Phoenix Metro Materials Recovery

GreenLight GreenPaper

Spring 2013

This report was created for the ASU Walton Sustainability Solutions Services (WSSS), for the purpose of informing current best practices and opportunities in waste mitigation, in order to help the City of Phoenix reach its goal of 40 percent waste diversion from landfill by 2020.

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The WSSS was working with the City of Phoenix to develop solutions for the initial stages of the city's new waste diversion goal - Phoenix 40 by 20. The new goal states that Phoenix wants to reach 40% waste diversion from landfills by 2020. The challenge that the WSSS faced was finding the time to conduct the research necessary to become fluent in best practices in municipal solid waste management.

To initiate its work, the WSSS hired six students from GreenLight to create a report that could serve as a knowledge bank to reference for quick and comprehensive review of best practices in municipal solid waste management. Having this baseline understanding was crucial to creating the City of Phoenix 40 by 20 plan.

Recommended Solutions

GreenLight engaged with WSSS to create a report on general best practices in municipal solid waste management. The work started in April of 2013 and a final report was presented in June of 2013, and coupled with a 31-slide presentation, was delivered to the City of Phoenix Public Works Department. The final report consisted of the aggregation of information related to the following areas:

- The waste industry supply chain
- Economic impacts of the waste industry
- Current best practices for waste management and diversion
- Materials Recovery Facility business operations
- Waste aversion practices, product/package design, and specialty recycling
- Waste-to-Energy technologies and adoption
- Future best practices for waste management and diversion

The final output was an 87 page, single-spaced report that will be utilized as reference to develop innovative solutions for Phoenix to reach its 40 by 20 goal.

Project Benefits

Benefits to Project Partner

The short-term benefit to the WSSS was that we were able to collect a comprehensive, high-level assessment of best practices in municipal solid waste management that helped the WSSS improve for their client. In the long-term, we proved to the WSSS the value of motivated undergraduate students for doing quality research on the fly. As a result of our effectiveness, the WSSS has decided to hire two yearlong 20 hour/week undergraduate interns to continue this work.

Benefits to Solutioneers

This project helped us prove that we can create value through collaboration and dedicated efforts. The experience was empowering and one of us got a high-paying internship as a direct result of knowledge gained from the project.

Benefits to the Community

Managing municipal solid waste allows for landfill sizes to decrease, reducing pollution into the soil, keeping more land available for community use, and lessening the eyesore that solid waste creates. In addition, it allows community members to be more conscious of their waste production and provides better environmental conditions to mitigate climate change.