



Metro Nashville
Public Works



2016 Annual Solid Waste Progress Report

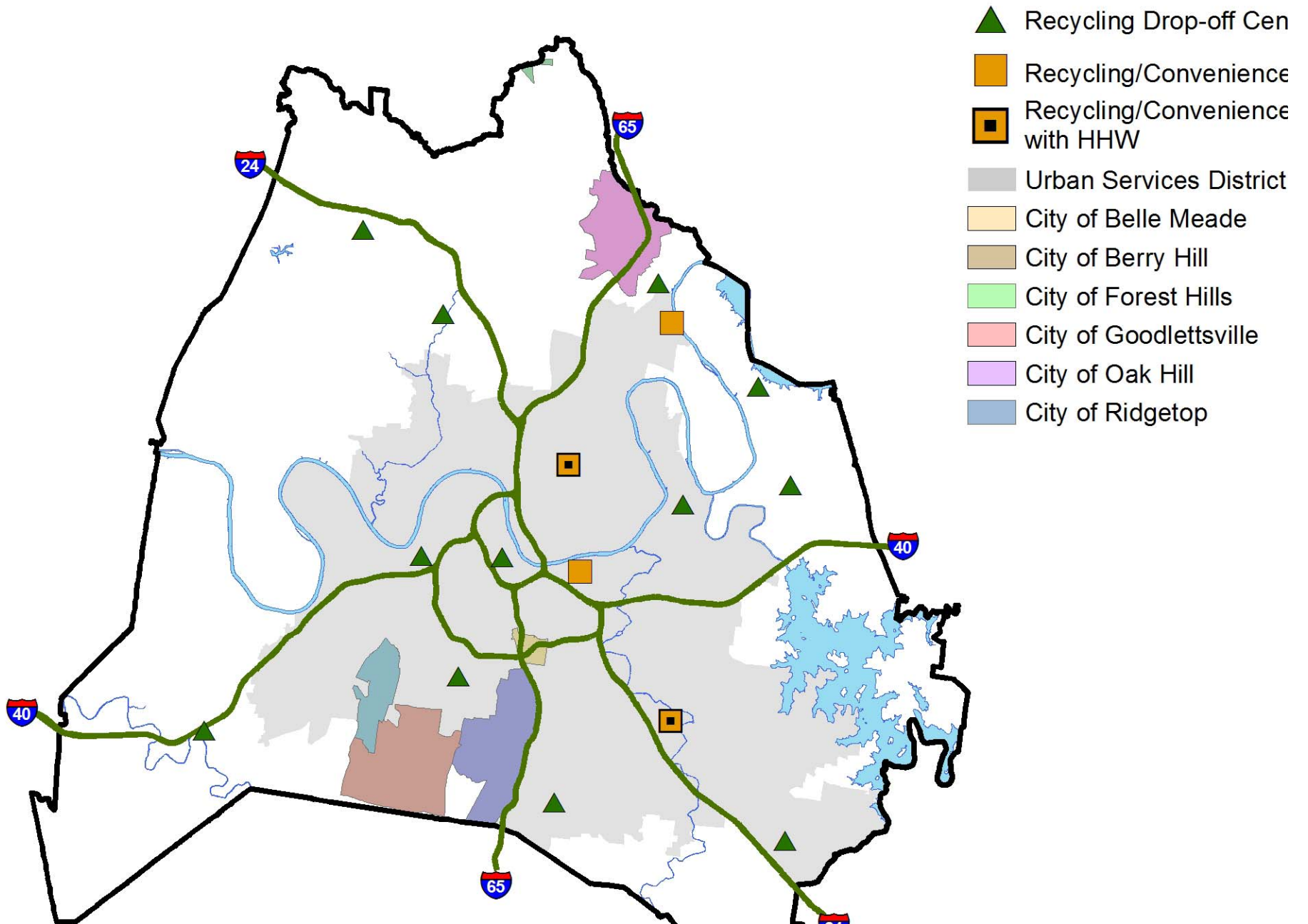
March 29, 2017

Report Overview



- 1. Administrative Contact Information**
- 2. 2025 Statewide Solid Waste & Material Management Plan & Tire Report**
- 3. Objective 2 – Increase Recycling Access & Participation**
- 4. Objective 3 – Promote Material Processing and End Use**
- 5. Objective 4 – Increase Diversion of Organics**
- 6. Objective 5 – Support New Waste Reduction & Recycling Technology**
- 7. Objective 6 – Expand & Focus Education & Outreach**
- 8. Objective 7 – Ensure Sufficient & Environmentally Sound Disposal**
- 9. Landfills & Recycling Reports**

