



Module: Careers in Waste Management

Introduction

This module explores career opportunities in waste management, from the curb to final disposal and everything in-between! Students will begin to think about the connection between their interests and opportunities to apply these interests in waste management careers. Students will also begin to consider a wide variety of education options to support these opportunities.

Learning Objectives

1. Understand the levels of government and regional responsibilities
2. Define solid waste management, municipal waste, and residential waste
3. Understand why waste management is important
4. Explore career options in municipal solid waste management
5. Make a connection between personal interest and opportunities to apply those interests to careers in waste management industry
6. Identify ways to get involved in waste management

Regional Municipality of Durham

The Region of Durham was established in 1974 and is in the highly developed and populated centre of Ontario, east of Toronto.

Quick facts

- Approximately 2,535 square kilometres in area
- Population of approximately 700,000 (estimated to grow to 1.2 M by 2041)
- Upper level of a two-tier government; Regional and Municipal
- Comprised of eight area municipalities:
 - Town of Ajax
 - Township of Brock
 - Municipality of Clarington
 - City of Oshawa
 - City of Pickering
 - Township of Scugog
 - Township of Uxbridge
 - Town of Whitby

Watch our [Durham 101](#) video to learn more about the roles and responsibilities of the Region – including waste management!

Who Does the Region's Waste Management Division Service?

The Region of Durham's Works Department provides essential services, many of which impact our daily lives, including waste management. The Region's Waste Management Division services

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approximately 200,000 households, 400 multi-residential buildings, and some areas of the business improvement areas (BIA). BIA's are specially designated zones within the downtown cores with a mix of small businesses and residential homes that generate waste. The Region's Waste Management Division does not service commercial, industrial, or institutional buildings. The Region's Waste Management Division is responsible for the disposal of residential waste within all eight area municipalities.

What is Solid Waste Management?

Solid waste management is all the activities required to manage waste from its creation to disposal. These activities include the collection, transportation, treatment, and disposal to name a few. In addition to these activities there is also planning, legal and regulatory frameworks required to manage solid waste properly and safely. Watch our [Solid Waste Management Overview](#) video to learn more!

Municipal Solid Waste

In Durham Region, the responsibility for managing and reducing waste is shared by the Region and its eight area municipalities. The Region is responsible for residential waste from the curb, multi-residential buildings and from the Region's waste management facilities.

What is Residential Solid Waste?

Residential waste (or household waste) is garbage, recyclables and compostable materials generated by residential homes, multi-residential building and small local businesses. This waste can include a wide variety of materials including non-hazardous and hazardous wastes. Non-hazardous waste includes materials such as plastics, food scraps, metals, and paper – many of which can be recycled or composted. Hazardous waste includes items such as household cleaners, paint, and batteries that must be brought to a waste management facility for proper disposal to protect the environment.

The Region is responsible for the disposal of all residential waste (waste generated from residential homes and multi-residential buildings) collected from the curb, and from the Region's waste management facilities.

Why choose a career in waste management?

Waste management is an important and ever evolving industry with extensive career possibilities. Changes in how materials are produced, packaged, and consumed have a significant impact on the waste management industry, as well as increased public awareness and sustainability efforts that help drive new waste management innovations. Waste management has evolved from simply placing waste into the ground, to include increased waste diversion programs such as recycling, organic collection and treatment, energy-from-waste, public-education programs to reduce solid waste at the source, and more attention to manufacturing processes and product life cycles.

The reality is that waste management is much more than just garbage. It takes a huge workforce, with a wide variety of skill sets, to ensure waste is managed in a way to protect the environment and our communities.

What type of education is required for careers in waste management?

Employment opportunities exist for a wide variety of interests and skill levels. Students who may not be interested in attending post secondary schooling and enjoy working in the outdoors may find

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opportunities working in jobs such as waste collectors, transfer station labourers and landfill attendants. Opportunities in the waste industry increase with the addition of post secondary education – from equipment operators, field and lab technicians and waste management clerks to policy makers, engineers, and scientists to name a few! Available post-secondary fields of study in the waste management sector include but are not limited to the subjects listed below.

College

- Environmental Technician / Technology
- Sustainable Waste Management
- Environmental Management
- Medium / Heavy Equipment Operator
- Heavy Equipment Technician
- Machinist / Millwright / Electrician
- Business Administration
- Contract Management
- Project Management
- Marketing
- Accounting
- Conservation and Environmental Law Enforcement
- Ecosystem Management
- Power Engineering
- Resource Drilling Technician

University

- Environmental Studies/Science
- Environmental Management
- Business Administration / Finance
- Contract Management /Administration
- Communications/ Public Consultation/Public & Government Relations
- Computer Science / GIS
- Project Management
- Human Resources Management
- Human / Physical Geography
- Biology / Chemistry / Physics
- Engineering
- Economics
- Planning
- Political Science
- Law

How can I get involved?

You don't have to wait until you are finished school to get involved in waste management - waste management starts at home with people just like you! You can start by rethinking the products you bring into your house; reducing the amount of waste you produce; reusing items whenever possible and by participating in your curbside waste management programs, including recycling and

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composting. In addition to waste within your home, you may choose to find activities in waste management within your community. Some examples include volunteer positions, student jobs, internships, and academic programs.

Conclusion

Waste management is an important and ever evolving industry. There are many career opportunities to choose from - from the creation of the waste to its final disposal, as well as the planning, legal and regulatory frameworks required to manage solid waste materials properly and safely. Waste needs to be managed responsibly to protect the environment and our community. How we choose to manage waste today impacts the future. You don't have to wait until you are finished school to get involved in waste management - waste management starts at home with residents just like you!

Curriculum Connections

The Ontario Curriculum, Grade 9 and 10: Canadian and World Studies, 2018 (revised)

- Issues in Canadian Geography, Grade 9, Academic (CGC1D)
- Issues in Canadian Geography, Grade 9, Applied (CGC1P)
- Civics and Citizenship, Grade 10, Open (CHV2O)

Guidance and Career Education, Grade 10, 2019 (revised)

- Discovering the Workplace, Grade 10, Open (GLD2O)

The Ontario Curriculum, Grades 11 and 12: Canadian and World Studies, 2015 (revised)

- Regional Geography, Grade 11, University/College Preparation (CGD3M)
- World Geography: Urban Patterns and Population Issues, Grade 12, University/College Preparation (CGU4M)
- Environmental Resource Management, Grade 12, University/College Preparation (CGR4M)
- World Issues: A Geographic Analysis, Grade 12, College Preparation (CGW4C)
- Living in a Sustainable World, Grade 12, Workplace Preparation (CGR4E)

The Ontario Curriculum, Grade 9 and 10: Science, 2008 (revised)

- Science, Grade 9, Academic (SNC1D)
- Science, Grade 9, Applied (SNC1P)
- Science, Grade 10, Applied (SNC2P)
- Science, Grade 10, Academic (SNC2D)

The Ontario Curriculum, Grade 11 and 12: Science, 2008 (revised)

- Biology, Grade 11, University Preparation (SBI3U)
- Chemistry, Grade 11, University Preparation (SCH3U)
- Physics, Grade 11, University Preparation (SPH3U)
- Environmental Science, Grade 11, Workplace Preparation (SVN3E)
- Chemistry, Grade 12, University Preparation (SCH4U)
- Earth and Space Science, Grade 12, University Preparation (SES4U)
- Physics, Grade 12, University Preparation (SPH4U)

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