their dog roam the neighborhood because there are laws requiring a dog to be on a leash and under control whenever the dog is off the owners’ property. The only exception is in areas where there are designated unleashed areas. The degree of severity of the penalty varies from city to city.

If a dog is found running loose, the animal control officer will take the dog to the local animal shelter and usually, the owner will be fined and charged for the cost of impounding the dog. Additional fines will be given to the dog owner if his dog does not have a license. According to the United States 2000 Census, Burlington City’s population was 9,736 (Burlington, 2007) yet Brenda L. Marks who is the Certified Municipal Registrar for the Burlington City Board of Health says that in 2006 only some 500 dogs were registered in Burlington City. Ms. Marks thinks that perhaps half the dogs in the city are unlicensed (Brenda L. Marks, personal communication, January 15, 2007).

The license fee in Burlington City is $8.00 a year for spayed or neutered dogs and $11.00 if they are not. If a licensed dog is impounded by the animal control, its records are checked and the owner is notified. The small yearly fee for licenses is a small price to
pay, because in general, unlicensed dogs are euthanized sooner than dogs with tags (Randolph, 2005). If a dog bites someone, becomes lost, stolen, or is picked up by animal control, the penalty to the unlicensed dog owner can be hefty, not to mention the fact that the dog could be put to sleep. In addition to the license, it is possible to have a microchip ID inserted into the dog’s shoulder. The chip is no larger than a grain of rice and contains the dog’s identification number. With the help of a scanner (available through official offices such as a town’s animal control authority, the police department, or at veterinarian offices), the person who finds the dog can have the ID number read. The number will appear on the computer screen; the scanner calls the toll free number and the dog owner is then notified of the location of his pet.

“If a dog is unlicensed or running at large, {the dog owner} probably lost {his} right to be notified before the dog is picked up or, in some cases, before the dog is destroyed. If a dog is running at large, it could pose an immediate danger to the public. In this case, most courts agree that the government has the power to impound and destroy it, without first notifying the owner. If a dog is in the act of attacking a person or livestock, anyone including government employees, may lawfully do anything necessary to stop it” (Randolph, 2005). The risks to the dog are great, such as the possibility the dog will be hit by a car. Also, the owner is at risk financially if the dog bites or injures someone (Randolph, 2005).

Jean Bessette of Van Nuys California was fined for walking his dog without a leash. The owner of the Labrador retriever protested because the dog actually had a leash on.
Instead of being walked by the owner, the dog had the end of the leash in its own mouth and according to Bessette was walking himself. Luckily for Bessette, he avoided a fine on a technicality; however, most people are not so lucky. Frustrated by the strict leash laws, many dog owners have formed groups across the United States and Canada in order to pressure their township or city into having specific areas where their dog can run off-leash. The first dog park was originated in Berkley, California in 1976 on a half of an acre in the Ohlone Park, now named the Martha Scott Benedict Memorial Park. This fenced off area is designated for dogs to run and play off leash. The Ohlone Park Dog Owners Association is still in existence and has become a nonprofit corporation that supervises the dog park (Randolph, 2005).

Most cities require a dog owner to pick up after their dog or face fines that range from $20 to $1000. Besides a possible fine, it is common courtesy to pick up the mess. Piles of dog feces make a community look messy and unsightly. Also, feces are unhealthy, as they can be the host of parasites and diseases. The feces biodegrade slowly, especially in cold weather, and it can take several weeks to several months to dissolve. In addition, droppings left around makes all dog owners look bad (Somdog, 2007).

If access to a property is free, there is a law in almost every state that protects property owners from liability when accessing their property. It is based on a Federal law for “recreational immunity”. The Federal Recreation Landowner Immunity and Immunity and Liability Act on which the state laws originate goes as such:
A landowner, who opens his land for public recreation use free of charge, owes no legal duty of care to a recreational user to guard, warn or make the premises reasonably safe. As a result, in the absence of a fee for the use of the land, there is generally no landowner liability for negligence acts or omissions which cause injuries to recreational users immunity under the Recreation Use Statues (RUS); however, will not apply if the landowner is guilty of willful (i.e., intentional) or wanton misconduct (i.e., utter disregard for the physical well-being of others) which causes injury to the recreational user. Where the lower legal standard of care (willful/wanton misconduct) is applicable under a RUS, landowner liability is highly unlikely. To establish liability, the injured plaintiff must, as a minimum, demonstrate the landowner’s utter failure to take the most minimal precautions, in the face of an extremely dangerous condition known to the landowner, but not apparent to the recreational user (Stecchi, 2006).

