Supplemental Materials

for

Improving Compliance with Leash Laws in Rock Creek Park

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Sponsor: National Park Service

These materials supplement the above named project report and are submitted to the faculty of WPI in partial fulfillment of the requirements for the Degree of Bachelor of Science
# Table of Contents

Table of Contents  
Part A - Authorship  
Part B - Sponsor Description  
National Park Service  
Figures  
Works Cited  
Part C - Interview Questions  
Individual:  
Horse Trainer:  
Park Police:  
NPS Staff and Volunteers  
Focus Groups  
Part D - Data sheet  
Part E - BARK Ranger Program  
Recruitment  
Advertisement  
Messaging  
Requirements + Training  
Part F - Social Media Posts  
Hashtags  
Positive posts  
Negative posts  
Seasonal Posts  
Testimonials  
Part G - Pamphlet Information  
Insert for trails pamphlet
## Part A - Authorship

<table>
<thead>
<tr>
<th>Author</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emily Donovan</td>
<td><strong>Introduction</strong>&lt;br&gt;Background - introduction, public opinions + attitudes, specific ROCR problems, final edits&lt;br&gt;Methodology - introduction + summary, objective 1, final edits&lt;br&gt;Results - introduction; objectives 1, 2, 3, 4, 5; final edits&lt;br&gt;Slide Designs - all sections&lt;br&gt;Figures 4, 5, 7, 9, 10, 11, 12, 13, 21, 24&lt;br&gt;Recommendations / Conclusions&lt;br&gt;Supplemental Materials - C, F</td>
</tr>
<tr>
<td>Mei Hao</td>
<td><strong>Background - dog popularity</strong>&lt;br&gt;Methodology - Objective 3&lt;br&gt;Results - Objective 2, Objective 3: paragraphs 1, 2, 7&lt;br&gt;Slide Designs - all sections, overall edits&lt;br&gt;Publisher Design&lt;br&gt;Extra Research - Social Trails&lt;br&gt;Figures 1, 2, 8, 14, 15, 16, 17, 18, 19, 20, 22, 26</td>
</tr>
<tr>
<td>Timothy Winters</td>
<td><strong>Background - rules + regulations</strong>&lt;br&gt;Methodology - Objectives 2, 4&lt;br&gt;Results - objective 4, final edits&lt;br&gt;Results - Final Edits&lt;br&gt;Slide Design - all sections, overall edits&lt;br&gt;Figures 6, 23, 25&lt;br&gt;Data Analysis</td>
</tr>
<tr>
<td>Tianyu Yu</td>
<td>Supplemental Materials C, G</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------</td>
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<tr>
<td>Background - problems caused by dogs</td>
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<tr>
<td>Methodology - Objectives 2, 4</td>
<td></td>
</tr>
<tr>
<td>Results - Objective 2: Bark Rangers Program, 3: Behavior, 4: Park Specialists, final edits</td>
<td></td>
</tr>
<tr>
<td>Recommandation - “Bark Rangers Program”</td>
<td></td>
</tr>
<tr>
<td>Slide Design - all sections</td>
<td></td>
</tr>
<tr>
<td>Extra Research - invasive plants</td>
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</tr>
<tr>
<td>Figure 3</td>
<td></td>
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<td>Table 1</td>
<td></td>
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<tr>
<td>Data Analysis</td>
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<td>Supplemental Materials - C, E</td>
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Part B - Sponsor Description

National Park Service

Established in 1916, the National Park Service is a bureau of the U.S. Department of the Interior. The National Park Service is lead by a director who is appointed by the President of the United States. The Director is supported by staff that include, “senior executives who manage national programs, policy, and budget in the Washington, D.C., headquarters and seven regional directors”, who are each responsible for national park management and program implementation across the United States in their respective regions (What We Do, 2018).

The national parks were established for conservation purpose, yet are open to the public. The mission of the National Parks Service is to care for, “special places saved by the American people so that all may experience our heritage” (What We Do, 2018). The National Parks System includes 417 sites that encompass more than 85 million acres in every state, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands. While the word ‘park’ bring to mind open grass fields and playgrounds the national parks include myriad types of parks: monuments, battlefields, military parks, historical parks, historic sites, lakeshores, seashores, recreation areas, scenic rivers and trails, and even the White House (FAQ 1, 2018).

Over 20,000 people work at the National Park Service, including full time employees, seasonal employees, interns. The National Park Service also has more than 315,000 volunteers yearly to assist with upkeep of the parks. Besides the commonly known park rangers, these jobs include curators for museums, landscape architects, engineers, educators, law enforcement officials and firefighters (FAQ 1, 2018). The National Parks across the country have been dealing with an uptake in yearly visitations, needing an estimated 12 billion dollars in repairs in 2015 with the estimated value growing with each year (2016). In 2018, the National Parks Service was given a yearly budget of 2.6 billion dollars (Budget, 2018). The National Park Service suffers greatly from inadequate funding and not enough staff to support the growing crowds yearly (2016).

