

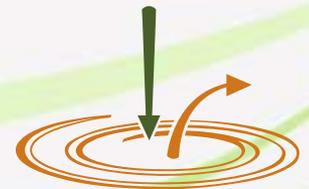


City of Key West

Solid Waste Master Plan

Draft Recommendations

Public Workshop
May 10, 2012



kessler consulting inc.
innovative waste solutions

Purpose of Public Workshop

- Work completed to date
- Status of previous recommendations
- Draft recommendations
- Stakeholder input
- Next steps

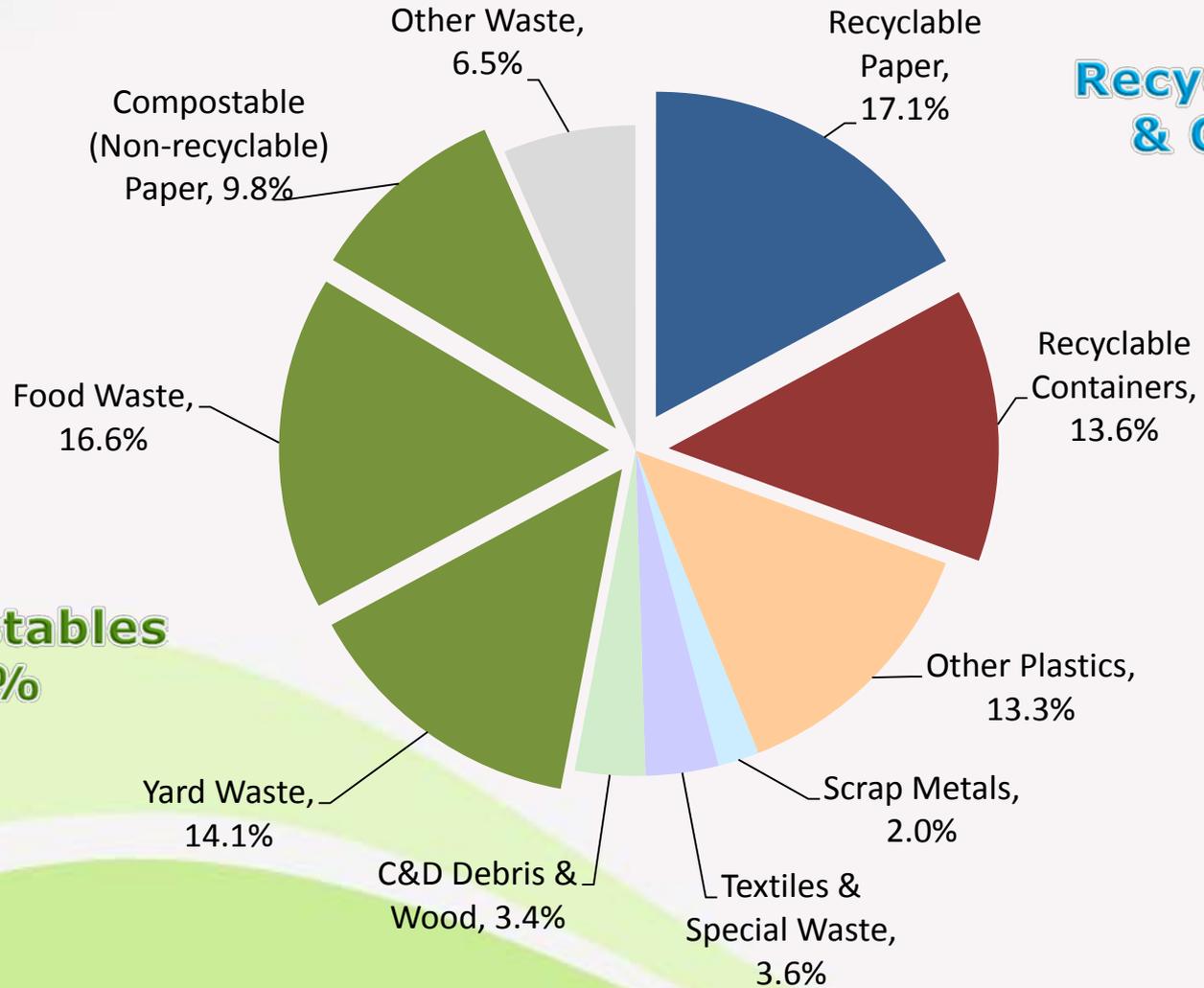


Work Completed to Date

- Waste composition study
- Analysis of collection agreement & rates
- Analysis of transport & disposal agreement & rate
- Initial recycling recommendations