Before installing a dog park, become familiar with the local, state, and federal laws concerning dogs. The local municipal building can provide a copy of all the rules and regulations of the town and books like Every Dogs Legal Guide: A Must Have Guide for Your Owner by Mary Randolph (2005) and So You Want to Build a Dog Park? Susyn Stecchi (2006) can be helpful resources for preventing a possible problem.

**F. Dog Training and Dog Parks**

Dogs that are improperly trained may not have the proper skills needed for interacting with the other dogs at a dog park. It is interesting to know what kinds of dog training are available and what works best for most dogs. When my dog Jake was a puppy, I enrolled him into a dog training class at the local PetSmart. The trainer Cindy Jacoby who had been teaching for over twenty years suggested purchasing a snake chain collar. She liked it because she felt it worked well for training and it did not damage the fur around the dog’s neck. She instructed me to yank the collar to make a correction, say the command and then give my dog a treat. At the completion of the eight week course, Jake learned
the basic commands, however he was obviously annoyed and agitated by the collar and demonstrated his anger by snapping back. This style of training can also lead to serious health issues to the dog such as potential damage to the esophagus.

Jake later attended another obedience school where the dogs were trained with positive reinforcement and the motto was “train without pain”. Skilled Dog Obedience Trainer, certified Dog Behavior Consultant, and owner of The Jersey Dog Trainer, Renee Premaza, replaced Jake’s choke collar with a harness. Small treats replaced the neck yank. Ms. Premza does not like choke collars and is “vehemently opposed to the indiscriminate use of shock collars!” She feels that “the basics of any good training program, require that your dog trusts you and that you want to avoid having your dog associate you with pain and discomfort.” She also feels that “a good trainer understands the psychology of how dogs learn and the so-called ‘trainers’ who use this device (aka "remote collar" or "e-collar") are depending on the use of an electronic piece of equipment to do their job for them rather than using creative skills and talent to teach dogs” (Premaza, 2007).

Jake was not trained with a shock collar, because it was obvious to me that the uncomfortable method of training did not work for him. Ethically and morally I did not like it either. In the eight week course entitled the “Bratty Bunch” obedience class with Renee Premaza, he was trained with a device called a clicker. I was instructed to click as soon as the dog performed the requested command and then immediately told to treat the dog with a small piece of food as reinforcement. The dog quickly learned that when he
heard the sound, he has done something good. Renee says that “we've actually made a promise to him that anytime he hears the click, he will get a treat.” She says that “when she deals with serious behavioral problems, she gets quicker results” with this method. The benefits of click training include: changing a negative, fearful emotion into a positive one, preventing inappropriate behaviors by teaching alternative or compatible behaviors, and encouraging the dog to think which teaches the dog to choose behaviors we like (Renee Premaza, personal communication, February 16, 2007). Jake excelled in this form of training and after the completion of the class was ready for an advanced training class where the dogs learn how to conduct themselves in a nursing home setting.

Ed Frawley is the owner of Leerberg® Kennel which sells dog training supplies. He is also the producer of over a hundred and twenty dog training videos and DVDs and for ten years he was a police K-9 handler. Frawley says that dogs instinctively try to establish a ranking order when there is a group of dogs and problems arise when several want to assume a certain rank (Frawley, 2005). At first there might be a lot of posturing if the dogs are inexperienced or do not have a strong temperament. Then, if the owner is unable to verbally command his dog to back off, a dog that has fought before will “launch into a full-fledged attack.” The experienced dog has learned that a quick and fast fight is the best defense (Frawley, 2005).

Frawley also warns that you should not assume that all the dogs in park are well behaved and well mannered. Just because it looks like they are playing nicely with the other dogs, it does not necessarily mean the other dogs will play nicely with your dog. He says that “the issue of rank has already been settled with these other dogs and the game may be going according to their rules. Your dog will not know the rules and can easily get into
trouble” (Frawley, 2005). Many times, dog owners don’t realize that their dog expects their owner to be the pack leader. If the handler does not protect his or her dog, the dog then loses confidence in its leader or owner (Frawley, 2005).

If the dog is threatened at a young age and is not protected by his owner, it will show avoidance to strange dogs and strange situations. Frawley suggests that if your dog is challenged by an aggressive dog that you should verbally tell the dog in a deep voice, “get out of there”. If another dog attacks your dog, Frawley recommends using pepper spray or actually going after the other dog physically. He says that a dog who has been attacked even one time will be permanently changed and it is quite likely that the attacked dog will become an aggressive animal himself. Finally, he recommends that owners of bully/aggressive dogs use a pronged collar that pokes into the dog’s neck or a remote collar that actually sends electrical currents into the dog’s neck in order to properly train dogs. He says “the correction needs to be so severe that the idea of fighting or showing aggression is not as strong as the fear of what happens when he does not mind. The dog must think his life is over” (Frawley, 2005).

