



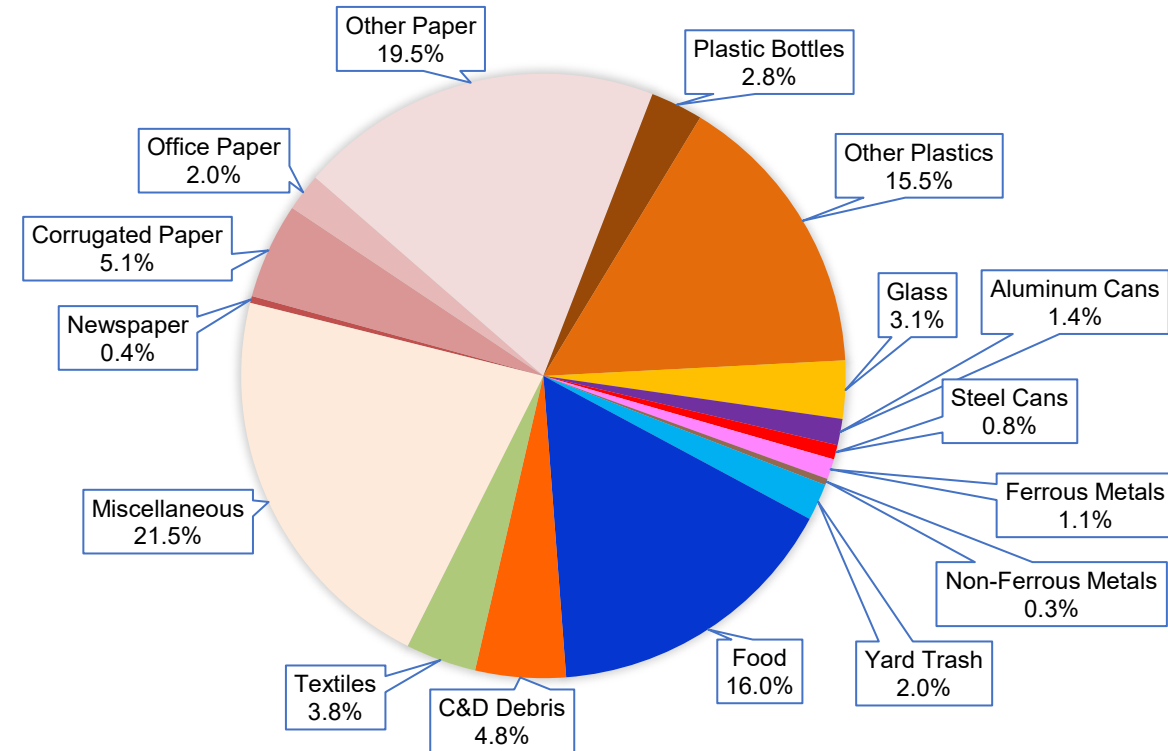
# ECOLOOP

## Landfill Diversion Options



# Municipal Solid Waste

- Leveda Brown Environmental Park
  - Transfer Station
- Residential & Commercial
- New River Regional Landfill
- ~ 850 tons per day



2019 Waste Composition Study





# EcoLoop Evaluation Criteria

## Zero Waste Strategies Report and Implementation Plan

- Zero Waste Guiding Principles

- Keep Resources Local

- Foster Job Growth

- Emphasize and Support Upstream Solutions

- Mitigate Climate Change

- Address Environmental Justice and Create Equity of Service

## Economic Development Benchmarks

## Comprehensive Plan

- **Solid Waste Element - Policy 1.2.5**

## Planned Development Master Plan




# Solid Waste Element

**Policy 1.2.5. Incinerator and mass burn facilities will not be included in the County solid waste system. The use of tires, plastics or plastic derived materials as a fuel source or as feedstock for a waste to energy facility is prohibited in the County solid waste system.** This policy does not prohibit the combustion of vegetative yard trash, vegetative biomass and vegetative storm debris. Hazardous waste or other material for which there is no alternative method of disposal shall be disposed of as mandated by Federal law.


# Solid Waste Element

**Policy 1.2.5.** Exceptions to this policy may be allowed for research and development activities by special exception when approved by the Board of County Commissioners. Additional standards including limitations on scale and environmental and safety standards shall be included in the Unified Land Development Code for such research and development activities.

