



Food Resource Feasibility

THE PROBLEM Food waste is one of the most prevalent categories contributing to the residential waste stream in Phoenix, making up 14.5% of the total waste stream from single-family households. This is the equivalent of over 56,000 tons of food disposed annually by these households (Cascadia Consulting Group 2014). The EPA estimates that residential and commercial food scraps account for 13.9% of the total waste stream. The city of Phoenix sees this problem as an opportunity to turn its waste into valuable resources, and has ambitious plans to decrease the total amount of food waste in the city.

THE PARTNER The city of Phoenix Public Works Department

THE SERVICE Food resource feasibility analysis of pre-consumer food waste solutions

THE SOLUTION ASU assessed options for various food waste conversion technologies, sustainable end-use of food waste energy, potential financial hurdles and policy options for rapid adoption. This study looked at large food scrap producers such as grocers and large restaurants. The analysis for food waste solutions includes the following points and recommendations for Phoenix:

- Windrow composting, anaerobic digestion and co-digestion of food scraps and waste water are all feasible options for Phoenix, with windrow composting having the lowest initial investment.
- Policies must support a financial incentive to convert food waste instead of landfilling it.
- Phoenix should assist businesses and facility operators in the difficult and prohibitive permitting and regulatory requirements for food waste conversion facilities.
- Buy-in and engagement from the local community will be very important in the success of the project.

THE OUTLOOK Phoenix is positioned to realize environmental and economic benefit through decreasing the amount of food waste sent to the landfills from grocers and other large retailers. Reduction and increased diversion of food scraps offers huge potential for retailers to decrease their costs. Food waste reduction measures are not only beneficial to the retailers' bottom lines, but also convey a socially responsible and environmentally-friendly image, making them more attractive than competitors to customers. However, low landfill tipping fees and challenges in collections create barriers to the availability of processing technologies.

Dan O'Neill

General Manager, Global Sustainability Solutions Services
Walton Sustainability Solutions Initiatives
dan.oneill@asu.edu | 480.965.9666

sustainabilitysolutions.asu.edu