

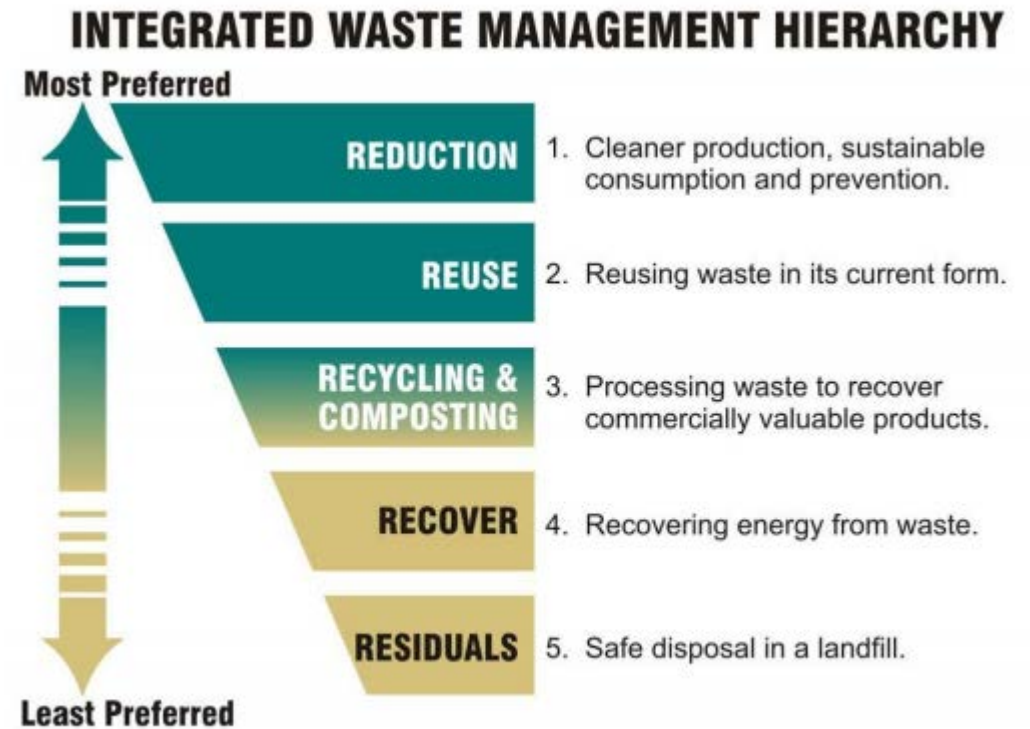


CITY OF HOUSTON LONG RANGE SOLID WASTE MANAGEMENT PLAN, THE NEXT 20 YEARS - DRAFT

Protecting and Enhancing Houston's Environment and
Providing Quality Service to the Community

Long-range plan goals

- ❑ The City requires a comprehensive and integrated plan that considers and addresses all components of an integrated solid waste system
- ❑ Looks out 20 years
- ❑ What services should the city provide?
- ❑ How to sustainably fund needed services and programs
- ❑ How best to manage various waste streams (residential, multi-family, commercial, construction, organics)



The RFP

Starting the Process and
Team Selection & Scope of
Project

Scope of Services

- Assist in setting goals & objectives
- Solid Waste Facility Inventory
- Waste Quantities and Projections
- Waste Management Activity Analysis
- Strategic Analysis
- Solid Waste Management Plan Adoption
- Public Outreach
- Project Management



RFP issued June 2017
Proposals due July 2017



Successful Team has experience with
solid waste planning
Meets M/WBE requirements



Notice to proceed August 2018
Kick-off meeting in September 2018

Purpose of the Plan

Outreach Program includes:

- Conducting a series of one-on-one interviews with key stakeholders in the industry
- Working with Mayor's Solid Waste Advisory Task Force (includes community, academia and industry)
- Development of web page with opportunity for written comments
- Survey of Public
- Public Meetings



