

Waste Opportunity: from desert dirt to Scottsdale soil

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The nutrients in the local waste stream can catalyze food production and form symbiotic relationships between Scottsdale and the Salt River Pima Maricopa Indian Reservation. The waste is a 'keystone' that creates benefits across various urban systems. The economic benefits to the Salt River Pima Maricopa Indian Reservation are numerous. Feral lands needing years to regenerate may be agriculturally productive due to the application of soil enriching compost. Instead of the 12,000 acres of farming existing now, 30,000 acres are feasible under the composting plan. Revenue will come from crops and dumping fees from Scottsdale. In addition, farming expenses will be reduced due to the lack of expenditures for fertilizer. Additional benefits include:

Greenhouse gases/Transportation: This project would dramatically drop greenhouse gases through three primary factors: fertilizer, the transportation of food and waste, and the reduction of landfill size.

Fertilizer production requires a high amount of energy. Natural gas is the primary ingredient. Recently natural gas prices spiked, and prices historically have been volatile. Farmers buy immense quantities of fertilizer with loan money, and volatile prices can make financial planning difficult and potentially ruinous. Replacing fertilizer with compost will reduce greenhouse gases and provide economic stability.

Vehicle miles traveled in the food system include transportation of fertilizer to the farm, raw food from the farm to the processing plant and processed food from the plant to the supermarket. In the new system, the site generates the fertilizer locally, and the food goes directly to local markets. The reduction in miles traveled means less greenhouse gases and less oil consumed.

Keeping waste local will reduce miles traveled to landfills. In the proposed design, biogas from the landfill and compost station power the garbage trucks, reducing the carbon footprint.

The smaller and refined waste stream reduces greenhouse gas emissions from the landfill and extend its life. Landfills emit greenhouse gases. If this proposed scheme were adopted, it would reduce greenhouse gas emissions by two-thirds.

Nutrients in food: Food loses nutrients due to long transportation distances from source to consumption, pesticides and synthetic processing. Local food, delivered the same day, grown in nutrient-rich soils, not soils desiccated of life by fertilizers, will be fresher and healthier than distant crops and processed foods.

Health: Local crops will be the staple foods in the reservation school system. We expect to institutionalize sustained healthy eating habits. These healthy eating habits should reduce the astonishing rate of diabetes among tribal members. Eating locally-grown food also projects to include the reduction of health care costs.

Waste: The refinement of the waste stream projects to reduce the amount of waste. Studies show when people sort their waste, they become more cognizant of their habits. This results in an overall reduction of waste which in turn lessens consumer demand for materials. Attention paid to the waste stream may also provoke a response to eliminate materials that require sophisticated disposal methods due to their toxicities.

Social: This new symbiotic cycle of waste to food provides jobs, economic and social opportunities that can help to integrate the communities of Scottsdale and the Salt River Pima Maricopa Indian Reservation. This project creates the need for: waste stream and agricultural workers and creates opportunities for farmer's markets, community gardens, urban fishing and community centers that do educational outreach on local agricultural methods. These places foster opportunities for the two communities to work, live and play together. This in turn produces 'points of friction' where people will have structured and serendipitous encounters sparking business and personal relations. Finally, the compost plant and agriculture can be a 'brand' for the community, boosting civic pride.

This plan builds upon an existing location of waste to compost. The farmer who leases the existing location from the Native Americans on the reservation, takes the food and garden waste from five-star Scottsdale hotels and turns it into compost which fertilizes the soils on his farm. The chefs in these hotels desire the foods produced from this compost system due to its high quality. Many of the chefs work on the farm site to help produce the compost and the vegetables. The number of people in the community involved in developing the site grows by the season. Our team sees the waste stream from the City of Scottsdale as an opportunity to grow a system 'adopted early' by members of the Reservation and the residents of Scottsdale.

