



COUNTY OF
LAMBTON

LAMBTON COUNTY
WASTE MANAGEMENT MASTER PLAN

VOLUME 3

**PUBLIC AND AGENCY
CONSULTATION APPENDICES**

PART III - APPENDIX 3E

M. M. DILLON LIMITED ♦ FEBRUARY 1995

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

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**LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN
PUBLIC AND AGENCY CONSULTATION**

**APPENDIX 3E
PUBLIC AND AGENCY REVIEW
CONSULTATION MATERIALS**

**M.M. DILLON LIMITED
FEBRUARY 1995**

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

SCHEDULE 3E-1

**DISTRIBUTION LIST FOR
NOVEMBER 1993
DRAFT MASTER PLAN REVIEW**

**WASTE MANAGEMENT MASTER PLAN
MASTER PLAN REPORT - DRAFT**

DISTRIBUTION LIST

DATE		VOL 1	<u>CERLOX</u>				<u>BINDER</u>			
			VOL 2	VOL 3	VOL 4	VOL 1	VOL 2	VOL 3	VOL 4	
Dec 20/93	Jane Marsh, Mayor Township of Moore R. R. #1 Mooretown, Ontario NOM 1M0	1								
Dec 20/93	Ron Whitman, Clerk Township of Moore 1155 Emily Street Mooretown, Ontario NOM 1M0	1								
Dec 20/93	Joseph Dedecker, Mayor Township of Sombra Box 243 Port Lambton, Ontario NOP 2B0	1								
Dec 20/93	John DeMars Clerk-Administrator Township of Sombra Box 40 Sombra, Ontario NOP 2H0	1								
Dec 21/93	Fred Thomas, Mayor Township of Bosanquet R. R. #3 Thedford, Ontario NOM 2N0	1								
Dec 21/93	Carol McKenzie, Clerk Township of Bosanquet Box 269 Thedford, Ontario NOM 2N0	1								
Dec 21/93	Gord Minielly, Mayor Town of Forest Box 944 Forest, Ontario NON 1J0	1								
Dec 21/93	John Trudgen Clerk-Administrator Town of Forest Box 610 Forest, Ontario NON 1J0	1								

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DATE		<u>CERLOX</u>				<u>BINDER</u>			
		VOL 1	VOL 2	VOL 3	VOL 4	VOL 1	VOL 2	VOL 3	VOL 4
Dec 21/93	Tom Lawson, Mayor Village of Grand Bend Box 768 Grand Bend, Ontario N0M 1T0	1							
Dec 21/93	Paul Turnbull Clerk-Treasurer Village of Grand Bend Box 340 Grand Bend, Ontario N0M 1T0	1							
Dec 21/93	Mac Parker, Mayor Township of Warwick R. R. #8 Watford, Ontario N0M 2S0	1							
Dec 21/93	Don Craig Clerk-Treasurer Township of Warwick R. R. #8 Watford, Ontario N0M 2S0	1							
Dec 21/93	Muriel Wright Lambton County - WMMP Public Advisory Committee R. R. #1 Camlachie, Ontario N0N 1E0	1							
Dec 22/93	Mike Bradley, Mayor City of Sarnia P. O. Box 3018 Sarnia, Ontario N7N 7N2	1							
Dec 22/93	Dave Boushy, Alderman City of Sarnia 1413 Lakeshore Road Sarnia, Ontario N7S 2M3	1							

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DATE		VOL 1	VOL 2	<u>CERLOX</u>		<u>BINDER</u>			
				VOL 3	VOL 4	VOL 1	VOL 2	VOL 3	VOL 4
Dec 22/93	Al Brogden, Alderman City of Sarnia 326 N. Vidal Street Sarnia, Ontario N7T 5Y6	1							
Dec 22/93	Terry Burrell, Alderman City of Sarnia 954 Champlain Road Sarnia, Ontario N7T 2G2	1							
Dec 22/93	Jim Foubister, Alderman City of Sarnia 1937 Buena Ventura Blvd Bright's Grove, Ontario N0N 1C0	1							
Dec 22/93	Ann Tuplin Commissioner of Administrative Services City of Sarnia Box 3018 Sarnia, Ontario N7T 7N2	1							
Dec 28/93	Francis Veilleux Bluewater Recycling Association Box 1330 Grand Bend, Ontario N0M 1T0	1							
Jan 4/94	Doug Redick, Mayor Village of Alvinston 648 River Street Alvinston, Ontario N0N 1A0	1							
Jan 4/94	Robert Alderman Clerk-Treasurer Village of Alvinston Box 28 Alvinston, Ontario N0N 1A0	1							