Review of Current
Program & Services



How does Houston
Compare with Other Cities



Determine Short-term
and Long-term Needs



Identify Specific
Strategies to Achieve
Goals & Objectives

Mayor's Advisory Task Force

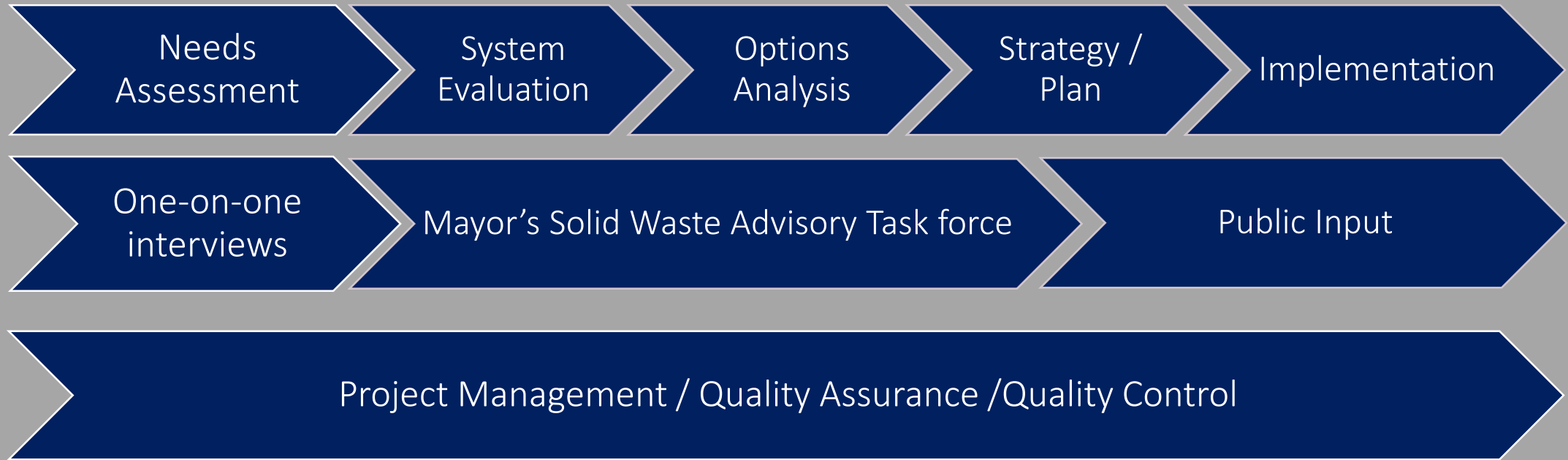


Citizen Task Force Members

- Becky Edmunson – Community Representative
- Jessica Hulseley – Community Representative
- Allen Goodlow – Community Representative
- Debbie White – Community Representative
- Rogene Calvert – Community Representative
- Vincent Sanders – Community Representative
- Abate T. Wolde-Kirkos - Academic
- Amy Boyers – Community Representative
- Rachel Powers – Non-profit Organization
- Cheryl Mergo – H-GAC
- Brandon Rogers – Solid Waste Industry
- Shanna Lopez – Solid Waste Industry
- Andy Teas – Apartment Industry
- Lora Hinchcliff – Composting Industry
- Justin DuBose – Composting Industry
- Andrea Rodriguez – Recycling Industry
- Joe Rizzo – Construction / Demolition
- Brett Sarver – Solid Waste Industry
- Andra Wilcox - HARC



- Establish Goals & Objectives
- Review Technical Assessments & Reports
- Recommend Priorities
- Provide Input on Plan Direction
- Assist in Public Outreach



Planning for Real Results

Houston's Goodness



- ❑ Garbage & Recycling as base services
- ❑ Monthly bulk waste collections (junk/green)
- ❑ Weekly yard waste collection
- ❑ Comprehensive Environmental Programming (HHW, Drop-off Sites)
- ❑ Re-use warehouse & Neighborhood Depository Sites
- ❑ Great waste disposal and recycling processing contracts and services
- ❑ Highly successful disaster management response
- ❑ Highly experienced executive leadership

