STATE OF THE INDUSTRY: LOOKING INTO THE FUTURE

TxSWANA
Lubbock, Texas
April 2022
Burns & McDonnell Overview

We provide a full-suite of Planning, Contracting, Financial, Operational and Engineering Consulting services, and we live by our mission statement:

Make Our Clients Successful

We founded our solid waste & resource recovery practice in 1970.

7,000 professionals
100% employee-owned
Founded in 1898
More than 55 offices

2021 ENR Top 500 Design Firms #9 in overall
Key Trends and Issues

- What to Expect from the Upcoming Generation
- Goal Setting and Measurement Matters
- What to Expect from Corporations, Impact of ESG?
- Contracting with the Private Sector
What to Expect from the Upcoming Generation?
City of Denton, Texas: Comprehensive Solid Waste Management Strategy

Key Drivers
► Rapidly Growing Area
► Infrastructure Opportunities and Challenges
► Diversion-Focused Community
► Organics Management
Dealing with Change

► Explore and anticipate a range of plausible futures
► Consider both trajectory (direction of change) and velocity (speed of change)
► Explore the combined impacts of multiple potential trends

The benefit of future thinking is that it prompts us to move outside our usual thought processes. We are able to explore the combined impacts of multiple potential trends. This creates a sharper focus on future pathways and opens our minds to creative solutions and preferred futures.
Strategic Plan Included Community Survey and Strategy Workshops

Population of 150,000

883 Survey Participants

18 Drivers of Change

Key Drivers of Change Categories

- Material diversion (recycling, food waste)
- Landfill Preservation
- Policy and Goalsetting
- Product Design and Manufacturing
Importance of Drivers

- How Well Currently Addressing Drivers

Generational change signals:
- Increased engagement in environmental stewardship
- Expectation for holistic system-wide approach to solid waste management
Technology Driven Solutions

Greed Without Guilt

Change the Future Now!

Changing societal attitudes & behavior

Impacts of technology and policy

Trash Trouble

Low-Tech Recycling Community

Consumption Culture

Reduce, Reuse, Recycle

Low-cost / Low-tech Policy Options
Getting from Expected to Preferred Future

- **Trajectory:** Strong preference for “Change the future now!” indicates clear direction of change
- **Velocity:** Survey responses show community support for near-term action
What to Expect from Corporations, impact of ESG?
Focus On Sustainability: What’s the Big Deal?

Companies are being held accountable for all aspects of their business: Corporate governance, policies, goals, transparent reporting and community relations.

Greenwashing radar is high: Talking about sustainability is no longer good enough.

The Waste/Recycling industry is being called out: The global, national and state focus on climate change has increased, and our industry has high visibility.

The next decade will reshape our industry: Change will touch all parts of our companies.
What is ESG?

Sustainability embraces people, planet and governance via ESG.

**Environmental (E):** The impact an organization has on the environment

**Social (S):** How organizations improve their community impact

**Governance (G):** How an organization’s board and management drive positive and transparent change
Millennials as Investors

85% Interested In Sustainable Investing

57% Declined an Investment Due to a Company’s Impact on People’s Health and Well Being
ESG adoption in investing steadily increased prior to the pandemic.
For the first time, the World Economic Forum (2020) reports all of the top five long-term risks by likelihood are environmental.
Larry Fink, Blackrock CEO, calls for Net Zero Climate Action Plans on behalf of the world’s largest investor ($9 trillion in assets). Further recommendations:

- Requirement for disclosure about how a company’s climate/net zero plan is incorporated into its long-term strategy
- Companies not quickly preparing for a net zero economy will see their businesses and valuations suffer
Goal Setting and Measurement Matters
City Recently Published Diversion Rate
Percent Year
Austin 42% 2015
Boston 21% 2019
Dallas 20% 2020
Denver 23% 2019
Fort Worth 30% 2018
Los Angeles 76% 2011
Minneapolis 37% 2016
Phoenix 36% 2019
Portland 70% 2015
San Antonio 36% 2019
San Diego 65% 2018
San Francisco City does not use diversion rate N/A
Seattle 57% 2018
Key Takeaways for Zero Waste Cities