Rock Creek Park

Unlike other National Parks, such as Glacier Park in Montana or Acadia in Maine that are characterized by their mountains, Rock Creek Park is an urban park in Northwest Washington D.C. Established in 1890 as the third federally managed parks in the country, Rock Creek Park incorporates 1,754 acres along the Rock Creek Valley with Rock Creek flowing to the Potomac River further south (History and Culture, 2018). The park is open year round during daylight hours, except National Holidays, and is closed to the public at night. Rock Creek Park has a very rugged landscape compared to its location in the city, with steep slopes carved into metamorphic rock. The highest point of elevation is 409 feet in Fort Reno, located west of the Rock Creek valley and the lowest point, sea level, is where the mouth of Rock Creek meets the Potomac River. Rock Creek flows south toward the Potomac River, except for the northwestern region where the creek flows east due to steep hills blocking it traveling south. The variation in topography house varying types of fauna and flora that belong to one of the eight natural communities recognized at Rock Creek Park by ecologists. Some areas in the park are highly elevated and provide a sunlit, dry and acidic soil climate for fauna to inhabit. Other communities that flourish in wet soil are found at the base of the hills in small depressions or along the floodplains (Natural Communities, 2018).

Varying climates in the park allow diverse group of animals to inhabit the park in different areas. Rock Creek Park is inhabited by 340 white tailed deer and is home to a large amount of racoons. Rock Creek Park has the most dense racoon population recorded nationally. Rangers believe
there are 6 to 8 fox dens in the park home to red and gray foxes. There have been coyote sightings since 2004, but the exact number of the population are unknown (FAQ 2, 2018). Other typical animals in the park all year are Eastern Grey squirrels, flying squirrels, wood thrush, woodpeckers, beavers, great blue heron, opossums and the red ear slider turtle. Other animals inhabit the park during different seasons such as mallards and toads in the spring and tiger swallowtail butterfly and garter snakes in the summer. In total there are 28 known species that inhabit Rock Creek Park throughout the four seasons (Native Animals, 2018).

Rock Creek Park provides marked trails for visitor enjoyment and safety, as well as to preserve wildlife in the park by preventing disruptions. Rock Creek Park contains 47 different trails, spanning 32 miles, that range from easy to difficult in hiking ability. The trails are all open to hiking while three are open to bikers and eleven trails allow horses (Trail Information, 2018). The two primary trails run North-South, Western Ridge and Valley Trail, while other trails run East-West and act as connector trails between the two primary trails. Roads in the park are typically used by commuters during the weekday to get to other areas of Washington D.C. On weekends, due to an influx in visitors, parts of Rock Creek Park are closed to cars (Hiking in Rock Creek Park, 2018).

Along with typical hiking activities Rock Creek Park also provides amenities that serve many other interests as well. There are 28 picnic areas in Rock Creek, eight of which hold up to 75 people per sites that require permits for use. Rock Creek Park is the only National Park with a planetarium that has free admission. The park has an equestrian center providing horseback riding lessons as well as trail rides. Rock Creek Park also has a golf course, a boathouse and tennis center all available with activities for patrons of the park. (Goods and Services, 2018). Many people volunteer as individuals by joining a group to help with park upkeep. Group volunteers perform general trash clean up, invasive plant species removal, trail work, and adopting part of the park. Adopting a portion of the park is a year long commitment that involves park staff developing a list of tasks that need to be done to improve a section of the park and oversee the development as the volunteers work on the park (SOLVE, 2018).

Recently, the lack of leashing regulation compliance in Rock Creek Park has officials interested in gaining more insight in the issue of dogs in the park. Visitation numbers in Rock Creek Park are steady, averaging 2.01 million from 2008 - 2013, jumping to 2.44 million in 2014 and then plateauing (See Figure 2). 2017 was the park’s most populous year at 2.48 million visitors (Rock Creek Park visitors 2017, 2018). With the increase in visitors Rock Creek Park officials encounter more issues and areas of improvement within the park.