Houston's Challenges

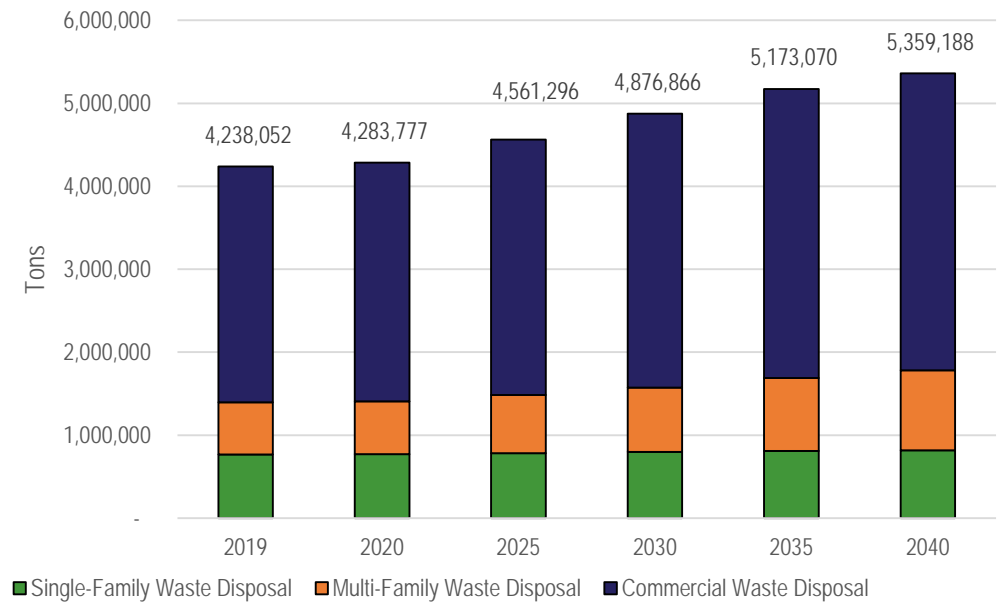
- ❑ Program funding impacts:
 - Currently required collection routes and staffing
 - Service growth to meet demand
 - Best practice equipment procurement
 - Customer engagement and education
 - Enforcement of Illegal dumping
- ❑ Multi-family waste management and disposal practices
- ❑ Greater participation by Commercial Sector is critically needed
- ❑ Disaster Response and Ongoing Storm Events
- ❑ Long-term landfill disposal capacity



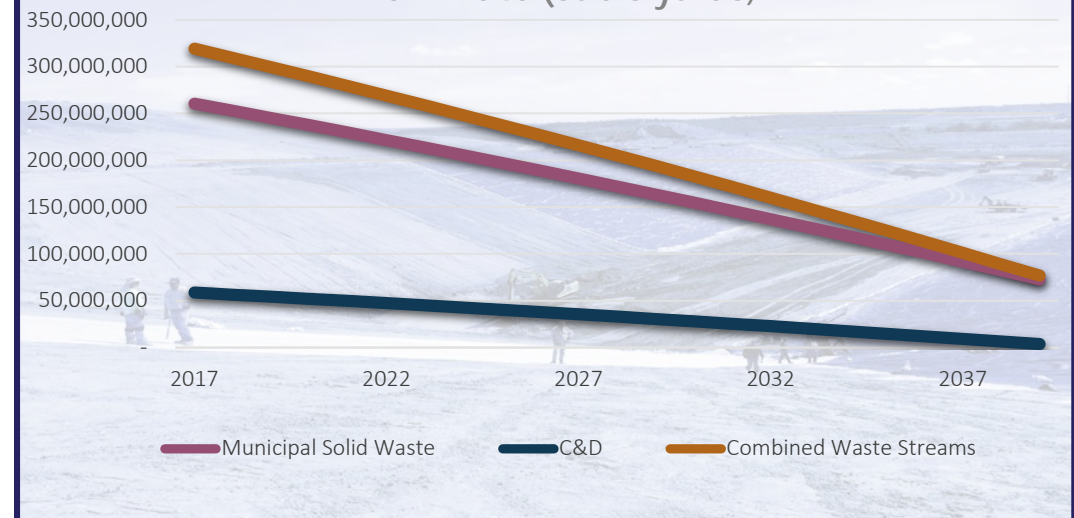
Houston's Long-term Needs

- ❑ Houston currently generates 4.3 million tons of waste, will increase to 5.4 million tons in 2040 at current rates.
- ❑ Approximately 2.0 million tons of material are diverted from the landfill due to City and private sector efforts (includes C&D recycling)
- ❑ Majority of this waste is from the commercial sector, including multi-family housing (80%)
- ❑ Landfill capacity is approximately 330 million cubic yards regionally. This capacity will be at 100 million cubic yards in 2040.
- ❑ Construction / demolition landfill space will be consumed by 2040
- ❑ Landfill closures will reduce the number of options available to the City – by 2040, it is possible that half of MSW landfills will have reached capacity

