



Memorandum

To: Bassett Creek Watershed Management Commission (BCWMC)
From: Barr Engineering Co. (Barr)
Subject: Item 5C: Bassett Creek Dog Park – Crystal, MN
BCWMC May 19, 2022 Meeting Agenda
Date: May 12, 2022
Project: 23270051.53 2022 2284

5C Bassett Creek Dog Park Area– Crystal, MN BCWMC 2022-05

Summary:

Project Proposer: City of Crystal

Proposed Work: Installation of a new dog park, parking lot, and other site improvements

Basis for Review at Commission Meeting: Fill in the floodplain; review potential dog waste pollution issues

Impervious Surface Area: Increase approximately 0.19 acres

Project Schedule: Fall 2022 construction

Recommendation for Commission Action: Conditional Approval

General Project Information

The proposed project is located along the North Branch of Bassett Creek in the Bassett Creek Park Pond subwatershed, south of the intersection of 32nd Avenue North and Brunswick Avenue North and west of Welcome Avenue in Crystal. The work includes construction of a new dog park, associated parking lots, and other site improvements including fence, trails, and utilities resulting in 4.34 acres of disturbance. On the project map there are two project locations indicated. The western project location will include the new dog park, site improvements and work in the floodplain. The eastern project location will include parking lot improvements and is not located in the floodplain. The proposed project creates 0.76 acres of new and fully reconstructed impervious surfaces, including 0.57 acres of fully reconstructed impervious and an increase of 0.19 acres impervious surfaces from 0.57 acres (existing) to 0.76 acres (proposed).

The initial submittal was received on March 25, 2022. The BCWMC engineer reviewed the submittal and provided comments to the City on March 31, 2022. The applicant addressed the comments and submitted revised plans and documentation on April 5, 2022 and April 6, 2022.

The Commission reviewed the project at its April 21, 2022 meeting, tabled the project and directed staff to work with Crystal staff to incorporate protections to the stream from potential dog waste pollution and bring the project back to the May Commission meeting. On May 4, 2022 Chair Cesnik, Administrator Jester and Engineers Herbert and Campagnola met with City staff at the dog park to

discuss the BCWMC concerns and a path forward. During the site meeting, city staff directed our attention to several of the existing proposed improvements and discussed new mitigating measures. Staff also provided city staff with a copy of the recommended practices for minimizing bacteria loading from dog parks as published in the Minnesota Stormwater Manual. The attached May 12, 2022 letter from the City of Crystal summarizes the bacteria prevention efforts and addresses dog park design and the recommended Minnesota Stormwater Manual practices.

Floodplain

The proposed project includes work in the BCWMC 100-year floodplain. The 1% annual-chance (base flood elevation, 100-year) floodplain elevation along the North Branch of Bassett Creek at Bassett Creek Park Pond is 851.2 feet NAVD88 (1.4 feet higher than the FEMA flood elevation). The February 2021 BCWMC Requirements for Improvements and Development Proposals (Requirements) document states that projects within the floodplain must maintain no net loss in floodplain storage and no increase in flood level at any point along the trunk system (managed to at least a precision of 0.00 feet). The proposed project will result in approximately 1 cubic yard of floodplain fill and 53 cubic yards of compensating storage, resulting in a net gain of approximately 52 cubic yards of floodplain storage.

Lakes, Streams, and Wetlands

The proposed project includes work adjacent to wetlands. The City of Crystal is the local government unit (LGU) responsible for administering the Wetland Conservation Act; therefore, BCWMC wetland review is not required. Barr staff is providing wetland support for this project directly for the city.

Rate Control

The proposed project does not create one or more acres of new or fully reconstructed impervious surfaces; therefore, BCWMC rate control review is not required.

Water Quality

The proposed project does not create one or more acres of new or fully reconstructed impervious surfaces; therefore, BCWMC water quality review is not required. The attached May 12, 2022 letter from the City of Crystal addresses potential dog waste pollution.

