D2 DULLES DEVELOPMENT

Going Green on the Fourth Runway at Dulles

Facts about the new Biological Treatment Units (BTU's)

The Metropolitan Washington Airports Authority is taking an innovative approach to protecting the environment around the new fourth runway. Five new biological treatment units (BTU's) constructed adjacent to the runway will provide a cleansing effect to stormwater runoff in the area.

This eco-friendly concept utilizes a complex system of collection and distribution pipes. This design allows even distribution of runoff to maximize effective treatment across each unit before entering the surrounding ecosystem.

At first glance, each BTU has the look of a water detention basin. The difference is just below the surface. Multiple layers of sand, stone and a special soil mixture, topped with specific surface vegetation, create an environment where runoff is filtered naturally as it percolates through the unit. After a typical rainfall event, water will be channeled from the runway drainage system and into each BTU through underground distribution pipes. Within the BTU, contaminants are absorbed by the plants' root system, broken down by soil microorganisms, or physically filtered by the media comprising each layer. The cleaner water then collects in underground drain pipes and is finally discharged.

The benefit to the environment will be a reduction in the amount of phosphorus and other potential pollutants. Surrounding waterways will experience less oxygen depletion as a result of this cutting edge drainage system.