Fayette County Public Schools Stormwater Best Management Practices Feasibility Study
Lexington, KY
August, 2016 – November, 2017

Following the completion of previous projects at a few Lexington schools, our project team of EcoGro, Ridgewater and Stantec Consulting Services approached our contacts at Fayette County Public Schools (FCPS) to see if they would be interested in assessing stormwater conditions at all properties owned by the school district. Because the city of Lexington had enacted a new stormwater management fee in 2010, the FCPS district had a new financial cost that corresponded directly to the amount of impervious surface area it owned. As one of the city's largest property owners, it became one of the largest rate payers.

In 2015 our team developed a proposal and grant application. In 2016, this project was funded in part by the Lexington-Fayette Urban County Government's Water Quality Management Fee and the Stormwater Quality Projects Incentive Grant Program. This funding supported a feasibility study to evaluate FCPS properties through the perspective of stormwater, identify opportunities to improve water quality, reduce stormwater flooding, provide educational outreach, assess options for developing stormwater BMPs (above and beyond what was already required) as well as develop strategies to reduce future stormwater management fees.

This study evaluated a selection of preferred stormwater BMPs across 60 properties, developed a matrix of applicability, then ranked locations and BMPs by how they would score on future grant applications. In addition, the team produced a conceptual plan and cost estimate for the top six scoring sites.

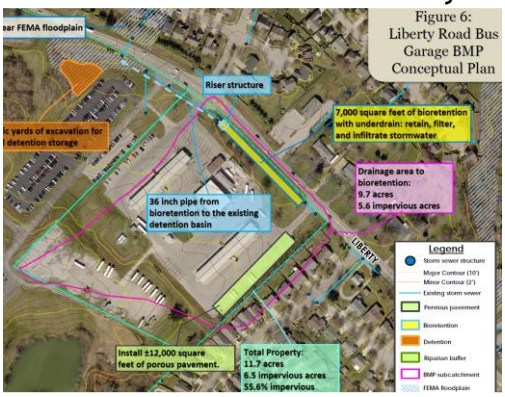


Figure 6: Liberty Road Bus Garage BMP Conceptual Plan

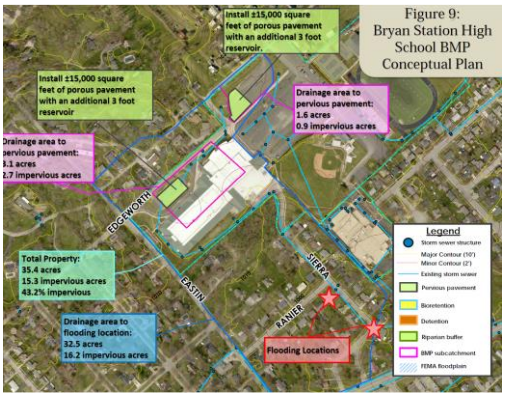
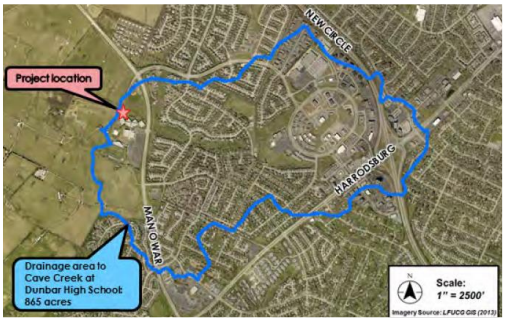


Figure 9: Bryan Station High School BMP Conceptual Plan



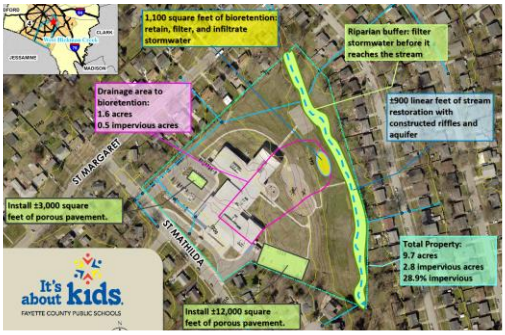


Table 1: BMP Scoring Matrix Criteria

Criteria	Description	Scoring
Criteria Based on LFUCG Scoring Criteria		
Flooding Problem	Can a BMP project address documented structure or road flooding?	Identify structure or road flooding
Does BMP Help Solve Problem?	Does the proposed BMP help solve the identified flooding problem?	Solves problem in 25-year storm: • 5 points for structure flooding, 3 points for road flooding Solves problem in 5-year storm: • 3 points for structure flooding, 2 points for road flooding Small reduction in flooding: • 1 point for structure and road flooding No flood reduction: 0 points for structure and road flooding
High Risk Commercial/Industrial Site	Is the property an LFUCG designated high risk commercial/industrial site? And does the BMP treat the pollutants from the site?	15 points if the site is a high risk commercial/industrial site. Otherwise, 0 points.
Impervious Area Removed	The amount of impervious area that would be removed.	0 to 15 points. All pervious pavement BMPs scored 15 points as it is assumed they have greater than 15,000 square feet of permeable impervious area to be removed.
Drainage Area to be Treated	Drainage area treated by the BMP.	> 40,000 square feet: 15 points 10,001-40,000 square feet: 10 points < 10,000 square feet: 5 points
Stormwater Education	Potential for educational programs in FCPS schools associated with the BMPs.	On-going education program: 10 points Educational signage: 5 points One-time educational program: 2 points
Additional Criteria Not Based on LFUCG Scoring Criteria		
Return on Investment (ROI)	ROI of 20-percent cost share currently required by Stormwater Quality Incentive Grant Program.	Short term ROI: 20 points 10-year ROI: 10 points 20-year ROI: 0 points
Operation and Maintenance	Considers the level of effort and how often a BMP needs to be maintained.	No on-going maintenance: 20 points Annual maintenance: 10 points Quarterly maintenance: 5 points Monthly Maintenance: 0 points

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