Erosion and Sediment Control

The proposed project results in more than 10,000 square feet of land disturbance; therefore, the proposed project must meet the BCWMC erosion and sediment control requirements. Proposed temporary erosion and sediment control features include silt fence, inlet protection, and rock construction entrances. Permanent erosion and sediment control features include riprap, stabilization with seed and mulch, and erosion control blanket.

Overall Review

As noted at the April meeting, even though there was concern about bacteria pollution to the creek, the project meets BCWMC requirements. Although it's not ideal to have a small portion of the dog park in the floodplain, after walking the site and reviewing the city's additional information, staff is satisfied with the

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city's plans to mitigate pollution. As shown in their attached May 12, 2022 letter, the city's proposed plans include expanding existing swales (to capture and retain runoff from the land that drains to the creek) and expanded education and signage to help enforce city ordinances, The city has agreed to work with the Commission on development of the signage and will pay for the signs and their installation prior to the opening of the park.

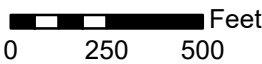
Recommendation

Conditional Approval

1. Revised drawings showing the expanded swale and any other improvement must be provided to the Commission engineer for final review and approval.

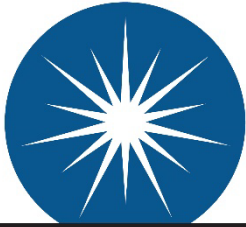


-  Project Location
-  Municipality
-  BCWMC Legal Boundary
-  Major Subwatershed
-  BCWMC Hydrologic Boundary
-  Bassett Creek



BCWMC #2022-05
 BASSETT CREEK
 DOG PARK AREA
 Crystal, MN

LOCATION MAP



CITY of CRYSTAL

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May 12, 2022

Laura Jester
Bassett Creek Watershed Management Commission
16145 Hillcrest Lane
Eden Prairie, MN 55346

Bassett Creek Dog Park - Follow-up to April 21 Commission Meeting

Background

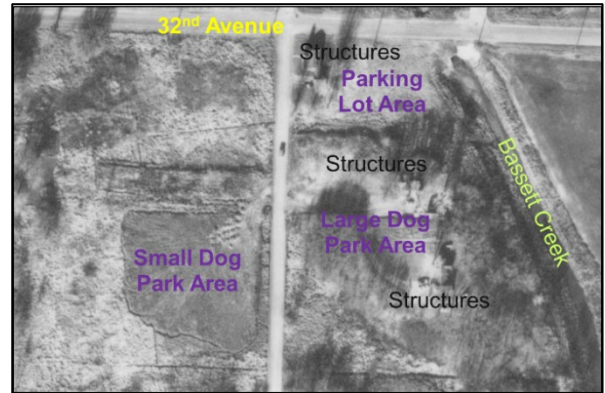
During the summer of 2017, planning began for a new dog park in Bassett Creek Park. The City of Crystal started a park system master planning project that year, which reviewed all park and recreation facilities in the city. Parks provide places for people to improve physical and mental health, so the parks were reviewed to make sure facilities are being offered that people want to use. The park planning effort paid particular attention to the city's larger community parks and incorporated a significant amount of public engagement. At Bassett Creek Park, much attention was paid to the dog park. The existing dog park was popular; but lacked the size and safety features offered at most other dog parks. Concerns were voiced about conflicts between dogs that had occurred in the past. Citizens requested a larger space, with separate areas for large dogs and small dogs. Providing some shade for visitors was another common request. Recognizing the current site was inadequate, a new location was sought in the same park.

