Biosolids, Chattanooga's #1 in #2!

Set in Chatype

Tennessee Recycling Coalition
Lifting Recycling As the Standard Since 1990

The City of Chattanooga, Public Works Department instituted a comprehensive waste prevention and recycling program that diverts its contributor's waste from the municipal landfill to land appliers as fertilizer. Each year the Moccasin Bend Wastewater Treatment Facility (MBWWTF) produces an average of ~70,000 wet tons of biosolids from the solids handling system which is stabilized material suitable as a soil and nutrient amendment for land application.

The City of Chattanooga is committed to providing the best possible water quality and wastewater service to its extensive population base of approximately 90,000 users in the Greater Chattanooga and Northwest Georgia areas.

Because of the desire to develop and maintain a quality biosolids management program, allowing for continued beneficial reuse of biosolids material, Chattanooga joined the National Biosolids Partnership (NBP). As part of this partnership, Chattanooga committed to managing its biosolids production and land application program in a manner that promotes the following:

- Environmental Performance
- Quality Management Practices
- Regulatory Compliance
- Better Relations with Interested Parties

The Moccasin Bend WWTF, prior to mid June 2005, produced approximately 100,000 wet tons of Class B biosolids that were disposed of in the City Landfill and the Rhea County Landfill operated by Sani-Tek. Since mid-June 2005 all biosolids produced by the MBWWTF have been beneficially reused via its land application program.

The transition from landfill disposal to a land application program represents approximately $400,000 dollars per year savings in disposal costs, or about $3.4 million dollars total through the end of 2014. In addition, it saved the City approximately $2.1 million in landfill space each year or about 10 years of landfill space through the end of 2014. It also made the MBWWTF the #1 recycler in the City.

Chattanooga's Biosolids Management Policy Statement requires its land appliers of biosolids to comply with the provisions of the NBP Manual of Good Practice as well as local, state, federal laws, rules, regulations, and guidelines governing land application practices.

The Moccasin Bend WWTP joined the National Biosolids Partnership (NBP) in April 2005 and signed a Memorandum of Understanding in August 2005. MBWWTP applied for the third party audit to be done in 2008 and received its Certification in January 2009. The MBWWTP was the 1st wastewater facility in Tennessee and the 23rd facility in the U.S. to be certified by the NBP. The MBWWTP has completed its first re-verification audit and remains an NBP platinum level certified organization in 2014.

Being a part of the NBP program has resulted in improvements in the consistency and quality of the biosolids being produced to the point that the Filter Press Cake was self-certified to be a Class "A" EQ material.

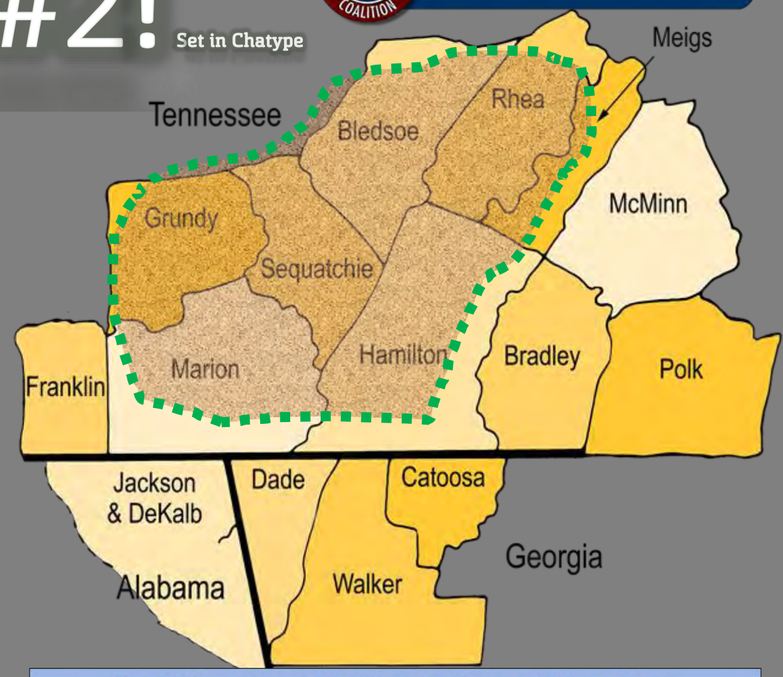
Tennessee State Law requires communities to divert recyclable materials from disposal in landfills in order to achieve a goal of 25 percent (%) waste diversion, but Chattanooga is committed to recycling 100 percent (%) of quality biosolids produced.