- Cities with high diversion rates share long-term commitment to Zero Waste principles
- West coast cities have a longer history of zero waste implementation
- Cities with high diversion rates enforce mandatory recycling participation
- San Francisco and other cities utilizing alternative measurement strategies
# Aspirational and Rational Zero Waste Goals

<table>
<thead>
<tr>
<th>Aspirational Goal</th>
<th>Rational Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional approach to achieving a high recycling rate (e.g. 90%)</td>
<td>Based on what’s currently measurable and within City control</td>
</tr>
<tr>
<td>Long-term focus (e.g. 20 years)</td>
<td>Focused on the next five years</td>
</tr>
<tr>
<td><strong>Metric:</strong> 90% City-wide diversion by 2040</td>
<td><strong>Residential Metric:</strong> 80% capture rate by 2030 (results in 60% percent residential diversion)</td>
</tr>
</tbody>
</table>
Consider Capture Rate as a Key Metric

Capture Rate provides an understanding of how effectively a curbside recycling program operates.
## North Central Texas Capture Rate

<table>
<thead>
<tr>
<th></th>
<th>TONS RECYCLED / % of recyclable captured</th>
<th>TONS RECYCLABLES IN WASTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper</td>
<td>288,032 45%</td>
<td>350,660</td>
</tr>
<tr>
<td>Plastic</td>
<td>52,222 22%</td>
<td>183,614</td>
</tr>
<tr>
<td>Metal</td>
<td>16,477 18%</td>
<td>72,746</td>
</tr>
<tr>
<td>Glass</td>
<td>78,383 25%</td>
<td>238,848</td>
</tr>
</tbody>
</table>

0% 100%
North Central Texas Materials Value

Data from 2018-2019 NCTCOG Regional Recycling Survey and Campaign

- OCC
- Mixed Paper
- PET
- HDPE - Natural
- HDPE - Colored
- Aluminum
- Ferrous
Contracting with the Private Sector
Contracting Trends: Potential for Higher Pricing Going Forward

- Equipment
- Shareholder Returns
- Enhanced Technology
- Supply Chain Disruptions
- Contamination
- Inflation and Cost Adjustments
- Covid
- Higher Volumes (Residential)
- Actual vs. Index Pricing
- Labor Challenges
Cost Adjustments

- Contracts should include pricing adjustments to account for inflation
- Historical approach has been CPI (plus a fuel component for collection / landfill contracts)
- Recent trend by the private sector toward alternative indexes
- Make decisions on indexes based on initial pricing
  - Lower initial pricing with alternative indexes
  - Potential higher pricing with CPI
## Historical Index Values – Change from Previous Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Water-Sewer-Trash</th>
<th>Garbage &amp; Trash Collection</th>
<th>80% CPI – 20% Diesel</th>
<th>CPI-U, All Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>5.9%</td>
<td>5.5%</td>
<td>-3.3%</td>
<td>3.8%</td>
</tr>
<tr>
<td>2009</td>
<td>5.9%</td>
<td>3.2%</td>
<td>3.9%</td>
<td>-0.4%</td>
</tr>
<tr>
<td>2010</td>
<td>6.0%</td>
<td>2.1%</td>
<td>4.8%</td>
<td>1.6%</td>
</tr>
<tr>
<td>2011</td>
<td>5.1%</td>
<td>2.8%</td>
<td>5.1%</td>
<td>3.2%</td>
</tr>
<tr>
<td>2012</td>
<td>5.4%</td>
<td>2.4%</td>
<td>2.3%</td>
<td>2.1%</td>
</tr>
<tr>
<td>2013</td>
<td>4.4%</td>
<td>2.8%</td>
<td>0.9%</td>
<td>1.5%</td>
</tr>
<tr>
<td>2014</td>
<td>3.7%</td>
<td>2.3%</td>
<td>-2.3%</td>
<td>1.6%</td>
</tr>
<tr>
<td>2015</td>
<td>4.4%</td>
<td>1.5%</td>
<td>-5.8%</td>
<td>0.1%</td>
</tr>
<tr>
<td>2016</td>
<td>3.6%</td>
<td>1.7%</td>
<td>3.9%</td>
<td>1.3%</td>
</tr>
<tr>
<td>2017</td>
<td>3.4%</td>
<td>2.2%</td>
<td>3.8%</td>
<td>2.1%</td>
</tr>
<tr>
<td>2018</td>
<td>3.5%</td>
<td>4.0%</td>
<td>2.4%</td>
<td>2.4%</td>
</tr>
<tr>
<td>2019</td>
<td>3.2%</td>
<td>3.2%</td>
<td>1.4%</td>
<td>1.8%</td>
</tr>
<tr>
<td>2020</td>
<td>3.2%</td>
<td>3.5%</td>
<td>-2.1%</td>
<td>1.2%</td>
</tr>
<tr>
<td><strong>Average Annual</strong></td>
<td><strong>4.43%</strong></td>
<td><strong>2.86%</strong></td>
<td><strong>1.10%</strong></td>
<td><strong>1.72%</strong></td>
</tr>
</tbody>
</table>
## Historical Index Values – Cumulative Change