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Jan 4/94	Ken Evans, Mayor Village of Arkona 5 Union Street W. Arkona, Ontario N0M 1B0	1							
Jan 4/94	Robert Jefferson Clerk-Treasurer Village of Arkona Box 95 Arkona, Ontario N0M 1B0	1							
Jan 4/94	Penny Phillips, Mayor Township of Brooke Box 33 Inwood, Ontario N0N 1K0	1							
Jan 4/94	Gloria Bedford, Clerk Township of Brooke R. R. #7 Alvinston, Ontario N0N 1A0	1							
Jan 4/94	Keith Houston, Mayor Tonwhsip of Dawn R. R. #4 Dresden, Ontario N0P 1M0	1							
Jan 4/94	Donna MacDougall Clerk-Treasurer Township of Dawn R. R. #4 Dresden, Ontario N0P 1M0	1							
Jan 4/94	Larry O'Neill, Mayor Township of Enniskillen R. R. #4 Petrolia, Ontario N0N 1R0	1							

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Jan 4/94	Duncan McTavish Clerk-Treasurer Township of Enniskillen R. R. #1 Petrolia, Ontario NON 1R0	1							
Jan 4/94	Bill Bilton, Mayor Township of Euphemia R. R. #2 Florence, Ontario NOP 1R0	1							
Jan 4/94	Joan Webster Clerk-Treasurer Township of Euphemia R. R. #2 Bothwell, Ontario NOP 1C0	1							
Jan 4/94	Owen Byers, Mayor Village of Oil Springs 2427 Hwy 21 Oil Springs, Ontario NON 1P0	1							
Jan 4/94	Janis Abbott Clerk-Treasurer Village of Oil Springs Box 22 Oil Springs, Ontario NON 1P0	1							
Jan 4/94	Marcel Beaubien, Mayor Town of Petrolia 579 Queen Street Petrolia, Ontario NON 1R0	1							
Jan 4/94	Brad Loosley Clerk, Admin. & Treas. Town of Petrolia Box 1270 Petrolia, Ontario NON 1R0	1							

**WASTE MANAGEMENT MASTER PLAN
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		VOL 1	VOL 2	VOL 3	VOL 4	VOL 1	VOL 2	VOL 3	VOL 4
Jan 4/94	Frances Wood Clerk-Treasurer Village of Watford 295 Main Street Watford, Ontario N0M 2S0	1							
Jan 4/94	Patricia Davidson, Mayor Village of Wyoming Box 104 Wyoming, Ontario N0N 1T0	1							
Jan 4/94	Caroline DeSchutter Clerk-Treasurer Village of Wyoming Box 250 Wyoming, Ontario N0N 1T0	1							
Jan 4/94	John Bouman R. R. #1 Sombra, Ontario N0P 2H0	1							
Jan 4/94	R.A. Grimshaw, P.Eng. Plant Manager Terra Interational (Canada) Inc. P. O. Box 1900 Courtright, Ontario N0N 1H0	1							
Jan 4/94	Tony Wright ICI Canada Incorporated 90 Sheppard Ave North York, Ontario M2N 6H2	1							
Jan 4/94	Lambton County Public Libraries								
	- Headquarters, Wyoming	1	1	1	1				
	- Sarnia	1	1	1	1				
	- Clearwater	1	1	1	1				
	- Forest	1	1	1	1				
	- Corunna	1	1	1	1				

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MASTER PLAN REPORT - DRAFT**