# EcoLoop Request For Proposals


- July 2022 - Staff presented recommendations to the Environmental Protection and Economic Development Advisory Committees. Both Committees agreed with staff but also recommended that the BoCC review the existing “waste to energy” policies in the Comprehensive Plan that resulted in the exclusion from consideration of certain technologies.
  - August 2022 – BoCC approved selection of Florida Express Environmental for the construction of a Construction and Demolition Materials Recovery Facility and directed staff to bring back for consideration proposals that are not incineration but include energy related technology such as breaking down chemicals for reuse.
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# Concerns with Waste To Energy Facilities

- Undermine reduction, reuse and recycling efforts
  - Consume more energy than they produce
  - Competes with other renewable energy solutions
  - Air emissions
  - Climate Change impacts
  - Expensive
  - Less jobs than alternatives
  - Not compatible with Circular Economy
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# Landfill Diversion Options

- Zero Waste Practices : Reduce, Reuse, Recycle
  - Solid Waste Incinerator
  - Advanced Mechanical and Thermochemical Processing
  - Biological Processing
  - Refuse Derived Fuel
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# Solid Waste Incinerator

- A Solid Waste Incinerator takes solid waste and combusts it to reduce mass of waste and create steam for the generation of electricity
- **Conflict with Policy 1.2.5**
- **There are no proposed Solid Waste Incinerators in Alachua County**



Covanta Lake County Resource Recovery Facility

# Advanced Mechanical and Thermochemical Processing

- Targeted Waste Stream: MSW, or source-separated Plastics/Polymers
- Commonly referred to as “chemical recycling” when raw MSW is first mechanically sorted, or a single waste stream of plastics/polymers are accepted and processed
  - Broad term that includes pyrolysis, gasification, other technologies
- End Products:
  - Production of different usable materials in the creation of new plastics
  - Production of syngas/low-carbon renewable liquid fuel
- **Potential conflict with Policy 1.2.5**

# Biological Processing

- Targeted Waste Stream: Organics (e.g., commercial food waste, household food waste)
- Biodegradation of waste in two different environments:
  - Anaerobic digestion done in absence of oxygen in enclosed space : Biogas
  - Aerobic digestion done in presence of oxygen in open area : Soil Compost
- **Not in conflict with Policy 1.2.5**




Anaerobic Digestion



Aerobic Digestor



# Refuse Derived Fuel

- Targeted Waste Stream: Organics, plastics, paper, combination of multiple stream
  - Wastes can be combined into large mixed product, or pelletized as a processed fuel source
  - Organics and recyclable materials can be separated for biological processing and traditional recycling
  - **Potential conflict with Policy 1.2.5**
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# Advisory Committee Presentations

- February 20 Climate Change Advisory Committee
  - February 23 Economic Development Advisory Committee
  - March 7 Environmental Protection Advisory Committee
  - March 20 Climate Change Advisory Committee
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# Options

1. Keep existing policies and only consider projects that meet the Comprehensive Plan
2. Update policy 1.2.5 and other related policies to include other alternative landfill diversion options



# Advisory Committees Recommendations

Climate Change, Economic Development & Environmental Protection Advisory Committees :

- Update Policy 1.2.5 and other related policies to include other alternative landfill diversion options

Climate Change Advisory Committee

- Limit policy changes to facilities located at EcoLoop
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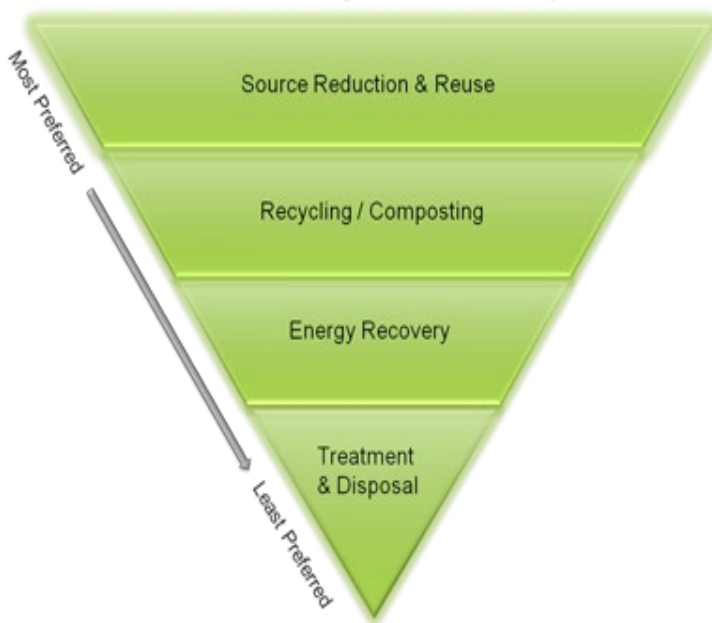
# Performance Standards

