

Pet Waste Management Action Plan

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Overview of Oyster Bay/Cold Spring Harbor

The Oyster Bay/Cold Spring Harbor Complex is the cleanest estuary in western Long Island Sound and is a vital ecological, economic, and recreational resource. The approximately 6,000-acre estuary, spanning approximately 40 linear miles of shoreline, is the site of one of the most economically important shellfisheries in the State; it contains a National Wildlife Refuge, State-designated Significant Coastal Fish and Wildlife Habitats, and has been identified by New York State as an Outstanding Natural Coastal Area. Moreover, the Oyster Bay/Cold Spring Harbor Complex is connected to Long Island Sound, an Estuary of National Significance. Oyster Bay is among the 30-plus areas highlighted by the Long Island Sound Study Stewardship Initiative, in New York and Connecticut, for the ecological and/or recreational values that they support (Friends of the Bay 2011).

Oyster Bay/Cold Spring Harbor Protection Committee

To help protect and enhance the water quality of Oyster Bay and Cold Spring Harbor and their tributaries in the most cost-efficient and effective manner thirteen (13) municipalities located within the watershed formed the Oyster Bay/Cold Spring Harbor Protection Committee in January 2010.

Our Mission

"Improve the health of Oyster Bay and Cold Spring Harbor by coordinating the efforts of all municipalities in the watershed and engaging the public."

Intermunicipal partnerships like the Oyster Bay/Cold Spring Harbor Protection Committee have proven effective to improve water quality across the country. Two successful local examples are the neighboring Hempstead Harbor Protection Committee formed in 1995 and the Manhasset Bay Protection Committee created in 1998. Working together the municipalities identified priority sources of pollution and implemented solutions that dramatically improved water quality with the support of numerous grants.

Activities

The Protection Committee will accomplish its mission by:

- utilizing and implementing the findings of existing studies,
- sharing information, technology and ideas,
- developing and implementing best management practices,
- developing and adopting model ordinances,
- actively pursuing grants, partnerships and other sources of support for the watershed,
- conducting and/or supporting water quality and habitat monitoring,
- enhancing awareness, conducting educational outreach and practicing stewardship, and;
- consulting with and engaging other governmental agencies, environmental advocates, educational organizations, interest groups, businesses and citizens.

Pet Waste Management Program

For more than a decade reports have identified pet and waterfowl waste as a contributor to water quality impairment in Oyster Bay and Cold Spring Harbor (NYS DEC 2003, NYS DEC 2007, Friends of the Bay 2011). In the 2007 Final Report for Shellfish Pathogen TMDL (Total Maximum Daily Loads) the New York State Department of Environmental Conservation and Suffolk County Department of Health Services reported, "water quality is primarily affected by urban storm water runoff (including pet waste) and direct waterfowl and wildlife inputs, followed by STPs (sewage treatment plants), failing septic systems, and boater waste".

In the Final Report for Shellfish Pathogen TMDLs for 27 303(d)-listed Waters (Battelle 2007) it was stated:

Without specific bacterial source tracking data, it is impossible to estimate how much dog waste is actually reaching any given water body, but the magnitudes of the fecal concentration and the production amount suggest that efforts to curb the amount of abandoned dog waste may be fruitful. (Battelle 2007)

Friends of the Bay's Watershed Action Plan (2011) called for the development, implementation and enforcement of a local law prohibiting pet waste on municipal property; development and implementation of a pet waste bag program for collection and proper disposal of pet waste; and increasing public education on the importance of pet waste (along with geese waste and septic systems) as a source of pathogens.

As part of the annual strategic planning, the Oyster Bay/Cold Spring Harbor Protection Committee decided that a comprehensive watershed-wide pet waste management program along with a similar resident waterfowl management program would be two of the committee's priorities to improve water quality and support implementation of Municipal Separate Storm Sewer System (MS4) requirements.

Reviewing Existing Information

To determine the current state of knowledge, learn from the experience of others and understand what local municipalities are doing, existing information was reviewed from a variety of sources. This information included research papers, technical guidance regarding best management practices, reports from private industry, web sites, municipal codes and the Municipal Separate Storm Sewer System (MS4) annual reports from each municipality.

Investigation and Analysis

An analysis was conducted to determine the nature and extent of the pet waste problem in the Oyster Bay/Cold Spring Harbor watershed. This multi-faceted approach consisted of reviewing existing information, meeting with protection committee members, field investigations and input from residents.