Metro Recycling Facil



Media Summary



- Media campaign with Comcast to promote Earth Day
- Media Releases
- Web and Social Media
- Recycling Contamination Reduction
 - Social Media
 - Reusable bag distribution
- Metro3 – Recycling educational slides and MRF video
- Foodwaste Workshop and Roundtable with TDEC
- Festivals, Conferences, & Events
- Recycling information in water bills

2016 Education Summary



- 429 education programs
- Program topics include waste reduction, reuse, recycling, composting, litter prevention
- Classroom presentations, community meetings, educational displays, etc.
- Tours of the Recycling Education Station

Higher Level of Service



City	Waste	Recycling
Berry Hill	X	X
Oak Hill	X	X
Forrest Hills	Private Haulers	Private Haulers
Belle Meade	X	X
Goodlettsville	X	X
Nashville USD	X	X
Davidson County (GSD)	Private Haulers	Private Haulers

Landfilled Waste



2016 Class I Solid Waste Tons

West Camden	114,656.68
Middle Point	528,706.14
Cedar Ridge	232,486.94
Bi-County	3,282.92
Other	5,914.54
Total Tons Landfilled	885,047.22

Disposal Capacity



2016 MSW Disposal Capacity

West Camden	35 Years
Middle Point	6 Years
Cedar Ridge	2 years
Bi-County	8 Months

Landfilled Waste



2016 Class III/IV C&D Waste Tons

MS-COT/Central Pike	6,055
Southern Services	344,120
Total III/IV Tons Landfilled	350,175

