

# ADVANCING ZERO WASTE

THE FUTURE OF WASTE MANAGEMENT:  
ASSESSING ENHANCED MATERIAL RECOVERY &  
BIOLOGICAL TREATMENT

Public Meeting | April 4, 2018

# PARTICIPANTS

## **David Mayberry**

Warden, Oxford County

## **Peter Crockett**

CAO, Oxford County

## **Bryan Smith**

Chair, Zero Waste Oxford

## **David Simpson**

Director, Public Works  
Oxford County

## **Frank Gross**

Manager, Transportation & Waste  
Management, Oxford County

## **Dave Vermeeren**

Supervisor, Waste Management,  
Oxford County

## **Alicia Evans** (Facilitator)

Specialist, Community Engagement  
AECOM



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# FUTURE OXFORD: AN OVERVIEW

# FUTURE OXFORD

**COMMUNITY SUSTAINABILITY PLAN**

The Community Sustainability Plan aims to improve quality of life for Oxford's current and future generations and to balance Oxford's collective economic, community, and environmental interests.

- What is sustainability?
- Implementing the plan

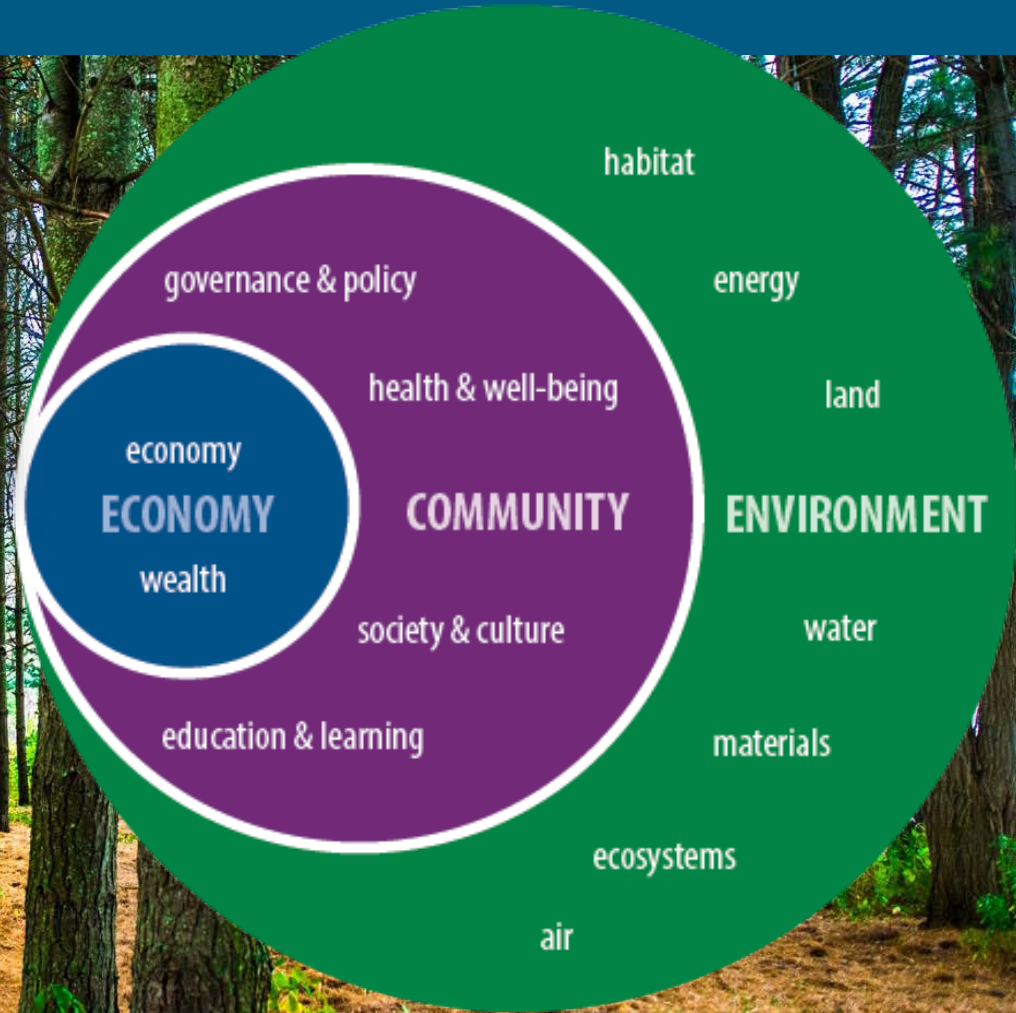
Print version with further details

FutureOxford.ca

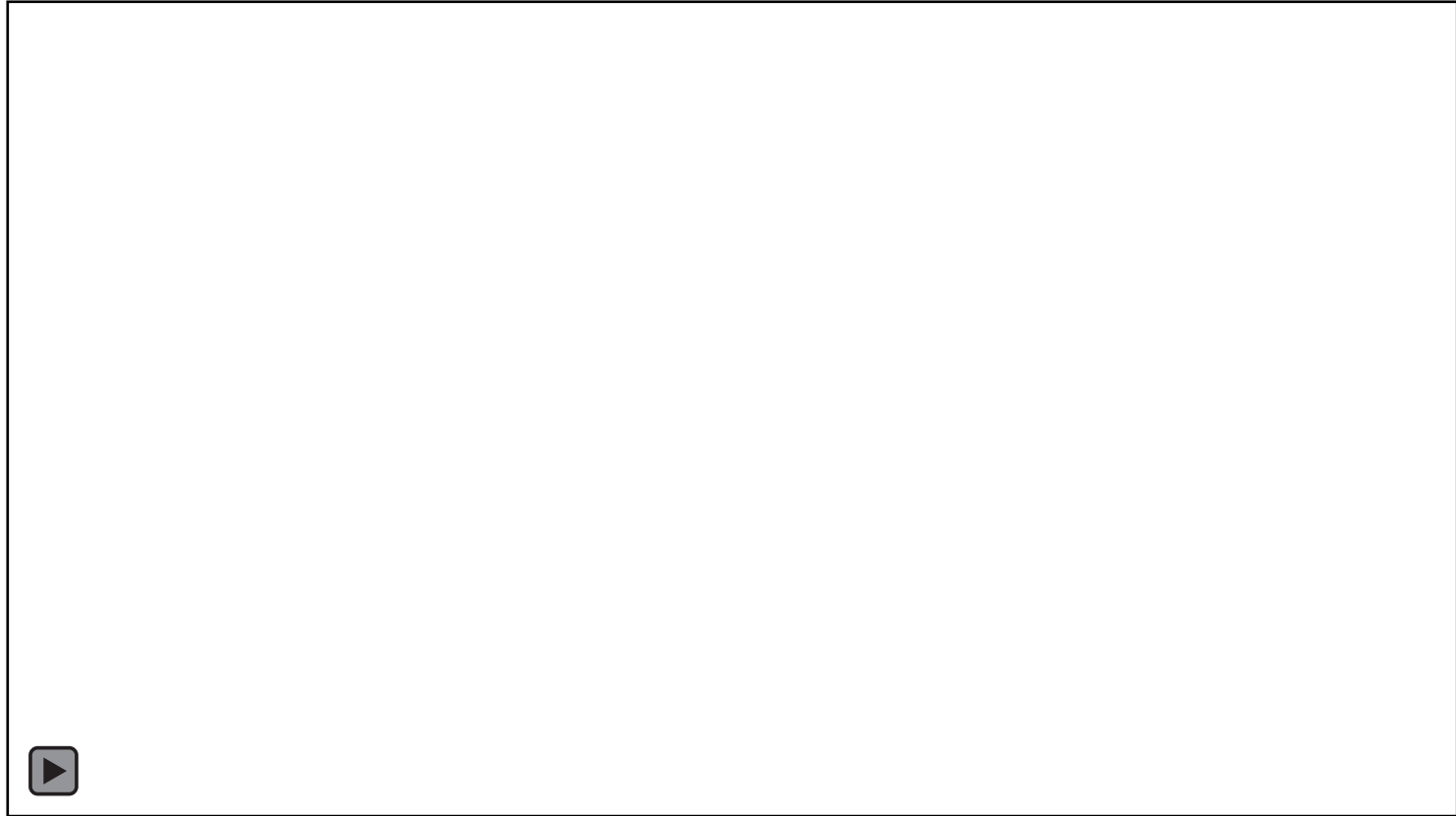
**Vision**  
A vibrant, prosperous, and responsible Oxford for all.