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				VOL 3	VOL 4	VOL 1	VOL 2	VOL 3	VOL 4
Jan 5/94	Dr. Keith MacMillan Director of Legal and Regulatory Affairs Monsanto Canada 2330 Argentinia Road Box 787 Mississauga, Ontario L5M 2G4	1							
Jan 5/94	Beth Lockhart Property Manager Novacor Petrochemicals Inc. P. O. Box 3060 Sarnia, Ontario N7T 7M1	1							
Jan 6/94	Piero Amodeo MOEE - Approvals Branch 250 Davisville Avenue 5th Floor Toronto, Ontario M4S 1H2					1	1	1	1
Jan 6/94	Juanita Berkhout MOEE - Waste Reduction Office 40 St. Clair West 7th Floor Toronto, Ontario M4V 1M2					1	1	1	1
Jan 10/94	Eric Hunter Laidlaw Environmental Services Ltd. 265 N. Front Street Sarnia, Ontario N7T 7X1	1							
Jan 10/94	Lillian Harkins 1919 Confederation Road Sarnia, Ontario N7T 7H3	1							
Jan 18/94	Mark Brunette City of London Maintenance Division Box 5035 London, Ontario N6A 4L9	1							

**WASTE MANAGEMENT MASTER PLAN
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DATE		<u>CERLOX</u>				<u>BINDER</u>			
		VOL 1	VOL 2	VOL 3	VOL 4	VOL 1	VOL 2	VOL 3	VOL 4
Jan 18/94	Paul Brubaker Ecologistics Ltd. 490 Dutton Drive Suite A1 Waterloo, Ontario N2L 6H7	1							
Jan 25/94	PAC Committee - split up for group study	5				1	2	1	1
Feb 1/94	Kristina Lee Wallaceburg Clean Water Committee 65 Phair Ave Wallaceburg, Ontario N8A 2M4	1							

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

SCHEDULE 3E-2

**DECEMBER 1993 AND JANUARY 1994
NEWSPAPER AD RE: PUBLIC REVIEW**

PUBLIC REVIEW

LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN DRAFT REPORT

Lambton County has prepared a draft Waste Management Master Plan (WMMP) to determine the best way to manage our waste for the next 20 years. Draft recommendations for the management of Lambton County's wastes over the long term include:

- waste reduction, reuse, and recycling at source;
- backyard and central composting;
- materials recovery; and
- landfilling.

Preliminary recommendations for the development and siting of these activities and facilities are also introduced. The Draft Master Plan is presented in four volumes as follows:

- Volume 1 - The Master Plan Report;
- Volume 2 - Technical Appendices;
- Volume 3 - Public and Agency Consultation Appendices; and
- Volume 4 - Site Selection Appendices.

The Draft Master Plan Report is available for a public review period of 60 days, beginning January 4, 1994, to March 7, 1994. All comments will be considered. Volume 1 of the Draft Report will be available at your local Municipal Office. The four-volume set will be available at the Lambton County Administration Office in Wyoming, and at the following Public Libraries:

- Sarnia - 124 Christina Street South
- Clearwater - 1362 Lambton Mall Road
- Corunna - 417 Lyndock Street
- Forest - King Street West

and by request through any other County branch Library.

Please forward all comments in writing by March 11, 1994, to:



Mr. Jim Kutyba, P.Eng.
Administrator, Waste Management
Lambton County
Highway 21, Box 3000
Wyoming, Ontario N0N 1T0

For more information, please call Jim Kutyba at (519) 845-0801 (fax: (519) 845-3817).

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

SCHEDULE 3E-3

**AGENCY REVIEW LETTER
FEBRUARY 1994**



WASTE MANAGEMENT

Hwy 21, Box 3000
Wyoming, Ontario
N0N 1T0

Phone: 519-845-0801
Fax: 519-845-3160

February 14, 1994

2

**Lambton County
Waste Management Master Plan
Draft Report - Agency Review**

Dear Sir:

Lambton County has prepared a Draft Waste Management Master Plan (WMMP) to determine the best way to manage its wastes for the next 20 years. Draft recommendations for the management of Lambton County's wastes over the long term include:

- waste reduction, reuse, and recycling at source;
- backyard and central composting;
- materials recovery; and
- landfilling.

Preliminary recommendations for the development and siting of these activities and facilities are also introduced.

The Draft Master Plan is presented in four volumes as follows:

**Volume 1
Master Plan Report**

This volume contains a summary of the main activities and findings of the Lambton County WMMP planning process. It presents the study background, a summary of public and agency consultation, descriptions of waste diversion and waste generation, a description of the waste management system development, the short-term and long-term waste diversion strategies, and the results of the facility siting and transfer station feasibility studies. The last chapter deals with the implementation of the Master Plan.



