

4MRVWG Dog Park Committee

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I. Dog Park Committee Charge

Explore possible future planning guidelines for the Shirlington Dog Park that retain its functionality and appeal while meeting environmental regulatory requirements.

In its deliberations, the committee may consider:

- Information and data gathered by the 4MRVWG to date
- Relevant regulatory and policy requirements, plans, and guidelines (federal, state, and county)
- Actions in the short-term that may address environmental, operational, and aesthetic conditions in the dog park and its immediate adjacent bank of Four Mile Run stream
- Other issues, as appropriate

A final report from the committee is due on September 15, 2017. The findings and recommendations from the committee will be presented to the full 4MRVWG in September 2017.

II. Information and Data Gathered to Date on Dog Park

Attributes:

- Well-loved, most heavily used dog park, and one of the most used parks, in Arlington
- Elongated shape, size, long stretch for dog running, people strolling
- Trees, shade, naturalized setting
- Acoustic “shell” shields barking and noise from community
- Divided but adjacent areas for big and small dogs
- Separated from other park users and most small children
- Proximity and access to Four Mile Run stream
- Only ADA accessible dog park – easy parking next to entrance and ADA path

Economic Role:

- Has helped make Shirlington a brand and destination for Metro area
- Listed on Yelp, other social media, in Arlington Magazine, as top dog park in N. Virginia and featured in New York Times as #1 dog park in country
- Contributes to real estate and rental market in area
- 200,000 visits a year per Arlington County statistics
- Contributes to formal and informal economy of area; visitors become consumers - coffee, meals, and shop in Village of Shirlington
- Has spawned multiple dog-related businesses (some requiring industrial zoning)

Existing Environmental Conditions:

- Minimal riparian buffer
- Exposed soil and soil compaction
- Upper bank erosion in places
- High pollutant load potential (bacteria and nutrients; sediment, possible industrial pollutants in soil from prior and current adjacent uses of the land)
- Stormwater runoff from adjacent impermeable rooftops and paved areas – petroleum, metals, sediment, and other pollutants

Existing Trees In and Near Dog Park

- Over 140 trees now inside the dog park, ranging in size from mature trees to recently planted saplings
- Biggest risk to trees is compacted soil that prevents tree roots from accessing water and oxygen
- Large amounts of canine urine accumulates nutrients and salts in soil that stress and kill trees
- Trees also being choked by non-native invasive vines
- Saplings closest to an entrance or heavily-used path (e.g. at the end of the pedestrian bridge) could be protected by a continuous soil panel, similar to those used for street trees along busy streets
- Saplings in dog park do not currently have any fencing or protection from dogs
- Young trees must be watered regularly (watering bags are typically used at least for the first two years)

III. Relevant Regulatory and Policy Framework

Implementation of the following regulatory requirements is initiated by land disturbance (clearing, grading, and/or excavation) of 2,500 square feet or more. Examples include: planned park improvements as well as large storm events that cause flooding and/or erosion that would necessitate park repairs and improvements.

- Resource Protections Areas and Water Quality Impact Assessment (Commonwealth of Virginia and Arlington County)

- Stormwater Management Ordinance (Commonwealth of Virginia and Arlington County)
- Adopted County Plans
- Watershed Management Plan (2001)
- Chesapeake Bay Preservation Plan (2001, element of the Comprehensive Plan)
- Natural Resources Management Plan (2010)
- Stormwater Master Plan (2014, element of the Comprehensive Plan)

Resource Protection Area:

- Entire dog park is located within a Resource Protection Area (RPA)
- **Any future redevelopment and/or re-configuration requires compliance with state and county regulations pertaining to stormwater management and RPAs**

Background on Resource Protection Areas:

- Established under Chesapeake Bay Preservation Ordinance (Chapter 61)
- Environmentally sensitive ‘buffer’ areas that provide critical ecosystem functions and protect the health of adjacent streams and wetlands from upland land uses
- Minimum width is 100 feet from the streambank edge, expanded to include steep slopes 25% or greater. Desired condition is forest with mix of trees and shrubs, as well as an herbaceous layer.

Why are RPAs protected?

- Filter and absorb upland runoff
- Stabilize soil and streambanks
- Provide wildlife habitat
- Provide shading for streams

RPAs in Arlington:

- Condition of RPAs varies widely throughout Arlington, ranging from areas with 100’ or more of natural buffer to many locations with impacts from existing private and public development and activities that pre-date the ordinance
- Long term objective is RPA improvement through redevelopment and restoration

Reviewing Development Activity in RPAs:

- Same rules apply to private and governmental projects
- Very site specific; currently no mechanism for transferring mitigation from one site to another
- Balance continuing existing uses with net buffer improvement concept – trade-offs
- Higher intensity use/impact ◊ more mitigation
- Stormwater compliance is intertwined with RPA requirements. Requests to expand or change existing nonconforming uses within an RPA footprint requires exception through Chesapeake Bay Ordinance Review Committee (CBORC)

- Water quality impact assessment is required for proposed modification or encroachment into the RPA buffer and reviewed by the Director of DES or CBORC

Stormwater Management Ordinance:

- Triggered by land disturbance of 2,500 square feet or more
- Runoff from impervious (pavement and rooftops) and other surfaces (e.g., grass, dirt, mulch) must be managed
- State provides a menu of Storm Water Management (SWM) facilities that can be used
- Generally, 10% to 20% net pollutant reduction required relative to existing conditions
- Compliance must be considered at beginning of design – Like RPA management, long term objective is incremental and cumulative water quality and flood protection improvements through redevelopment process

Stormwater Master Plan:

- Adopted by County Board September 2014
- Incorporates 3 technical needs assessment studies that identified priorities and led to current CIP project proposals:
 - Stream inventory
 - Watershed retrofit plans
 - Storm sewer capacity analysis
- Provides comprehensive framework for managing stormwater, streams, and watersheds for an approximately 20-year planning horizon.

