

Agenda item ___ - Consideration of rainwater harvesting as addition to retaining wall project

Discussion: The proposed Upper Park retaining wall includes a collection system by French drain that would discharge the collected water to the lower park, where there are existing issues from pooled stormwater discharge. The downspouts from the Field House roof contribute to the amount of discharge that would be collected into the French drain. Based on the dimensions in the diagram of the retaining wall, my calculations of the amount of discharge from the west 1/2 of the roof is approximately 654 gallons of water per 1" rain. A possible solution to ameliorate this discharge, would be to add a stormwater collection tank that would collect the rainwater which could then be used for watering and irrigation of the new landscape area created by the retaining wall.

There are several vendors for rainwater tanks in Austin. Looking online from various vendors, it seems that such a system could be installed for less than \$10,000. This capital project would not only improve stormwater discharge in this area which would lessen erosion, but would also improve the area below in the Lower Park, and also provide a source of water to establish and maintain whatever landscape/grass might be installed in connection with the new retaining wall.

Some water tank vendors also provide drainage engineering services as part of their services, allowing the City to benefit from professional review of the drainage issues in this area of the park. For example see information from the website of local water tank vendor, Innovative Water Solutions LLC, one such Austin vendor:

<https://www.watercache.com/drainage>

"For each situation, we assess the drainage problem and all of the factors that are contributing to it. We **identify a solution strategy** for your situation which could entail multiple methods and systems to fix the problem. At this point, we explain the main issues and the different options that are available. As a contractor, we strive to provide the right solution at the right price.

Since IWS is a licensed professional engineering firm (F-11414), your drainage problems will be assessed by a licensed professional engineer (PE #99248) who has the expertise to provide the best solution for your situation. We offer drainage design, installation, and inspection services for residential and commercial properties in the Austin and central Texas area.

Since we also look at projects with **sustainability in mind**, we can identify opportunities for water conservation while designing solutions for your drainage issues. For example, if the majority of your problem derives from the runoff from your roof surface, we can install a [rainwater collection system](#), while installing the rest of the drainage solution to take the overflow water to where it won't cause a problem. You will be able to **turn a problem into an opportunity.**"

Recommendation:

1) Request proposals from vendors for addition of a water storage tank at the Field House in connection with the proposed retaining wall and report on the proposals at the next City Council meeting.

2) In the event of a successful proposal, seek funding for this park capital project from the RCDC.