Meetings with Protection Committee Members

To understand what the problems, if any, pet waste is posing in their community and what they are doing to address them, meetings were held with knowledgeable representatives from each municipality. In some communities the mayor and/or trustees were best informed about these issues; in others it was the village clerk or highway manager. As part of these meetings popular areas for dog walking and recreation along with potential problem areas for pet waste were identified.

Public Input

Through public education and outreach efforts the Oyster Bay/Cold Spring Harbor Protection Committee will continuously solicit input from the public to gain additional anecdotal information on where large concentrations of pet waste may be occurring.

Field investigations

In person, on-going field investigations will be used to follow-up with areas identified by municipal officials and residents that have been identified as potential pet waste problem locations.

The benefits of a comprehensive watershed-wide pet waste management program include cleaner neighborhoods, less friction between dog owners and non-dog owners, better water quality and improved compliance with stormwater regulations.

Analysis of Pet Waste Issue

Why is pet waste a problem?

In densely populated suburban areas pet waste, if not properly picked up, can affect the use and enjoyment of public spaces resulting in conflict between pet owners and fellow residents. Pet waste affects the quality of residents walking in the community and children in play areas and fields. Children are particularly vulnerable as they may not be diligent about washing their hands after playing. In addition pet waste is a food source that attracts rodents.

Pet Waste is not only an unsightly nuisance but an environmental pollutant. Contrary to what some may think dog waste is not a fertilizer. Animal products in the diet of dogs make the waste unsuitable for soil enrichment. Fecal matter contains harmful bacteria, which close shellfish beds and beaches. Worms and parasites that can transmit disease can live in soil for years (see Table 1). As a result pet wastes are not recommended for back yard compost piles and dogs and cats should also be kept away from gardens (US EPA 2001).

A single gram of dog feces, the weight of a business card, can contain up to 23 million fecal coliform bacteria (Van der Wel, 1995). Pet feces can contribute a fairly substantial amount of fecal coliform to a watershed. US EPA (1993) has estimated that two to three days of accumulated dog waste from approximately 100 dogs within a 20 square mile watershed could contribute enough coliform to close the receiving waters to swimming and other contact activities.

TABLE 1: POTENTIAL HARMFUL ORGANISMS ASSOCIATED WITH DOG WASTE	
(US EPA 2001)	

Organism	Symptoms		
Cryptosporidium	gastrointestinal illness lasting two to ten days in healthy individuals but can be fatal in people with weakened immune systems, particularly concerning as it is highly resistant to disinfection with chlorine		
Giardia lamblia	Skin sores to chest pains		
Salmonella			
E. coli	Diarrhea and abdominal gas, virulent strains can cause serious illness and fatalities		
Roundworms	Severe infections may cause fevers, bronchitis, asthma or vision problems		

The American Veterinary Association (2007) estimates there are 72 million dogs in 43 million households in the United States. The United States Environmental Protection Agency estimates the typical dog excretes 0.75 pounds of waste per day or 274 pound per year. Nationally this results in 30,000 tons/day or 10 million tons per year of dog waste. To provide some perspective, this would translate to 267,000 tractor trailers

bumper to bumper for 3,800 miles (Doody Calls 2012). This line of trucks would stretch from Los Angeles, California to New York City with stop at Walt Disney World in Orlando, Florida along the way.

The City of Dover (New Hampshire) is working with residents and the New Hampshire Department of Environmental Services (NHDES) to promote proper pick-up and disposal of pet waste. Recently, NHDES and the University of New Hampshire conducted a study using a DNA fingerprinting technique to match bacteria found in water samples to bacteria from specific sources, including humans and domestic animals. With this forensic science, NHDES found that dogs are a significant contributor of bacteria in surface waters including a small creek in Dover that flows into the Bellamy River (City of Dover). Similarly, outside of Seattle microbial source tracking studies have shown that approximately 20% of bacteria isolates that could be matched with host animals were matched up with dogs (Trial, 1993).

The University of Maryland Cooperative Extension Agency Home and Garden Improvement Center event studied dog owners' rationale for not picking up after their dog.