Dogs allowed into a public space can be viewed as a nuisance, but especially those that are off-leash. Dogs disrupt the public enjoyment of the park, pose a hazard to the visitors, and lack of compliance with leashing regulations results in disruptions in the wildlife. Off-leash dogs disrupt the animals and foliage in the park, transferring pollen and soil from certain areas to other areas and can disturb nesting grounds. Off-leash dogs have also been noted to disturb nesting areas for small mammals and the egg sacs of salamanders and frogs (Barcus 2018). The disturbances dogs cause interfere with the National Parks Service mission of conserving land for future generations. The National Park Service website has a specific page for pet rules when bringing a pet into Rock Creek Park. The rules include: keeping dogs on leash at all times to protect the dog, other dogs, other visitors, and the park’s wildlife. Rules also forbid leaving a pet tied and unattended as well as to rules regarding pet waste. The National Park Service website provides a “Top Ten Reasons for Keeping Your Dog on a Leash” list to encourage owners to leash dogs and understand the dangers of off-leasing their dog in Rock Creek Park (See Figure 1).
of Columbia also has rules against off-leashing dogs within the district, punishable by fine. (Pets, 2018). If owners would like to take their dogs to a designated dog park, the commute could be upwards of 5 miles depending on their location in the city.

As a team we hope to be able to recommend a strategy to Rock Creek Park officials to help with the lack of compliance regarding dog regulations. Our project is an effort to see how better communication might encourage dog owners to follow the regulations through observations and other forms of data collection.
Figures

Figure 1. Top 10 reasons to keep your dog on a leash from Rock Creek Park

Figure 2. Visitation statistics for Rock Creek Park

Works Cited


Part C - Interview Questions

Individual:

We are a group of students from Worcester Polytechnic Institute in Massachusetts. We are working with National Park Service and Rock Creek Park to reduce the adverse impacts of off-leashing dogs in Rock Creek Park.

The team have been observing the dogs and dog owners in the park for the past week and the team would like to have an interview with some questions on your perception of off-leash dogs. The team may quote the response in the team’s research. If the team does, you will be given an opportunity to review the team’s statements before publication. You are free to stop the interview at any point. You may refuse to answer any question that you don’t feel to answer. Participating in this interview is completely voluntary.

If you have any question, please feel free to contact us collectively at gr-dc18nps-rcp@wpi.edu or contact our faculty advisor Dominic Golding at golding@wpi.edu, and Lorraine Higgins at ldh@wpi.edu.

Horse Trainer:

1. How long does a typical ride last?
2. Are the rides individual or will multiple horse be on a trail at once?
3. What is the most common trail ride?
4. Is it common to see other visitors with and without dogs on the rides?
5. How do horses and off-leash dogs normally interact?
6. What are some negative impacts of unleashed dogs on horses?
7. In the past 6 months, how many times have you seen an off-leash dog causing problems for horses or horse riders?
8. Are there any particular incidents that you can recall that caused or could have caused severe consequences?
9. Are you a dog owner?
   a. If yes: Where do you walk your dog and what are your motives for leashing the dog?
10. What do you think is the reason that people don’t leash their dogs even when there are regulations against off-leashing dogs?
11. Do you have any suggestions to improve the regulations to be more effective?

Park Police:

Sergeant Stewart

1. We understand that the National Park Service has a rule requiring all pets to be leashed at all times, yet many park visitors ignore the rule and walk their dogs off-leash in the park. How does the park police normally respond to these situations? Does the park police typically get involved only when an off-leash dog is causing problem for other visitors, wildlife or property, or whenever a sighting of an off-leash dog occurs?
2. When the park police get involved with off-leash dog incidents, how do you approach the owner about the problem? Do you talk with the dog owner? Give a fine?

3. How many tickets do you think you give out monthly for a visitor letting a dog off-leash?

4. How do owners of off-leash dogs react when the park police accost them about unleashed dogs?

5. We are aware of the Incident Management, Analysis and Reporting System (IMARS) system, but are still unclear on how the system works. How do the incident reports normally come in? Do the reports include complaints from park visitors?

6. How many reports involving dogs being off leashed has been filed over the past 3 months?

7. What kind of incidents are often reported?

8. What are the most common locations for complaints?

9. Have you noticed an uptick in complaints during a particular season?

10. Is there a record of reports that we could get access to? If not, is there any chance that we could get the information anonymously (without specific information on the reports)?

11. Are you a dog owner?
   a. If yes: Where do you walk your dog and what are your motives for leashing the dog?

12. What do you think is the reason that people don’t leash their dogs even when there are regulations against off-leashing dogs?

13. Do you have any suggestions to improve the regulations or the enforcement to be more effective?

Lieutenant Simeon Klebaner

1. We understand that the National Park Service has a rule requiring all pets to be leashed at all times, yet many park visitors ignore the rule and walk their dogs off-leash in the park. How does the park police normally respond to these situations? Does the park police typically get involved only when an off-leash dog is causing problem for other visitors, wildlife or property, or whenever a sighting of an off-leash dog occurs?