Recycling Tons-Residential



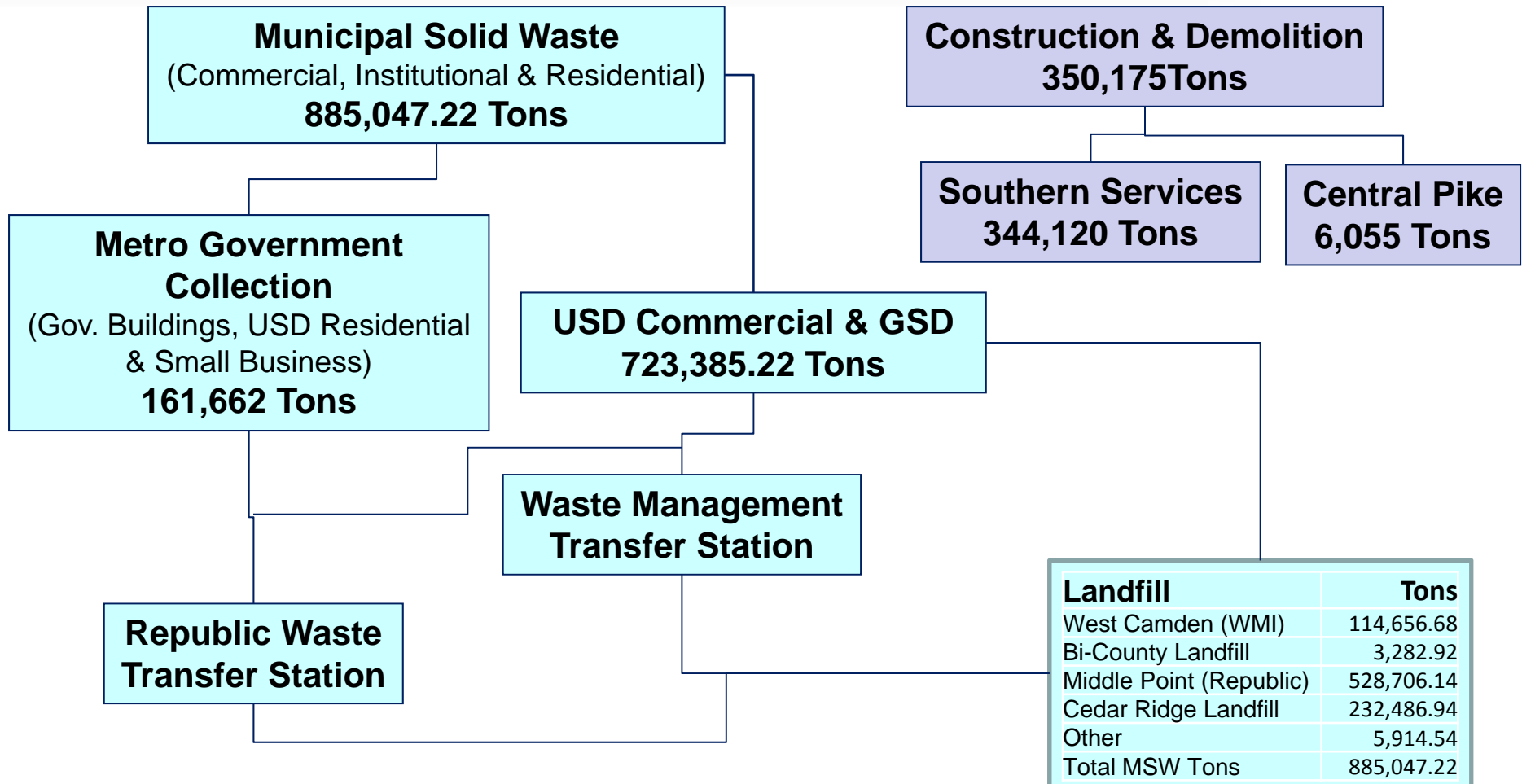
	2015 Tons	2016 Tons
Automotive Fluids	18.76	37.66
Cardboard	1,930.38	2,273.13
Carpet/Pad	264.26	106.58
Electronic Waste	117.50	218.47
Glass	2,236.78	2,282.41
Grease	6.77	7.80
HHW	49.32	33.26
Metal	465.78	674.41
Mixed Plastic/Metal	820.05	831.74
Mixed Recyclables	13,036.79	13,219.46
Paper	2,344.23	2,176.39
Tires	6,761.36	7,327.61
Wood Waste	50,141.25	53,319.47
TOTAL	78,197.91	82,508.39