Table 2: Dog Owners' Rationale for Picking Up or Not Picking Up After Their Dog(HGIC, 1996)

Reasons for not picking it up:	Reasons for picking up:	
 Because it eventually goes away Just because Too much work On edge of my property It's in my yard It's in the woods Not prepared No reason Small dog, small waste Use as fertilizer Sanitary reasons Own a cat or other kind of pet 	 It's the law Environmental reasons Hygiene/health reasons Neighborhood courtesy It should be done Keep the yard clean 	

Pet Waste Management in OB/CSH Watershed

The number of dogs in the Oyster Bay/Cold Spring Harbor watershed can be estimated to be between 7,286 and 13,154. The lower, more conservative, number is determined by simply doubling the 3,643 dogs in the Cold Spring Harbor/Eel Creek watershed (NYS DEC 2003) to estimate the number of dogs in the entire Oyster Bay/Cold Spring Harbor watershed. The number of dogs could be as high as 13,154 dogs if we make some assumptions using the formula provided by the American Veterinary Medicine Association (2012) and the NYS DEC (2003). The data, presented in Table 2 below estimates that there are over four million dogs in New York State, 289,000 in Nassau County and 322,000 in Suffolk County. If we only include dogs in the municipalities that have at least 50% of their land area in the Oyster Bay/Cold Spring Harbor the estimated number of dogs is 13,154 dogs.

	2010 US Census Population Data	Total Number of Households	Households with Dogs	Total Dog Population
	-	Population/2.67	Households X 0.36 (percent of dog owners)	Dog Households X 1.6 (mean number per household
New York State	19,375,102	7,256,593	2,612,373	4,179,797
Nassau County	1,339,532	501,697	180,611	288,978
Suffolk County	1,493,350	559,307	201,351	322,161
Cold Spring Harbor and Eel Creek Watershed	16,885	6,324	2,277	3,643
OB/CSH Watershed	60,973	22,836	8,221	13,154

TABLE 3: ESTIMATE OF DOG POPULATION

Given these estimates 5,464 pounds of dog waste are produced every day from 7,286 dogs. This is derived by multiplying the 7,286 dogs by 0.75 pounds of waste per day results in 5,464 pounds per day (US EPA 1993). Using this same formula if the watershed contains 13,154 dogs they would produce an estimated 9,865 pounds of dog waste per day.

While determining the exact number of dogs or precise amount of waste produced is difficult; it is not necessary as the Final Report for Shellfish Pathogen TMDLs for 27 303(d)-listed Waters (Battelle 2007) stated:

Without specific bacterial source tracking data, it is impossible to estimate how much dog waste is actually reaching any given water body, but the magnitudes of the fecal concentration and the production amount suggest that efforts to curb the amount of abandoned dog waste may be fruitful. (Battelle 2007)

In meetings with representatives from each of the Protection Committee's municipal members and from subsequent code review some interesting trends emerge:

- Ten of the fourteen municipalities interviewed have ordinances or "pooper scooper" laws requiring owners to pick-up after their pets. In fact the four municipalities without "pooper scooper" laws two of the villages are in the process of adopting such laws.
- Currently only the City of Glen Cove and Nassau County have Pet Waste Bag Programs, while the towns of Oyster Bay and Huntington and the Village of Bayville have expressed interest/need for installing pet waste bag stations.

Adoption of this comprehensive watershed wide pet waste management plan will entitle all Protection Committee members to declare they have a pet waste bag program even if they do not have a pet waste station in their community. This is a result of examining the needs and problem areas throughout the watershed to determine where pet waste stations would be most effective.

Problem areas/Needs:

Overall, municipal members did not indicate that pet waste was a significant problem in their community. Many of the communities with large lot zoning indicated that dog walking is not a big activity and owners have their dogs relieve themselves on their property (which still should be picked up regularly).

Potential Problem Areas

- Long Island Sound shoreline (Bayville)
- President Streets (Bayville)
- West Harbor Drive/Centre Island Beach (Town of Oyster Bay)

Locations where dogs are not allowed but may be a problem:

- Stillwell Woods (Town of Oyster Bay)
- Gibson Pond (Lattingtown)

Potential Locations for Pet Waste Stations

- Bayville Avenue near Centre Island Beach (Town of Oyster Bay)
- West Harbor Drive (Bayville/Town of Oyster Bay)
- Bayville Village Center to raise awareness
- Downtown Oyster Bay to raise awareness
- Cold Spring Harbor Park (across from fire department)
- Cold Spring Harbor State Park trail head

Options

Numerous watershed protection groups and local municipalities have devised methods for addressing pet waste management. Presented here are a variety of possible options for managing pet waste in the Oyster Bay/Cold Spring Harbor watershed gathered from a variety of sources around the country.

