


# Bobcat Blend- Composting for a Greener Campus



# Overview video

Bobcat Blend composting diverted **57** tons of organic waste from the landfill last year.



0:27 / 1:58

TCEQ: 2013 TEEA Winner, Education - Texas State University, San Marcos - Bobcat Blend

TCEQNews

Subscribe 120

1,956

<https://www.youtube.com/watch?v=b25f1F82PY0>

# Mission

- Bobcat Blend is a faculty managed, student-run and grant-supported **research and teaching-oriented waste management campus composting and education program** at Texas State University.



# History

- 300 tons of food waste from Texas State University was deposited into the sewer system or landfill each year.
- 2006 – Search for grant funding
- 2008 – EPA grant obtained (to work with invasive species), site constructed, permits obtained
- 2009 – Composting began on campus with Commons & LBJ
- 2012-2015 – Campus expansion, increased volunteer support



# Compost Site

- Located ten miles away from campus due to environmental sensitivity
- 5 acres
  - (~ 2.5 acres for composting area and ~2.5 acres for catchment pond)
  - Sloped and bermed to catchment pond
  - Fenced, water and electricity sources
  - 50' easement for fire department access
- Fully functioning municipal solid waste (MSW) site according to TCEQ standards



# Campus collections

- Past and current collections include:
  - Dining halls, kitchens
  - Student Center
  - FCS Nutrition labs
  - Honors Coffee House
  - Agriculture gardens and greenhouses
  - Grounds waste
  - Invasive species from Meadows Center for Water and the Environment
  - Biology research projects on invasive fish species
  - Special campus events
  - Seasonal collections of leaves, pumpkins at city drop off points.



# Green Bucket program

- Departments and individuals requested pick-up of organic waste from home or office.
- Issued a bucket with a map of existing pick-up sites
  - Allowed efficient use of labor and containers.



# Compost Equipment

- Truck, bobcat, trailers
  - (pediporter)
- Screener constructed by Ag Mech students
- Sustainability at the site: Coming full circle with screening successes





# Research

- Large-scale composting as a means to manage invasive river species (water hyacinth, water lettuce, wild taro, hydrilla and sargassum)
- The economic feasibility of a campus compost collection and education program at Texas State University
- Large-scale composting as a means of managing sheep waste products in Texas
- Vermicomposting food waste at Texas State University
- Compost specialty blend studies
- Compost tea studies in progress...



# Teaching

- Field trips to site
  - Students from Agriculture, Family Consumer Science, Sustainability studies courses
  - Texas Organic Farm and Garden Association
  - CAPCOG Solid Waste group
  - Edible/Sustainable San Marcos
  - City of San Marcos Parks and Recreation
  - Elementary and middle school students
  - Other university representatives looking to model program
- On campus vermicomposting shed



# Teaching

- “Worm shed”
- Value-added product
- Organic gardening class
- Living Library campus gardens
- Efficient use of space
- Popular in sales



# Outreach

- Master Composter classes
  - Collaboration with city where students instruct
- Farmer's Market
  - Monthly compost tea and vermicastings sales
- Field trips and guest lectures
  - On and off campus
  - Schools, garden clubs



# Value/Impact

- 6-8 students on staff (1 graduate student manager)
- Cafeteria waste collected
  - 2010/2011 -- 26.4 tons
  - 2011/2012 – 57 tons
  - 2012/2013 – 80.7 tons
  - 2013/2014 – 140.5 tons
  - 2014/2015 – 81.1 tons
    - And 150 yards Grounds waste, 160 yards City leaf waste, 90 yards river waste
  - Waste weighed at local/city recycling center, on a truck scale
- Bobcat Blend increased recycling rate on campus.
  - Bins for recycling were not in place in some collection sites until Bobcat Blend project initiated



# Value/Impact

- Research
  - Hands-on experiences
  - Development of new compost products using waste materials
  - Documentation of efforts
  - Reflection and improvement of program



# Value/Impact

- Campus, Local and Regional Awards
  - 2012 --Texas Commission for Environmental Excellence in Education Pollution Prevention Award Finalist
  - 2013 – Texas Commission for Environmental Excellence in Education Pollution Prevention Award, , Texas State University Boko Student Service Award
  - 2014 – Texas Solid Waste Association of North America (TX SWANA award), San Marcos Chamber of Commerce Green Business Award
- Positive publicity for department and university



# Value/Impact

- Compost used in the Agriculture campus greenhouses and gardens.
  - Reducing costs for classes and labs.
  - Reduces irrigation, fertilizer, pesticide needs
- 140 yards of compost sold to local community gardens, the city, faculty and staff and recently to local industry.
- Funds used to support the program.





# Value/Impact

- Industry demand for students
  - Texas is 2<sup>nd</sup> largest producer of compost in the U.S.
  - Texas Disposal Service, City of Austin, Texas Commission for Environmental Quality, post-graduate studies
  - Beyond composting/waste management knowledge and skills, students develop leadership, teamwork, public speaking, managerial, small engine skills.



# Value/Impact

- Program includes whole campus society.
  - Faculty, students and staff
  - All across campus
  - Every day, all year long
  - All majors



# Biggest Challenges

- Inconsistent funding
- Equipment failure & maintenance
  - Dump trailer, bobcat & truck
  - Extremely costly
- Continuity of student labor
  - Dependent on funding availability
- Kitchen staff/managers changes periodically
- Student turnover requires regular re-education
- Contamination in bins frustrates cafeteria managers especially



# Considerations in Funding

- Overall program costs ~ \$43,650/year
  - Faculty manager – no cost
  - Graduate student manager
    - Sometimes funded by department or college
  - Compare to Recycling Program
  - Includes fuel, maintenance costs which can vary
  - Includes donations, grants, built and scavenged items



# Thank you

Send questions to:  
Tina Marie (Waliczek) Cade  
[tc10@txstate.edu](mailto:tc10@txstate.edu)

