

**FOR MORE INFORMATION ABOUT
GEOSYNTHETIC MATERIALS, CONTACT:**

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HOW GEOSYNTHETICS BENEFIT OUR NATION'S INFRASTRUCTURE

Geosynthetics are a family of civil engineering materials used in our nation's infrastructure. Many durable polymers (plastics) common to everyday life are found in geosynthetics. The most common are polyolefins and polyester; although rubber, fiberglass, and natural materials are sometimes used.

Since their introduction in the late 1960s, geosynthetics have proven to be versatile and cost-effective ground modification and environmental protection materials. Most of these materials come in roll form and are delivered to sites in trucks. Their use has expanded rapidly into nearly all areas of civil, geotechnical, environmental, coastal, and hydraulic construction.

FASTER, LESS EXPENSIVE, TIME PROVEN

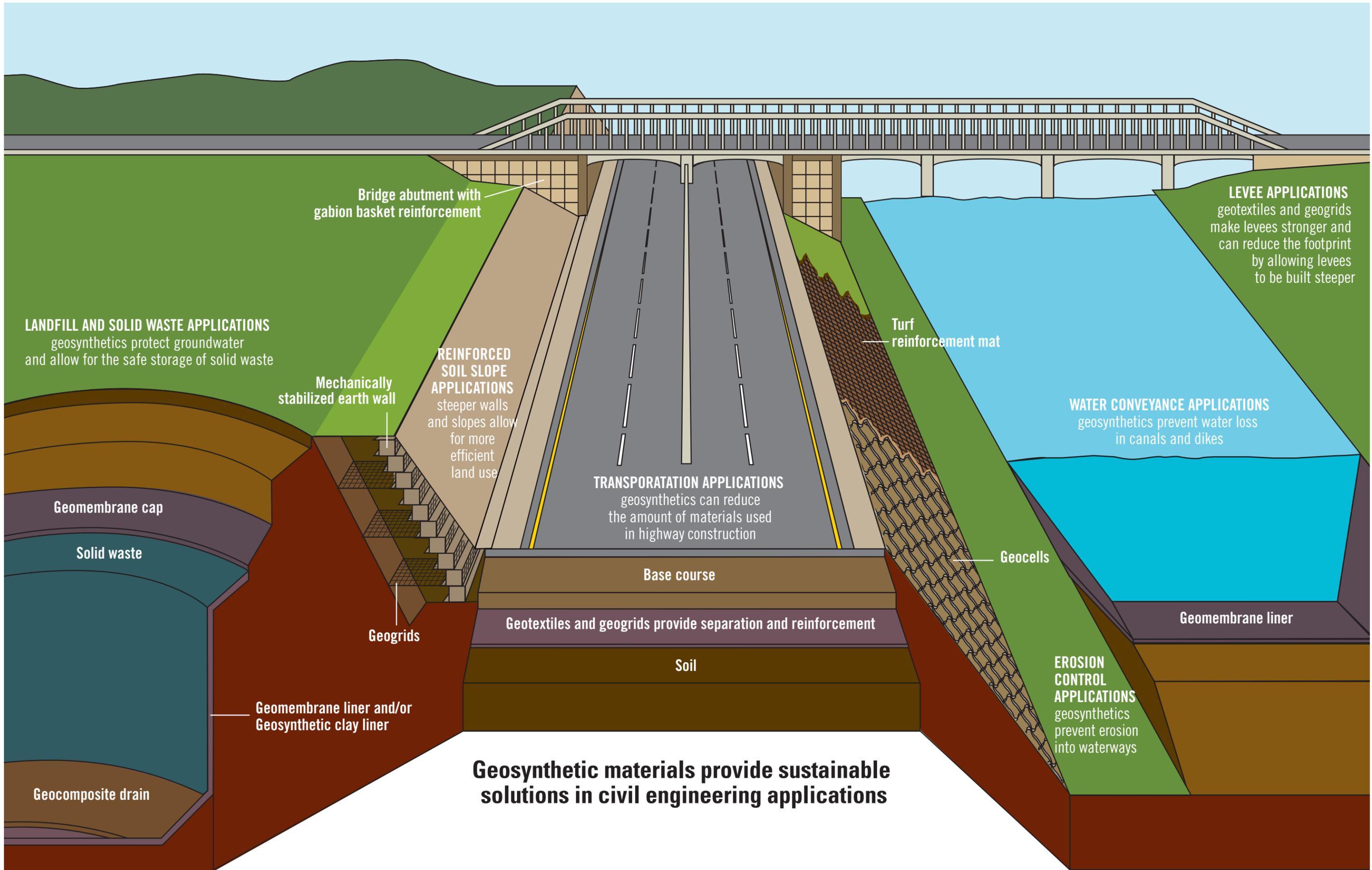
Geosynthetics, including geotextiles, geomembranes, geonets, geogrids, geocells, geocomposites, and geosynthetic clay liners, often used in combination with conventional materials, offer the following advantages over traditional materials:

- **Rapid Deployment**—Geosynthetics can be installed quickly, providing the flexibility to construct during short construction seasons, breaks in inclement weather, or without the need to demobilize and remobilize the earthwork contractor.
- **Cost Savings**—Often geosynthetics are less costly to purchase, transport, and install than other materials, soils, and aggregates.
- **Time Proven**—Geosynthetics have been in use for more than 40 years.

PRODUCTION AND EMPLOYMENT

Most geosynthetics are produced in U.S. textile and plastics mills. As a result, strict quality control procedures can be followed to create superior material consistency compared to soil, rock, concrete, or other natural materials.

There are more than 40 manufacturers of geosynthetics that provide products for the North American marketplace. More than half of the manufacturers are located in the Southeastern U.S or Texas. The industry provides more than 12,000 jobs in the U.S. in manufacturing, fabrication, distribution, and installation. The geosynthetics industry adds \$2.1 billion to the U.S. economy.



Bridge abutment with gabion basket reinforcement

LEEVE APPLICATIONS
 geotextiles and geogrids make levees stronger and can reduce the footprint by allowing levees to be built steeper

LANDFILL AND SOLID WASTE APPLICATIONS
 geosynthetics protect groundwater and allow for the safe storage of solid waste

REINFORCED SOIL SLOPE APPLICATIONS
 steeper walls and slopes allow for more efficient land use

TRANSPORTATION APPLICATIONS
 geosynthetics can reduce the amount of materials used in highway construction

WATER CONVEYANCE APPLICATIONS
 geosynthetics prevent water loss in canals and dikes

EROSION CONTROL APPLICATIONS
 geosynthetics prevent erosion into waterways

Mechanically stabilized earth wall

Turf reinforcement mat

Geocells

Geomembrane cap

Solid waste

Base course

Geomembrane liner

Geotextiles and geogrids provide separation and reinforcement

Soil

Geomembrane liner and/or Geosynthetic clay liner

Geogrids

Geocomposite drain

Geosynthetic materials provide sustainable solutions in civil engineering applications