**Mission**  
To achieve community sustainability throughout Oxford.

Community goals  
Economy goals  
Environment goals



# FUTURE OXFORD





## 100% RE BY 2050

- First municipality in Ontario to commit to achieving 100% renewable energy
- 100% RE Plan (2016)



## BUILDING TRANSFORMATION FOR ZERO CARBON FOOTPRINT

- Passive House standard for municipal housing
- New Oxford County Waste Management Facility



# PROTECT AND RESTORE THE ECOSYSTEM

About 600 acres of land in Norwich Township and South-West Oxford is being re-naturalized with funding from The Cowan Foundation





# LOW-CARBON TRANSPORTATION

- EV Charging stations
- Municipal green fleet, including Canada's first hybrid ambulance and first CNG snowplow





# COMMUNITY WELLBEING

- Canadian Index of Wellbeing
- Oxford Community Wellbeing Survey and report (2016)
- Community leader workshop (2017)



# ACHIEVING ZERO POVERTY

- County Council resolution (Nov 2017)
- Achievable... wellbeing for all... “the right thing to do”

# A VIBRANT ECONOMY

- Legacy Fund
- Oxford Workforce Development Partnership “Action Plan & Strategy Alignment”
- Sustainability Cluster: A hub for research, education and innovation

# REGIONAL TRANSPORTATION

- Strategy for Southwestern Ontario
- New Directions (2016)
- Empowering Ontario's Short Line Railways (2017)
- High-performance rail advocacy
- Freight strategy to be released in 2018






# ACHIEVING ZERO WASTE

- Council motion to become a zero waste community (2015)
- Zero Waste Plan (2016)
- Extending lifespan of current landfill to 2100 from 2043
- Exploring options in waste reduction and recovery technologies

# LEARN MORE

FutureOxford
ABOUT NEWS EVENTS RESOURCES LEGACY FUND THE PLAN





## Future Oxford





Our plan for quality of life for Oxford's current and future generations

LEARN MORE

## Faces and Places

Go behind the scenes to meet the local residents and community projects bringing Future Oxford to life

## FutureOxford.ca OxfordCounty.ca/speakup



[HOME](#) [NEWSROOM](#) [EALERTS](#) [CONTACT US](#)



Services for You
Business in Oxford
Things to Do
Your Government

### The future of waste management

Oxford County is looking for feedback on a technology approach to reducing and recovering waste from going to landfill. Learn more and provide your feedback through Speak Up, Oxford!



The future of waste management

2018 Business Plan and Budget

Regional transportation

Woodlands Conservation Ebylaw

Employment opportunities
Interactive maps
Apply for human services benefits
Garbage and recycling

Growing stronger, together.

Oxford County represents the best of both worlds: urban communities full of life, entertainment, and commerce; and, rural areas that are rich in natural resources, history, and farming communities.

Located in the heart of Southwestern Ontario, Oxford County is home to several thriving communities. As a highly accessible location, with first rate transportation routes, Oxford is home to eight area municipalities that are fit for your business and your life.

News

Public Health investigating two E.coli cases in Tavistock  
While Public Health continues to investigate all risk factors for two recent cases of E. coli, municipal drinking water is not a suspected cause and remains safe to drink. Learn more.

Future Oxford Speaker Series invites residents to learn more about electric vehicles  
Learn more about the Oxford County's Electric Vehicle Accessibility Plan and expert recommendations for charging infrastructure in the County at this workshop in Thamesford on Tuesday, April 10. More.

Council this Week - Highlights from the March 28 County Council agenda  
Funding for electric vehicle charging stations, Public Works annual reporting and an update on the Trans Canada Trail. Read Council this Week.

International Renewable Energy Academy returning to Oxford County  
Residents can learn more about renewable energy during a free presentation offered by the International Renewable Energy Academy (IREA). Interested community members may also attend the various IREA education events happening throughout Oxford County. See the full itinerary and register for upcoming events.