- Energy Consumption vs Energy Production
- Air Emissions Standards
- Climate Change Standards
- Compatibility with Circular Economy

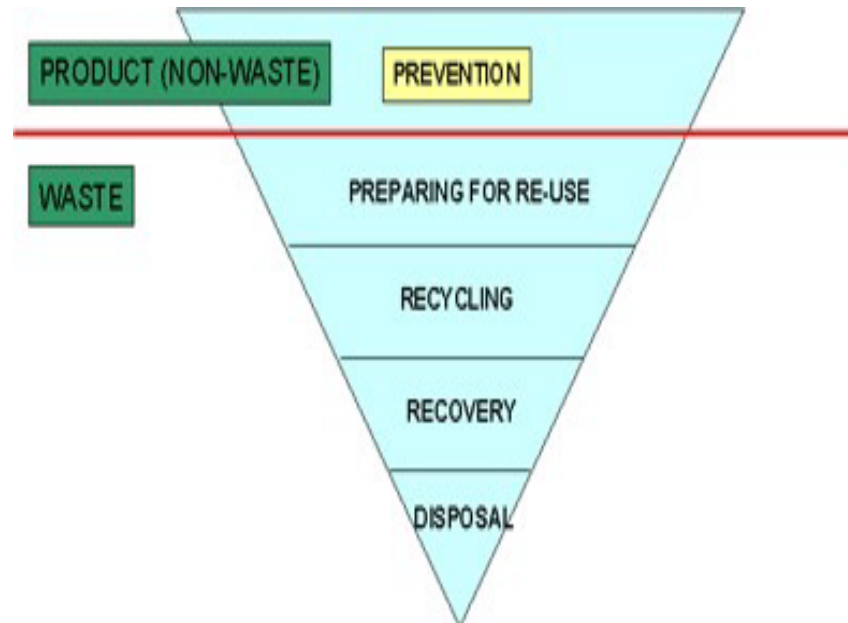


# Waste Management Hierarchy

Waste Management Hierarchy



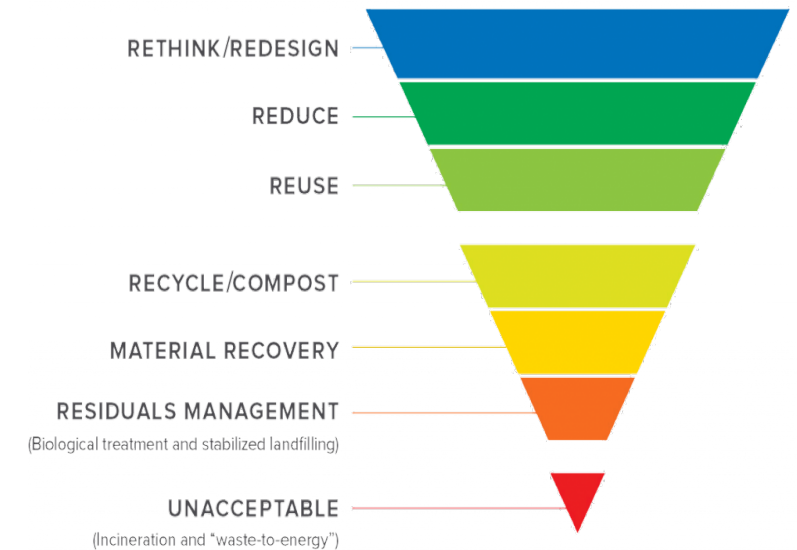
Environmental Protection Agency



European Union

THE ZERO WASTE HIERARCHY 8.0

For detailed version visit [www.zwia.org/zwh](http://www.zwia.org/zwh)



Zero Waste International Alliance





Hazardous Materials

ECOLOOP

Materials Recovery Facility

Leveda Brown  
Environmental Park

Transfer Station

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# Staff Recommendation

Receive presentation and provide policy direction to staff regarding potential future changes to the Solid Waste Element and related policies of the County's Comprehensive Plan