Do Nothing

The easiest approach would be to not do anything. Given the data presented in this report and the MS4 requirements this is not a reasonable or responsible approach.

Pet Waste Bag Program

Develop and implement a pet waste bag program for collection and proper disposal of pet waste this could entail some or all of the following:

- Pet Waste Stations purchase and distribute dog disposal stations or dog disposal bags. Considerations:
 - Location
 - Convenience is key although nearby residents may have concern about location
 - Dog disposal stations work best if at a targeted area, like a dog park or town park where pick-up logistics is probably not an issue.
 - At beginning of walk, dispose of in middle or end of walk
 - Along sidewalks on BOTH sides of street allow dog walkers to step aside so others can pass
 - Map of dog waste stations (i.e. OB/CSH web site)
 - Туре
 - Sign (see Appendix A: Resources)
 - Bags single pull slightly more expensive than roll but avoid multiple bags being taken unintentionally; to save cost recycled plastic grocery bags can be used
 - Can recommend heavy duty aluminum can with:
 - Mailbox style chute to keep other trash out
 - o Heavy duty liners
 - Lid on can to avoid "poop soup"
 - Opportunities to reduce the cost:
 - Pet Waste Bag Sponsorship/Advertising



• Pet Waste Station Sponsorship



• Plastic grocery bag recycling dispenser



Maintenance & Servicing

- Station Monitoring
 - Check Weekly or 2x/week weather dependent
 - Keep bag dispensers stocked
 - Keep cans empty keep regular trash out to avoid filling too quickly

- Who will maintain the stations?
 - o Municipality
 - Department of Public Works
 - Highway Department
 - Parks Department
 - Animal Control
 - Outsourcing
 - Professionals cost?
 - Landscapers cost? expertise?
 - Volunteers Reliability? Liability?

Public education

Implement a campaign to raise awareness of the environmental, public health and quality of life problem caused by not picking up after your pet and how residents can be a part of the solution.

Identify problem spots

- Step in Poop Map fun way to determine where waste stations should go
- Poop Patrol schedule common area cleanings volunteer clean-up supplement municipal employees efforts
- Establish a Pet Waste Committee comprised of community leaders, pet related businesses and others that can help develop the pet waste campaign and encourage others to participate.
 - City/town representatives—conservation commission, recreation department, animal control, others
 - Watershed residents
 - School representatives
 - Local veterinarians
 - Pet supply store representatives
 - Humane Society representatives
 - Business and/or farm owners within the watershed

Create a Campaign

- Brand the campaign with an official logo and slogan. Use on promotional items. Some example slogans:
 - "Scoop the Poop"
 - "Where's Your Baggie?"
 - "What do you do with doo?"
 - "Courtesy is Contagious (so is pet waste). Thank you for picking up after your pet!"

- Run a logo design contest for the campaign; this will help get more people involved and also provides a media opportunity. Hold an awards event to announce the winners for additional publicity. Although this is a rewarding activity, it requires extensive staff coordination and management.
- **Create flyers**, posters and/or a simple brochure and post/distribute where audience is most likely to see them, such as pet food stores, veterinary offices, humane societies, the town hall, and transfer station.
- Create promotional materials like door-hangers, bumper stickers, T-shirts, magnets, posters, pins, bookmarks, decals, and lawn and garden markers with the official logo/slogan of the campaign and some basic dog waste and water pollution facts. Place where your target audience will most likely encounter. For instance try contacting pet supply stores.
- Set up a website. A few ideas: Include contact information for the outreach campaign. Post a media section with links to all of the press received since the campaign began. Post names of people who have signed a "scoop the poop" pledge (*with their permission*).