Recycling Tons-Commercial



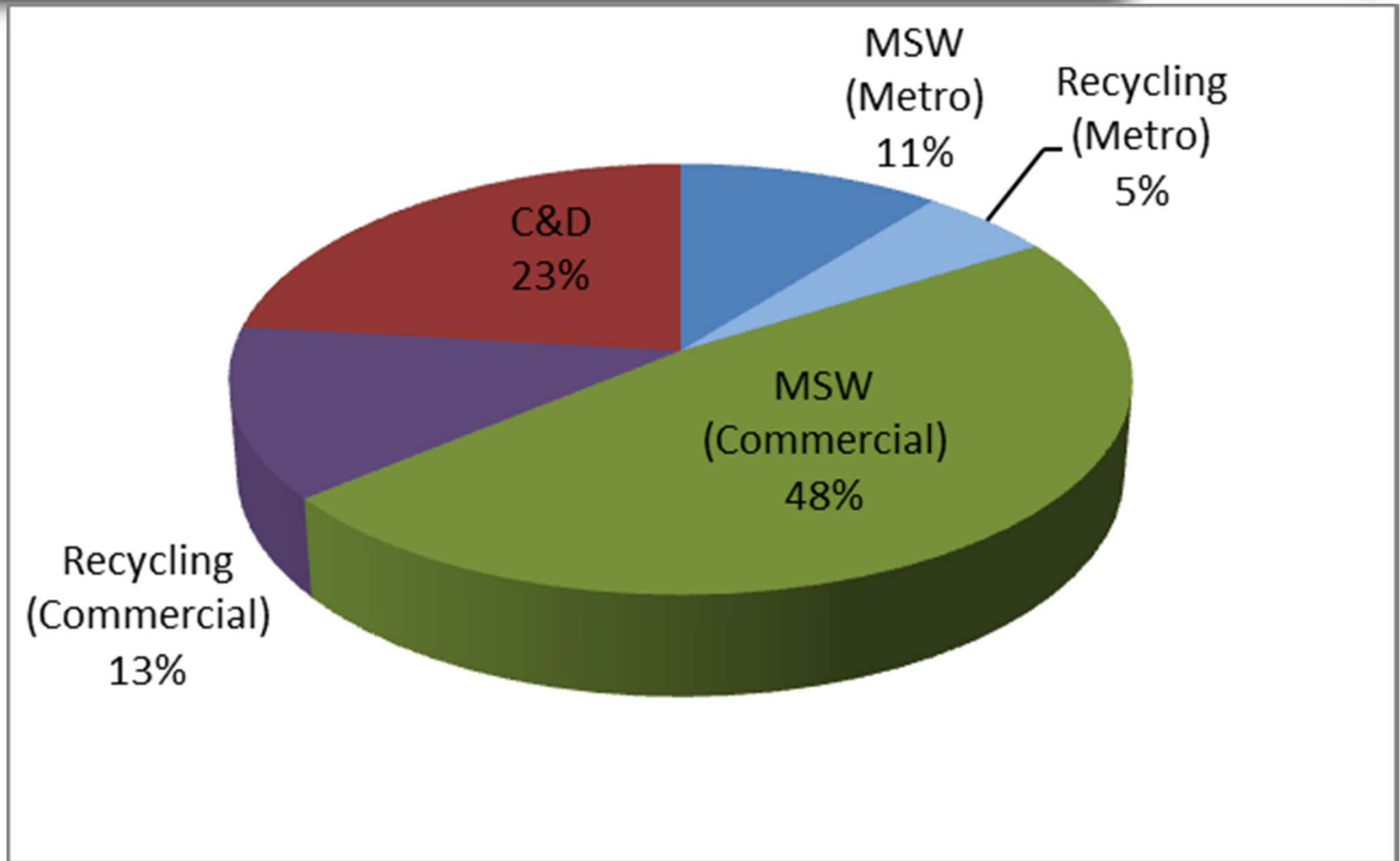
	2015 Tons	2016 Tons
Batteries, Automotive Fluids	1,288.92	836.84
C&D Recycling	11,035.00	3,093.15
Cardboard	18,107.81	21,316.86
Carpet/Pad	4,800.00	4,817.00
Food Waste	7,520.70	750.00
Glass	35,408.75	18,435.22
Grease	7,172.80	8,012.00
Metal	113,338.27	94,984.61
Mixed Recyclables	3,200.21	14,067.80
Paper	15,226.51	21,264.59
Plastic	18,379.87	479.66
Textiles	6,288.00	7,083.00
TOTAL	241,766.84	195,140.73