**Final Concept
from Crystal's
Park and
Recreation
System Plan
2017**



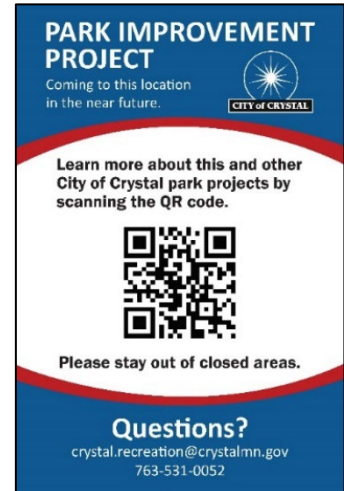
Location

Several locations were reviewed during the planning process, but a degraded woodland in the NW corner of the park was chosen as the future dog park location. The site had been the location of several structures into the 1970s (photo from 1971). Once removed, the area filled with 'volunteer' trees and buckthorn. 'Volunteer' trees generally have a short lifespan, so the site today consists of many dead and dying trees. These potentially hazardous trees will be removed to improve safety in this existing public space. Equally important was staying out of an oak remnant woodland just to the south of this area.



Design

Periodically from 2018 – 2020, issues related to the current dog park were raised with Crystal's Park and Recreation Commission. Moving the dog park was added to the city's long-term capital plan, which allowed the commission to point to a future project when requests for change came up. In 2021, Crystal staff met with staff from other agencies to review best practices in dog park design. Staff and commission members also visited dog parks in other cities to see if features should be included in the Bassett Creek Dog Park. The notes from all this were reviewed and provided our consultant to begin dog park design early in the fall. As planning began, additional public input was sought through city social media sites, dog park Facebook page and e-mail communications. Signs with a QR code (right) were also placed in the area of both the old and new dog parks in the fall of 2021 - to keep park users informed of the project.



The design of the new dog park incorporates features that had been regularly called for since 2017, including separate areas for small dogs and large dogs and shade for dog park visitors. The design also incorporates findings from our review of dog parks in other cities, which includes having a 2nd exit for safety in the large dog park - in case any number of safety issues arise at the main entrance. An accessible trail is also provided around the perimeter of each dog park to encourage use, and the bench pads are large enough for a wheelchair to pull in next to the bench.

However, to include the accessible trail and the 2nd exit for safety into the plan, the question of location came up. To allow the trail to follow a natural 'bench' to keep the trail accessible, the dog park fence and the 2nd exit would need to enter the 100-year flood plain. Options to keep these out of the flood plain would require additional grading; and may create steeper slopes due to earthwork needed for trail accessibility. As we work to balance public planning outcomes, accessibility considerations, safety concerns and potential impacts to natural resources; moving the fence slightly into the 100-year flood plain may be the most reasonable solution for this project.

2. To help communicate the city's pet waste requirements, information on this is posted at the dog park, is available on the city website and through a flier developed for dog park use. The city also agrees to work with the watershed to improve signage related to pet waste and the watershed. The city has funds available for this. Signs will be installed prior to dog park opening late fall this year or next spring (following grass establishment).
3. To make cleaning-up after dogs easier, the city purchases and makes bags available for picking up dog feces. The bags will be available at each dog park entrance.
4. The city also supplies garbage cans for easy disposal of pet waste. Garbage cans will be available at each dog park exit – including the one by the 2nd exit. The containers are emptied weekly during the slow season and twice per week during the busy season.
5. Dogs are not allowed in the water. While other dog parks allow this, and it was a request for this dog park too, allowing dogs in the water will not be allowed at this dog park.
6. Buffers to nearby wetlands will meet wetland setback requirements. The fence will be at least 20' minimum, 30' average from adjacent wetlands. The buffer from the large dog park fence to Bassett Creek exceeds this requirement, and ranges from 55' to 80'.
7. While much of the dog park drains away from the creek, a portion does drain toward it. To improve infiltration throughout the entire dog park area, much of the degraded woodland will be removed, and the sparse woodland ground cover will be converted to grass. This new ground cover will create a large infiltration area between the top of the highest point to the fence.



8. In addition to the setback from Bassett Creek, an existing swale between the dog park and gravel park trail (right) currently reduces water flow across the trail - to the creek. This has been effective, as evidenced by little to no gravel repair being necessary on the trail each year. With conversion of sparse ground cover to grass in the dog park area, water flow through this area should be reduced even more. Additional vegetation and grading improvements could be made here if necessary.