Promote the Campaign

- Spread the word in local publications that your audience receives, like school, health care, humane society, and condo association newsletters.
- **Use local media** for public service announcements on why dog waste is a pollution problem.
- Recruit "ambassadors" that model the desired behavior and are willing to talk to their neighbors about it. This works well when an especially prominent, respected member of the neighborhood models the behavior.
- Start a scoop the poop pledge program. Ask people to commit to picking up after their dogs by signing a "scoop the poop" pledge at local pet store, groomer and/or veterinary office. Better yet, post in a public place (*with the pledgers' permission*). People are more likely to change their behavior if they have made a commitment, especially in public.
- Host a public information meeting. A public information meeting allows you to provide information to your targeted audience on the

project and the pet waste pollution problem. Just as important, if not more so, it provides an opportunity for the community to brainstorm potential solutions. The solutions come from the community!

- Use press releases to announce any events associated with the campaign. Alert radio, TV and print media.
- Engage the Public
 - Facilitate an activity for the target audience to increase their understanding of how dog waste pollutes water, such as the "EnviroScape" program.
 - **Conduct a watershed stewardship activity**, such as a storm drain stenciling program.
 - Link to existing education programs in the schools. Partner with local summer camp programs to conduct outreach activities.
- Establish prompts to help dog owners remember to bring their bag with them or remember to pick up the poop in the yard. For instance, create doggie bandanas or lawn ornaments that say, "Got Bags?"
- Establish picking up pet waste as a social norm. You can start by asking individual dog owners if they would like to see healthier water in their local community. Most people will say yes. Secondly, ask if s/he is willing to commit to picking up their dog's waste. Pass out a sticker or lawn ornament that designates the person as a committed "pooper scooper." A visible demonstration of commitment to a behavior change can be a powerful tool in establishing a social norm.
- Provide complimentary dog waste kits at events, dog groomers, vets, etc. The kits could include information on why dog waste pollution is a problem and prompts for helping people remember to bring their bags. The possibilities include doggy bandanas, waste disposal bags, doggie biscuit treats, and other fun, useful stuff for dog owners.
- Map of dog waste stations on OB/CSH web site
- Municipal Partners
 - Replace "Curb Your Dog" signs that used to be picked up by street sweepers but can get into storm drains, emphasize picking it up with "Pick-up After Your Pet" signs
 - Adopt local ordinances "Pooper Scooper" laws

- Develop, implement and enforce a local law prohibiting pet waste on municipal property. US EPA 2014 strongly encourages enforcement of laws to be effective
- Schedule common area cleanings or part of municipal employees job description

Dog Park

Dog exercise areas or dog parks are a public resource that can provide a focused area for cleaning up after your dog. These parks must include, among others, covered trash receptacles, dog feces pick-up bags, and posted rules. The posted rules include a requirement that dog owners/handlers must immediately pick up and dispose of all dog feces in trash receptacles (NVRC 2004). In Clifton Park, New York a \$700 pet waste septic system was offset by dog park permit fee. "Ten Tips for Planning and Building a Dog Park in Your Community" from DoodyCalls can be found in Appendix D.

Plan of Action

After reviewing the options presented the Oyster Bay/Cold Spring Harbor Protection Committee has committed to the following:

- 1. Develop and Implement a Public Education Campaign
 - **a.)** Spread the word in local publications that reach our target audience such as weekly papers, civic association newsletters and town and village communications.
 - **b.)** Create flyers, posters and/or a simple brochure and post/distribute where audience is most likely to see them, such as pet food stores, veterinary offices, humane societies, and town/village halls.
 - c.) Establish a page on the Oyster Bay/Cold Spring Harbor Protection Committee's website. A few ideas: Include educational informational about pet waste. Provide contact information for the outreach campaign. Post a media section with links to all of the press received since the campaign began. Post names of people who have signed a "scoop the poop" pledge (*with their permission*).
 - **d.)** Provide complimentary dog waste kits at outreach events, dog groomers, vets, etc. The kits could include information on why dog waste pollution is a problem and prompts for helping people remember to bring their bags. The possibilities include doggy bandanas, waste disposal bags, doggie biscuit treats, and other fun useful stuff for dog owners.

2. Initiate a "Scoop the Poop" Pledge Campaign

Ask people to commit to picking up after their dogs by signing a "scoop the poop" pledge at local pet food stores or groomers.

3. Continue to Identify Problem Location

Work with local officials, residents and through dashboard surveys to identify other areas where pet waste is a problem. Implement a targeted education campaign in these areas which may include promotional materials like door-hangers and lawn and garden markers with the official logo/slogan of the campaign and some basic dog waste and water pollution facts.