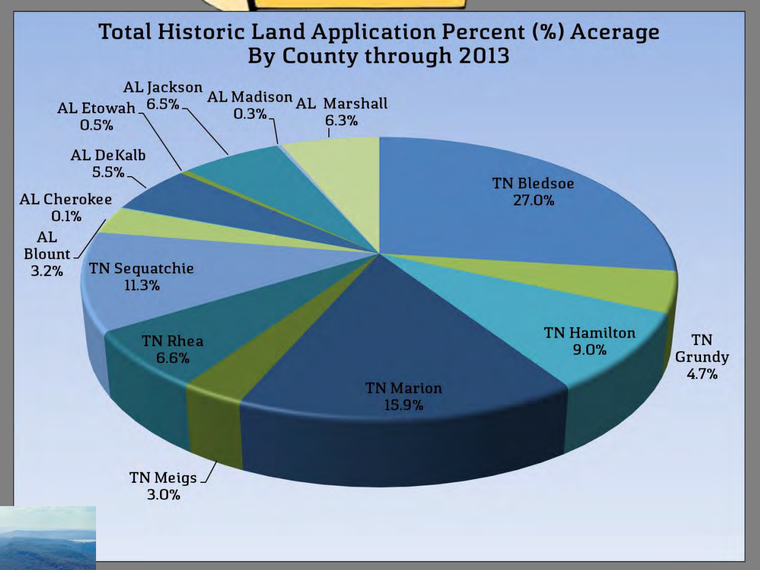
In 2013 67,534 wet tons (27,070dry tons) were applied on 5,024 permitted acres in TN. Biosolids were applied on 44 farms & land application sites in seven (7) TN counties; Bledsoe, Grundy, Hamilton, Marion, Meigs, Rhea, and Sequatchie. In the past, prior to 2009, 34 farms in Blount, Etowah, Dekalb, Jackson, and Madison Counties in AL were applied.

The MBWWTF has 15 +/- acres of land permitted on the plant site where biosolids are applied. 3,150 rectangular and 60 round bales of hay are produced on average annually in two cuttings even with drought conditions. This hay has been used to feed the camels at the Chattanooga ZOO, bank stabilization at the City Landfill and Summit Landfill, and on Public Works City Wide Services construction projects throughout the City.

Another key site is the 900 acre state owned Williams Island within the City limits and in the middle of the TN River. This site is being operated as a cattle and hay operation, as well as being a historic archeological site. The operators of the site welcomed the use of biosolids as an organic fertilizer product. The value to the all of the farmers at 2014 fertilizer cost for nutrients and lime was approximately $120/dry ton or about $2.96 ton/year.

Daily samples are tested for pH to ensure that Class B requirements are being met for post lime stabilized biosolids. Weekly samples of the biosolids produced are tested for the Part 503 metals and fecal coliform to confirm Class B standards (all significantly below Part 503 requirements). Monthly samples are tested for enteric viruses, Helminth ova, salmonella, and fecal coliform to further demonstrate a quality product (none detected to date).





Annual samples are analyzed for PCB and TCLP tests are performed (all have been significantly below Part 503 requirements).

Weekly field inspections are made and documented to land application sites to verify that setbacks are being followed and application rates are correct. All complaints are answered and addressed immediately by the MBWWTP and its contractor.

On 12/15/2011 the City of Chattanooga's Moccasin Bend Wastewater Treatment Plant (MBWWTP) Biosolids were certified as a "Fertilizer"; Permit #4755; UFTRS CODE #667, and remains certified in 2014. MBWWTP assumes full responsibility for compliance with the Tennessee Commercial Fertilizer Law. As part of MBWWTP's certification a product label has been developed stating its claims and guarantees.

Each quarter MBWWTP will report the dry tonnage applied, which will be subject to inspection and fees by the TDA per 40 CFR 503 pollutant concentrations regulations.