2. When the park police get involved with off-leash dog incidents, how do you approach the owner about the problem? Do you talk with the dog owner? Give a fine?

3. How do owners of off-leash dogs react when the park police accost them about unleashed dogs?

4. How many reports involving dogs being off leashed has been filed over the past 3 months?

5. What kind of incidents are often reported?

6. What time of a day has the most dog incident reports?

7. Are you a dog owner?
   a. If yes: Where do you walk your dog and what are your motives for leashing the dog?

8. What do you think is the reason that people don’t leash their dogs even when there are regulations against off-leashing dogs?

9. We know that giving out 25 dollar tickets has not been successful and it is hard to change the law. So we’ve proposed several recommendations: the BARK Ranger program, social media post to raise public awareness and pamphlet for education people on dangers of off-leashing and horse etiquette. Do you have any comment?
**NPS Staff and Volunteers**

Resource Manager (invasive plant manager):
1. Could you please explain your role in the National Park Service?
2. What are the negative effects of invasive plants species?
3. How do off-leash dogs spread invasive plants?
4. What are some other problems that off-leash dogs could cause for plants in the park?
5. Where are the most serious areas?
6. What can harm the dogs if they run off-trails?
7. Do you believe off-leash dogs are the main contributor to the spreading or do all dogs/humans/wildlife contribute?
8. How does leashing the dog help with preventing the problem?
9. What are some of your suggestions for increasing leash law compliance in the park?

Matthew Carroll Acting Superintendent for Steamtown Park:
1. What types of off-leash problems do you have in your park?
2. What is the protocol when dealing with a complaint?
3. What is your perception of the off-leash dog problem?
4. What are some major issues that off-leash dogs cause in the park?
5. What has the committee been doing or thinking about doing to attempt to solve the problem of leash compliance?
6. Are you a dog owner?
   a. If yes: Where do you walk your dog and what are your motives for leashing the dog?
7. What do you think is the reason that people don’t leash their dogs even when there are regulations against off-leashing dogs?

Volunteer Questions: Kathryn Tyler
1. Could you please briefly explain your role in Rock Creek Park?
2. How has the volunteers been engaged in solving the off-leash dog issues in Rock Creek Park?
3. What are some of the educational programs in ROCR?
4. What are the essential elements to make a program successful?
5. Is there is any program for adults?
   a. yes:
      i. What are some of the differences between the programs for adults and programs for children?
      ii. What are the essential elements to make programs for adults successful?
   b. No:
      i. Why not? What are the challenges to host program for adults?
      ii. What might be the alternative ways to make people aware the negative impacts that their dogs might cause?
6. Could you tell us more about the Bark Ranger program?
7. Has the Bark Ranger program been effective? Why or why not?
8. Do you think volunteers are a feasible way to regulate leashing?
Erik: Volunteer / bicyclist
1. Can you explain how/why you became a volunteer?
2. How has the off-leash dog issue directed you specifically?
   a. Have you ever encountered dog owners?
   b. What do you generally say to them?
3. What actions should be taken to stop the off-leash dog problem?
4. Do you think roving volunteers is an effective strategy?
5. Do you have any other suggestions to help with the off-leash issue?

Ron Harvey
1. How successful would you say the Catoctin BARK ranger program is? Has it made a noticeable difference?
2. What is the current status of the off-leash dog problem in Catoctin Mountain Park?
3. Since we have heard that Rock Creek park has been having some trouble enforcing the leash law, we are wondering how the leash law is enforced in Catoctin Mountain Park?
4. We have heard that the Catoctin Mountain Park has a BARK ranger program, could you please tell us more about how the program works?
   a. How long has the program been running?
   b. How long did it take to implement the program?
   c. What steps are needed to implement the program?
   d. How many people are currently running the program?
   e. How many volunteers, dogs and people, are currently in the program?
   f. How are volunteers for the program recruited and trained?
   g. How much funding has been put into the program?
5. Why has the BARK ranger approach been chosen for solving dog issues in the park?
6. Has the program been effective for solving off-leash and other dog related problems in the park?
7. What are some of the problems that you have encountered when implementing the program?
8. What are some of your suggestions that you have if the BARK ranger were to be implemented at Rock Creek Park?

Saralee Boteler: Civilian horse rider that boards and rides her horse in ROCR
1. We are trying to develop a volunteer program called the BARK ranger, which basically is volunteers bringing their dogs to approach dog owners who don’t leash their dogs and try to convince them. Do you think that will work on horse trail?
   a. yes:
      i. What should the volunteer watch out for on trail?
      ii. What are some ways that off-leashed dogs might get harmed on horse trail?
   b. no:
      i. why do you think this program will not work on horse trail?
      ii. What alternative ways do you think might work? Signages?
2. What kind of horse etiquette is crucial for the public to understand?

