Western Region Solid Waste Capacity Study

ALTERNATIVES FOR ADDRESSING WASTE CAPACITY CHALLENGES WORKSHOP
What entity are you representing today?
Is this your first time attending a meeting about solid waste disposal capacity issues in the western counties of the NCTCOG region?

- Yes: 17%
- No: 83%
This study was funded through a solid waste management grant provided by TCEQ through NCTCOG. This funding does not necessarily indicate endorsement of the study’s findings or recommendations.
Introductions

North Central Texas Council of Governments

Cassidy Campbell
Tamara Cook
Elena Berg

Arredondo, Zepeda & Brunz LLC

Michael Carleton

NCTCOG

Keep Texas Recycling

Rachel Hering
Background
Issues

01 The region is running out of available landfill capacity

02 There are opportunities to improve the region’s environment

03 There are opportunities to provide more efficient service to residents and businesses
Background

• The western region is 8 counties with 34 cities with over 5000 population.

• Covers 7000 square miles

• Population is 2.65 million

• 70% of land is undeveloped
The region needs an additional 57 million tons of disposal capacity to meet 2050 needs.
Establish an On-going Policy Advisory Group ("PAG") and Explore the Potential of Creating a Western Region Solid Waste Management Agency Inc. ("WRSWMA")

- Cooperative Public Information Programs
- Cooperative Material Marketing
- Increase Citizen Collection Stations Availability
- Increase Composting Capacity
- Cooperative Collection Programs
- Cooperative Disaster Debris Management
- Increase Transfer Station Capacity
- Increase Landfill Capacity
Policy Advisory Group (PAG)
Potential PAG Activities

- Implement regional public information program
- Implement regional communications program
- Identify opportunities for future project sharing and collaboration
- Establish regional training program
- Evaluate the potential Western Region Solid Waste Management Agency, Inc. (WRSWMA)
Next Steps for the PAG

- Provide any comments on the latest draft of the Alternatives Analysis Report
- Prepare bylaws or some formal structure to assure continuity (memorandum of understanding)
- City and County approvals
- Establish meeting schedule
- Identify near-term regional opportunities
- Evaluate WRSWMA
- Identify training opportunities
What are the best next steps for keeping the PAG functional?

What pitfalls do cities or counties see in the approach?

What are low hanging fruit for other types of projects?

Would a PAG help in making these types of projects more feasible?
Would either you or a representative attend meetings of the Western Region Policy Advisory Group after this workshop?

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Yes</td>
<td>A</td>
<td>90%</td>
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<tr>
<td>No</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Maybe</td>
<td>C</td>
<td>10%</td>
</tr>
</tbody>
</table>
What concerns do you have, if any, about continuing meetings of the Western Region Policy Advisory Group after this workshop?
Do you see value in establishing the Western Region Solid Waste Management Agency?

- Yes, I see its value.  
  A  69%

- I'm not sure.  
  B  31%

- No, I don't see its value.  
  C
What do you think is the immediate next step for the Western Region Policy Advisory Group?

- We see the need, we need focus.
- Identifying opportunities for increasing capacity (new landfills)
- Entity buy-in on the direction
- Establishing the committee
- Get engagement from the western governments, not just the eastern governments.
- Framework for continued action
- Capacity
- Education
- Establish a meeting schedule
Increase Organics Management Capacity
Weatherford Story

AN EXAMPLE OF HOW IT CAN WORK
The Weatherford Story

- Once upon a time, the City of Weatherford owned a landfill. Later, the City sold the landfill. Some years later, the landfill is about to close.
- The City uses the Weatherford Landfill for disposal of biosolids (sludge).
- Several other cities in the western regional also rely on the Weatherford Landfill for biosolids disposal.
- Now alternatives must be identified and implemented.
Compost Project Requirements

- Long-term supply of materials (biosolids and other organics)
- Long-term market for products
- Acceptable site
- Authorization from TCEQ and other permits (i.e. stormwater)
- Equipment and labor
- Financing
- Commitment to quality and marketing
- Political will
What are potential feedstocks for the Weatherford Project?

