

BALDWIN COUNTY LANDFILL

MSW LANDFILL



LOCATION

Milledgeville, GA

OWNER

Baldwin County

ENGINEER

Oasis Consulting Services

CONTRACTOR

Oasis Consulting Services

SIZE

19 Acres

DATE COMPLETED

2017

The Baldwin County Landfill marks a historical final closure as not only the first of its kind in the state of Georgia, but one of the first in the country to feature an entirely new landfill design process utilizing the ClosureTurf® system. Featuring an innovative benchless design, the system eliminated the need for diversion berms, benches and down chutes by completely changing the hydrology methods in the traditional design.

In 2016, Baldwin County Board of Commissioners sought a design-build option for the closure of the 21.5-acre, Phase 3 Union Hill Church Road landfill. Oasis Consulting Services, a metro-Atlanta based woman-owned engineering consulting firm, was awarded the contract and obtained the Georgia Environmental Protection Division (EPD) approval of ClosureTurf in lieu of a traditional vegetated cap.

With SPLOST funds stretched, the county was relieved that the design-build solution from Oasis came in \$1.5 million under traditional procurement. The approved ClosureTurf® system attributed to much of the cost savings. It eliminated the standard USEPA costly, low-permeability clay liner, as well as vertical in-waste gas collection wells. But the real distinctive advantage was the use of a benchless design to enhance the hydraulic benefits of ClosureTurf. Even with slopes steeper than 3:1 in some locations, the benchless design allows the entire cap to sheet flow to the perimeter ditches, eliminating the need for diversion berms (used to combat drainage length) and downslope channels (energy dissipation). This cutting-edge design ultimately created a domino effect in cost savings and risk management for the county.

"We will probably make history. This is the first municipal solid waste landfill that has been closed in the state of Georgia with this process. We already have several individuals from several states that have come down and visited. It will be a showplace for the state of Georgia."

Ralph McMullen, Baldwin County Manager

Oasis was able to complete the installation in about half of the time required for prescriptive caps. In addition to design and construction savings, future maintenance will be drastically reduced during the long-term post closure care period. The surrounding environment will also benefit, especially water quality, as a result of two key factors: the avoidance of fertilizers that will not be necessary to grow and maintain grass; and the elimination of soil erosion and sediment-laden runoff from the cap.

As acknowledgement for their innovative approach, Baldwin County and Oasis Consulting Services was awarded the 2017 Georgia Chapter American Public Works Association engineering award for innovative, small/rural community projects.



Slopes are 2.5:1 with the longest slope length at an impressive 285 feet.



The beautiful green closure of Baldwin County.



ClosureTurf blends into the natural environment.



Sand being installed in the engineered synthetic turf.



Perimeter channels are the only storm water mechanism needed to carry the water off site.



A view of one of the sideslopes at Baldwin County Landfill.

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