9. The main entrances to the dog park are on the east side of the large dog park. This will keep most dog traffic on the side of the dog park away from Bassett Creek.
10. There is an existing 'Bassett Creek Dog Park – Dog Owners Group' Facebook page that helps share information on the dog park. This group helped share information during the planning process and can help promote positive dog park behavior too.

Additional Items

Responses specific to the following Stormwater Manual recommendations was also requested.

1. Locate parks away from receiving waters
There is a 55' to 80' buffer between the dog park fence and Bassett Creek, and 20' minimum, 30' average buffer to adjacent wetlands.
2. Ensure parks are on pervious surfaces
The dog park surfacing will be a pervious grass surface – with an impervious handicap accessible gravel trail around the perimeter.
3. Drainage should be away from impervious areas
The majority of impervious surfacing consists of small gravel trails. Drainage toward the creek encounters a swale before it gets to the main park trail.
4. Design parks to minimize compaction
Use of the of the gravel trail within the dog park will help keep some traffic off the grass area – reducing compaction.
5. Enforce pickup of pet waste, including ensuring appropriate disposal facilities
Appropriate disposal facilities, including bags for picking up feces and garbage cans to deposit waste, are provided at each dog park entrance/exit.
6. Possible design considerations for dog parks include doggy loos (disposal units installed in the ground to facilitate decomposition, pooch patches (areas of sand), and long grass areas that are mowed less frequently (a height of around 10 cm is appropriate).
A grass surface will be used throughout the dog park.
7. Siting dog parks out of swales and away from steep slopes
The dog park will have positive drainage toward the fence. While there is some slope, other mitigation efforts such as replacing sparse ground cover with grass and having a swale at the bottom of the hill will help improve infiltration.
8. Providing vegetated buffers of prescribed widths between dog parks and waterways, swales, storm drain inlets, gulleys and steep slopes
There is a 55' to 80' buffer between the dog park fence and Bassett Creek, and 20' minimum, 30' average buffer to adjacent wetlands with existing vegetation.
9. Rimming the downslope edge(s) of dog parks with conventional BMPs that show promise at removing bacteria (e.g., infiltration-dependent facilities).
The swale between the dog park and trail, combined with grass cover in the dog park, will improve infiltration. Additional swale capacity and improved vegetation can be added to the swale if necessary. Further review will be needed.

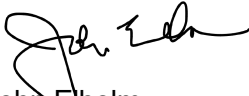
Dog Parks

In reviewing best practices for dog parks, several sources refer to the benefits of them.

1. A memo provided by the watershed, from CDM Smith to Minneapolis, notes that “encouraging the use of dog parks may, in fact, be a potential fix for increasing the amount of dog waste picked up.” It notes that dog parks are an easy target to implement BMPs such as public outreach, and dog parks often have a community group that encourages proper cleanup. Bassett Creek Park has an existing dog park group.
2. The MPCA website has the following reference, “A study in the Minnehaha Creek Watershed, Minnesota, showed that domestic pets were a relatively small contributor to bacteria loads in runoff, likely due to fairly aggressive efforts to have dog owners pick up after their dog.” Education efforts here, in cooperation with the watershed, should be effective for encouraging dog owners to pick up after their pets.
3. We have also found that well managed facilities promote positive behavior. Park users generally take better care of new facilities than they do with older facilities. However, if issues arise within the fenced area, the gates could be locked until clean-up occurs.

Thank you for reviewing our request to move the dog park fence into the 100-year floodplain; to accommodate handicap access and a 2nd dog park exit. A map of the large dog park is attached here that provides additional details. Should you have additional thoughts or questions, please contact me at (763) 531-1150 or john.elholm@crystalmn.gov.

Sincerely,



John Elholm
Recreation Director