- Brush
- Wood
- Yard waste
- Food waste
- Organic commercial wastes
- Agricultural waste
- Biosolids

Organics represents approximately 35% of the waste stream (not including paper).

In 2019, 74,700 tons of biosolids were landfilled.

There is a significant effort to recover brush in the region.
Regional Composting Opportunity

- Other cities face the same problem and are interested in a potential regional solution.
- To date, nine cities have expressed an interest in supplying biosolids and/or brush to a regional compost project.
## Project Implementation

<table>
<thead>
<tr>
<th>Task / Years</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>Feasibility Study</td>
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<tr>
<td>Market Analysis (feedstocks &amp; products)</td>
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<tr>
<td>Institutional Issues (ownership/operations)</td>
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<tr>
<td>Site selection</td>
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<tr>
<td>Permitting (Registration)</td>
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<tr>
<td>Construction Procurement</td>
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<td>Operations</td>
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</tbody>
</table>
Key Issues for a regional composting program and Inter-local Agreements

- Commitment to the Project
- Supply of Materials & Material Specifications
- Fee Structures
- Revenue Sharing (or not)
- Risk Sharing
- Indemnification
Role of the PAG in the Compost Project

- Training for cities interested in the project
- Coordinating potential project participants – using the network
- Potentially bringing in private sector participants who may be ad-hoc members
DISCUSSION

What are potential concerns about participating in a regional compost project?

How could the PAG be of assistance in making the project work more effectively?

What other cities are interested in participating in this project?
Do you think there is value in exploring how local governments in the Western Region can participate in a regional compost program?

- Yes: 85%
- No: 15%
- Maybe: 0%
What roadblocks do you think are hindering the development of a regional compost program for the Western Region?

“Funding and engagement”
“Engagement”
“Lack of finances”
“The unknown of abilities that are actually available for the project.”
“Ability to move product”
“Cost and marketing - ability to move product”
“Start-up costs”
“Communication and structure”

“Location/Haul Distance”
“Marketing”
“Broader participation in study”

“Uncertainty”
“Funding and engagement”
“Buy in and cooperation”
“Location”
What information do you think we need about organics management in the Western Region that we currently do not have?
BREAK
LANDFILL CAPACITY

ONE OF BIGGEST ENVIRONMENTAL ISSUES CONFRONTING WESTERN REGION
<table>
<thead>
<tr>
<th>Landfill</th>
<th>Owner</th>
<th>Operators</th>
<th>Permitted Acres</th>
<th>Fill Acres</th>
<th>Remaining Capacity (million tons)</th>
<th>Years Remaining*</th>
<th>Amendment Pending (million tons/capacity)</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Arlington</td>
<td>City of Arlington</td>
<td>Republic Services</td>
<td>774</td>
<td>391</td>
<td>38.3</td>
<td>42</td>
<td>No</td>
</tr>
<tr>
<td>City of Cleburne</td>
<td>City of Cleburne</td>
<td>City of Cleburne</td>
<td>84.7</td>
<td>24.7</td>
<td>7.7</td>
<td>13</td>
<td>No</td>
</tr>
<tr>
<td>City of Fort Worth</td>
<td>City of Fort Worth</td>
<td>Republic Services</td>
<td>300.0</td>
<td>128.6</td>
<td>14.9</td>
<td>18</td>
<td>No</td>
</tr>
<tr>
<td>Turkey Creek Landfill</td>
<td>Waste Connections</td>
<td>Progressive Waste</td>
<td>219.0</td>
<td>69.0</td>
<td>4.8</td>
<td>7</td>
<td>Yes, would add 3.6 million tons of capacity</td>
</tr>
<tr>
<td>Weatherford Landfill</td>
<td>Progressive Waste</td>
<td>Progressive Waste</td>
<td>112.0</td>
<td>35.0</td>
<td>0.4</td>
<td>1.5</td>
<td>No</td>
</tr>
<tr>
<td>Total Western Region</td>
<td></td>
<td></td>
<td>1,490.0</td>
<td>668.0</td>
<td>58.5</td>
<td>24</td>
<td>3.6</td>
</tr>
<tr>
<td>Total NCTCOG Region</td>
<td></td>
<td></td>
<td>6,804.0</td>
<td>2,399.0</td>
<td>405.4</td>
<td>38</td>
<td>N/A</td>
</tr>
<tr>
<td>Western % of NCTCOG Region</td>
<td></td>
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<td>22%</td>
<td>28%</td>
<td>14%</td>
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Landfill Capacity

