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# *An Inventory of Creosote in Ontario*

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GLBTS Benzo(a)pyrene/Hexachlorobenzene Workgroup Meeting  
June 3, 2008



Environment Canada  
[www.ec.gc.ca](http://www.ec.gc.ca)

Canada

# *Objective*

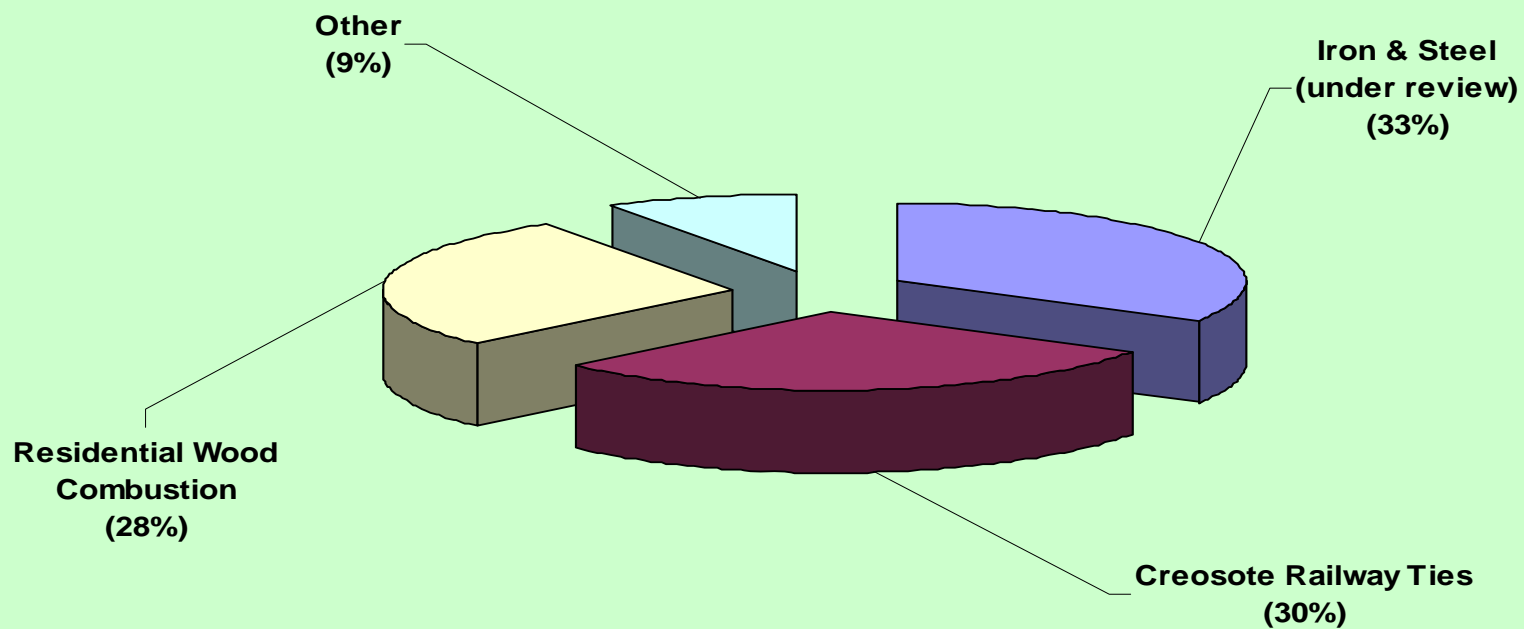
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To establish current use patterns, trends and fate of creosote treated wood in Ontario as well as to identify best means of disposal to minimize the impact of creosoted wood on the Great Lakes Basin



# Background

**2005 Ontario Benzo(a)pyrene Sources**  
8,340 kg (18,348 lbs)





# *Survey Methodology*

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- Contracted Wood Preservation Canada
- March 2008 report by G.E. Brudermann, M.Sc.F. (Frido Consulting Inc.)
- Literature (e.g., historical use data, creosote loss from wood in service)
- Contacted creosote manufacturers/suppliers and end users (railways, utilities, Ontario Ministry of Transport) in 2007



