



Composting seems simple. But in large facilities with tight environmental controls, it takes the right tools and a knowledgeable approach applied constantly to each stage of the process. The City of Phoenix has built a facility that provides very good processing tools to manage the compost, and has hired WeCare Organics to use their knowledge of the composting process and the marketing of compost to manage this state-of-the-art facility. Their seven - year contract provides them incentive to help the City quickly grow its collection programs, and to then manufacture high quality compost from those feed-stocks. WeCare Organics has an excellent reputation in making and selling quality composts.



As part of the Arrington Watkins Architects local team, Green Mountain Technologies (GMT) brought to Phoenix over 25 years of compost facility design and operation experience to design an efficient and easy to manage compost facility. By focusing on the initial first few weeks of the composting process, keeping temperature, moisture and oxygen levels within tight control, the process is accelerated and the compost retains more nutrients, making a better product, faster. GMT has helped to create a unique state-of-the-art composting process for the City of Phoenix, while using automation to keep the process simple and effective. GMT will also assist the city with initial facility operational oversight and training.

## Compost Matters. To Soil. To Plants. To Streams. To Climate. To You.

A little compost goes a long way to solving life's annoying problems. Buy and use compost for your home and business landscaping areas and gardens. Compost can reduce how much, and how often, you need to water. It will do most of the fertilizing for you. Compost helps keep plant diseases at bay and also helps your soil become a water filter, reducing runoff and improving water quality. The soil also is meant to store carbon to keep it out of the atmosphere. Compost is that carbon, and should be in everyone's soil. Make it easier on yourself, use compost.

Watch your plants get happy. When they need trimming, give the excess back to your compost facility.

For more information about the city's Green Organics collection program, please call 602-262-7251.



## Green Organics Mix

# City of Phoenix 27th Avenue Compost Facility

In 2013, Mayor Greg Stanton and City Council members announced Reimagine Phoenix, a new citywide sustainability initiative to divert 40 percent of residential waste from the city landfill by 2020.

With the Public Works Department developing the underutilized 27th Avenue Landfill Complex, the Resource Innovation Campus (RIC) was created as a hub for innovators building Phoenix's circular economy and generating economic development. The first operational project in this campus is the phase 1 Compost Facility, opening at 55,000 tons per year initially and quickly growing to 110,000 tons per year of green waste diverted from the city landfill.

The Compost Facility sits on approximately 27 acres within the RIC and has potential to grow into a 220,000 tons per year facility.

The 27th Avenue Compost facility is the first solid waste infrastructure project in the United States, and the first project in Arizona, to earn Envision recognition from the Institute for Sustainable Infrastructure. The Envision system rates sustainable infrastructure across the full range of environmental, social, and economic impacts.



## Turned Aerated Pile (TAP) Composting System

A Turned Aerated Pile (TAP) compost system lets large facilities make compost fast. Piles are turned twice a week in order to re-wet the compost, re-establish porosity and break up clumps. Aeration is provided through the floor beneath the pile blowing or sucking air through the piles continuously. Biocovers cover the fresh piles and biofilters treat any collected air, keeping odors to a minimum. Wireless probes send temperature readings to the control building allowing the automatic control of air supply volume and direction to keep the pile at optimal composting temperature. Cured finished compost is produced in 45 to 60 days.

## Desert Composters Need to Capture Water

Composting is a thirsty process. Keeping the piles moist is essential. This facility reuses all the water that hits the site, and recaptures a large percentage of the steam coming from the piles. Shallow well water is used for pile irrigation. Also any stored condensate or runoff is used to irrigate the fresh TAP piles before they go through final sanitation processing. The site stormwater pond is lined and any water collected can also be utilized on the TAP.

## Compost Facilities Must Manage Odor Well

Odors are reduced by constant aeration, and by being efficient as the operators grind and mix the incoming food waste, green waste and animal manure. Covering these fresh piles with a wet biocover of wood chips or screened mulch reduces odors by over 90% when air is pushed through the pile. The biofilters allow air pulled from the piles to be treated to remove over 90% of the odors.