4. Acquire and install Pet Waste Stations

Develop and implement a pet waste bag program for collection and proper disposal of pet waste in target areas where there is local commitment to maintain the stations.

- 5. Replace "Curb Your Dog" signs with "Pick-up After Your Pet" Identify and replace the few remaining "Curb Your Dog" signs with "Pick-up After Your Pet" signs.
- 6. Develop, implement and enforce a local law prohibiting pet waste on municipal property.

To comply with MS4 storm water requirements the Protection Committee will work with municipalities to develop and implement "pooper scooper" laws.

Implementing these measures through a comprehensive watershed-wide pet waste management program will result in cleaner neighborhoods, less friction between dog owners and non-dog owners, better water quality and improved compliance with stormwater regulations.

Bibliography

- American Veterinary Medicine Association (AVMA). 2012. U.S. Pet Ownership and Demographics Sourcebook. Schaumburg, IL.
- Battelle. 2007. Final Report for Shellfish Pathogen TMDLs for 27 303(d)-listed Waters prepared for U.S. Environmental Protection Agency Oceans and Coastal Protection Division and New York State Department of Environmental Conservation Division of Water, Duxbury, M.A.
- City of Dover, New Hampshire. No date. Help Dover reduce pollution from pet waste!. [http://www.ci.dover.nh.us/csenviron_out.htm?id=PET%20WASTE Exit EPA Site]. Accessed September 8, 2005.
- Doody Calls. 2012. The Community Pet Waste Management Handbook. Charlottesville, VA.
- Friends of the Bay. 2011 Oyster Bay/Cold Spring Harbor Watershed Action Plan prepared by Fuss & O'Neill. Oyster Bay, NY.
- Hardwick, N. 1997. Lake Sammamish Watershed Water Quality Survey. King County Water and Land Resources Division. Seattle, WA.
- Home and Garden Information Center (HGIC). 1996. Residential Fertilizer Use Survey. Unpublished Surveys. University of Maryland Cooperative Extension. College Park, MD.
- National Council on Pet Population Study & Policy. 2014. Frequently Asked Questions. Accessed January 4, 2014. http://www.petpopulation.org/faq.html
- New York State Department of Environmental Conservation (NYS DEC). 2013. Retrofit Program Plan Guidance Document for Pathogen Impaired Watershed MS4's on Long Island. (<u>http://www.dec.ny.gov/docs/water_pdf/rppgdpiwms4li.pdf</u>). Albany, NY.
- New York State Department of Environmental Conservation, Bureau of Watershed Assessment and Management, Division of Water 2011. The Atlantic Ocean/ Long Island Sound Basin Waterbody Inventory and Priority Waterbodies List Encompassing all or portions of Bronx, Kings (Brooklyn), Nassau, New York (Manhattan), Queens, Richmond (Staten Island), Suffolk and Westchester Counties Volume 2: Nassau and Suffolk County Waters. Albany N.Y.
- New Hampshire Department of Environmental Resources (NHDER). 2007. The Inside Scoop: How to Conduct a Pet Waste Outreach Campaign. Concord, NH.

- New York State Department of Environmental Conservation (NYS DEC). 2003. Final Pathogen Total Maximum Daily Loads For Shellfish Waters in Oyster Bay Harbor and Mill Neck Creek. Albany,NY. (http://www.NYSNYSDEC.ny.gov/docs/water_pdf/oystbay.pdf)
- Northern Virgina Regional Commission (NVRC). 2004. Implementation Pan for the Fecal Coliform TMDL (Total Maximum Daily Load) for Four Mile Run, Virginia. Annandale, VA
- Swann, C. 1999. A Survey of Residential Nutrient Behaviors in the Chesapeake Bay. Widener Burrows, Inc. Chesapeake Research Consortium. Center for Watershed Protection. Ellicott City, MD.
- United States Environmental Protection Agency Office of Water (US EPA). July 2001. Source Water Protection Practices Bulletin Managing Pet and Wildlife Waste to Prevent Contamination of Drinking Water (EPA 916-F-01-27). Washington D.C.
- United States Environmental Protection Agency (US EPA). 2014. Web. 2 Jan 2014. Pet Waste Management. <u>http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=factsheet</u> <u>results&view=specific&bmp=4&minmeasure=1</u>
- United States Environmental Protection Agency (USEPA). 1993. Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters.
- United States Environmental Protection Agency, Office of Water (USEPA). 2002. National Menu of Best Management Practices for Storm Water Phase II. Accessed 3/7/2002. <u>http://www.epa.gov/npdes/menuofbmps/menu.htm</u>. Washington, DC.
- Upper White River Watershed Alliance and Tipperecanoe Watershed Foundation (UWRWA). Accessed 2/3/14. <u>http://www.clearchoicescleanwater.org/pets/pet-poo-impacts/</u>. North Webster, Indiana.
- van der Wel, B. 1995. Dog Pollution. The Magazine of the Hydrological Society of South Australia.. 2(1)1.