Stream Inventory and Dog Park

- Stream inventory prioritizes severe erosion as well as infrastructure damage
- Regulatory credits for stormwater permit require active erosion and comprehensive stream restoration
- Four Mile Run along Park study area: Floodplain and adjacent uses limit comprehensive stream restoration, and partially hardened condition of the bank makes it a lower priority than other streams
- Given existing constraints, dog park area is not identified as a priority in Stormwater Master Plan

Addressing RPA and Stormwater Management Requirements Together:

- A context-sensitive approach is taken
- SWM facilities can only be located in areas of existing impact
- Strategies that mimic purpose and function of natural buffers are prioritized
- Less compatible strategies require extensive grading and drainage piping that can conflict with protection and enhancement of riparian buffer because these types of facilities impede the successful growth of root systems in trees and other plantings

- Net buffer improvement also achieved
- Substantial riparian buffer areas with trees, shrubs and grasses provide the most benefits by holding and slowly absorbing water into the soil; stormwater sheets off roots of individual trees and is not easily absorbed
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IV. Considerations and Range of Options

What we heard from County Board work session:

- Develop more options that retain functionality while meeting environmental requirements
- Seek to maintain attributes of existing park
- Seek to retain quality, understanding that sacrificing some square footage may be necessary (but should be more limited than in renderings to date)

Considerations:

- Maintain general location and proximity to Four Mile Run
- Provide a quality dog park user experience for both humans and canines
- Provide for an environmentally healthy and operationally sustainable dog park
- Provide good stewardship of Four Mile Run
- Recognize cost constraints of various alternatives

Range of Options:

- Maintain the park in current configuration
- Make improvements that do not impact more than 2,500 square feet
- Develop guidelines to direct any future master planning/design
- Recommend improvements that may trigger regulatory requirements
- Combination of above options that provide for phased changes as necessary
- Reassess relevant park boundary - encompass the entire stream area in the 4MRV planning process
- Other options not yet considered??

Additional Considerations:

- Constraints on developing detailed design options at master planning phase: soil testing, engineering studies and detailed designs not part of master planning process; time and expenses now would be hypothetical; would have to be redone in future design process
- Regulatory requirements may change between now and ultimate design process.

V. Other Issues:

Boundary issues (Reviewed at 7/10/17 meeting):

- Clarify future use of county-owned parcel on Oakland Street for possible future reconfiguration (police warehouse)

- Reclaim land at Oxford Street entrance that is being used by auto repair shop
- Explore use of existing parking for possible future reconfiguration

Environmental Issues:

- Are there creative ways to address stormwater issues with contributions from existing adjacent businesses?(Edie Wilson)
 - Green roofs
 - Any pilot programs to encourage business stormwater credits?
 - Encourage voluntary stormwater management practices
 - Provide water sources for young trees
- What short-term steps can be taken to improve environmental sustainability without triggering regulatory requirements? (Keith Fred suggestions to be discussed at future meeting)
 - Block access to informal path outside the dog park fence
 - Examine maintenance practices to increase vegetative buffer
 - Increase plantings along stream bank
 - Increase availability of trash containers and bags
 - Provide access to water in designated location to reduce stream bank erosion
- What steps can be taken to improve viability of existing trees and newly planted trees? (Nora Palmatier)
- How have other communities faced similar issues between regulatory requirements and dog parks? (Caroline Haynes)
- What is the current science on water quality and sources of contamination? (Nora Palmatier)
- Clarify access to 4MRV (consistent with adopted plans, 4MRV design guidelines, policies, TMDL rules, RPA rules, ADA, etc.). (Caroline Haynes)

Additional questions (from 7-11-17 meeting):

- Regarding Section 61-14-B of the Ches. Bay Ordinance, would an act of nature (such as a major storm event) not preclude rebuilding the dog park as it was before the storm event as long as there was no increase in impervious area and as long as reconstruction takes place within two years of the damage? Does the dog park fall under this definition of a "non-conforming structure"? (Caroline Haynes)
- What is the rationale behind the 35 foot buffer as a remediation tool? Presumably this is based on the science of how much of a forested area is

needed to hold water so that it can be absorbed into the soil and we would like to understand the research behind this. (Nora Palmatier)

- What responsibility does the county have to manage storm water that pours off the storage building and across the county-owned parking lot before it reaches the stream? (Caroline Haynes)
- What actions can the county take within the riparian zone with respect to additional plantings or hardening the access points to the water, before triggering permits from the Corps of Engineers and/or FEMA? (Caroline Haynes)
- Related to the above question, would it be possible, and how much value would there be, to building up a berm and creating a swale along parts of the edge of the dog park to capture stormwater, using less than a 35' buffer? (Caroline Haynes)

Request for detailed map of dog park (Caroline Haynes)

Financial issues:

- What investments have been made in Shirlington dog park over the past 15 years? (Keith Fred)
- What are potential capital investments in the short term? Mid-term? Long-term? (Edie Wilson)
- What are the rules regarding the donation of amenities for parks? (Caroline Haynes)

Public Engagement, Education and Cooperation: (Tina Worden/Adam Henderson)

- How do we engage the park users to understand and protect the stream area and prevent pollution?
- How can we improve the messaging and signage in and around the dog park, including opportunities for environmental education/interpretation?

VI. Recommendations:

- **Actions in the short-term that may address environmental, operational, and aesthetic conditions in the dog park and its immediate adjacent bank of Four Mile Run stream (TBD)**
- **Possible future planning guidelines for the Shirlington Dog Park that retain its functionality and appeal while meeting environmental regulatory requirements (TBD)**