# Creosote Manufacturers & Treaters

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## Manufacturing

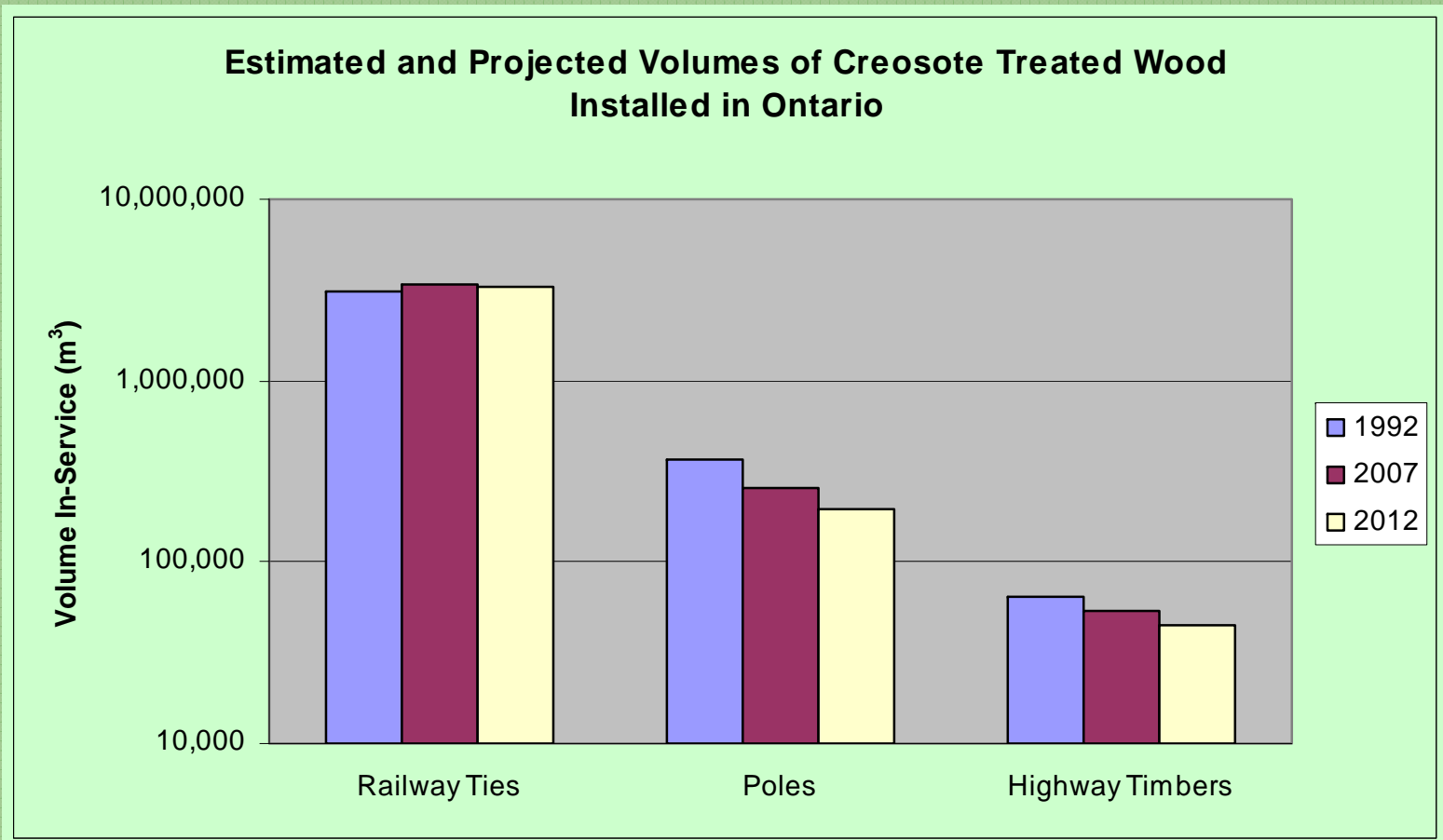
- VFT Canada Inc. (Hamilton, Ontario)
  - *The only manufacturer of creosote in Ontario and Canada*
  - *Operates under the Responsible Care Program*
  - *Holds several registrations for heavy-duty and brush-grade creosote*
  - *2006 National Pollutant Release Inventory numbers for benzo(a)pyrene*
    - *2.1 kg release to air*
    - *5,967 kg transferred off-site for physical treatment*

