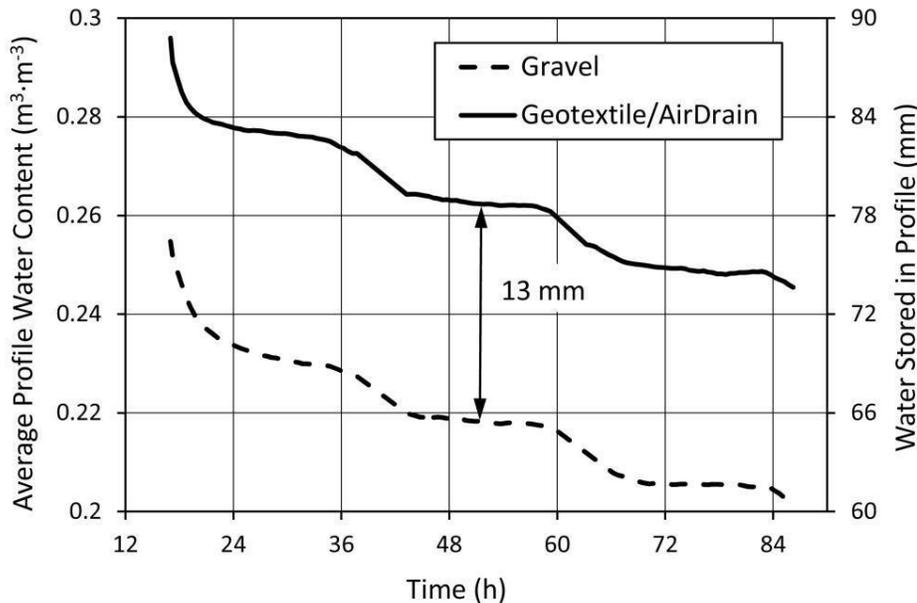


Supported by a five-year research project that was collaborative effort between Texas A&M University, AirField Systems and the United States Golf Association.

1. Given the same root zone material and depth, the AirField AirDrain System profile will store about 1.2 cm (0.47 inches) more water in a 30 cm (12 inch) profile:
<http://i2.wp.com/www.AirFieldsystems.com/wp-content/uploads/2015/10/Figure-4-AirDrain.jpg>
2. The added stored water will allow longer intervals between irrigation. For a deep rooted turf in the heat of summer this could amount to an additional 2 days between watering's and may be longer during cooler times of the year.
3. The AirDrain System creates a larger perched water table as compared to the gravel bed used in USGA systems. Gravel will allow some continuous water films to form and thereby increase the tension and remove additional water from the overlying root zone. The AirDrain does not support the formation of such water films and thus forms a larger perched water table.
4. No clogging of any of the tested geotextiles was observed in any of the root zone materials that met or were slightly finer than the USGA particle size recommendations.
5. The AirDrain Systems creates 100% vertical drainage with its 1" high 92% air void under your entire field. No other product even comes close.
6. With the AirDrain System you can use a 9" to 11" sand profile for the field.
7. With the AirDrain System you can use less compost and organics because the AirDrain System creates a larger perched water table by storing more water in the sand profile.
8. With AirDrain you can use a 95/5 sand organic mix as the AirField does not rely solely on the organics to hold more water.
9. The AirDrain System including the filter fabric for an entire sports field comes in 2 trucks for a typical installation.
10. AirDrain is palletized with 798 sqft. per pallet. Each piece of AirDrain grid has a tab on one corner painted yellow, male and female connectors, this makes attaching the grid as easy as possible, it doesn't get any easier.
11. Pallets can be staged across the field for easy installation. The parts only weigh 3lbs. per piece and are 32"x32"x1". Assembly is so easy we actually had a class of 8th graders install a small sample field at their school.

12. The testing of the AirField Systems AirDrain lasted for more than five-years. The research project was collaborative effort between Texas A&M University, AirField Systems and the United States Golf Association.
13. During the testing they created a USGA gravel profile and an AirDrain System typical profile. Both profiles were fully irrigated and 4 days later the AirDrain System profile had as much water as the USGA profile had on the 1st day of watering. (graph from the testing below)



Temporal change in water stored in Sure Play root zone mixture atop gravel and atop geotextile/AirDrain in uncovered test greens. Stored water measured by vertical TDR probes. Water loss was by drainage and evapotranspiration. probes. Water loss was by drainage only.