Continued

February 14, 1994

- Volume 2
Technical Appendices** This volume contains the technical appendices related to the development of the waste management system. The appendices include a glossary; the Master Plan Terms of Reference; a description of waste management regulations, legislation and policies; details regarding the determination of waste quantities and the waste diversion rate; details of the transfer station feasibility study; details of the development of the long-term waste diversion strategy; and a description of the Concordance Analysis Method.
- Volume 3
Public and Agency
Consultation Appendices** This volume contains appendices related to the public and agency consultation program. Included are notices, newsletters, agendas, minutes of meetings and sign-in sheets and hand-outs from the Public Information Centres.
- Volume 4
Site Selection Appendices** This volume presents the technical appendices for the site selection process. This includes some detailed scale maps related to the identification of alternative sites and the technical reports related to the detailed comparison of the four potential sites.

Your organization is invited to participate in the review of the Draft Master Plan. A 60-day government agency review period is scheduled for April and May 1994. Please indicate on the attached form whether or not your organization wishes to participate in the review of the Draft Master Plan. Please also indicate in the space provided:

- The specific volume(s) of the Draft Master Plan (if any) that you wish to receive for review; and
- the name and address of the appropriate contact person for your organization.

Please return your completed response form to Ms. Annie Chan, at the address indicated, by March 4, 1994. If a response is not received by that date, it will be assumed that your organization does not wish to participate. If you would like additional information, please call Catherine Fletcher, M.M. Dillon Limited, at 519-438-6192 or call the undersigned at 519-845-0801.

Yours truly,

James J. Kutyba, P. Eng.
Administrator, Waste Management

JJK/AC/nb

Encl.

cc: J. Berkhout, MOEE
P. Amodeo, MOEE
O. Wigle, MOEE



**DRAFT LAMBTON COUNTY
WASTE MANAGEMENT MASTER PLAN**

AGENCY REVIEW RESPONSE FORM

Please complete this form and return it to M.M. Dillon Limited, as noted below.

1. We would like to review the Draft Master Plan. Please send us the following volume(s) of the Draft Master Plan:

- Volume 1
- Volume 2
- Volume 3
- Volume 4.

OR

- We do not wish to review the Draft Master Plan, but would like to be kept informed.

OR

- We do not wish further correspondence regarding the Master Plan.

2. The appropriate contact name and address for our organization is:

Telephone:

Fax:

Please return this form by March 4, 1994, to:

DILLON

M.M. Dillon Limited
P.O. Box 1850, Station A
North York, Ontario
M2N 6K7

Attention: Ms. Annie Chan

AGENCIES - DRAFT REVIEW LETTER

Mr. Bryan D. Boyle
Ontario Ministry of Agriculture and Food
Box 730
Petrolia, Ontario
N0M 1R0

Mr. Tonu Tosine
Associate Director
Land Use Planning Branch
Ministry of Agriculture and Food
801 Bay Street, 8th Floor
Toronto, Ontario
M7A 2B2

Mr. P. Donnelly, Planner
Ausable-Bayfield Conservation Authority
P.O. Box 2410
Exeter, Ontario
N0M 1S0

Ms. Carol Miller, Manager
Bell Canada
40 Hunter Street, 2nd Floor
Chatham, Ontario
N7L 3L9

Chief Tom Bresette
Chippewas of Kettle & Stony Point First Nation
53 Indian Lane, R.R. 2
Forest, Ontario
N0N 1J0

Chief Philip Maness
Chippewas of Sarnia First Nation
978 Tashmoo Avenue
Sarnia, Ontario
N7T 7H5

Ms. Joan King, Chair
Citizens of Plympton
Action on the Environment
R.R. 1
Camlachie, Ontario
N0N 1E0

Ms. Sherri Morrison, Chair
Citizens' Environmental Action Group
R.R. 1
Mooretown, Ontario
N0N 1M0

Mr. D.A. Reynolds, Manager
Engineering & Environmental Services
CN North America
277 Front Street West, Suite 503
Toronto, Ontario
M5V 2X7

Mr. R.J. Spence
Environmental Protection Officer
CN Rail
277 Front Street West, Suite 503
Toronto, Ontario
M5V 2X7