- Analysis of transfer station operations
- Commercial waste generation study
- Analysis of waste diversion opportunities
- Draft master plan recommendations



Citywide Waste Disposed



**Recyclable Paper & Containers
31%**

**Compostables
40%**

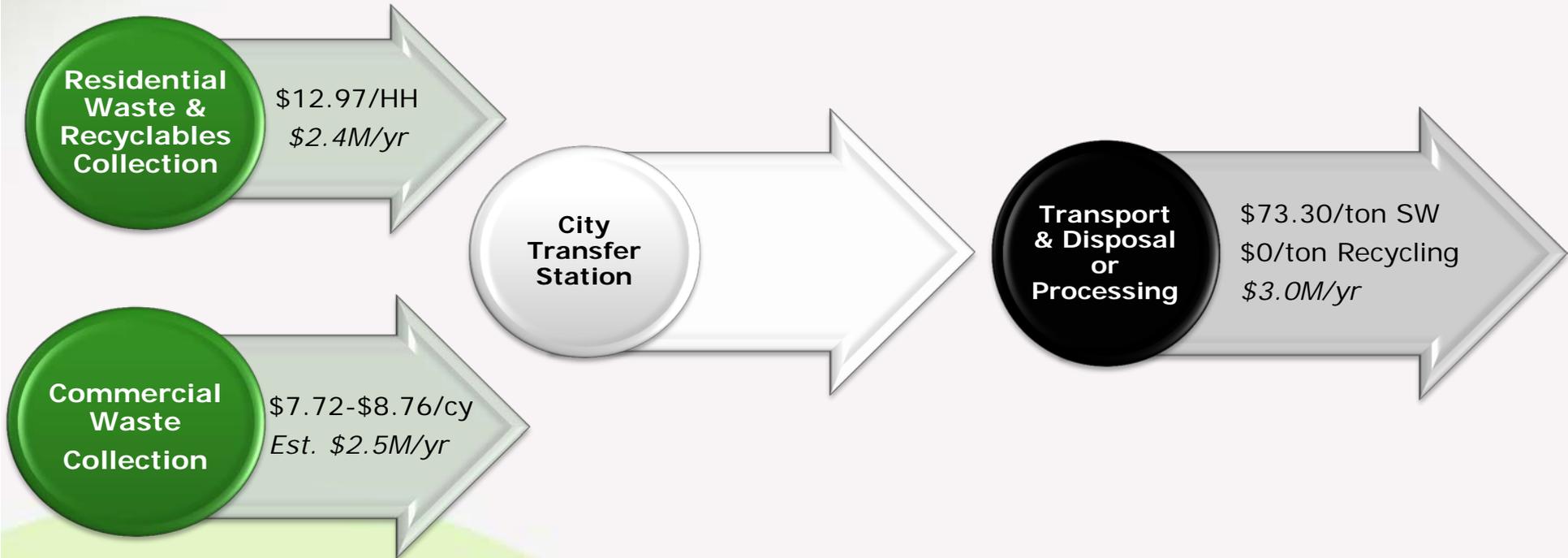
**Recyclables & Compostables
71%**



kessler consulting inc.
innovative waste solutions



Current System & Contracts



- Collection Agreement expires 12/2014 (no extensions)
- Transfer & Disposal Agreement expires 3/2018 (7yr extension)
- Terminate either with 180-days prior written notice