Joe Kish: Lands and GIS Specialist
1. Could you please briefly explain your role in the park?
2. What does the Geographic Information System do?
3. What are some of your experiences related to dogs off-leash issues in Rock Creek Park?
4. Where do you consider to be hot spots for off-leash dog issues?
5. Are there any maps that addresses this issue that could be of help to our research? e.g. mapping of social trails?
6. What do you think would be helpful to improve leash law compliance in the park?

Kerry Olson: Acting Chief of Interpretation, Education and Volunteers for the Washington Office
1. Could you please briefly explain your role?
2. Could you briefly explain your perception of the off-leash dog issue?
3. Did you have a off-leash issue in Santa Monica, if not why?
4. What kind of actions has Santa Monica Mountains NRA taken to reduce dog issues in the park? What has been effective and what has not?
5. What kind of actions has parks in D.C. taken in order to reduce the dogs off-leash issue?
   a. Do you know of any successful cases?
6. We know of a Bark Ranger program in Canoticut Mountains and are looking into the possibility of starting one in Rock Creek. Do you know of any other parks in D.C. having similar programs?
7. What are some key points for making an education or volunteer program successful?
8. What would you be most concerned about starting a Bark Ranger program in Rock Creek Park or in D.C. area in general?
9. What are your suggestions for increasing leash compliance in Rock Creek Park?

**Focus Groups**

Horse Center Focus Group
Good [Morning/Afternoon/Evening]. Thank you for joining us. We really appreciate you giving your time to us so we can further our research. We are students from Worcester Polytechnic Institute, an engineering school in Massachusetts, and we are working in D.C. to study the impact of off-leash dogs in Rock Creek Park. Specifically, we are investigating the negative effects of off-leash dogs in Rock Creek Park and how to improve visitor compliance with leash laws. We hope to gather your opinions on the kinds of problems caused by dogs, the frequency and severity of the issues, current approaches to handling the problems, how well those approaches are working, and what alternative approaches might be better.

This session will last for about 90 minutes and we will be taking notes throughout this session. Your response will not be confidential, but will be anonymous if used in a research report. You will have the right to review anything we put on our report regarding this session before we publish it.

This is meant to be a relaxed discussion. We want you to be as honest as you can so that we can accurately reflect your thoughts and feelings. Please also try not to talk at once so that we can document everything clearly and so that everyone can have an opportunity to express their views.

We look forward to your opinions and we will report to the National Park Service about your thoughts.
1. Dog & Horse Related:
   a. What are the types of problems that off-leash dogs cause for horses and horse riders in the park?
   b. How often do these incidents occur?
   c. Have you noticed a pattern regarding time of day/day of week for dog/horse incidents?
   d. Where do these incidents normally occur? Do these incidents occur at particular places in the park/on horse trails or do they happen anywhere along the horse trails?
   e. What are some severe consequences that these problems could lead to? Could you give us some specific examples?
   f. What are the current approaches to handling the off-leash dog problems? Do you approach the dog owner directly, call the park police or use other methods?
   g. Do you consider the methods effective?
   h. What are your suggestions for better engaging with the public about the leashing regulations to improve compliance?

2. Personal
   a. Is anyone a dog owner?
   b. Where do you normally walk/play with your dog?
   c. Where do you normally play with your dogs off-leash?
   d. Do you normally leash your dog when walking/playing?
   e. What are your reasons for leashing/not leashing your dog?

Park Rangers Meetings

1. We know that park rangers don’t have authority to discipline. Do you feel that the public respects you?
2. Do you ever explain to anyone (children, dog walkers) the hazards to the park and to the dog/owner?
3. We are looking to create an education system. What do you find to be the best ways to convey information to the public?
4. We’re there ever issues in the park that dealt with public not following the law? How did you solve?
5. How much money is set aside for solving this issue?
Part D - Data sheet

Link:
https://docs.google.com/spreadsheets/d/1cnIAEFIkNZEU_aedp9wIZX10Gajy9VBJ14D0BwWXlyg/edit?usp=sharing
Part E - BARK Ranger Program

In order to create a successful BARK Ranger program the park needs to first recruit volunteers and raise public awareness. To do that, the team has done multiple observations at 5 different key locations in ROCR-- Battery Kemble, Montrose Park, Dumbarton Oaks, Military Field and Meridian Hill at three different time slots and the result is shown in Table 1.