## Ontario Treaters

- No pressure-treated wood facilities in Ontario using creosote



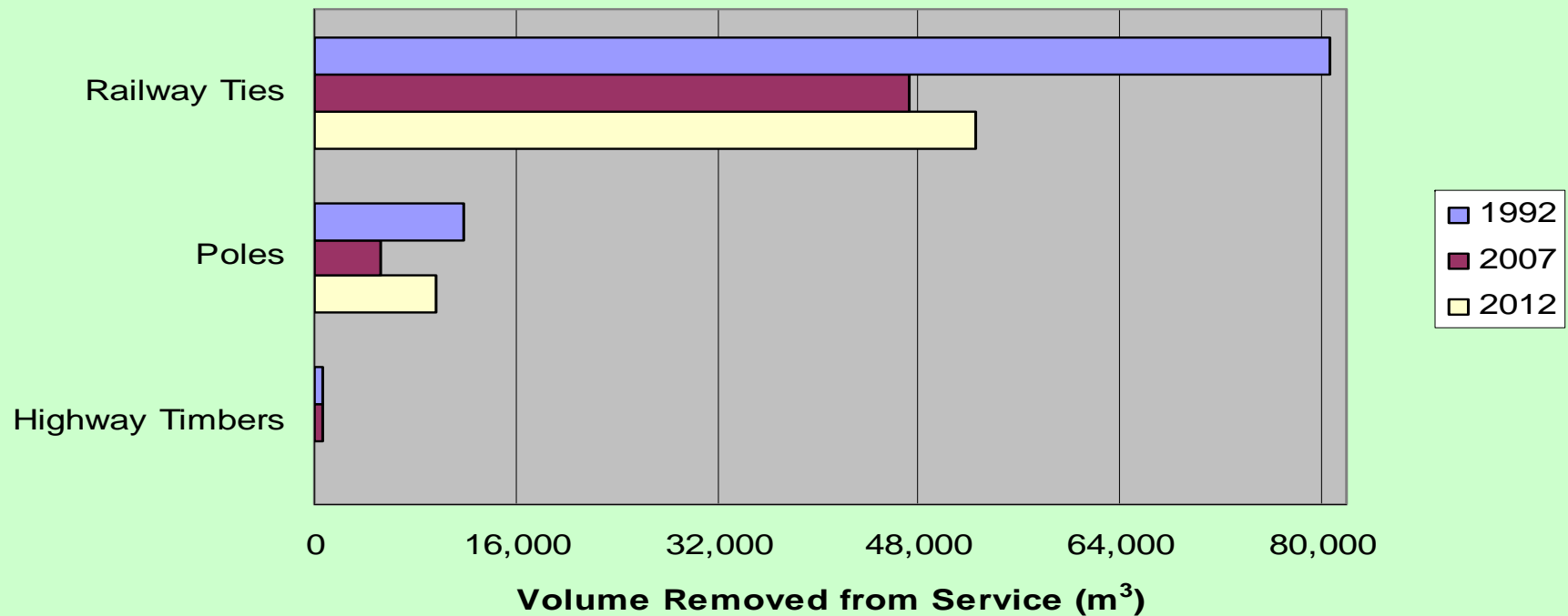
# Creosote Treated Wood Installed in Ontario





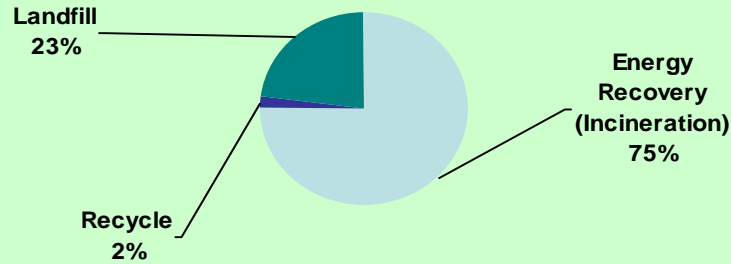
# Creosote Treated Wood Removed from Service in Ontario

Estimated and Projected Volumes of Creosote Treated Wood Removed from Service in Ontario

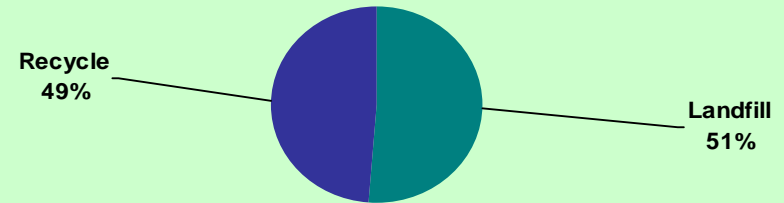


# Creosote Treated Wood Disposal Practices in Ontario (2007 data)

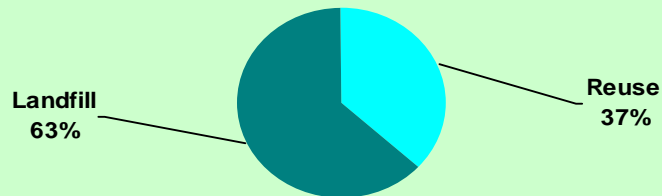
**Railway Ties**  
(47,250 m<sup>3</sup>)