Financial Implications of Recycling vs. Disposal

Transport & Disposal
- \$73.30/ton

Recycling

$\$150/\text{ton}$ - $\$40/\text{ton}$ - $\$50/\text{ton}$ = $+\$60/\text{ton}$
Current Market Value of Curbside Recyclables Estimated transport costs Estimated processing costs Net Value

Current revenue to City: \$0



kessler consulting inc.
innovative waste solutions

Status of Initial Recommendations

- Immediate – work with existing contractor to increase recycling
 - Lower commercial recycling collection fees
 - Residential recycling revenue
- Short-term – composting feasibility; recycling carts; special events



Status Quo vs. Change?

- City's initial objective
- No measureable improvements thus far
- Significant modifications needed to increase recycling
- Partnerships to help implement change



A Brief History of Recycling in Florida

1988	1990s	2000s	2010s
<p>Solid Waste Management Act</p>	<ul style="list-style-type: none"> • Residential curbside • Yard waste 	<ul style="list-style-type: none"> • Commercial recycling • Multi-family • Single stream 	<ul style="list-style-type: none"> • Commercial single stream • Residential carts • Organics • C&D • Pay-As-You-Throw • Mixed waste processing
<p>FL Goal: 30% FL Rate: 4% Key West: ?%</p>	<p>30% 27% <10%</p>	<p>30% 29% <10%</p>	<p>75% ? ?</p>



Is Waste-to-Energy (WTE) Recycling?

- Florida State Legislature **YES**
- Environmental Protection Agency **NO**
- Other States **NO**
- Dictionary **NO**
- Key West **?**



KCI's Recommendations

I. Policies

II. Programs

III. Facilities



kessler consulting inc.
innovative waste solutions

I. Policy Recommendations: Program Foundation

- Recycling Program Manager – full time
- Recycling goals
3 Phases - 25%, 40%, 75%
- Separate yard waste collection
- Compensation for recyclables
- Public-private partnerships to carry out the these policies
- Commission updates



Recommendations

I. Policies

II. Programs

III. Facilities



II. Program Recommendations

- Residential Program
- Commercial Program
- Special Events Recycling
- HHW & E-Waste Program
- C&D Debris Program



Residential Recommendations

Phase 1:

- Recycling carts
- Separate yard waste
- 1-1-1 collection
- Multi-family recycling
- Comprehensive outreach & education