Appendices

Appendix A: Resources

The Inside Scoop: How to Conduct a Pet Waste Outreach Campaign

New Hampshire Department of Environmental Resources. 2007. Concord, NH. http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-06-35.pdf

Dog Waste Stations, Signs, Dispensers, Trash Cans and Pick-up Bags

The following are some websites to give you ideas on the types of available products. (The Oyster Bay/Cold Spring Harbor Protection Committee does not endorse these companies or products.)

- www.dogwastedepot.com
- www.petwasteeliminator.com/
- www.pbp1.com/Property/Products/Grounds/Pet-Control
- www.dogipot.com/
- www.muttmitt.com/ customized signs and bags for sponsors
- http://bagspot.com/
- www.theparkcatalog.com/
- www.bagsonboard.com
- www.islandtailwaggers.com/poop-bags.html

Dog Waste Stations and Plastic Bag Recycling Project in City of Chandler, Arizona http://chandleraz.gov/default.aspx?pageid=688>

Appendix B: Sample Legislation

Town of Huntington, NY Chapter 78-7 Commission of Nuisances and Other Offenses (similar to Incorporated Village of Bayville code)

- (B) No person owning, harboring, keeping or in charge of any dog shall cause, suffer or allow such dog to soil, defile, urinate, defecate on or deface any public property, including but not limited to parks, roadways, highways, streets, walkways, pathways, sidewalks or off-leash areas, or any place where people congregate or walk or on any private property without the permission of the owner of said private property.
- (C) Exceptions. Dogs may be curbed on that portion of a roadway or street lying between the curblines. A person who curbs a dog shall immediately remove, in a suitable container, all feces deposited by such dog. The feces removed from the designated area shall be disposed of in a sanitary manner by the person owning, harboring, keeping or in charge of any dog curbed, except that a person who is visually impaired and/or disabled and is accompanied by a guide or service dog shall be exempted.

Village of Oyster Bay Cove, NY Chapter 106-7 Animal Waste

No person owning, possessing, harboring or having custody or control of any animal shall permit such animal to deposit any animal waste, as that term is commonly understood, on any public street, road, or highway, including the rights-of-way thereof, or other public place located within the Village unless such waste is immediately removed in a sanitary manner.

City of Houston, Texas Section 6-24 summarized (dog and cat poop)

Defecation by dogs or cats

Pet owners must remove all fecal material deposited by their pets on property they do not own, including neighbors' yards, city parks, school property, public rights-of-way, etc.

Defecation by dogs or cats

• A person in control of a dog or cat must promptly remove and dispose of, in a sanitary manner, feces left by their dog or cat, when walking outside of your own yard with their pet.

- Each person in control of the dog or cat must have materials to remove feces left by their dog or cat when they are off their own property.
- If the person in control of the dog or cat is the owner of the property, this law does not apply.

Violation of this section is punishable upon conviction by a fine of not less than \$75 or more than \$500. Each violation of this section is a separate offense.

Appendix C: Easy Steps for Dealing with Your Pet's Waste (City of Dover, NH. 2014)

- 1. Always carry a plastic bag when you walk your dog
- 2. Re-using an old newspaper delivery bag or plastic grocery bag works well
- 3. To avoid unpleasant surprises, check the bag for holes before your pet's walk
- 4. Use the bag as a glove to pick up the pet waste
- 5. Turn the bag inside out around the waste, scoop it up, seal the bag, and dispose of it in a trashcan
- Don't place bagged or un-bagged pet waste in a storm drain or hose pet waste towards storm drains as they drain directly to a stream, river, lake or other water body.
- 7. If you have a large yard, bury un-bagged pet waste about 5 inches deep in the ground away from vegetable gardens and waterways; remember that compost piles may not get hot enough to kill disease-causing organisms
- 8. Remove waste from areas where children play or you garden
- 9. Wash your hands with warm, soapy water after dealing with pet waste