**2016 Davidson County
Landfilled Waste
1,235,222.22 TONS**

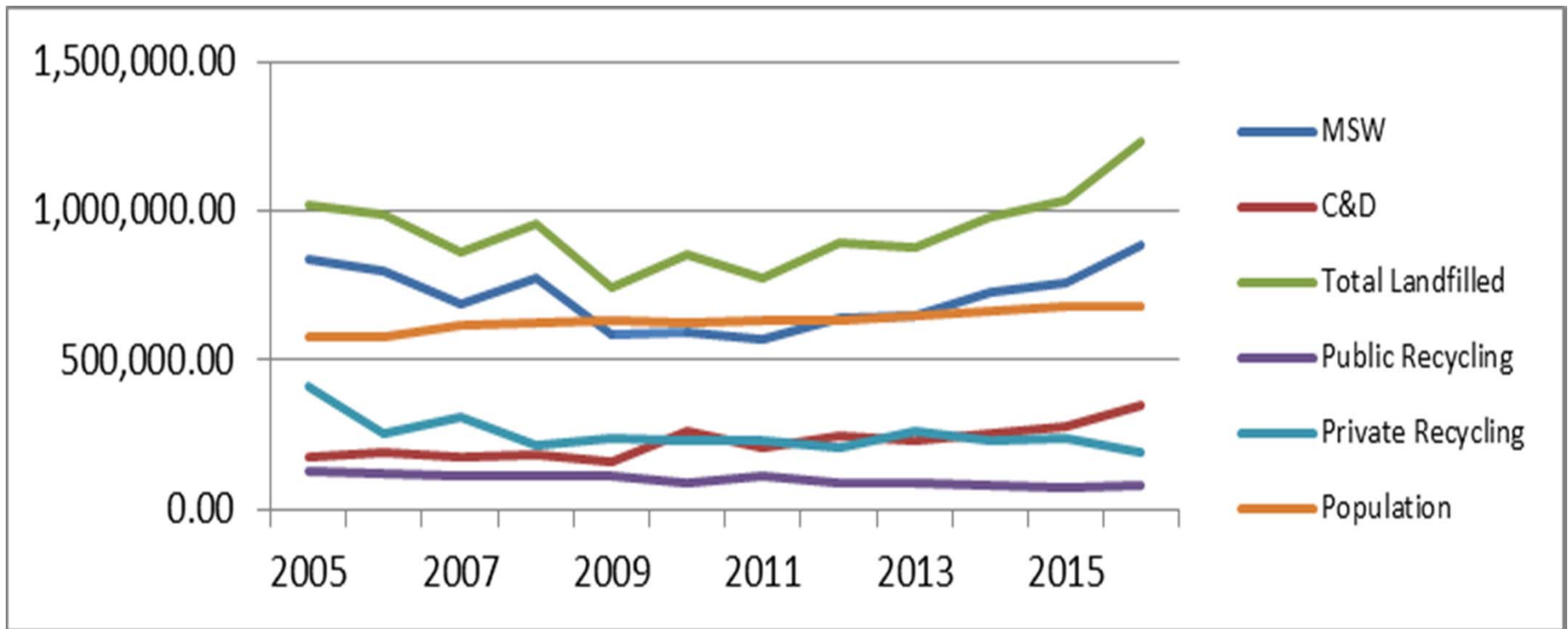


Landfill	Tons
West Camden (WMI)	114,656.68
Bi-County Landfill	3,282.92
Middle Point (Republic)	528,706.14
Cedar Ridge Landfill	232,486.94
Other	5,914.54
Total MSW Tons	885,047.22

Davidson County 2016 Waste and Recycling Stream



Historical Trends



Waste Diversion Goals



- **TDEC** – Reduce waste entering Class I landfills 25% per capita from the 1995 base year.
- **Davidson County 10 Year Plan** – Reduce waste entering Class I-IV landfills 60% per capita from the 1995 base year.

TDEC & 10 Year Plan Diversion Goal Comparison



	TDEC Requirement	10 Year Plan Goal
2016 Class I Waste	885,047.22 Tons	885,047.22 Tons
2016 Class III-IV Waste	n/a	350,175 Tons
Total Landfilled Waste	885,047.22 Tons	1,235,222.22Tons
1995 Base Year Tonnage	971,383.00 Tons	971,383.00 Tons
1995 Per Capita Generation	1.83 tons/person/year	1.83 tons/person/year
Waste Diversion Goal	1.37 tons/person/year or lower annually	.73 tons/person/year or lower by 2018
2016 Waste Diversion Rate (per capita)	1.29 tons/person/year	1.80 tons/person/year

Livable Nashville Committee



Comprised of leaders from Nashville's public, private, environmental, academic, and philanthropic sectors— **and charged its members with developing a shared vision for protecting and enhancing Nashville's livability and environmental quality.**

Livable Nashville Committee



DRAFT RECOMMENDATIONS

Waste Reduction & Recycling

Reduce, Reuse, Recycle our waste for a healthier, cleaner, more prosperous Nashville.