14. The AirDrain System will have less diseases and issues because the top of the profile will not remain constantly wet.
15. An AirDrain System is able to capture and move water to a containment pond or underground storage etc. for reuse. In certain parts of the country you might be able to have a self-sustaining field due to the water holding abilities of the AirDrain System.
16. AirField will be on site for field installations with 2 weeks' notice to help make sure that the install crew learns all the easy tips and tricks of installation. And we are always available by phone.
17. Airfields AirDrain has a unique ability no other system has in that it can flush the profile quickly and efficiently anytime its needed. This practice is particularly common where salt laden irrigation water is used and in areas along the East Coast, Gulf Coast, California coast, and Desert Southwest.

<http://gsrpdf.lib.msu.edu/ticpdf.py?file=/article/white-flushing-5-2-14.pdf>

Natural Grass Installations

AirField has over 200 installations around the world, including several noteworthy natural grass installations:

Natural Grass Facilities

NFL

- Arizona Cardinals Stadium 94,000 SF Natural Grass, Glendale, AZ NFL Game Field
 - In an NFL Players Association poll, the field at University of Phoenix Stadium was voted as the league's top playing surface since 2006.
 - In 2008 it was also selected as the league's best playing surface in a Sports Illustrated poll among NFL players.
 - Super Bowl XLII
 - Home of the Tostitos Fiesta Bowl
- Baltimore Ravens 75,000 SF Natural Grass, Owings Mills, MD Practice Field

COLLEGE

- Kyle Field Texas A&M 75,000 SF Natural Grass Football Stadium installed 2015
- Aggie Stadium 101,000 SF Natural Grass, Varsity Soccer Complex
 - The stadium hosted the 2005 NCAA Women's College Cup and the 2007 NCAA Women's College Cup. The site was also selected to host the 2009 NCAA Women's College Cup.
- Olsen Field 120,000 SF Natural Grass, Texas A&M University Baseball Game Field
- Texas A&M University 54,000 SF Natural Grass, Varsity Softball Complex Softball Game Field
- Washington State University 97,000 SF Natural Grass Soccer Field installed 2014
- University of Maryland 125,000 SF Natural Grass, Varsity Soccer Complex Stadium Game Field
 - Since its opening in 1995, state-of-the-art Ludwig Field has been the home of the Terrapin men's and women's soccer teams as well as playing host to eight NCAA Tournament games, including Maryland's 1-0 win over American University last season, as well as numerous other local soccer events throughout the past eight years.
 - In addition to the collegiate games played at Ludwig Field, the complex has played host to numerous U.S. and professional soccer matches, as well. Among the teams who have used Ludwig Field as their home-away-from-home are the 2000 U.S. Women's National Team and the WUSA's own Washington Freedom.
- Highers Simpson Field 130,000 SF Natural Grass, Baylor University Practice Field

Natural Grass Sports Fields

- Virginia Sports Complex, 23,000 SF with 2 Natural Grass Baseball Infields
- Derby Field in Berkeley California, 31,000 SF Natural Grass Baseball Infield installed 2012
- New Haven Park in Aurora Illinois, 30,000 SF Natural Grass Softball Infield installed 2010
- Waubonsie Creek Park in Aurora Illinois, 35,000 SF Natural Grass Softball Infield installed 2011

Natural Grass International Sports Fields

- Estadio Metropolitano de Barquisimeto Stadium, 72,000 SF Natural Grass Soccer Field installed 2006, Caracas Venezuela World Cup Soccer Field
- Caracas Venezuela Soccer Complex 72,000 SF Natural Grass Practice Field installed 2006

Natural Grass Green Roof Installations

- Chesapeake Energy Roof Top Sports Field, 74,000 SF Natural Grass installed in 2011 on top of a 3 story parking garage.
- Chesapeake Energy Building #14 Roof Top, 10,000 SF Wild Grass Green Roof installed in 2012 is a green roof with wild flowers and grasses indicative of the Oklahoma Landscape.
- Naples Florida YMCA, 9,500 SF Natural Grass Roof Top Sports Field installed 2015

Questions & Answers:

What are the benefits of a natural grass AirField drainage system?

Low Impact Development

The need for storm water trenches can be dramatically reduced by eliminating the herringbone trench system and limiting the perimeter trenches. The AirField System aids in low impact development by preserving existing natural areas during and after installation. Designed to limit site disturbance, geocell systems drastically reduce required earthwork and removal.

