STORMWATER BMP SITES IN PAXTON CREEK WATERSHED

BMP Types: Capital View Commerce Center Bioretention Areas, Riparian Buffer & Vegetated Swale

Capital View Commerce Center Under Construction in 2008

Name and Location: Capital View Commerce Center is at corner of Cameron and Herr Streets in Harrisburg. The State Street Bridge bounds the south side of the property.

Project Site Number and BMP Type Code: 10 A,C,J

GPS Coordinates: Lat N40.27290 degrees, Long W76.87691 degrees;

Site Features: Overland runoff can be great in urban areas with much impervious surface and restricted area for infiltration, particularly during heavy storms. Capital View Commerce Center is on a brownfield (soils retain pollutants from previous industrial uses), and a floodplain. To deal with these limitations, the land development is raised several feet above anticipated 100-year storms, and ground excavations are controlled (no basements, or deep surface penetrations). The Best Management Practices (BMPs) combination at this site is a project of a Targeted Watershed Grant for stormwater projects, administered by Susquehanna River Basin Commission in partnering with site developers Cameron Management Consultants, Inc., PCWEA, a landscape architect, and others to develop innovative and cooperative stormwater management approaches for PA communities (www.srbc.net for project overview when completed). The bioretention areas consist of gardens that absorb stormwater, and partially remove pollutants through actions of soils, vegetation, mulch, and other materials at two places: near the north parking lot adjacent to Herr Street; beside the truck docking station located at the south side of the building. A 200 feet long vegetated drainage swale is also planned for the western edge of the south parking lot. Although the west side of the building is required to have open access (meaning no structures), a riparian buffer consisting mainly as shrubs is planned for spaces between the western side of the building and alongside the south parking area and the vegetated swale, to further protect the creek from overland stormwater flows with pollutants off the brownfield site during heavy storm events. Expected pollutant removals in fully functioning bioretention areas are approximately: total suspended solids (mainly dirt) and total phosphorus, 85% each; nitrate, 30%. The corresponding maximum pollutant removal efficiencies of the vegetated swale are 50% each for total suspended solids (manly dirt) and total phosphorus; nitrates, 20%. The maximum swale removals are not likely to be reached

until low-growing, very dense vegetation with high drought and salt tolerance are established, and runoff can be significantly slowed, possibly with baffles or check dams for enhanced infiltration. Removal efficiencies vary by season (greater removal in spring and summer), and by garden age or condition (vegetative health and soil porosity can change). Buffers consist of shrubs, trees, and ground covers that help prevent overland stormwater flows (with sediment and other pollutants) from reaching waterways. The slow growth of deciduous hardwoods sometimes requires decades for buffer vegetation to reach maximum effectiveness. This buffer rehabilitation involves plantings along main stem Paxton Creek, which was channelized and lined with concrete at this location over a hundred years ago. Other potential enhancements at this site are a trail and pocket park. Expected pollutant removals in fully functioning riparian buffers are approximately: total suspended solids (mainly dirt), 65%; total phosphorus, 50%; nitrate, 50%. The pollutant removal efficiencies vary by season (greater removal in spring and summer), and by buffer drainage area changes, or condition (vegetation grows denser, or declines). Upon project completion, a facts sheet about this site will be available at www.srbc.net

Site directions: The project site is located at the corner of Herr and Cameron Streets, considered adjacent to, and east of the downtown area of Harrisburg. It is most easily accessible, at a distance from an exit off !-81 directly onto Cameron Street, and another exit off I-83 onto Second Street, followed by a short trip (equivalent of 2 long blocks) along Paxton Street until reaching Cameron Street, and then, turning northward.