Targets	Strategies	"Sizzle" Items
<ul style="list-style-type: none">• Reduce food waste by 10% by 2020 (50% by 2030)• Increase landfill-diversion rate to 35% by 2020 (50% by 2030; Zero waste by 2050)	<ul style="list-style-type: none">• Increase residential recycling rates• Reduce construction and demolition waste• Increase rates of commercial waste-diversion and recycling• Demonstrate leadership on food-waste reduction• Leverage Metro's administration of the solid-waste program• Equip Metro Government with the ability to "lead by example"	<ul style="list-style-type: none">• Mayor's Restaurant Food-Saver Challenge• Biweekly curbside-recycling pickup• Glass-Bottle recycling pilot-project with lower-Broadway's Honkey-Tonk row

Nashville Food Waste Initiative



- Project of the Natural Resource Defense Council
- Nashville as its pilot city for developing high-impact local policies and on-the-ground actions to address food waste
- Small food digs August 2016 (residential, commercial and government)
- TDEC/NRDC Roundtable in Summer 2016
- Restaurant Food Saver Challenge - current

Annual Progress Report & 10 Year Plan Update



Questions

Solid Waste Master Plan

Nashville and Davidson County

CLEAR GLASS
CLEAR GLASS

BROWN GLASS
BROWN GLASS

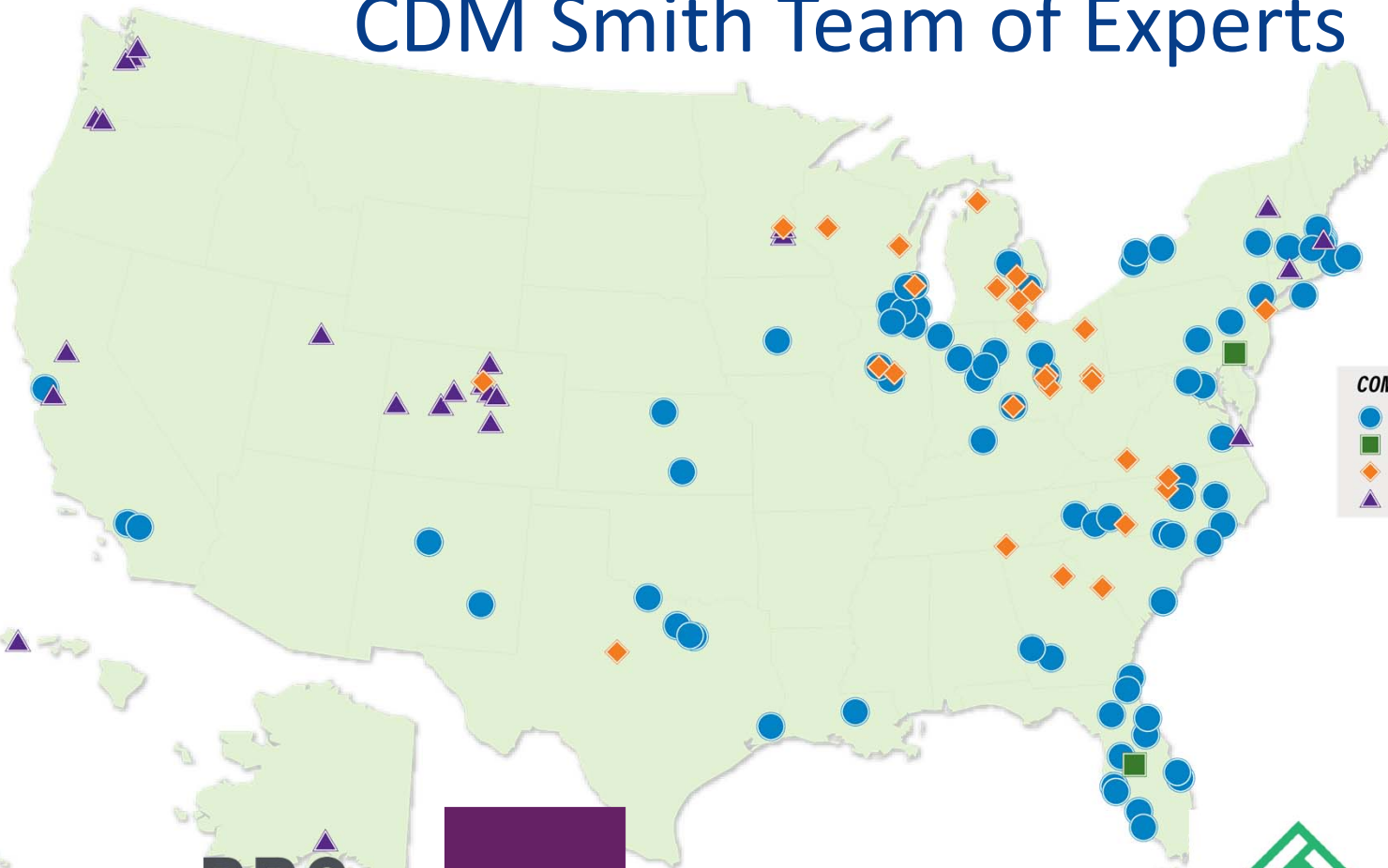
GREEN GLASS
GREEN GLASS



March 29, 2017

**CDM
Smith**

CDM Smith Team of Experts



COMPANY KEY

- CDM SMITH
- CEC
- ◆ RRS
- ▲ SERA



Solid Waste Management Plan Vision and Goals



- Ultimate Goal: Achieve zero waste within next 30 years
- Increase waste reduction and diversion from landfilling through increased recycling and energy recovery
- Provide a clear path to zero waste with 5, 10, 20 and 30 year benchmarks



Solid Waste Management Plan Tasks



- **Task 1** - Research
- **Task 2** - Evaluation
- **Task 3** – Public Engagement
