Town of Queen Creek
Green Waste Removal

By: Kyle Corona, Bill Boucher, Timothy Belda, Eric West
Problem Statement

- Divert green waste from landfills in the Town of Queen Creek, and create a usable end-product.
- Come up with a feasible program, discuss how this program will be implemented, and address how the people of the town will be involved in this program.
- We will need to understand the costs, infrastructure, and potential behavioral changes that will be associated with a new green waste program.
- Implications of this program in terms of residential responsibility, governance, market implications, and municipality must be addressed and clearly defined.
Potential Solutions

- Biogas
- Compost Plant
- Maintain Landfill
- Rainwater Retention
Approach to Solution

- Approach based on stakeholder involvement
- Recognize perspectives and responsibilities of these parties
  - Resident Responsibility
  - Government Role
  - Market Implications
  - Municipal Aspect
Resident Responsibility

- Be educated on the subject
  - What green waste is
  - How to dispose of it

- Communicate with government
  - Understand the program being put in place
Resident Importance

- Getting residents on board is VITAL
  - Willing to bear any extra costs
- Understand affluence of the community
  - Median income ~$81,000
Responsibility

- Residents must separate waste
- Maintain waste bins
- Keep on schedule with waste pick up
Governmental Implications of Green Waste
Education

- Avoid contamination
- Show people the benefits of Green Waste
- Inform why it is important to use a Green Waste bin
- Beneficial to all aspects of the situation
Various Techniques of Education

- Preexisting Educational Infrastructure
- Media Outlets
- Green Waste Bin
Education: Preexisting Educational Infrastructure

- Teach the process to children at a young age
- Children will take pride in helping the planet
- Children will educate their parents on the matter
- Field trips to the Green Waste facility would be a memorable experience for any child
Education: Media Outlets

- Short public service announcements to educate the residents of Queen Creek about the program
- Television
- Radio
- Newspaper
- Social Media
Green Waste Bin

- Vital information
- List of what can and can’t be put in the bin
- Avoid last minute contaminations
Incentives

- Tax breaks to participants of the Green Waste program
- Mandating that all residential and commercial facilities compost
- Providing subsidies to the companies involved in the municipal processes of Green Waste
Disincentives

- Warnings - Large visual cues on the Green Waste Bin
- Clear communication of the problem with the residents
- Fines only if necessary
- Important to be associated with positive impacts on the community
Market Implications

Implications on the businesses who buy the end product?

- Contamination
- Complexity
- Customer Base
Contamination

- **What is it?**
  - Oil, feces, weed killer, herbicides, pesticides, fungicides, fertilizer, etc.

- **Why is it a problem?**
  - A lot of material with no home

- **Solution?**
  - Education, communication, & marketing
Complexity

- How is it complex?
  - In a sense, it’s a lot like brewing beer

- Why is that a problem?
  - Improper timing/accuracy can ruin the process

- Solutions?
  - Hire experienced professionals
  - Standardize the procedure
Customer Base

- Why is it difficult to create?
  - Recycling green waste has not become a norm

- Solutions?
  - Marketing
  - Preserving quality and reputation

- Bottom line?
  - Quality is Key
Municipal Aspect
Problems

- Population boom 9,000/30,000
- Educating the public
- Enforcing laws or regulations relating to waste
- Diversion rate
- Financing
Financial

Annual Budget Overview of Queen Creek

**Where does the money come from?**

Town sources as a percent of the total budget

<table>
<thead>
<tr>
<th>FY14-15 Revenue Sources</th>
<th>$102.3M as a Percent of Total Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town Sources</td>
<td>22%</td>
</tr>
<tr>
<td>Federal Sources</td>
<td>22%</td>
</tr>
<tr>
<td>County Sources</td>
<td>12%</td>
</tr>
<tr>
<td>Grants &amp; Other Financing Sources</td>
<td>9%</td>
</tr>
<tr>
<td>Property Taxes</td>
<td>8%</td>
</tr>
<tr>
<td>Other Revenue (Cigarette Tax, State Share of Local Sales Tax)</td>
<td>3%</td>
</tr>
</tbody>
</table>

**Where does the money go?**

Town expenses as a percent of the total budget

<table>
<thead>
<tr>
<th>FY14-15 Adopted Budget</th>
<th>2013-14 Adopted Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Works/Water</td>
<td>20%</td>
</tr>
<tr>
<td>Police</td>
<td>19%</td>
</tr>
<tr>
<td>General Government</td>
<td>19%</td>
</tr>
<tr>
<td>Economic Development</td>
<td>10%</td>
</tr>
<tr>
<td>Health</td>
<td>9%</td>
</tr>
<tr>
<td>Parks &amp; Recreation</td>
<td>4%</td>
</tr>
<tr>
<td>Libraries</td>
<td>3%</td>
</tr>
<tr>
<td>Other Expenses</td>
<td>9%</td>
</tr>
</tbody>
</table>

*FY 2013-14 Adopted Budget includes $47,000 for 9/15 Acquisition*
Process

- Infrastructure
- Zoning
- Pick up times
- Size and variety of green waste
- Rules and regulations
End Product

- Diversion Rate
- Fertilizers
- Bio Fuels
Our Solution

- Compost Plant most viable option
- Provides most benefits without damaging community
- Does require a large increase in infrastructure, or transportation to an existing plant
Implementing

- In order to implement this plan, education is the most important in terms of protecting the waste from contamination, and getting residents on board.
Questions?