<table>
<thead>
<tr>
<th>Year</th>
<th>Water-Sewer-Trash</th>
<th>Garbage &amp; Trash Collection</th>
<th>80% CPI – 20% Diesel</th>
<th>CPI-U, All Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>5.9%</td>
<td>5.5%</td>
<td>-3.3%</td>
<td>3.8%</td>
</tr>
<tr>
<td>2009</td>
<td>12.1%</td>
<td>8.9%</td>
<td>0.4%</td>
<td>3.5%</td>
</tr>
<tr>
<td>2010</td>
<td>18.9%</td>
<td>11.2%</td>
<td>5.2%</td>
<td>5.2%</td>
</tr>
<tr>
<td>2011</td>
<td>25.0%</td>
<td>14.3%</td>
<td>10.7%</td>
<td>8.5%</td>
</tr>
<tr>
<td>2012</td>
<td>31.7%</td>
<td>17.1%</td>
<td>13.2%</td>
<td>10.7%</td>
</tr>
<tr>
<td>2013</td>
<td>37.5%</td>
<td>20.4%</td>
<td>14.2%</td>
<td>12.4%</td>
</tr>
<tr>
<td>2014</td>
<td>42.6%</td>
<td>23.2%</td>
<td>11.6%</td>
<td>14.2%</td>
</tr>
<tr>
<td>2015</td>
<td>48.9%</td>
<td>25.0%</td>
<td>5.1%</td>
<td>14.3%</td>
</tr>
<tr>
<td>2016</td>
<td>54.3%</td>
<td>27.2%</td>
<td>9.2%</td>
<td>15.8%</td>
</tr>
<tr>
<td>2017</td>
<td>59.4%</td>
<td>30.0%</td>
<td>13.4%</td>
<td>18.2%</td>
</tr>
<tr>
<td>2018</td>
<td>65.0%</td>
<td>35.1%</td>
<td>16.1%</td>
<td>21.1%</td>
</tr>
<tr>
<td>2019</td>
<td>70.3%</td>
<td>39.5%</td>
<td>17.7%</td>
<td>23.3%</td>
</tr>
<tr>
<td>2020</td>
<td>75.7%</td>
<td>44.3%</td>
<td>15.3%</td>
<td>24.8%</td>
</tr>
<tr>
<td><strong>Average Annual</strong></td>
<td><strong>4.43%</strong></td>
<td><strong>2.86%</strong></td>
<td><strong>1.10%</strong></td>
<td><strong>1.72%</strong></td>
</tr>
</tbody>
</table>
MRF Contracts: Actual Vs. Index Pricing

Many contracts include a processing fee and revenue sharing.

These contracts pay cities based on the higher of actual or index values (becoming more of an issue now with higher values).

Actual pricing typically 10 – 20 percent higher than index pricing.

Recent trend by MRF operators seeking to transition to contracts based only on index pricing.

**RECOMMENDATION:** Continue the higher of the actual or index pricing, equitable approach and encourages collaboration.
Ideal Solid Waste and Recycling Contracts

- Allow both parties to live through range of market conditions
- Create shared risk and reward
- Establish strong communication and collaboration
- Include clear expectations around acceptable materials and contamination
Additional Questions?

Scott Pasternak
Burns & McDonnell
512.872.7141
spasternak@burnsmcd.com