Recruitment

Time and locations for BARK ranger volunteer recruitment

<table>
<thead>
<tr>
<th>Observations result in 5 key locations (off-leashed/total dogs)</th>
<th>Battery Kemble</th>
<th>Montrose Park</th>
<th>Dumbarton Oaks</th>
<th>Meridian Hill</th>
<th>Military Field</th>
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<tbody>
<tr>
<td>Morning</td>
<td>32/45</td>
<td>40/59</td>
<td>0/0</td>
<td>5/76</td>
<td>1/5</td>
</tr>
<tr>
<td>Noon</td>
<td>24/41</td>
<td>8/12</td>
<td>7/8</td>
<td>3/27</td>
<td>0/2</td>
</tr>
<tr>
<td>Afternoon</td>
<td>16/28</td>
<td>9/20</td>
<td>0/0</td>
<td>5/29</td>
<td>6/29</td>
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</table>

Fig 1. Observations result

From the result, Battery Kemble, Montrose Park, and Meridian Hill are the three most popular locations for dog activities as well as visitors. Therefore, volunteer recruitment should take place at one of these three locations to begin the program outside the main body at Rock Creek Park as well as establish a program in the main body of Rock Creek to target the trails and Military Field after further research.

1. Battery Kemble
Recruitment and advertisement should take place in morning. Morning Battery Kemble is the most popular time out of three slots. There are more visitors and also frequent dog traffic making recruitment here successful.

2. Montrose Park
Weekends morning is very popular compared to other time in a week for dog owners together at west side of Montrose Park. Therefore, weekends morning is the perfect time to recruit and to advertise BARK Rangers. Weekend mornings also have clusters of dog owners together making recruitment easier by targeting multiple people at once.

3. Meridian Hill
Meridian Hill has a high leashing compliance but still a few off-leashed cases. Morning Meridian Hill is very popular both for dogs and other park visitors and is the best time of a day to recruit volunteers and raise public awareness about the program as a whole.

Advertisement
Since the off-leashing problem is not severe in Meridian Hill, it is better to start off at Montrose Park and Battery Kemble and use Meridian Hill as a place to advertise the program. To further raise the public awareness, the team also created Instagram posts for ROCR about BARK Ranger program and stories related to dogs in ROCR (see Figure 2).

![Sample Instagram Post](image.png)

**Fig 2. Sample Instagram post to promote BARK Ranger Program**

**Messaging**

In order to encourage more dog owners to comply with the leashing regulation and also to give them a good experience in the park, the team has developed a universal message for park staff and volunteers when they encounter off-leashed dogs and their owners:

“Hi, I have noticed you’re having a good time with your dog here. I just wanted to warn you that dogs have been known to chase wildlife and get lost. Your dog may also be susceptible to Lyme disease from ticks and rabies from wildlife in the park. Because of this, [Insert Park Name] requires all pets be leashed in the park to keep dogs and visitors safe. We would really appreciate if you could help us protect our park and I’m sure your dog will appreciate being kept safe. Hope you and your dog enjoy your walk here!”
Due to the different characteristics in different parks, there are different behaviors and dangers dogs are likely to get into that vary with each location.

In Battery Kemble, many off-leash dogs roam on the big open area next to the parking lot. Dogs are likely to roam on the parking lot or even chase cars. Dogs could be hit by vehicles that try to get in or leave the parking lot. Other than that, many owners take their dogs on trail adjacent to the creek which is dirty and full of chemical compounds according Joe Kish the Land and GIS Specialist. Therefore, our message for volunteers at Battery Kemble is:

While I love the grassy areas here for my dog, I keep him leashed due to parking lot here in Battery Kemble. The last thing I would ever want is for my dog or anothers to get hit by a car so I always encouraging leashing. The trails here also have protected plants along the trails that could irritate your dog if they get into it so it’s best to keep the dog leashed.

In Montrose Park, owners usually socializing with each other and let the dog roam freely. The park is full of plantation and hedges that dogs might get into. Dogs may be hurt by poison ivy and get scratches from other plants. Montrose Park is also adjacent to R Street, if an off-leashed dog run through the fences, it might get hurt by a car. Therefore, our message for volunteers at Montrose Park is:

Hi there! While I love the grassy areas here for my dog, I keep him leashed due to the surrounding streets. The last thing I would ever want is for my dog or anothers to get hit by a car so I always encouraging leashing. You never know what might send your dog running!

Requirements + Training

In order to be considered as a candidate for ROCR BARK Ranger program, the owner needs to provide proof from professional veterinarian and shows that the dog follows owner’s verbal commands. During the training, the team believes that it would be better to have a group gathering time for all the BARK Rangers in order to show that the dog candidates are friendly both to owners and other dogs.

