New York State homeowners are now able to use recycled materials in the construction of leach fields for residential onsite wastewater treatment systems (OWTS). Tire-derived aggregate (TDA) is a construction material produced from recycled vehicle tires. TDA can be used as an alternative to stone aggregate in leach fields in New York State as of February 2010. New York joins over fifteen other states that already use TDA in onsite wastewater treatment systems.

Why Use Tire Derived Aggregate?
TDA has excellent drainage properties, maintains its structural integrity and weighs one-third as much as stone or gravel. TDA’s reduced weight makes the material easier to handle and will typically result in reduced transportation costs. A typical household wastewater treatment system will use approximately two thousand discarded tires, thereby helping to find beneficial uses for the approximate twenty million tires discarded each year in New York State.

What is New York State’s Experience?
The New York State Waste Tire Management & Recycling Act of 2003 sets forth the state’s waste tire management priorities, which include the beneficial use of tires in civil engineering applications. The use of tire-derived aggregate in onsite wastewater treatment systems is such a beneficial use. The Center for Integrated Waste Management (CIWM) located at the University at Buffalo has studied the use of TDA in septic systems for several years. The CIWM has conducted laboratory simulations and testing; installed and monitored a full-size demonstration septic system that uses both stone and TDA; interviewed officials from states that have allowed the use of TDA; and reviewed related studies from other educational and research organizations. Findings from those activities indicate that TDA performs equally to, if not better than stone in leachfields. Studies did find that TDA contains steel wire that over time will corrode and release small amounts of metals, primarily iron and manganese, however, studies by the CIWM and several other organizations have shown that in these metals do not leach at levels that are of environmental concern and these small amount of metals are readily adsorbed in the soils surrounding the leachfield.

Where Can You Buy TDA?
Currently there are two tire recyclers who have obtained a Beneficial Use Determination from the NYS Department of Environmental Conservation to manufacture TDA for septic systems:

Modern Corporation Casings, Inc.
Model City, NY Catskill, NY
(800).662.0012 (518).943.9404
www.moderncorporation.com www.casingsinc.com

Other suppliers as they become approved will be listed as well on the NYS Department of Environmental Conservation website: http://www.dec.ny.gov/chemical/8821.html.
Are There Different Approvals for Using TDA?
The approval process is the same for systems using TDA as for those using stone aggregate. Homeowners in New York State should contact their local health department for information and guidance. Local health departments can be found at the following address from the NYSDOH website: [http://www.nyhealth.gov/nysdoh/luh/map.htm](http://www.nyhealth.gov/nysdoh/luh/map.htm).

Are There Additional Precaution Necessary?
The presence of some protruding wire in TDA requires that installers take basic construction safety precautions such as use of protective shoes and gloves, and remove excess material from the site through the use of magnetic nail sweepers or rakes. There is no need for any special construction equipment.

Additional Information
For more information on the use of TDA in residential onsite wastewater treatment systems at the state and national level, see:

- New York State Department of Health


- New York State Tire Derived Aggregate Program
  Use of TDA specifically in New York State, current research and technical/regulatory developments: [http://www.tdanys.buffalo.edu](http://www.tdanys.buffalo.edu).

- Empire State Development
  Information on New York State tire recycling resources and reports: [www.esd.ny.gov/recycle](http://www.esd.ny.gov/recycle).

- ASTM D6270-08 “Standard Practice for Use of Scrap Tires in Civil Engineering Applications”
  Detailed information on testing the physical properties, design considerations, etc. of scrap tires: [http://www.astm.org](http://www.astm.org).

- EPA Resource Conservation Challenge
  Use of scrap tires in civil engineering applications and compilation of Environmental Studies from around the country: [http://www.epa.gov/osw/conserve/materials/tires/civil_eng.htm](http://www.epa.gov/osw/conserve/materials/tires/civil_eng.htm).