Smaller staging areas

Arriving in 2 truckloads and typically requiring 2,000 square feet or less of a staging area for an entire sports field, the AirField System proves to be far more efficient and economical. AirField limits unwanted compaction in the construction area and related trucking disturbance and destruction including: traffic to and from the site, a line of waiting trucks, airborne contaminants, sediment pollution from tracking, extra fuel consumption and many other unwanted issues.

100% recycled drainage grid

From the start AirField utilizes a 100% post-manufactured recycled resin, adding to the green factor of your facility. At the end of AirDrains life which could be after multiple field installations, AirDrain can be sent to just about any plastics manufacturer and reground for re-use as the resins that make up AirDrain are always in high demand. **No need to send back to the manufacturer the owner receives the proceeds of the recycled plastic which could be \$10,000.00 or more.**

Healthier turf / stronger and deeper root system

With the nearly perfect perched water table created by the AirField System's 1" air void, you get stronger and deeper root growth, healthier turf resulting in a field that is safer and more durable for the players.

A nearly perfect perched water table

2.5 - 4 more days of plant available water in your root zone over a traditional gravel profile resulting in less frequency of irrigation and (according to our customers) they enjoy a significant amount of total irrigation savings.

Tested at 233 psi / 33,552 psf unfilled.

AirDrain is strong, and it lasts. You should be able to replace your turf at the end of its useful life right over the top of the AirField system without having to additionally replace your drainage layer.

100% Vertical Drainage

The AirDrain Geocell is comprised of approximately 9% plastic creating a 91% air-void under the entire field. The AirDrain geocell's ability to evacuate water is only governed by 2 distinct components, which are the permeability of the profile above it and the infiltration rate and capacity of the sites perimeter drains. AirDrain has the ability to hold the water across the field until it can be evacuated by the perimeter drains. AirField is able to hold .568 gallons of water per square foot, which across an average field of 85,000 square feet is 48,343 gallons that could be captured for re-use.

Rainwater Harvesting

The AirField System has the ability to capture, route and store water in a detention facility where the grey water can be reused at a later date for collateral landscaping saving the site substantial irrigation and maintenance expenses.

Rainwater harvesting systems are simple to install, operate, and maintain. It is convenient in the sense that it provides water at the point of consumption and operating costs are negligible. Water collected from the roof or field catchment is available for use in potable (per local approval) and non-potable applications such as:

- Toilets and/or urinal flushing
- Laundries
- Mechanical Systems
- Custodial Uses
- Site Irrigation

LEED Credits Associated with Rainwater Harvesting:

- Water Use Reduction
- Water Efficient Landscaping
- Innovative Wastewater Technology
- Storm water Design: Quality Control
- Storm water Design: Quantity Control
- Innovation in Design

Expansion and Contraction Joints

AirDrain has expansion and contraction joints built into each part. As temperatures rise and fall plastic will expand and contract but with an AirField System the field above will remain consistent. AirDrain will not displace turf, deform or buckle from heat and moisture, or form gaps in freezing cold or dry conditions that can be seen through the turf. AirDrain's expansion and contraction joints when joined together form a tight and sturdy grid surface that creates a constant GMAX for a perfect playing surface above for both natural grass and artificial turf surfaces.

Natural Grass Testimonials

“To date, the drainage system itself has worked flawlessly. From our observations the AirField System has the capacity to drain more quickly than other systems, yet we have experienced less localized dry spots during the summer months. This summer, during the first week of July, the entire putting surface was intentionally allowed to reach a severe drought stress condition. Compared to other construction methods represented on the rest of the green, there were less localized dry spots on the AirField plot. I attribute this primarily to a deeper, healthier root system. Other potential advantages include the ability to flush the root zone more efficiently and since the AirField System replaces the gravel layer, this eliminates inconsistency in gravel materials which must be obtained from different sources in a particular region.

I believe the system is revolutionary and based on the particular needs of your clients, would fully endorse and recommend the AirField System. I wish to thank you and AirField Systems for your continued interest in the Turfgrass Management Program at Oklahoma State University - Oklahoma City and wish you continued success.”

David Gerken
Associate Professor of Turfgrass Management
Oklahoma State University

“We're processing the data for the large column studies and finding, as expected, that the AirField System's design holds about 2.5 to 4 days more plant available water than the USGA gravel based design.”

Kevin McInnes
Dept. Soil and Crop Sciences
Texas A&M

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