Training Materials

Along with the bandana and badge already created by the volunteer ambassadors the use of a card to promote the BARK Ranger could also be helpful. Modeling from the card the Petrified Forest National Park has (see Figure 3), the team created the BARK Ranger card for ROCR(see Figure 4). This card outlines the rules of being a BARK Ranger in a user friendly way, has the dog and owner take a “pledge” inside and the card is a great way for owners to show pride in being a BARK ranger. Having owners display this card in pictures could be a great way for the park to do “meet your BARK Ranger” weekly as well as promote the program to get more involved.
Rewarding System

In order to encourage more dog owners volunteer for BARK Ranger program, and raise public awareness, the team develop the “reward system”. Every month, ROCR staff will post BARK Rangers pair on the park social media as a reward to the volunteer to encourage more people
leashing their dogs. The post will have hashtags such as #barkrangernps #barkrangerROCR #goodboy #DogswithJobs #dogsofDC #dcdogs #rockcreekpark in order to raising further public awareness.

Figure 5. Sample social media post
Part F - Social Media Posts

Hashtags
- #barkrangerNPS
- #barkrangerROCR
- #goodboy
- #DogswithJobs
- #dogsofDC
- #dcdogs
- #ROCRlove
- #puppylove
- #rockcreekpark

Positive posts

- Good boy spotted at [insert location] leashed up with his owner! Practice safe habits and keep your dog leashed at all times at ROCR (it’s the law).
- BARK Ranger [insert name] spotted at [location] on patrol making sure dogs in ROCR are SAFE and LEASHED up. Keep up the great work [name]!
- Here is [name] enjoying the late afternoon sun here in ROCR. The park trails are a great place to give your dog some exercise. Remember: keep your dog safe and have them leashed at all times!
- Just a pup who loves the nature here at ROCR. Respect the plants here and keep your dog safe from ticks in the underbrush by keeping your dog LEASHED.
- Meet your BARK Ranger of the week! [highlight a new bark ranger weekly including rangers in different locations of ROCR] [name] has been a bark ranger for [time] and is loving reminding people to keep your pups leashed. If you spot [name] make sure to say hi!
- Rock Creek is one of a few National Parks that allow dogs to walk along the trails! Where do you like to hike and walk with your #BestFriend. Remember to show appreciation for your park and keep your dog leashed at all times.
- [image of bark ranger] Keeping our park safe and visitors happy one walk at a time. Your dog could be a BARK Ranger too! Visit the Nature Center to learn more.
- [name] our proud BARK Ranger in Rock Creek Park which is a beautiful and dog friendly National Park!
- Get out there and enjoy the sun like this pup Ranger [name] spotted on the trails! [dog name] knows the safety of staying on his leash at all times! Practice safety and appreciation for Rock Creek Park like [name].
- It feels good to get outside and stretch those doggy legs! Stay safe and remember to keep your dog leashed at all times. Together you can both get your daily exercise!

Negative posts

- Even well behaved dogs can get lost! With the high deer population in ROCR, chasing of deer by dogs is high. Keep your dog on a leash to keep it safe from getting lost in the woods.
- Did you know we have a few coyotes in ROCR? While exact numbers are unknown coyotes have been spotted in the park. Leash your dog to keep it safe!
• Reminder that the wildlife in ROCR is WILD. That means rabies is common and can go untracked. For extra protection keep your dog leashed to prevent unnecessary interactions between your dog and a racoon or squirrel in the park. Safety is our priority!

• We love the taste of nature ROCR gives in Washington D.C. However, the park is surrounded by high trafficked roads. Keep your dog leashed at all times to prevent avoidable accidents!

• While we love all dogs in the park some people can be allergic or afraid of dogs. Let’s all make sure everyone can have an enjoyable experience in ROCR and keep your furry friend leashed!

• While the famous creek in ROCR is beautiful to look at while on a hike please keep yourself and your furry friends OUT of the creek! The creek contains bacteria from water run off that is unsafe for dogs and humans. Don’t put your dog in harm's way and keep them leashed!

• Spring has sprung! With warmer weather, deer ticks come out of hiding. Your dog is susceptible to ticks when they wander off-trail into the underbrush. Keep your dog leashed and on trail for it’s safety!

• While working our BARK Rangers always carry a trash bag with them! On today's hike BARK Ranger [name] found [insert trash]. When visiting Rock Creek, please take the time to place trash in the provided trash cans. Lets keep YOUR park clean.

• [Picture of Ranger near horse sign] Did you know Rock Creek Park is one of the few National Parks in the NATION to have horse trails and daily horse riding in the parks? While on trails be smart and safe while around the horses. Being safe means moving to the side of the trails to allow a horse to pass, be visible at all times, and have your dog LEASHED to prevent a spooked horse. What can a spooked horse do? A spooked horse can not only injure the rider, but injure your dog as well!