Seeking public input on the future of waste management  
A unique and proven technology approach for reducing and recovering waste could be a game changer. Learn more and provide your feedback through Speak Up, Oxford!












Request for Proposals/Tenders

Strategic Plan

Annual Report

Telephone directory

Waste Management Calendar

Landfill: Quick facts

Council Minutes & Agendas

Road updates

Interactive mapping

Your drinking water

Service feedback form

Community questions, concern?

Communication resources

Practice in Oxford

Accessibility standards




  
**Committed to**  
 100% RE | Zero Waste | Zero Poverty



# Participation in the Waste Technologies Review

Bryan Smith, Co-Chair  
Zero Waste Oxford



# ABOUT ZERO WASTE OXFORD

- Convened in 2015 as a Future Oxford sub-committee
- Key activities:
  - ▶ Submissions to Ontario's "Strategy for a Waste-Free Ontario: Building the Circular Economy" and "Draft Food & Organic Waste Framework"
  - ▶ Zero Waste Event Planning workshop and guide
  - ▶ Waste audit and technology assessment



# WASTE TECHNOLOGIES – PHASE 1

## January-August 2017

- Audit of County's current mixed waste stream including characterization of waste disposed
- Citizen participants in the County's process to assess waste technologies that can expand the life of the current landfill
- Preliminary screening of waste technologies using Future Oxford Multi-Criteria Assessment (MCA) tool

# WASTE TECHNOLOGIES – PHASE 2

## August 2017-Present

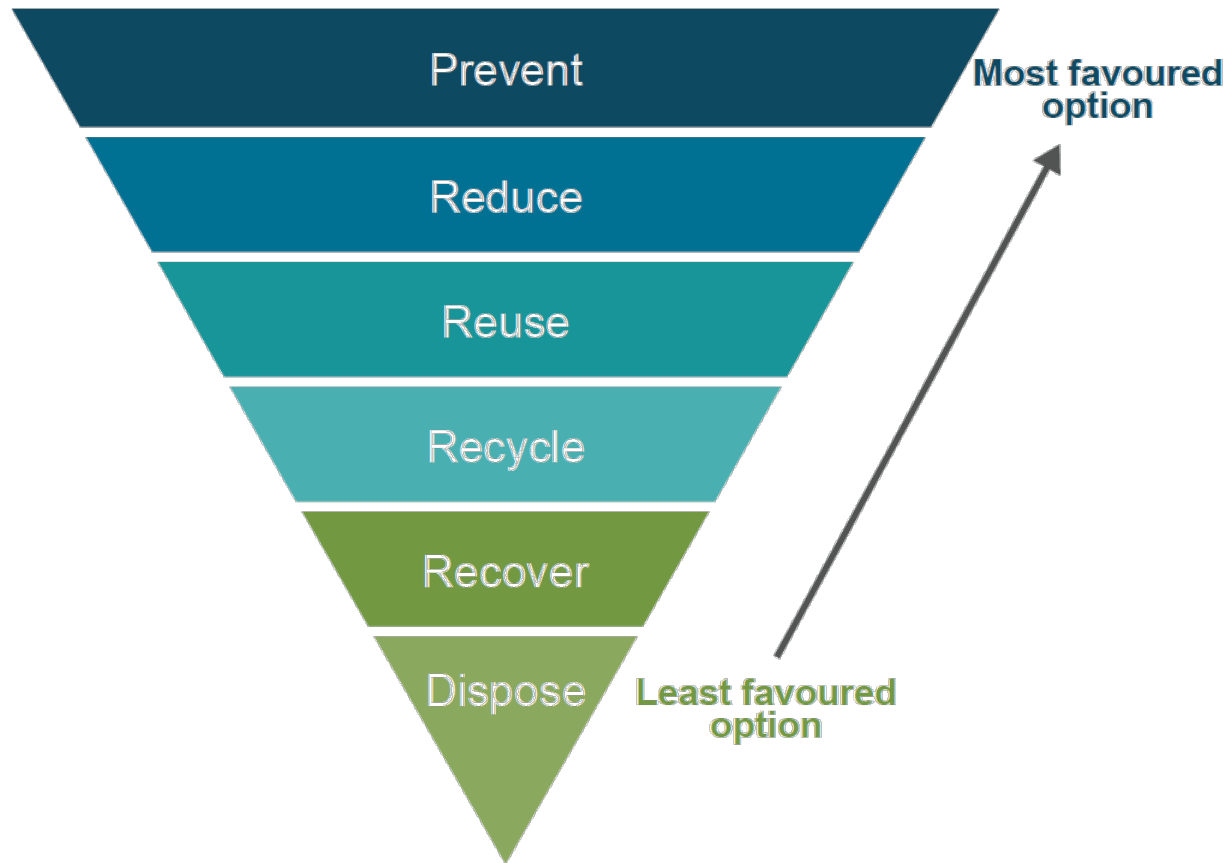
- Worked with the County to refine the Future Oxford Multi-Criteria Assessment (MCA) Tool to help evaluate the technologies in more detail
- Helped to develop Request for Information which was issued to the marketplace
- Worked with County through the MCA evaluation of vendor submissions and technology rankings to identify preferred waste approach