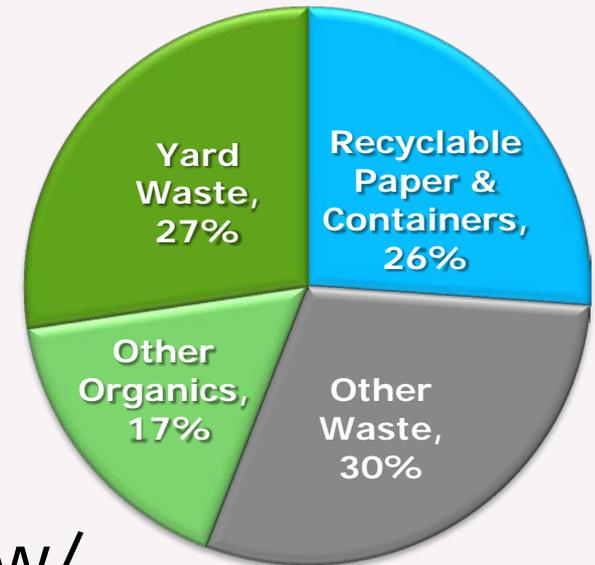


Residential Recommendations

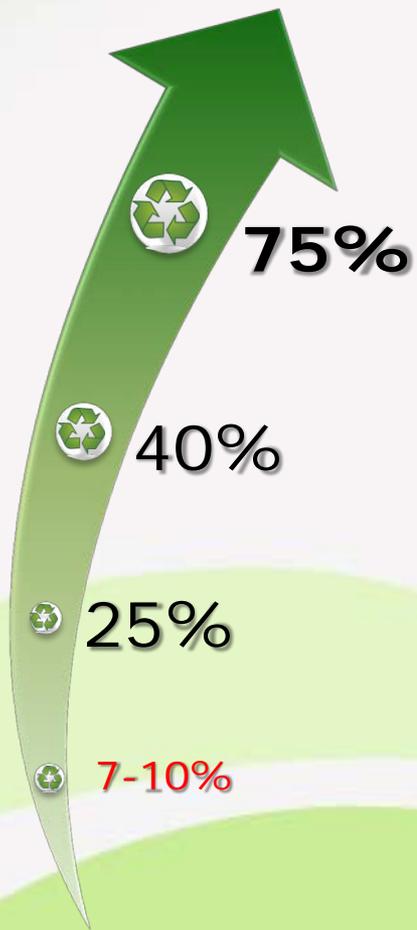


Phase 2:

- All organics
- Pay-As-You-Throw/
incentive program

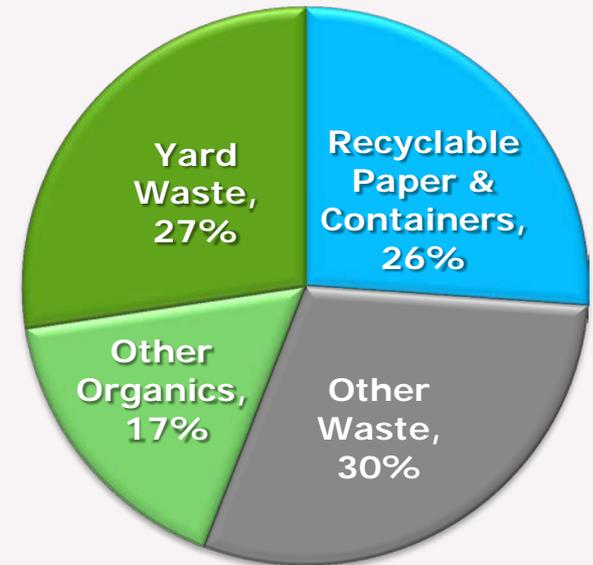


Residential Recommendations



Phase 3:

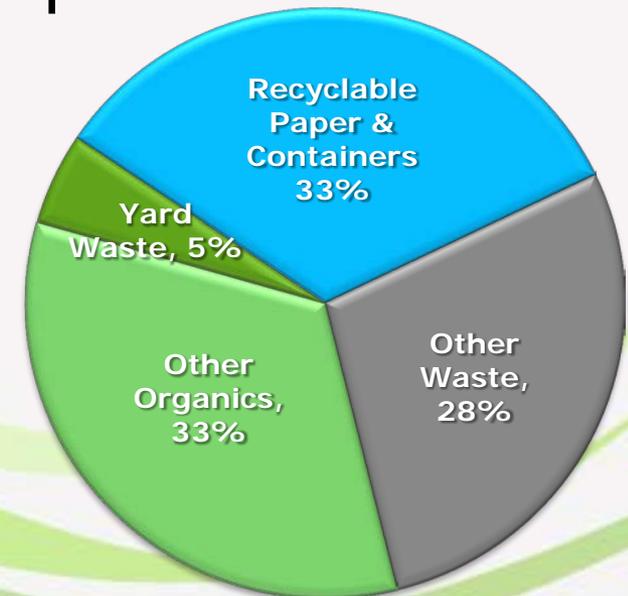
- Mixed waste processing
- Enforcement



Commercial Recommendations

Phase 1:

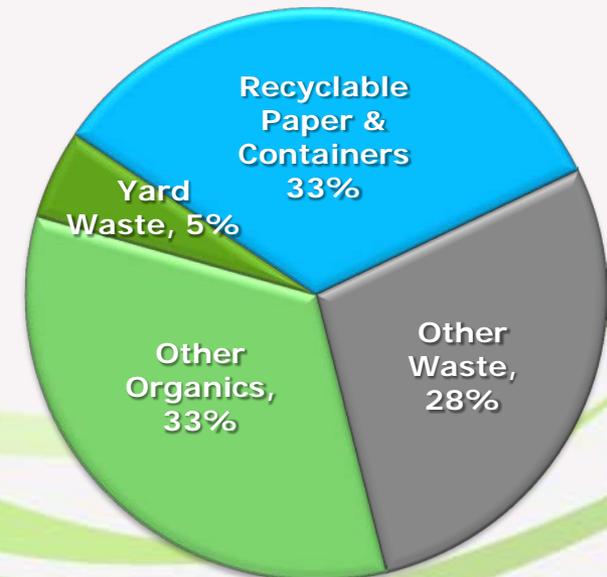
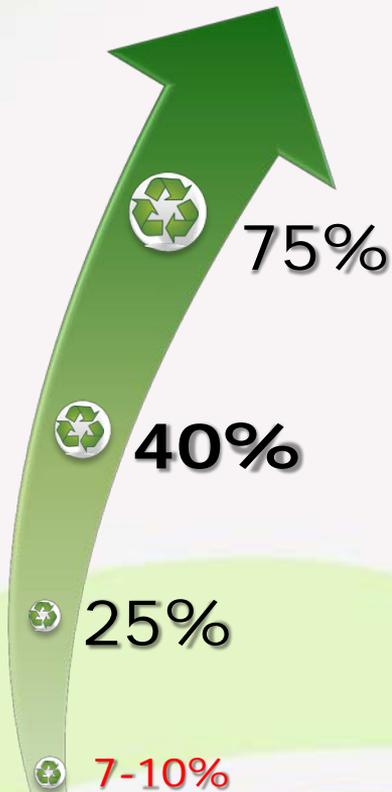
- Collection costs: recycling = solid waste
- Single stream collection – all recyclables
- City leads by example – Green the City
- Outreach



Commercial Recommendations

Phase 2:

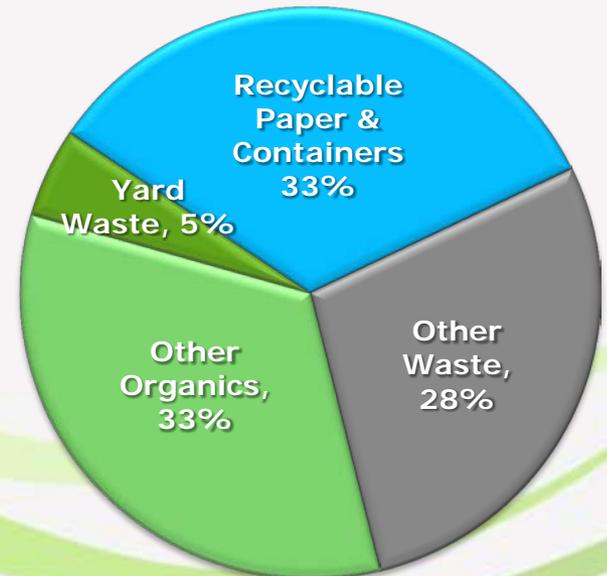
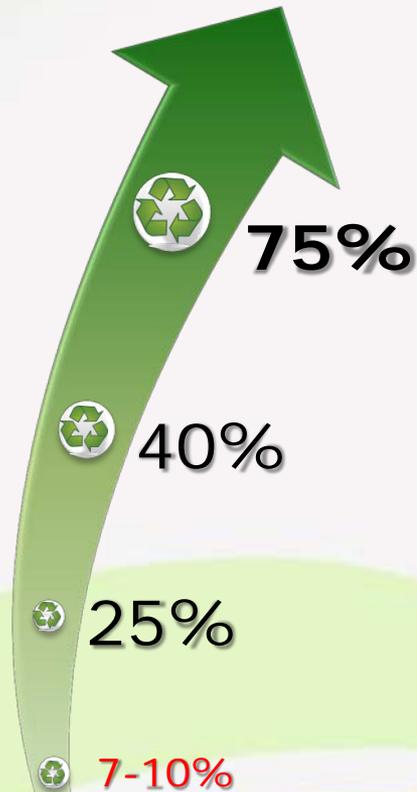
- Toolkit & education
- Technical assistance
- Incentive program
- Business group networking
- Food waste pilot
- Organics composting