The closure of the Weatherford Landfill will accelerate closure date of the Turkey Creek Landfill.

Closure of FW, without a replacement, will significantly accelerate closure of the Arlington Landfill.
Landfills and annual throughput (tons per year)

Source: TCEQ 2020 MSW Annual Reports

- Weatherford: 126,000 tons
- Arlington: 933,000 tons
- Fort Worth: 732,000 tons
- Turkey Creek: 665,000 tons
- Denton: 388,000 tons
In approximately 20 years, only the Arlington Landfill and Denton Landfill will have capacity if nothing is done.

For reference, McCommas Bluff accepts 4500 tons per day.
Landfill Site Selection, Design, Operation & Closure

Key Principles

**NO ONE** wants a landfill in their city, county or region.

**In the future**, there may be technologies that will eliminate the need for landfills, but these are on the cutting edge and reliability is key factor.

The Region must have a **RELIABLE** waste management system.
# Timeframe for implementation

<table>
<thead>
<tr>
<th>Task/Years</th>
<th>1</th>
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<th>12</th>
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<td>Site selection</td>
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<td>Land Procurement</td>
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Securing New Landfill Capacity

Options

- A city or group of cities develop a new landfill.
- The region relies on the private sector to identify and develop new landfill capacity.
- The region establishes an Agency to build new capacity.
- The region does nothing and relies on landfills outside the region to meet its long-term needs.
Issues Related to Public Ownership

- Control site selection.
- Control how waste is managed.
- Control of disposal costs.
- Control facility design.
- Control and preserve site life.
Keys to Implementation

Key Elements
- Shared needs
- Economic interest
- Economies of scale
- Political will

Examples
- Brazos Valley Solid Waste Management Agency
- North Texas Municipal Water District
- Upper Sabine Valley Solid Waste Management Agency
Discussion

- There is interest in establishing a Western Region Solid Waste Management Agency. What are the thoughts about strategic steps to establish one?
- What would get a city or county to join?
- What would keep a city or county from joining?
How important is the construction of a new landfill in the Western Region to you?

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Very Important</td>
<td>50%</td>
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<tr>
<td>Fairly Important</td>
<td>25%</td>
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<tr>
<td>Important</td>
<td>25%</td>
</tr>
<tr>
<td>Slightly Important</td>
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</table>
Citizen Drop-offs & Recycling Centers
<table>
<thead>
<tr>
<th>County</th>
<th>City</th>
<th>Facility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erath</td>
<td>Stephenville</td>
<td>NIX Manufacturing Citizens Collection Station</td>
</tr>
<tr>
<td>Hood</td>
<td>Granbury</td>
<td>Hood County Citizens Collection Station</td>
</tr>
<tr>
<td>Parker</td>
<td>Springtown</td>
<td>City of Springtown Citizens Collection Center</td>
</tr>
<tr>
<td>Somervell</td>
<td>Glen Rose</td>
<td>Glen Rose Citizen Convenience Station</td>
</tr>
<tr>
<td>Tarrant</td>
<td>Fort Worth</td>
<td>City of Fort Worth Hillshire Drop Off Station</td>
</tr>
<tr>
<td>Tarrant</td>
<td>Fort Worth</td>
<td>City of Fort Worth Old Hemphill Drop Off Station</td>
</tr>
<tr>
<td>Tarrant</td>
<td>Fort Worth</td>
<td>City of Fort Worth Brennan Ave Drop Off Station</td>
</tr>
<tr>
<td>Tarrant</td>
<td>Fort Worth</td>
<td>City of Fort Worth MLK Drop Off Station</td>
</tr>
<tr>
<td>Tarrant</td>
<td>Town of Westover Hills</td>
<td>Westover Hills Citizens Collection Station</td>
</tr>
<tr>
<td>Wise</td>
<td>Decatur</td>
<td>Wise County Decatur Citizens Collection Station</td>
</tr>
<tr>
<td>Wise</td>
<td>Paradise</td>
<td>Wise County Cottondale Citizen Collection Station</td>
</tr>
<tr>
<td>Wise</td>
<td>Boyd</td>
<td>Wise County Boyd Citizen Collection Station</td>
</tr>
<tr>
<td>Wise</td>
<td>Chico</td>
<td>Wise County Chico Citizen Collection Station</td>
</tr>
<tr>
<td>Wise</td>
<td>Decatur</td>
<td>Wise County Slidell Citizen Collection Station</td>
</tr>
</tbody>
</table>