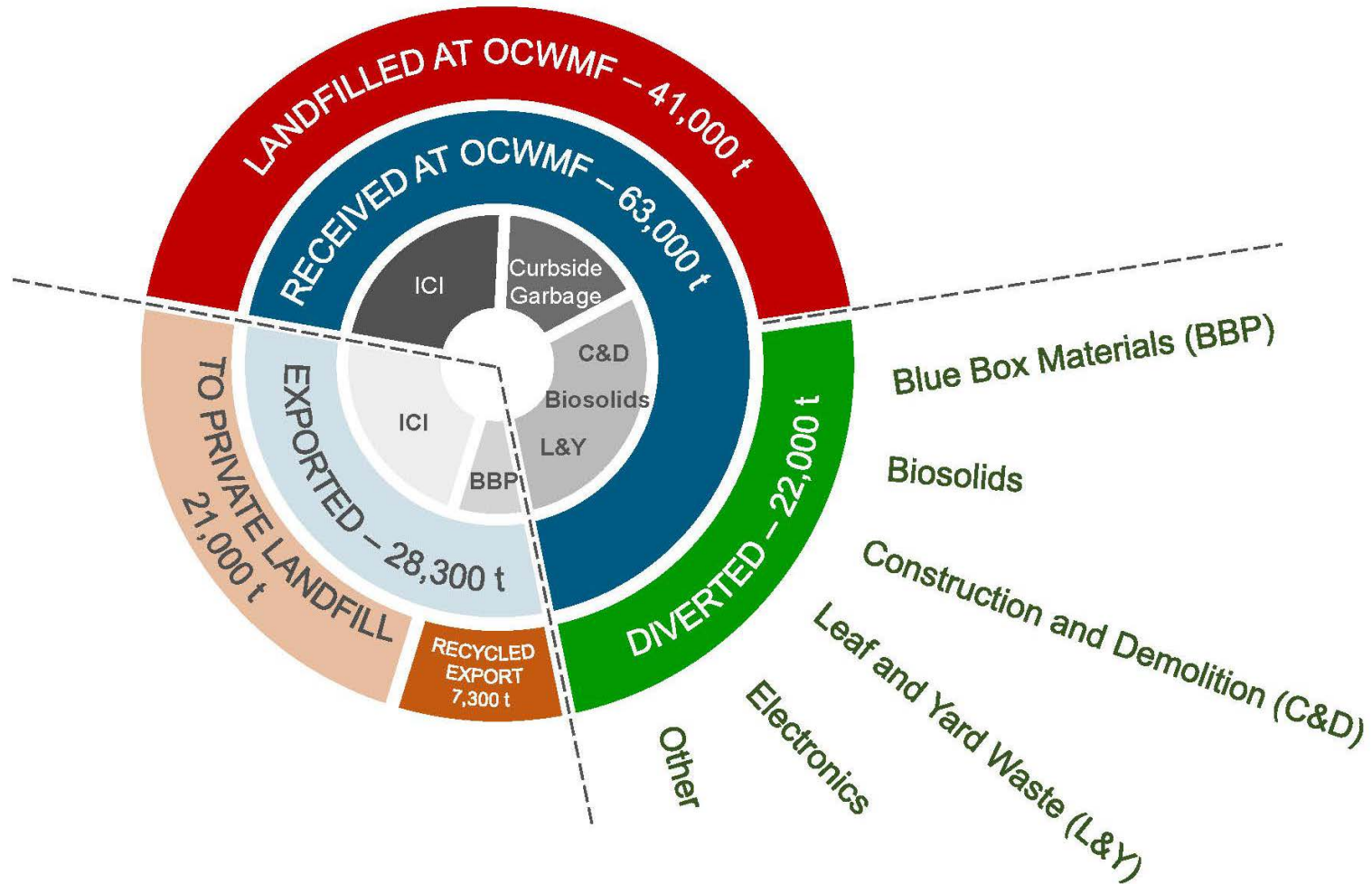
# PREFERRED WASTE RECOVERY AND REDUCTION TECHNOLOGY APPROACH

# GUIDING PRINCIPLE

## Waste Management Hierarchy



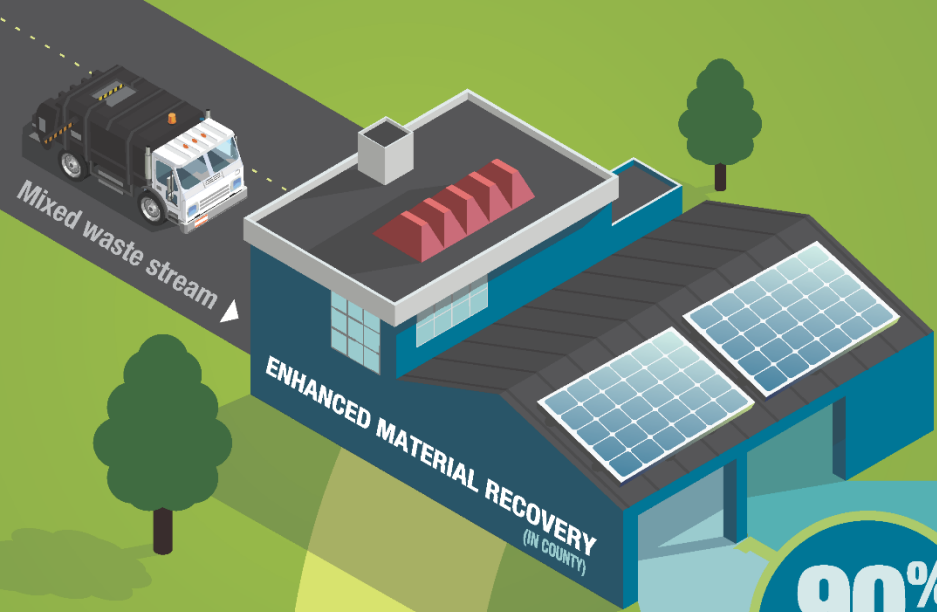
# 2017 MIXED SOLID WASTE – OXFORD COUNTY



# Preferred Technology

to extend the life of our landfill until the year

# 2100



**90%**  
Recovered resources

**Organics:**

PROCESSING FACILITY (INSIDE/OUTSIDE COUNTY)



**a Dry Anaerobic Digestion**  
(in vessel)



**b Wet Anaerobic Digestion**

- Stand alone digester
- WWTP digester
- Agriculture sector digester



**c Composting**

End markets

- Compost product
- Soil enhancement

**Recyclable and recoverable materials:**

End markets



\$ Metals



\$ Plastics



\$ Paper



\$ Other

- Lumber
- Construction & demolition

End markets

\$ Biogas  
\$ Biosolids/  
Fertilizer

Reduced Greenhouse Gas



Carbon capture



**10%**  
Residual waste

Non-marketable contaminated glass, plastics, toys, etc.