Commercial Recommendations

Phase 3:

- Mixed waste processing
- Mandates & enforcement



Recommendations

I. Policies

II. Programs

III. Facilities



kessler consulting inc.
innovative waste solutions

Transfer Station Recommendations

- Safety - policies established
- Operational efficiency
- Equipment - modifications & updates
- Ownership & operation scenarios



Organics Facility Recommendations



Phase 1:

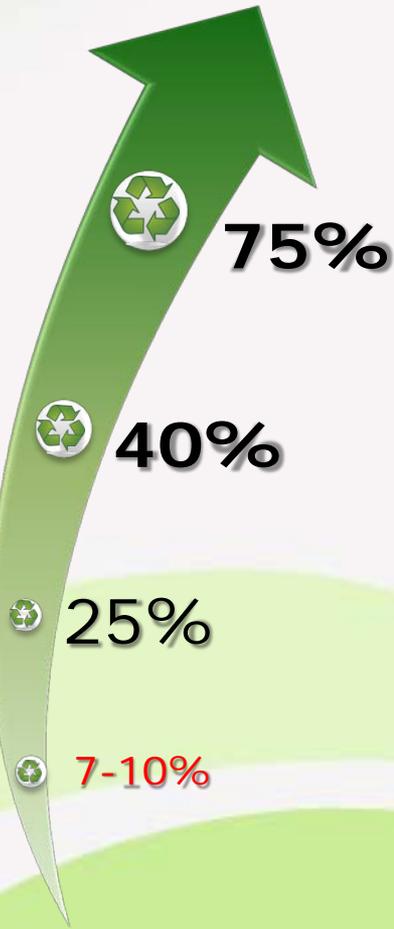
- Immediately identify yard waste transfer site; RFP for yard waste processing
- Identify potential long-term composting site(s) – in Keys or SE Florida
- RFP to select technology & long-term composting capacity



Organics Facility Recommendations

Phases 2 & 3:

- Start composting
 - Yard waste
 - Commercial food waste
 - Biosolids



Recommendations Summary

Program Recommendations	Residential	Commercial
 <p>Phase 1 (1-2 yrs)</p> <p>25%</p>	<ul style="list-style-type: none"> • Recycling carts • Yard waste; 1-1-1 • Multi-family • Outreach & education <p>11%</p>	<ul style="list-style-type: none"> • Recycling collection \$ = SW collection \$ • All recyclables • Green the City • Outreach <p>4%</p>
 <p>Phase 2 (3-5 yrs)</p> <p>40%</p>	<ul style="list-style-type: none"> • Organics • Pay-As-You-Throw/ incentive program <p>6%</p>	<ul style="list-style-type: none"> • Toolkit & education • Technical assistance • Incentive program • Organics <p>9%</p>
 <p>Phase 3 (5-10 yrs)</p> <p>75%</p>	<ul style="list-style-type: none"> • Mixed waste processing • Enforcement <p>13%</p>	<ul style="list-style-type: none"> • Mixed waste processing • Mandates & enforcement <p>22%</p>

Next Steps

- Stakeholder input
- Complete draft Master Plan
- Present to City
- Finalize Master Plan
- Implement Plan



Discussion