E. Waldinsperger, Environmental Officer
Southern Ontario District, Engineering Services
CN Rail Company
277 Front Street West, Suite 401
Toronto, Ontario
M5V 2X7

Mr. M. Hamilton, Regional Director
Ministry of Community and Social Services
195 Dufferin Avenue
IBM Building, 5th Floor
London, Ontario
N6A 1K7

Ms. Kathy MacPherson
Accommodation Unit
Human Resources Branch
Ministry of Community and Social Services
2 Bloor Street West, 23rd Floor
Toronto, Ontario
M7A 1E9

Ms. Liz Clarke, Chair
Concerned Citizens Against Incineration
R.R. 1
Courtright, Ontario
N0N 1H0

Mr. Peter Carruthers
Environmental Assessment Co-ordinator
Archaeology & Heritage Planning Unit
Cultural Operations Branch
Ministry of Culture, Tourism and Recreation
77 Bloor Street West, 7th Floor
Toronto, Ontario
M7A 2R9

Mr. Neal Ferris
Development Review Officer
Ministry of Culture, Tourism and Recreation
55 Centre Street
London, Ontario
N6J 1T4

Mr. John Shipman
Manager, Corporate Policy
Corporate Affairs Branch
Ministry of Culture, Tourism and Recreation
77 Bloor Street West, 7th Floor
Toronto, Ontario
M7A 2R9

Mr. Steven Mitchell, O.A.A.
Capital Policy Architect, School Capital Program
School Business & Finance Branch
Department of Education
Ministry of Education & Training (MET)
900 Bay Street, Room 2166, Mowat Block
Toronto, Ontario
M7A 1L2

Mr. Egils Tannis, O.O.A.
Capital Policy & Program Analyst
Grants Administration Branch
Department of Colleges and Universities
Ministry of Education & Training
900 Bay Street, 9th Floor, Mowat Block
Toronto, Ontario
M7A 1L2

Mr. Gary Kay, Co-ordinator
Waste Management Programs
Ministry of Environment and Energy
985 Adelaide Street South
London, Ontario
N6E 1V3

Mr. W. Ng, Director
Approvals Branch
Attention: Mr. A. Dominski
Ministry of Environment and Energy
250 Davisville Avenue, 3rd Floor
Toronto, Ontario
M3S 1H2

Ms. Jill Pritchard-Scott
Environmental Assessment Co-ordinator
Conservation and Renewables Section
Policy Division
Ministry of Environment and Energy
56 Wellesley Street West, 14th Floor
Toronto, Ontario
M7A 2B7

Mr. W. Bien, Chairman
Environmental Assessment Co-ordinating Committee
Ontario Region, Conservation & Protection
Environment Canada
P.O. Box 5050, 867 Lakeshore Road
Burlington, Ontario
L7R 4A6

Dr. R. Schabas, Director
Public Health Branch/
Chief Medical Officer of Health
Attention: Ms. Joyce Nsubuga
Ministry of Health
15 Overlea Boulevard, 5th Floor
Toronto, Ontario
M4H 1A9

Hydro-Electric Commission of the
Town of Bothwell
P.O. Box 99, 137 Elm Street East
Bothwell, Ontario
N0P 1C0

Hydro-Electric Commission of
The City of Sarnia
855 Confederation Street
Sarnia, Ontario
N7T 7L6

Hydro-Electric Commission of
The Village of Arkona
Box 249, 4 Richmond Street
Arkona, Ontario
N0M 1B0

Hydro-Electric Commission of
The Village of Oil Springs
Main Street
Oil Springs, Ontario
N0N 1P0

Hydro-Electric Commission of
The Village of Wyoming
P.O. Box 750, 641 Broadway Street
Wyoming, Ontario
N0N 1T0

Ms. Michelle K. Jones
Environmental Assistant, Environmental Planning
Department of Indian and Northern Affairs Canada
25 St. Clair Avenue East, 5th Floor
Toronto, Ontario
M4T 1M2

Mr. Jim Travers, President
Lambton Bowhunters Association
151 Finch Avenue
Sarnia, Ontario
N7S 5G9

Mr. Paul Mantle, Safety Officer
Lambton College
1457 London Road
Sarnia, Ontario
N7T 7K4