Below are Frawley’s recommendations for making a safe dog park.

1. Dogs should pass a test before being permitted into the park. The dog must know how to deal with dog fights and the owner should demonstrate that he is able to call his dog back from a group of several dogs that are playing.
2. Separate the large dogs from the small dogs.
3. Leave the park when an aggressive dog arrives at the park.
4. Visit the park at off peak hours.
5. Call your dog away from the pack when a dog fight takes place and use a remote collar.
6. Play separately from the dog pack park to show your dog that you are just as fun as the other dog.
7. While you are at the dog park, watch your dog 100% of the time.
8. Only socialize with the other patrons when your dog is on a leash.
9. Take your dog other fun places besides a dog park such as for walks or swimming.
10. Learn how to use a remote collar (Frawley, 2005).

Many of Frawley’s suggestions are practical and make sense. It is important to point out however that Frawley is a businessman who is trying to market and sell his dog training DVD’s and remote collars, so his opinions are defiantly biased in nature. The other problem is that shocking a dog might stop the problem, but is this humane treatment to an animal? Are there other methods that are not so cruel that can work just as well?

Cesar Millan thinks that “a dog park can be a welcome break from a (dog’s) routine. The dog park can be used to help your dog increase his social skills, and perhaps give him some fun running and playing with members of his own kind. But that is all you should expect from a dog park.” He warns that a dog park should not be a substitute for a walk or a place for the dog to work off his excess energy. Mr. Millan is concerned with the “power of the pack” and feels there is high risk of conflict when many unfamiliar dogs are confined to an enclosed area. Mr. Millan says it usually takes weeks to introduce a new dog to a pack of balanced and stable dogs and warns that most dog owners do not know the stability of the other dogs that go to a park (Millan, 2006).

Before entering a dog park, Millan feels the dog’s energy level should be low. He suggests walking the dog for at least a half hour and then once near the park, walk around that neighborhood for a while. High energy dogs should wear a backpack to expend their excess liveliness. A calm and relaxed dog will be more likely to interact in a healthy social way. Once at the dog park, Millan says that dog owners need to be aware of what
their dog is doing and to move around and interact with his dog. He also suggests not petting or comforting a dog when it is behaving aggressively, dominant, or is afraid because this would encourage poor behavior. He does not recommend taking a sick dog to a dog park because it could be attacked because the other dogs might confuse its sickness with its being weak. Millan does not encourage pet owners to bring more than three dogs at time and to never to bring food into the park because fights could occur. Most importantly, Millan believes that to socialize a dog, a better alternative is to go for walks with other dogs. He says that this is “the best way for dogs to get to know one another as a pack. Then begin by letting these dogs get to know one another in more relaxed play situations, carefully making note of each dog’s behavior and response.” He encourages the owners to stay involved (Millan, 2006).

There are many ways to train a dog and consistency is the key and a nonviolent approach is preferred. To prevent possible problems, Frawley’s idea of requiring dogs to pass a test before being permitted into the park should be implemented in all dog parks.

**VIII. Conclusion**

In an urban environment, there is a real need for a safe place where dog-owners can take their dog to run freely, play, and interact with other dogs. A dog park can be the solution, however, there must be proper supervision, enforced policies and rules, consideration to the design, attention to the environment, dog health and behavior concerns, and a comprehensive plan on how to properly maintain the park. Often times the dog park designers have not addressed all of these issues prior to installation and the result can be “heart-braking” to the owner, deadly to the dog and costly to the community.
It is not unusual in an urban environment for neighbors not to know or socialize with the people living next door. And dog owners who walk their pets often try to avoid other people walking their dogs so as to minimize potential conflicts between their animals. However, in a dog park setting, dog owners might be happily surprised by the unlikely friendships that can occur. And if the park is well thought out and planned to insure the safety and security of the animals, the result can be a real boost for the community. Some of the positive results may include better socialized and more fit dogs.

A comprehensive reference manual for developing and maintaining dog parks currently is needed. Such a resource would serve landscape designers, park administrators, city officials, dog owners, and the general public with authoritative, scientific information on the purpose, design, sanitation standards, development, management, and maintenance of dog parks. It is my desire to compile such a handbook to insure effective, attractive, and inviting environments for both dogs and their owners.
IX. References


Stecchi, Susyn. (2006). *So You Want to Build a Dog Park?* DogParks USA™