**?**  
Alternate markets

**🏗️**  
Landfill

**🚫**  
Product bans

**Oxford County**  
*growing stronger...together*

# KEY STEPS

1. Council Report PW 2018-05 on March 14, 2018
2. Public consultation: March 15 to April 30, 2018
  - Confirm recommended waste technology approach
3. Council report in June 2018
  - Present recommended waste technology approach
  - Seek approval for formal RFP process
4. Report back to community



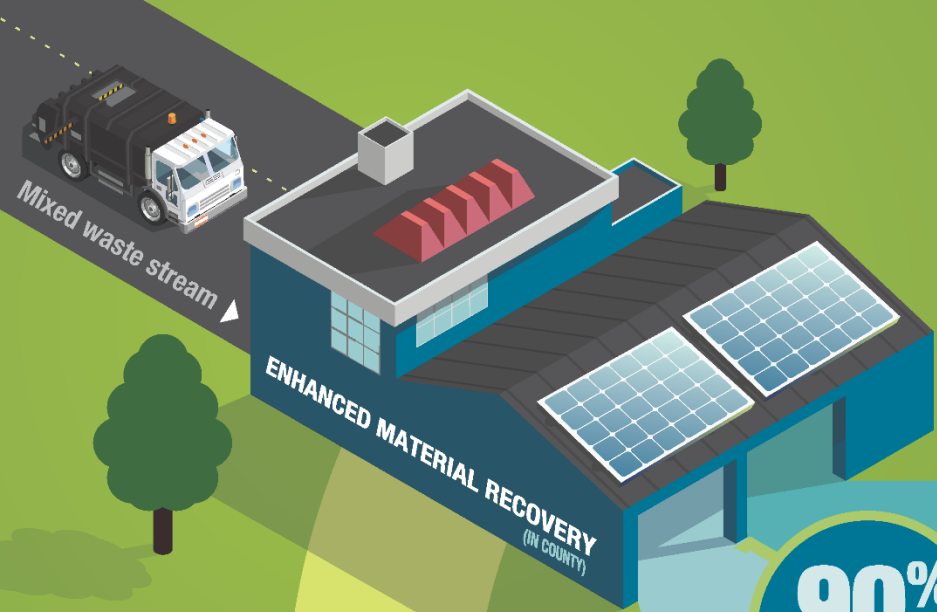


# QUESTIONS & DISCUSSION

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*Reduced Greenhouse Gas*



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**Alternate markets**

**Landfill**

**Product bans**

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# MORE INFORMATION



March 14, 2018

## The future of waste management

New technology is being proposed to reduce the amount of materials being disposed of in the Oxford County landfill

In an effort to reduce the amount of solid waste going into the Oxford County landfill, Oxford County Public Works is seeking public input on unique technology that would be a game changer when it comes to reducing and recovering waste.

Enhanced Material Recovery & Biological Treatment has emerged as the preferred technology that aims to recover as much as 90% of the materials that end up in our landfill. Oxford County is looking for residents' thoughts on the preferred technology and whether the idea resonates with their outlook on what the County should be doing to address our waste.

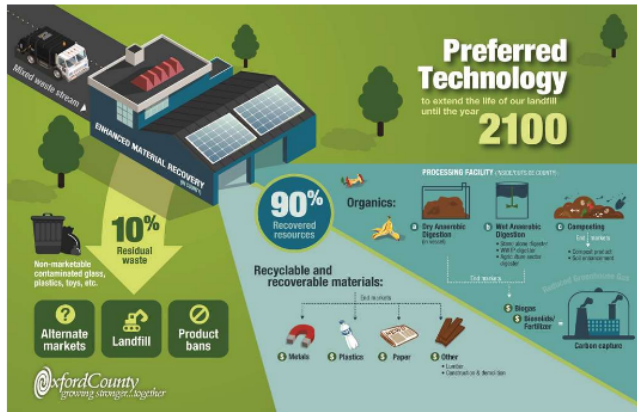
Recovering and diverting 90% of materials from the County's waste stream would extend the lifespan of the Oxford County landfill to the year 2100.

### What is Enhanced Material Recovery & Biological Treatment?

Using this unique but proven technology, garbage would be sorted with organics separated for processing in a manner which could produce biogas, biosolids and compost materials.

Other recyclable and recoverable materials like metals, plastics, construction and demolition materials would be separated and sold/distributed to various end markets.

The goal would be to have as little as 10% of the material left to be disposed of in the landfill.



[OxfordCounty.ca/speakup](https://OxfordCounty.ca/speakup)

- Council reports
- Infographic
- Presentations (Council + public meeting)
- Survey and comment form
- To be posted: Video of public meeting
- Updates