

PENNVEST Funds Green Stormwater Management at Coleman Memorial Park

PACD.org

October 2014

Entering Coleman Memorial Park visitors notice the mature trees, pavilions, amphitheater, sports fields and pool. This beautiful 99-acre park located in the City of Lebanon has been a favorite place for picnics, sports and music for city and county residents since 1936. Sherry Capello, Lebanon City Mayor, points out that, "As a community park, it serves and is available to the more than 134,000 county residents. Coleman Memorial Park is truly a hidden gem within the city limits."

What visitors usually don't notice are the innovative or "green" stormwater management practices recently installed. Designed to preserve existing vegetation, reduce the amount of paved surfaces and blend with the topography of the park, these new stormwater controls blend in and improve the appeal of the park.

With a vision of reinvigorating and bettering the park for future generations, The Coleman Park "Master Site Plan" was adopted May 2011. The park's Board of Trustees, the City of Lebanon and other partners worked together to create a plan to guide future development and that reflected the community's wishes on how the park should be improved and preserved.

The core of the plan involves expanding recreational activities and developing the park's historic aspects – but it also recognizes that improvements need to be done in a sustainable manner. Initial projects were planned to accommodate park growth by improving access to the park and expanding available activities. They also provided an opportunity to implement innovative, or "green", solutions for managing stormwater and improving water quality in the park.

In 2012, with funding from The Pennsylvania Infrastructure Investment Authority (PENNVEST) and the Pennsylvania Department of Conservation of Natural Resources (DCNR), planning for the foundational projects in the Master Site Plan was begun. With DCNR funds available for revitalizing communities, creating new recreational opportunities and for conserving natural resources; and with PENNVEST's Nonpoint Source Program funds for projects that have a water quality benefit – it was an ideal situation for cooperation between these two state agencies. Recognizing the partnership, Mayor Capello stated, "We truly appreciate the assistance given to us by both PENNVEST and DCNR for making the project a reality and providing another example of why Lebanon IS "The Place to Grow"!

Construction was started on a number of projects in April 2013 that are substantially complete at this time, including:

Park Entrance:

A redesigned park entrance considers anticipated future development in and around the park. Sight distances were extended and an exit to Route 72 was added. Green aspects of the new entrance include an above ground "infiltration" bed that captures stormwater runoff that then filters down to the underground water table. Site work for the new travel lanes were planned to minimize the area that would be disturbed and to preserve existing vegetation.

Parking for Future Playground:

A new pervious parking area creates 33 parking spaces for a future playground and picnic pavilions. The pervious surface permits ground infiltration of stormwater while supporting vehicle traffic. Design and construction was sensitive of existing trees and preserving the semi-wooded character of the area. Because of the new parking area, an asphalt parking lot will be removed in the future reducing the overall impervious surface area in the park. The result is reduced stormwater runoff, increased recharge of the underground water supply and a reduction of heat from paved parking areas.



New Pervious Parking Lot for Future Playground Preserves Semi-Wooded Character of the Area

Veterans Memorial Amphitheater (VMA) Seating Area Improvements:

The existing impervious paved asphalt area in front of the Amphitheater was removed. In its place are concentric retaining walls and grassed areas that reduce stormwater runoff from the site and increase ground infiltration of stormwater. Concert goers also have a better overall experience because of cooler temperatures, improved visibility and level seating at VMA events.



Impervious Asphalt Being Removed at the Amphitheater



Amphitheater Retaining Walls and Grass Areas Replace Impervious Asphalt to Improve Infiltration

Veterans Memorial Amphitheater (VMA) Parking Lot and Irrigation Cistern:

Before improvements, the Main VMA parking lot was a large, sloped, impervious asphalt area. Re-grading parts of the parking lot and reorienting parking spaces allowed more level parking bays and created opportunities for infiltration and stormwater collection.

Stormwater running off the parking lot is directed to islands where it is infiltrated to groundwater or collected for irrigation. Collected water is sent to a 10,000 gallon underground cistern where it is stored until needed for watering adjacent sports fields.

Overall, the main parking lot improvements resulted in two additional parking spaces, a reduction in stormwater runoff, increased ground infiltration of stormwater and water stored for irrigation. Removing the asphalt and planting trees and shrubs in the infiltration islands reduces the thermal pollution, keeping the area cooler for park visitors. An added benefit is that using stored water runoff lowers irrigation costs by reducing the amount of metered city water used.



Islands in Parking Lot Infiltrate and Collect Stormwater For Irrigation of Adjacent to Sports Fields.

Connecting Walkway:

A pedestrian walkway connects parking lots, the amphitheater, playground and other use areas in the park. Built using pervious materials, the walkway itself is designed to serve as a stormwater control device by capturing and infiltrating runoff from adjacent slopes. Using the most direct, constructible route, while preserving existing vegetation and allowing for the existing topography were all important design considerations for the walkway. The result is an attractive pedestrian walkway that controls stormwater runoff yet maintains the wooded character of the park.

The improvements at Coleman Memorial Park show that “green” stormwater management techniques can be accomplished economically and effectively. Well designed and placed “green” stormwater control best management practices not only improve water quality in Pennsylvania’s streams but also enhance the aesthetics and appeal of the areas where they are used. To learn more about the park and for a link to the Master Site Plan go to <http://www.colemanmemorialpark.org>.

Much of the funding for the water quality improvements at Coleman Memorial Park was from the **Pennsylvania Infrastructure Investment Authority (PENNVEST) Nonpoint Source Program**. Created in 2010 to address growing concerns about nonpoint source pollution in the Commonwealth, PENNVEST is able to fund nonpoint source projects that have a water quality benefit. Eligible projects include “green infrastructure” projects for urban stormwater control, agricultural best management practices and abandoned mine drainage projects.