- **Task 4** – Plan Development, Recommendations, and Goals
- **Task 5** – Cost Studies
- **Task 6** – Waste Stream Characterization
 - Subtask – Recycling characterization in partnership with TDEC



Task 1 - Research



- Evaluation of Current Solid Waste Program
- Residential, Commercial, Institutional and Industrial Recycling in the USD and GSD
- C&D Diversion and Recycling
- Review of Successful Zero Waste Diversion Programs
- Organic Waste Recycling and Processing
- Waste Management Collection, Processing, and Disposal Systems/Options
- Legislative/Policy Ideas
- Future Funding Options



Task 2 - Evaluation

- Cost/Benefit Analysis
- Potential Facility Locations including Regional Partnerships
- Diversion Estimates – Waste reduced or diverted from landfills
- Opportunities to Recover Non-Traditional Recyclables
- Implementation Plans
- Comparison of Environmental Benefits of Proposed Programs
- Case Studies of Similar-Sized Programs



Task 3 – Public Engagement



- Public Meetings and Listening Session for Residences and Businesses
- Interviews with Metro Council Members
- Interviews with Key Environmental Groups
 - BURNT
 - RAM
 - Tennessee Environmental Council
- Conduct an Online Survey of Nashville Residents and Businesses
- Meetings with TDEC and Waste Management Staff of Surrounding Counties



Task 4 – Plan Development, Recommendations, and Goals



- Development of a Plan to Achieve Zero Waste
- Recommendations
 - Incremental steps of 5, 10, 20, and 30 years
- Increased Waste Reduction and Landfill Diversion
- Establish a Set of Clear Goals and Metrics



Task 5 – Cost Studies

- Triple Bottom-Line Comparison
 - Financial
 - Environmental
 - Social
- Financial Analysis
 - Operational and Capital costs
- Environmental
 - Life-cycle analysis
- Social
 - Impact on community assets