Projected Waste Generation



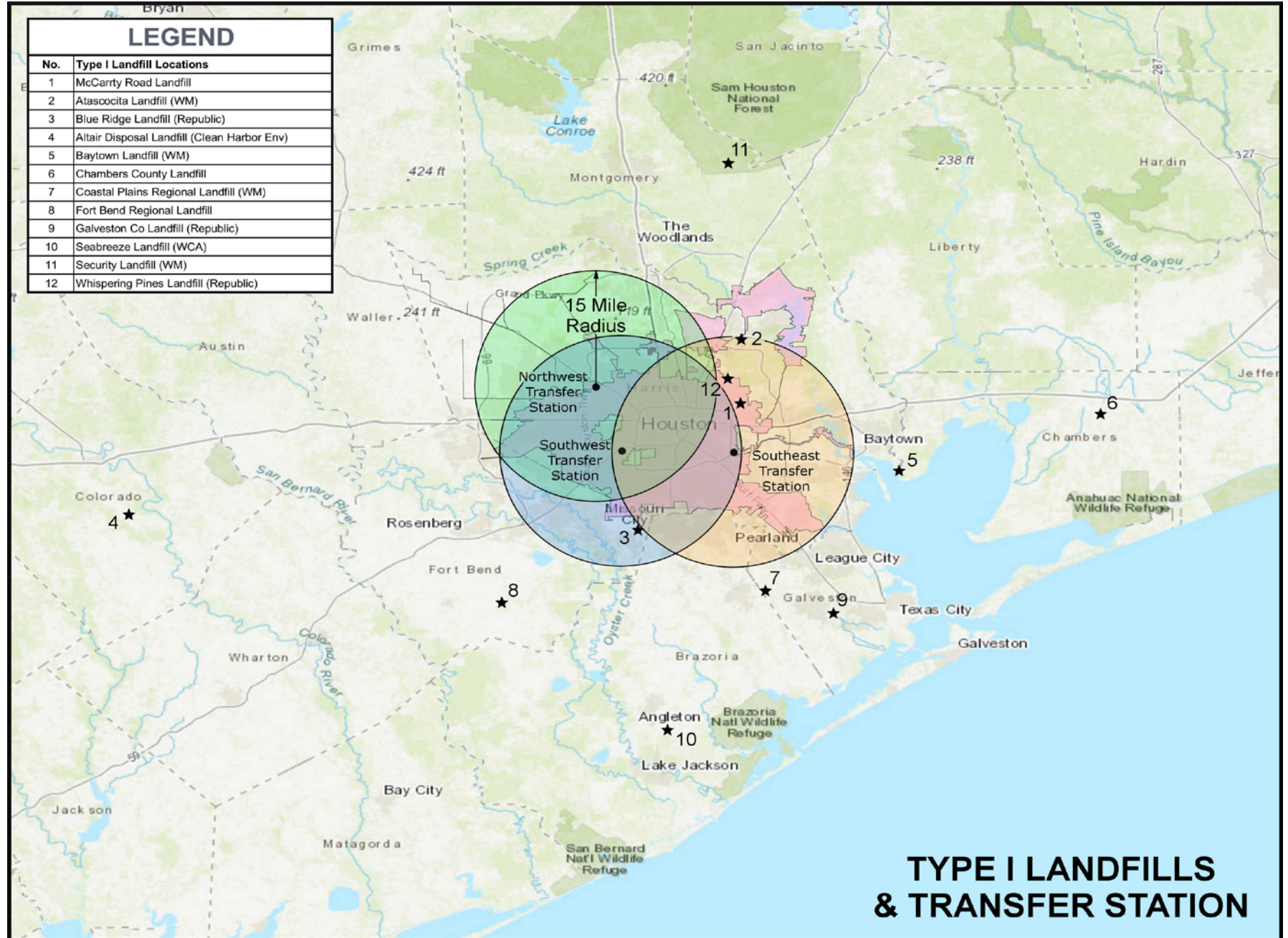
Estimated Regional Landfill Projected Capacity 2017-2040 (cubic yards)



MSW (Type I) Landfills and City of Houston Transfer Stations

Only 4 of 12 MSW Landfills are within 15 miles of a City of Houston Transfer Station

City's primary landfills are McCarty Road Landfill, Atascocita Landfill and Blue Ridge Landfill
Combined, they have an average of 30 -35 years of capacity



What would more sustainable funding provide?