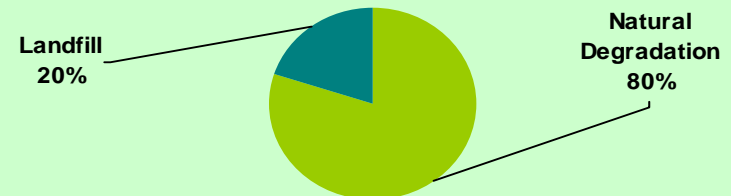
**Poles**  
(5,198 m<sup>3</sup>)



**Highway Timbers**  
(700 m<sup>3</sup>)



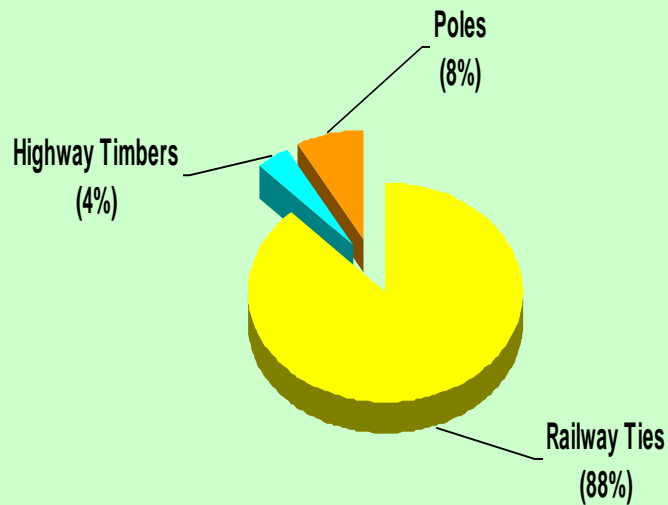
**Other**  
(100 m<sup>3</sup>)



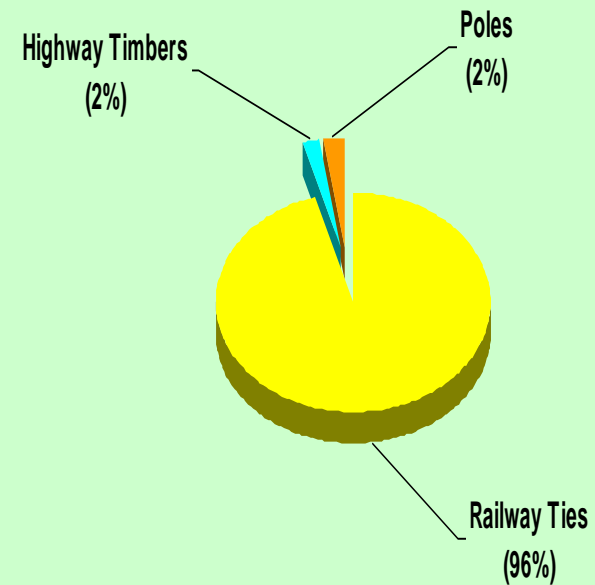


# Polycyclic Aromatic Hydrocarbons from Creosote Treated Wood in Ontario (2007 data)

**Total PAH in Use**  
(136,791,000 kg)



**Total PAH Depleted**  
(387,000 kg)



# *Alternatives to Creosote Treated Wood*

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- Canadian Railways
  - *Have been testing alternatives for many years*
    - *Alternative Preservatives, Composite and Laminated Wood, Concrete, Steel*
      - *Wood generally outperforms alternative materials in costs and usually in performance and service life*
    - *Potentially technical viable option may be Copper Naphthenate in an oil carrier*
      - *Relatively expensive*
      - *Inconsistency in composition may affect performance*
  - *Neither of the two major railways expect a change from current practices*





# Discussion and Recommendations

- By 2028 or sooner, it is expected that all creosote treated wood other than railway ties would have been removed
- Ensure wood is reused and recycled
- Use of available and proven technology for recycling and disposal
- Regulatory barriers for recycling and disposal technology in Canada must be minimized
- Ensure continued political commitment to the proper management of post-use treated wood
- Recognize the benefits of creosoted wood
- Once the barriers have been minimized, landfilling of treated wood residues should be discouraged
- Maximize coordination and collaboration among governments



[http://en.wikipedia.org/wiki/Railway\\_tie](http://en.wikipedia.org/wiki/Railway_tie)



<http://www.seattle.gov/light/news/newsreleases/release.asp?RN=20>



# *Next Steps*

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- Use information from survey to update release estimates for benzo(a)pyrene
- Evaluate release information and need for further actions