Task 6 – Waste & Recycling Characterization

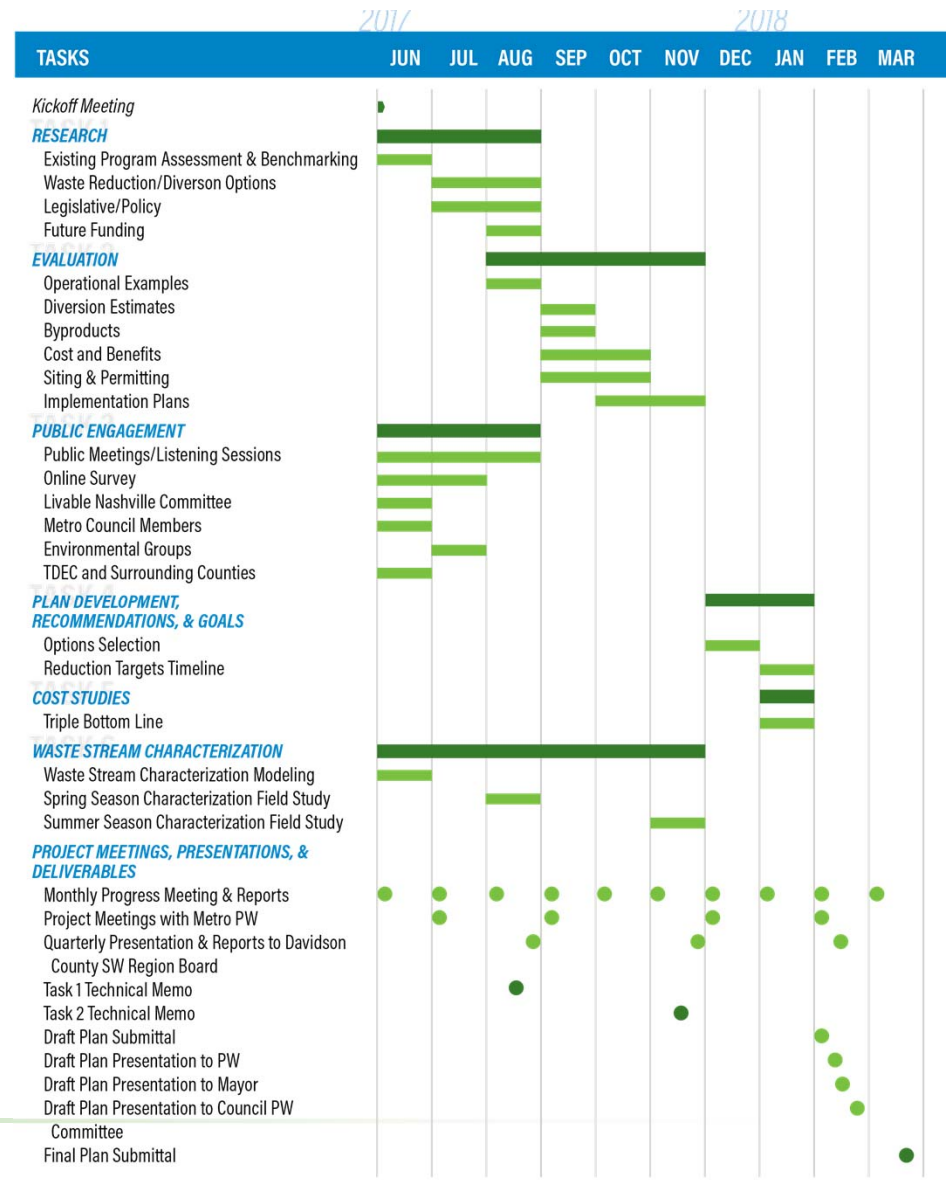


- Two seasonal sorting events
 - July – capture tourist season
 - October – capture universities, colleges and local schools
- Sort locations will consider geographic and population distribution
 - Multiple Waste Sources
 - Residential
 - Commercial/industrial/institutional
 - Construction & Demolition
- Recycling Characterization
 - Partnership with TDEC
 - Data to be compared to similar characterizations performed in major cities across the US



Project Schedule

- Research, Public Engagement and Characterization Planning - June 2017
- Quarterly Reports to Solid Waste Regional Board – August, November & February
- Draft Plan – February 2018
- Final Plan – March 2018



Next Steps Moving Forward



- Finalize Contract with Metro
- Schedule and Begin Planning Waste and Recycling Characterizations
- Begin Evaluation of Existing Solid Waste System
- Begin Public Engagement and Outreach





Thank You!