- Right-size collection's operations with necessary collections equipment and staffing: 122 driver positions and 147 collections units which includes necessary backups
- Increase the number of additional depositories needed – City has 6, however needs 5 more to meet demand and coverage of the expanse of the city footprint of 640 sq. miles
- Increase the number of inspectors needed to address illegal dumping enforcement in a more substantial way
- With proper service resources, customer service levels would be greatly enhanced
- Provide first class programs designed to reduce waste generation and improve quality of recycling programming



Texas Cities' Comparison

Figure 4: Services Comparison – Funded by Monthly Rates and Environmental Fees

	Austin	Anderson Mill	Arlington	Dallas	Denton	El Paso	Fort Worth	Georgetown	Houston	Missouri City	New Braunfels	Pflugerville	Round Rock	San Antonio	San Marcos	Sugar Land
CORE SOLID WASTE SERVICES																
Refuse	★	★	★	★	★	★	★	★	▲	★	★	★	★	★	★	★
Recycling	★	★	★	★	★	★	★	★	▲	★		★	★	★	★	★
Bulky	★	★	■	★	★		★	★	▲	★		★	★	★	★	★
Brush	★	■	■	■	★	■	■	■	▲	★	■	★		★	■	★
Yard trimmings	★	■	■	■	■	■	★	★	▲	■	★	■	■	★	■	■
Organics (including food scraps)	★													★	★	
ADDITIONAL SERVICES																
Household Hazardous Waste (HHW)	◆			★	★	★		★	▲		★			◆	★	★
Textiles collection	★												NR			★
Dead animal collection	◆			★		★	★		▲					★◆		
Prescription medication drop-off	◆				★											
Drop-off centers	◆			★	★	★	★		▲				NR	◆	★	★
Street sweeping	◆						◆	◆					NR			
Bike lane sweeping	◆						◆	★◆	▲				NR			
Illegal dumping cleanup	◆		★	★	★	★	★		▲				NR	★	◆	★
Neighborhood Clean-ups	◆					★			▲				NR	◆		
Post-disaster response/cleanup	★◆			★	★		★		▲				NR	★		
Special events	★◆	★					★		▲	★	★	★	★	★	★	★
Education and outreach	★◆			★	★	★	★	★	▲	★	★	★	★	★	★	★
Central Business District (CBD)	◆					◆			▲							

Green stars - programs funded with service fee
 Yellow diamonds—programs funded with environmental fee
 Blue square—funded by other departments
 Blue triangle—funded with general fund

▲ Provided with other funding source
 ◆ Provided with an environmental fee
 ■ Material collection provided but not as separate service
 ● Provided and funded by another city department
 (blank) Service is not provided by the city
 NR Not Reported

Houston's Resources Compared to Other Cities (fy 2020 budgets)

Houston's 2021 Budget request is \$88.978 Million

City	Houston	San Antonio	Dallas	Fort Worth	Austin
Households Served	390,435	356,000	245,000	225,049	200,550
FTEs	434	624	525	116*	462
Households Served Per FTE	893	570	466	NA*	434
Annual Budget (\$millions)	\$92.0	\$130	\$113.7	\$69.4	\$101.9
Budget \$ / HH	\$ 235	\$ 365	\$ 464	\$ 308	\$494

*does not include private haulers collecting waste / Dallas includes landfill operations

Solid Waste Fees for Other Cities

Ten Largest Cities in Texas Monthly Solid Waste User Fees

Rank	City ¹	Monthly Solid Waste User Fee ²	Monthly Environmental Fee	Monthly Cart Lease Fee	Enterprise Fund
1	Houston	\$ -	\$ -	\$1.14	No
2	San Antonio	26.76	2.24		Yes
3	Dallas	27.26	-		Yes
4	Austin	42.85	8.95		Yes
5	Fort Worth	22.75	0.50		Yes
6	El Paso	19.00	5.00		Yes
7	Arlington	14.94	-		No
8	Corpus Christi	16.91	-		No ³
9	Plano	16.10	-		Yes
10	Laredo	18.00	-		Yes

1. Cities are ranked by population size
2. A 96-gallon cart is chosen if/when other options are available to keep service level and cost comparisons equal

Solid Waste Fees in H-GAC Region

Ten Largest Cities ¹ in H-GAC Monthly Solid Waste User Fees		
City ²	Population	Monthly Solid Waste User Fee ³
Houston	2,325,502	\$ -
Pasadena ⁴	151,718	40.99
The Woodlands ⁵	108,070	14.15
Pearland	102,513	20.11
League City	95,735	22.50
Sugar Land	91,192	19.38
Missouri City	74,092	12.65
Baytown	73,720	27.71
Conroe	66,181	16.19
Galveston	49,471	20.48