Appendix D: Ten Tips for Planning And Building A Dog Park in Your Community (Doodycalls 2014)

1) Location, location, location

Location is the first and most important consideration to take into account when planning a dog park. Ideally, you want to identify an area situated off to the side and preferably towards the back of the community. Likewise, the proposed park should be easily accessible to all residents. Keep in mind also that dog parks do not necessarily have to be located on perfectly flat areas. Is there a piece of land in your community that is not suitable for other uses due to a slope or rough terrain? Consider utilizing this area for a dog park. This will allow you to make more use of available land in the community.

2) Fencing the park and designing an entrance

Every dog park includes at least two basic structures: fencing around the perimeter and a staged entrance area. Fences should be five feet or higher to prevent a dog from jumping over it. Entrances should serve as an effective buffer to your park. If possible, consider a double gate system. This area will give everyone some much appreciated breathing room as they enter and exit with their pet. It also serves as an assimilation and introduction area, and also helps to keep dogs from escaping.

3) Gate placement

Where to place the double gate is also an important consideration. Corners of the dog park are not advisable, as this allows new dogs entering the park to easily be cornered by the other dogs as they rush to greet each other. This can create a situation leading to dog fights. Alternatively, gates placed along the side of a park give dogs a full 180 degrees to enter.

4) Dog park surface

Contrary to popular belief, grass should be avoided as a surface for dog parks. For starters, the constant running and romping of dogs will tear grasses up, leaving only exposed dirt, which then become a soupy, muddy mess when it rains. In addition, dog urine contains high levels of nitrogen, which damages the grass, killing it even faster.Save yourself the expense and maintenance headaches - select an alternative surface. Decomposed granite, for instance, is extremely durable, requires minimal upkeep and is more environmentally friendly. Decomposed granite is made up of very small pieces of granite and can range in size from ¼" inch to a sandy consistency. There are also specially designed artificial turfs for dog parks available on the market today. While the initial cost is higher, the surface will be more attractive and manageable for a longer period of time.

5) Small dogs and large dogs

Many dog parks have two separate sections of the park. One side is for small dogs (usually less than 35 pounds) and another for the big boys. These areas are completely separate enclosures so the dogs cannot mix at all. It can be a good idea to plan the double gate so that it can be used to enter either section of the dog park, saving you money on building costs.

6) Signage

Clearly display and enforce the rules for your dog park. Like all parks, your dog park should have set rules and regulations, as well as contact information for authorities and management clearly posted on a permanent sign on the entry gate to the park.

7) Common dog park rules and regulations

- This park is for the use of residents and their pets only
- Owners are legally responsible for their dogs and any injuries caused by them.
- Puppies and dogs must be properly licensed, inoculated and healthy to use the park.
- Animals must wear a collar and ID tags at all times.
- Owners must clean up after their dogs.
- Dogs showing aggression towards people or other animals must be removed from the park.
- Animals exhibiting a history of aggressive behavior will not be permitted.
- Puppies using the park must be at least four months old.
- Owners must not leave their dogs' unattended or allowed out of sight.
- Children under the age of 16 are not permitted in the park unless actively supervised by a parent.
- Dogs in heat are not allowed inside the park.
- No food, beverages, glass, sharp objects or weapons are permitted inside the park.
- Owners must carry a leash at all times. Dogs must be leashed before entering and prior to leaving the park.
- Violators will be subject to removal from the park and suspension of park privileges.

8) Water supply

An available running water supply for dogs in the park is very important. Avoid large buckets of standing water, as they can spread disease between dogs and

can become a perfect breeding ground for mosquitoes in the summer months. A high-low water fountain is ideal for dog parks – the high being for people and the low for pets.

9) Park seating

Have benches or available seating. A dog park can be a great place to meet fellow residents and socialize, so try to group seating together. Also keep in mind the seating material. Aluminum is a good choice because it is less affected by weather and will not absorb odor like wood will.

10) Controlling the poop at the dog park

Lots of dogs mean lots of dog poop. This is something you can absolutely count on when planning a dog park. To curb pet waste problems, consider developing a comprehensive pet waste management plan, with a professional pet waste removal service.