Mr. Grant Yeo
Director of Education
Lambton County Board of Education
Box 2019, 200 Wellington Street
Sarnia, Ontario
N7T 7L2

Mr. J.F. Ross
Director of Education
Lambton County Roman Catholic
Separate School Board
430 Christina Street South
Sarnia, Ontario
N7T 2N8

Mr. Andrew Taylor
Lambton Health Unit
160 Exmouth Street
Point Edward, Ontario
N7T 7Z6

Lambton Sportsmen Ltd.
c/o Edward Alin
1299 Indian Road North
Sarnia, Ontario
N7V 4C6

Mr. Joe Connop
Lambton Wildlife Incorp.
P.O. Box 681
Sarnia, Ontario
N7T 7J7

Mr. R.M. Farewell, Environmental Planner
Realty Group, Real Estate Branch - Central
Management Board Secretariat
777 Bay Street, 15th Floor
Toronto, Ontario
M5G 2E5

Mr. Ron Brown
Policy and Administration Project Planner
Plans Administration Branch, North and East
Ministry of Municipal Affairs
777 Bay Street, 14th Floor
Toronto, Ontario
M5G 2E5

Ms. Shirley Crockett, Planner
Plans Administration Branch - Central and Southwest
Ministry of Municipal Affairs
777 Bay Street, 14th Floor
Toronto, Ontario
M5G 2E5

Mr. Larry Douglas, Director
Corporate Policy & Planning Secretariat
Ministry of Natural Resources
99 Wellesley Street West
Room 6440, Whitney Block
Toronto, Ontario
M7A 1W3

Mr. Ezio Nadalin, Planner
Ministry of Natural Resources
Box 1168, 1023 Richmond Street West
Chatham, Ontario
N7M 5J5

Mr. Don Ignacy
Manager, Financial Planning and Policy
Co-ordination
Ministry of Northern Development and Mines
159 Cedar Street, 7th Floor
Sudbury, Ontario
P3E 6A5

Ms. Cindy Civiero
Ontario Hydro
700 University Avenue, A5 F12
Toronto, Ontario
M5G 1X6

Mr. John Van West, Policy Analyst
Negotiations Support and Community Relations
Branch
Ontario Native Affairs Secretariat
595 Bay Street, Suite 1009
Toronto, Ontario
M5G 2C2

Mr. Peter Westfall
People Against Landfill Expansion
1778 Churchill Road
Sarnia, Ontario
N7T 7H3

Public Utilities Commission of
The Town of Forest
P.O. Box 59, 19 Ann Street
Forest, Ontario
N0N 1J0

Public Utilities Commission of
The Town of Petrolia
P.O. Box 640, 4156 Petrolia Street
Petrolia, Ontario
N0N 1R0

Public Utilities Commission of
The Village of Alvinston
P.O. Box 130, 558 Elgin Street
Alvinston, Ontario
N0N 1A0

Public Utilities Commission of
The Village of Grand Bend
P.O. Box 250, 14 Ontario Street North
Grand Bend, Ontario
N0M 1T0

Public Utilities Commission of
The Village of Point Edward
102 St. Clair Street
Point Edward, Ontario
N7V 1N7

Public Utilities Commission of
The Village of Thedford
P.O. Box 24, 28 Main Street
Thedford, Ontario
N0M 2N0

Public Utilities Commission of
The Village of Watford
P.O. Box 490, 522 Huron Street
Watford, Ontario
N0M 2S0

Ms. Cathy Lovelock, Chair
Sarnia Citizens Action Network
817 Lynnwood Avenue
Sarnia, Ontario
N7T 7A3

Fire Chief Robert Timms
Sarnia Fire Department
1410 Wellington Street
Sarnia, Ontario
N7S 5C3

Mr. Paul Carter, Chair
Sarnia Lambton Environmental Vigil
and Action Committee
303 Brock Street North
Sarnia, Ontario
N7T 5Z9

Dr. C. Greensmith
Medical Officer of Health
Sarnia-Lambton Health Unit
160 Exmouth Street
Point Edward, Ontario
N7T 7Z6

Mr. B.A. Francis, Project Manager
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Ministry of the Solicitor General
and Correctional Services
200 First Avenue West, P.O. Box 4100
North Bay, Ontario
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Mr. A.I. MacIver
Fire Protection Technologist
Research Standards
Office of the Fire Marshall
Ministry of the Solicitor General
7 Overlea Boulevard, 3rd Floor
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M4H 1A8