1. The Woodlands is classified as unincorporated territory but was included for the purposes of this comparison.
2. Cities are ranked by population size according to US Census Bureau
3. A 96-gallon cart is chosen if/when other options are available to keep service level and cost comparisons equal
4. The charge for solid waste service in Pasadena is included with the water bill. Rate shown is 100 gallon cart
5. Residents of The Woodlands pay \$169.80 for solid waste collection. Collected with property taxes. $\$169.80 / 12 = \14.15 .
6. **Data collected March 2020**

Public & Private Roles

Houston's current system is a mix of public and private sector waste management

Residential Collection – Public / Private
Recycling – Public / Private

Transfer Stations – Public / Private

Landfills - Privates

Issues Related to Privatization

- Risk Sharing
- Level of Service Provided
- Costs Savings & Revenue Sharing
- Flexibility
- Emergency Management Opportunities
- Reliability

Landfill Ownership/Operation for Major Texas Cities

	Public / Public	Public / Private	Private / Private
Austin			●
Arlington		●	
Corpus Christi		●	
Dallas	●		
El Paso	●		
Fort Worth		●	
Garland	●		
San Antonio			●
Houston			●

1. **Financial sustainability**
2. **Rightsizing Service Operations**
3. **Establish best-practice fleet replacement schedule/model**
4. **Enhanced customer engagement/education**
5. **Initiate future waste disposal outlet(s) now**
6. **Strengthen transfer station infrastructure (NE, SW)**
7. **Multi-family and Commercial waste management reductions**
8. **Ongoing Council actions to implement programs and policies**



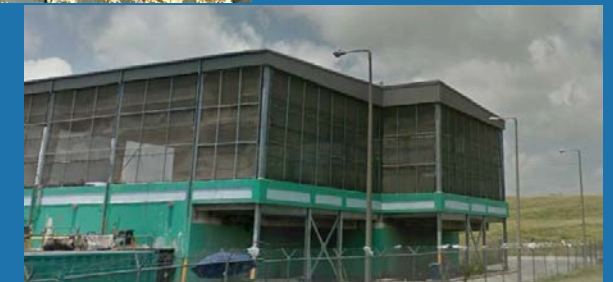
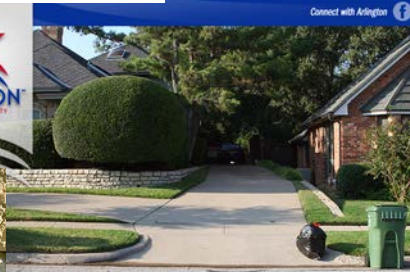
The road ahead...



Providing Solutions - Improving Community
Serving Texas Since 1981

Michael Carleton Project Manager – Arredondo, Zepeda & Brunz LLC

Solid Waste Management Planning
1990 Houston
Fort Worth
Arlington
Dallas Climate Action Plan
Collection system transitions
Recycling material procurement
Transfer Station & Landfill Site Selection & Permitting
Waste-to-Energy Implementation
Organizational Assessments & Feasibility Studies
TxSWANA Presenter
GDPC – Natural Resources Task Force Leader



Project Team

Team will achieve an 11% minority / women owned business goal



Risa Weinberger & Associates, Inc.



Dave Yanke - Member of the TCEQ Municipal Solid Waste Management and Resource Recovery Advisory Council. Conducted numerous financial planning assessments nationally for city solid waste programs, collection analysis and solid waste planning, including H-GAC studies on MSW generation and diversion forecasts, commercial food waste collection and management.

Risa Weinberger PE has over 39 years experience in solid waste management and co-wrote the textbook SWANA program manager compost certification course and has taught it on a national level. She has been a board member of the State of Texas Alliance for Recycling and is on the Texas Commission on Environmental Quality Municipal Solid Waste Management Resource Recovery Advisory Council.

Allison Trulock – Past director of SWANA’s Collection and Transfer Technical Division. Ms. Trulock specializes in master planning, collection options evaluations and efficiency studies, stakeholder outreach, procurement assistance, and financial feasibility analysis.

Christine Arbogast has 30 years of planning, permitting, and civil engineering experience in environmental and solid resource management projects. She has directed long-term strategic planning studies for public solid waste management agencies.

Tammi Wallace is the Founder and Principal Consultant for EnFocus Strategies (EFS). EnFocus Strategies, founded in 2012, is a management consulting firm that offers strategic planning services focused on public relations, business development and diversity & inclusion training and consulting.

Next Steps



Task Force Review and Comments



Public survey & comments



Final Plan to City Council



Council Actions for adoption and implementation