USPS’s SOS

Team 1002
Our problem

• United States Postal Service (USPS) is dying
• Cost of sending mail increasing
• Earnings decreasing
• Suggested no deliveries on Saturdays
According to the Annual Cost and Revenue Analysis Data

Total earnings from letters, after costs removed per year

\[ y = -57.133x^2 + 228685x - 2E+08 \]

\[ R^2 = 0.9668 \]

<table>
<thead>
<tr>
<th>Year</th>
<th>Income-Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>8,706.03</td>
</tr>
<tr>
<td>2009</td>
<td>5,396.96</td>
</tr>
<tr>
<td>2013</td>
<td>1,295.25</td>
</tr>
<tr>
<td>2014</td>
<td>-95.27</td>
</tr>
<tr>
<td>2020</td>
<td>-10,837.98</td>
</tr>
<tr>
<td>2030</td>
<td>-37,883.83</td>
</tr>
<tr>
<td>2060</td>
<td>-187,581.23</td>
</tr>
</tbody>
</table>

http://www.usps.com/financials/cra/welcome.htm
Trends

- Cost of first-class mail was found using 1988-2009 data

**Increase in first-class mail**

<table>
<thead>
<tr>
<th>Year</th>
<th>Increase in first-class mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>0.2</td>
</tr>
<tr>
<td>2000</td>
<td>1.2</td>
</tr>
<tr>
<td>2020</td>
<td>2.2</td>
</tr>
<tr>
<td>2040</td>
<td>3.2</td>
</tr>
</tbody>
</table>

\[ y = 0.0091x - 17.834 \]
\[ R^2 = 0.9999 \]

- Average household will have no mailboxes in the year **2043**

**Earning per delivery stop daily**

<table>
<thead>
<tr>
<th>Year</th>
<th>Earning per delivery stop daily (in $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>2.0</td>
</tr>
<tr>
<td>2000</td>
<td>1.5</td>
</tr>
<tr>
<td>2020</td>
<td>1.0</td>
</tr>
<tr>
<td>2040</td>
<td>0.5</td>
</tr>
</tbody>
</table>

\[ y = -0.0399x + 81.52 \]
\[ R^2 = 0.9967 \]

• Greatest cost is employee benefits and wages
• Limiting employees is best
• Graph based on the earning per stop and the price of first-class mail
• The USPS is not federally funded.
  – Since 1989

Average mail per house per day

\[ y = 0.0009x^2 - 3.8661x + 4007.2 \]

\[ R^2 = 0.9984 \]
Our idea:

• If mail is delivered to one half of the developments/regions every other day
  – other half remaining days
• Mail only delivered three times a week
  – Earnings per stop would double
  – Assumption that this will have no effect on the average volume of mail per household
Observations

• Will not change the estimated year (2043) at which the average American stops using ordinary mail boxes.
• Will allow for the delivery staff to be cut in half
• Thus, decreasing employee and benefit costs of delivery staff by fifty percent.
• Rounded so there would be less part-time employees and more full-time
• Both get the same benefits
  – more efficient to have full-time employees.
• Part-time staff is still required:
  – Seasonal
  – Temporary positions
  – Etc.

<table>
<thead>
<tr>
<th></th>
<th>Full time</th>
<th>Part time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently</td>
<td>85%</td>
<td>15%</td>
<td>100%</td>
</tr>
<tr>
<td>Change (keep)</td>
<td>43%</td>
<td>7%</td>
<td>50%</td>
</tr>
<tr>
<td>New</td>
<td>86%</td>
<td>14%</td>
<td>100%</td>
</tr>
</tbody>
</table>
The Money

<table>
<thead>
<tr>
<th>Largest Crafts &amp; Supervisor/Managers Stats</th>
<th>2006</th>
<th>2005</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clerks</td>
<td>217,555</td>
<td>221,644</td>
<td>292,400</td>
</tr>
<tr>
<td>City Carriers</td>
<td>224,202</td>
<td>228,278</td>
<td>242,300</td>
</tr>
<tr>
<td>Mail Handlers</td>
<td>55,466</td>
<td>56,028</td>
<td>62,237</td>
</tr>
<tr>
<td>Rural Carriers</td>
<td>65,143</td>
<td>64,335</td>
<td>54,588</td>
</tr>
<tr>
<td>Supervisors/Managers</td>
<td>33,226</td>
<td>33,234</td>
<td>38,835</td>
</tr>
</tbody>
</table>

- **Mail Clerk/Processer:**
  - Total Pay: $37,545 - $54,257

- **Mail Handler:**
  - Total Pay: $20,744 - $32,645

- **Mail Carrier:**
  - Total Pay: $41,956 - $55,142


http://www.payscale.com/research/US/Job=United_States_Postal_Worker_(Carrier)/Hourly_Rate
Detail in the Numbers

• Using the data from the last slide we see:
  – Splitting the number of carriers in half will get rid of 25% of employees, about 144,672 people total
  – Carriers earn about $42,000+ a year
  – We get a savings of ~ $6,076,203,000 a year
Benefits

• Technology
  – Can replace many tedious tasks
  – Reduce the number of employees

• Transportations
  – Costs cut due to less mileage per day

• P.O. Boxes would still receiving mail daily
  – More P.O. Boxes = more post office revenue
Online Survey

If the Postal Service uses the every-other-day delivery schedule, do you think this would affect the mailing community?

- Yes (75%, 889 Votes)
- No (25%, 290 Votes)

Total Voters: 1,179

http://blog.uspsoig.gov/?p=4099
Disadvantages

• More days between drop-off and delivery
  – Need to submit papers early to be sure they arrive in time
• New routes
• A loss of jobs in a bad economy
Not the first time

• “Tri-weekly rural routes were established where mail volume was not sufficient for six-day delivery”

• In 1906, 0.6% of rural routes were tri-weekly, and in 1999, 0.06% still received tri-weekly delivery
Thank You

Questions?