Source: TCEQ 2020

24 communities stated that they participate in FW HHW Program - A model for cooperative Citizen Convenience Stations
Key Issues for Cooperative Use of Citizen Convenience Stations

Single Owner & Operator
- Facility Design and Costs
- Materials that are acceptable
- Hours of operation
- Quantities of materials that can be delivered
- Charges for use of the site (by local government or by individual customer)
- Term of the contract

Joint Ownership & Operation
- Facility Design & Costs
- Control over who can use the site
- In-house operations or contract operations
- Haul and disposal contracts
- Management of unacceptable or hazardous wastes
- Annual budget, fees and charges
There is interest in cooperative drop-off centers or CCS
Source: Western Region Survey

<table>
<thead>
<tr>
<th>City/Town/County</th>
<th>Drop-off centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azle</td>
<td>Yes</td>
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<tr>
<td>Annetta</td>
<td>Yes</td>
</tr>
<tr>
<td>Glen Rose</td>
<td>Yes</td>
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<tr>
<td>Dalworthington Gardens</td>
<td>Yes</td>
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<tr>
<td>Arlington</td>
<td>Yes</td>
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<tr>
<td>Granbury</td>
<td>Yes</td>
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<tr>
<td>Colleyville</td>
<td>Yes</td>
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<tr>
<td>Stephenville</td>
<td>Yes</td>
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<tr>
<td>North Richland Hills</td>
<td>Yes</td>
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<tr>
<td>Decatur/Wise</td>
<td>Yes</td>
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<tr>
<td>Mansfield</td>
<td>Yes</td>
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<tr>
<td>Granbury/ Hood County</td>
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<tr>
<td>Aurora</td>
<td>Yes</td>
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<tr>
<td>Stephenville</td>
<td>Yes</td>
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<tr>
<td>Annetta South/Parker</td>
<td>Yes</td>
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<tr>
<td>Benbrook</td>
<td>Yes</td>
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<tr>
<td>De Cordova</td>
<td>Yes</td>
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<tr>
<td>Weatherford</td>
<td>Maybe</td>
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<tr>
<td>Burleson</td>
<td>Maybe</td>
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<tr>
<td>Watauga</td>
<td>Maybe</td>
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<tr>
<td>Decatur/Wise</td>
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<td>Grapevine</td>
<td>Maybe</td>
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<td>New Fairview</td>
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<td>Haltom City</td>
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<tr>
<td>Annetta North</td>
<td>Maybe</td>
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</table>
Discussion

- What are constraints to cooperative citizen convenience station agreements?
- How challenging has it been for those who have them to site and gain TCEQ approvals?
- What are ideas for expanding this concept to reality?
Attendees were not given this poll because citizen convenience stations and recycling centers were not discussed during the workshop.
Recap on
What’s
Next?
Did this workshop help you gain a better understanding of solid waste disposal capacity issues in the Western Region?

Yes: 100%
Thank You

Questions

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