Staff Sargeant Al Squires
Operational Policy and Planning Branch
Ontario Provincial Police
Ministry of the Solicitor General
90 Harbour Street, 3rd Floor
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St. Clair Parkway Commission
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Corunna, Ontario
N0N 1G0

Ms. Irene Posliff, Senior Planner
St. Clair Region Conservation Authority
205 Mill Pond Crescent
Strathroy, Ontario
N7G 3P9

Tecumseh Gas Storage Ltd.
c/o Consumers Gas Co.
Land Development
P.O. Box 650
Scarborough, Ontario
M1K 5E3

TransCanada Pipelines Ltd.
c/o Prospect Taxation Department
P.O. Box 1000, Station M
Calgary, Ontario
T2P 2K5

Mr. Bill Clark, Manager
Engineering and Environment
Transport Canada
Airports Group
4900 Yonge Street, Suite 300
North York, Ontario
M2N 6A5

Mr. A.E. Irving, P.Eng.
Planning, South-Western Region, London
Ministry of Transportation
P.O. Box 5338, Postal Station D
659 Exeter Road
London, Ontario
N6A 5H2

Mr. Douglas A. Sulman, Q.C.
General Counsel and Secretary
Union Gas Limited
Executive Offices
50 Keil Drive North, P.O. Box 2001
Chatham, Ontario
N7M 5M1

Chief Dan Miskokoman
Walpole Island First Nation
R.R. 3
Wallaceburg, Ontario
N8A 4K9

Mr. Larry Luth
Waste Reduction Committee
221 North Christina Street
Sarnia, Ontario
N7T 5V1

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

**SCHEDULE 3E-4
RESPONSES TO
FEBRUARY 1994 AGENCY REVIEW LETTER**

**SCHEDULE 3E-4
RESPONSES TO AGENCY REVIEW LETTER**

Agency	Volumes Requested
<p>Mr. Bryan D. Boyle Ontario Ministry of Agriculture and Food Box 730 Petrolia, Ontario NOM 1R0</p>	1, 2, 3 4
<p>Ms. Donna S. Mundie Land Use Planning Branch Ministry of Agriculture and Food 801 Bay Street, 8th Floor Toronto, Ontario M7A 2B2</p>	1, 2, 3, 4
<p>Mr. Patrick Donnelly Planning Supervisor Ausable-Bayfield Conservation Authority R.R. 3 Exeter, Ontario NOM 1S5</p>	3, 4
<p>Mr. Dave Sutherland Environmental Technologist CN North America 277 Front Street West, Suite 503 Toronto, Ontario M5V 2X7</p>	1
<p>Mr. Neal Ferris Development Review Officer Ministry of Culture, Tourism and Recreation 55 Centre Street London, Ontario N6J 1T4</p>	1, 4
<p>Mr. Steven Mitchell, O.A.A. Capital and Operating Grants Administration Ministry of Education & Training (MET) 900 Bay Street, Room 2166, Mowat Block Toronto, Ontario M7A 1L2</p>	1, 2, 3, 4
<p>Mr. J. McNeely Approvals Branch Ministry of Environment and Energy 250 Davisville Avenue, 3rd Floor Toronto, Ontario M3S 1H2</p>	1, 4

**SCHEDULE 3E-4
RESPONSES TO AGENCY REVIEW LETTER
(Continued)**

Agency	Volumes Requested
Mr. Don Willock Sarnia Hydro P.O. Box 2140 855 Confederation Street Sarnia, Ontario N7T 7L6	1, 2
Ms. Michelle K. Jones Environmental Assistant, Environmental Planning and Management Department of Indian and Northern Affairs Canada 25 St. Clair Avenue East, 5th Floor Toronto, Ontario M4T 1M2	1
Mr. Paul Mantle Safety Officer Lambton College 1457 London Road Sarnia, Ontario N7T 7K4	1, 2
Mr. Andrew Taylor Lambton Health Unit 160 Exmouth Street Point Edward, Ontario N7T 7Z6	1, 4
Mr. Ross M. Farewell Environmental Co-ordinator Realty Group, Real Estate Branch - Central Management Board Secretariat 777 Bay Street, 15th Floor Toronto, Ontario M5G 2E5	4
Mr. Ezio Nadalin Area Planner Ministry of Natural Resources Box 1168, 1023 Richmond Street West Chatham, Ontario N7M 5J5	1, 2, 3, 4
Mr. Bern H. Feenstra Resident Geologist Ministry of Northern Development and Mines 659 Exeter Road London, Ontario N6A 4L6	1, 2, 3, 4