• [image of dog on leash or BARK ranger] Even in the winter months trampling can cause damage to the fauna in Rock Creek. Please stay on the trails!

Seasonal Posts

Spring : Spring has sprung! With warmer weather, deer ticks come out of hiding. Your dog is susceptible to ticks when they wander off-trail into the underbrush. Keep your dog leashed and on trail for it’s safety!

Summer : While the famous creek in ROCR is beautiful to look at while on a hike please keep yourself and your furry friends OUT of the creek! The creek contains bacteria from water run off that is unsafe for dogs and humans. Don’t put your dog in harm's way and keep them leashed!

Fall : Even well behaved dogs can get lost! With the high deer population in ROCR, chasing of deer by dogs is high. Keep your dog on a leash to keep it safe from getting lost in the woods.

Winter : [image of dog on leash or BARK ranger] Even in the winter months trampling can cause damage to the fauna in Rock Creek. Please stay on the trails!

Testimonials

Horse testimonial:
Private horse rider Saralee was walking along Rock Creek with her horse when without warning, Prince reared (something he has never done on trail), squealed, bucked and bolted as there was a
dog underneath Prince, attempting to bite his legs. She recalls: "Dog made no noise but gave chase as Prince bolted. I managed to stay on and turned Prince to face animal, as per horsemanship guidelines. Prince obeyed immediately and stood still as did dog, 10 feet away. I was terrified, as was Prince who was snorting and breathing hard. No dog owner in sight. Dog only wearing collar. I called out for help, for dog owner. No response. Turned Prince and began walking away from dog. Dog again attacked, getting under Prince and attempted to bite his legs. Again, stopped and turned Prince to face dog and dog backed off 10 feet. Continued calling for help, for dog owner. After second call dog barked at us, obeyed and trotted back to owner, but owner did not leash him, and dog has turned back toward us. I shouted to him to put dog on leash. He hesitated and I repeated request to put dog on leash. He then did so and continued walking toward us. When he got close enough, so I didn't have to shout, I informed dog owner that I was reporting him to NP police. He responded with more abusive language. I told him I didn't make the rules and would be reporting him. We then resumed walking. We had just rounded a corner, when Prince spooked and as I looked behind, dog was almost at Prince's hind legs, again silent. His owner had let dog spool out length of very long retractable lead. I pulled off trail, turned Prince to face dog and owner. Owner then reeled in dog and repeated threat that he would see me later as he and dog moved past us. I waited until he was well past before turning Prince back to trail and slowly walking well behind owner and dog."

Other powerful testimonials we suggest:

- Owners discussing ordeals with losing their dog in the park
- Stories about rescuing dogs lost in the park
- Dogs injured while off-leash
Part G - Pamphlet Information

Info for Dogs 101 Pamphlet
Please keep your dog on leash at all times.
- Leashes should be no longer than 6 feet. Dogs should be physically restricted. Please don’t use GPS pet trackers.
- Your dog could easily get lost when off-leash. Multiple dogs has been lost in Rock Creek Park running off-leash.
- Bodies of water such as Rock Creek contains fecal coliform and is unsanitary for your dog to play in.
- Help us protect the park by reducing disturbance to wildlife and other visitors.

Bag your pet’s poop.
- Dispose of bagged dog waste in the nearest garbage can.
- Please don’t leave bags with poop on the trail, which is considered littering.
- Pet waste not picked up leads to sanitation issues and a decline in water quality.

Stay on trails
- Help your dog stay away from ticks carrying Lyme disease and rabid racoons in bushes in the area.
- Walking off trail could create social trails that fragment the forest and reduce area that local birds could use as habitats.
- Dogs could have an effect on wildlife up to 200 feet away by stressing them out. Please help us preserve the natural environment by staying on trails.

It is very likely that you encounter horses when walking on bridle trails in the park. Please follow these etiquettes to keep you and your dog safe:
- 1. Always give horses the right of way. Step to the side of the trail until horses pass.
- 2. Pick your dog up or hold it by its collar. Horses spook easily, and an animal running around could scare it, causing injury to a rider, your dog, or the horse.
- 3. When passing horse from behind, alert the rider, and wait for permission before passing.
- 4. Always keep your dog close.

Insert for trails pamphlet

It is very likely that you encounter horses when walking on bridle trails in the park. Please follow these etiquettes to keep you and your dog safe:
1. Always give horses the right of way. Step to the side of the trail until horses pass.
2. If you have a pet with you, pick it up or hold it by its collar. Horses spook easily, and an animal running around could scare it, causing injury to a rider, your dog, or the horse.
3. When passing horse from behind, alert the rider, and wait for permission before passing.
4. Keep children close when walking on bridle trails. Loud noises and running kids can easily startle horses.