**SCHEDULE 3E-4
RESPONSES TO AGENCY REVIEW LETTER
(Continued)**

Agency	Volumes Requested
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Staff Sargeant Al Squires Operational Policy and Planning Branch Ontario Provincial Police Ministry of the Solicitor General 90 Harbour Street, 3rd Floor Toronto, Ontario M7A 2S1	1, 4
Ms. Irene Posliff, Senior Planner St. Clair Region Conservation Authority 205 Mill Pond Crescent Strathroy, Ontario N7G 3P9	1, 2, 3, 4
Mr. Ray Schnegelsberg Manager, Engineering Tecumseh Gas Storage Ltd. P.O. Box 520 Corunna, Ontario N0N 1G0	1, 4
Mr. Douglas A. Sulman, Q.C. Vice-President, General Counsel and Secretary Union Gas Limited Executive Offices 50 Keil Drive North, P.O. Box 2001 Chatham, Ontario N7M 5M1	1, 2
Mr. Michael Williams Walpole Island First Nation Heritage Centre R.R. 3 Wallaceburg, Ontario N8A 4K9	1, 2, 3, 4

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

SCHEDULE 3E-5

**PUBLIC ADVISORY COMMITTEE
COMMENTS AND RESPONSES
FEBRUARY 1995**

**LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN
DRAFT MASTER PLAN REPORT REVIEW
PUBLIC ADVISORY COMMITTEE COMMENTS AND RESPONSES**

Comment	Response	Action Taken
<p>Volume 1, Chapters 3, 4, 7</p> <p>It is recommended that an Executive Summary of no more than two pages in length preface each chapter. That summary should highlight the salient facts, recommendations and conclusions presented in the chapter. Duplicates of those individual summary pages could then be drawn together to form an Executive Summary of the Master Plan.</p>	<p>Once the Master Plan has been reviewed, revised, agreed upon, and is ready to be finalized, an Executive Summary will be prepared. The suggestion to preface each chapter with a summary will be reviewed with the Steering Committee.</p>	<p>An Executive Summary will be prepared in conjunction with preparation of the EAA/EPA submission in the event the County decides to apply for approvals for a new landfill/facility. The Executive Summary will preface the whole report, rather than each individual chapter.</p>
<p>Attributing a waste generation rate of 1.5 kg per capita per day to residents of Enniskillen (Volume 2, Table D-1) begs to be challenged. It is unlikely that any of the municipalities who did not provide organized collection services at the time of the 1985 questionnaire, would have more than a guess in respect to quantity of waste generated by their residents.</p> <p>Those municipalities providing collection services could refer to tonnage billed by the contractor. However, in the absence of scale facilities, those data also reflect estimates rather than actuals.</p> <p>Table 3.4 reflects a calculation of waste diversion. Unfortunately, it does not accurately reflect the fact that within rural areas, one need not buy a composter in order to return organic waste to the soil. Nor has it required a waste disposal crisis to alert rural dwellers to this capability.</p>	<p>It is acknowledged that the generation rate of 1.5 kg/capita/day determined for Enniskillen Township from the survey completed for Stage 1 of the WMMMP is an estimate. This is in part why a generation rate of 1.1 kg/capita/day, which is typical for rural areas, was used for determining future waste quantity projections. It is important to note that the waste generation rates determined in Stage 1 were compared against actual disposal quantities reported by the County in 1992. The rates from Stage 1 were found to still be reasonably accurate.</p> <p>(Reference: Stage 1 Final Report, December 1986; Chapter 3, Pages 3-4 and 3-5; Appendix 2D.)</p> <p>It is agreed that residents in rural areas do not need a backyard composter to compost and that this is not reflected in Table 3.4. Residents in rural areas who compost without a composter have likely been doing so for many years. Table 3.4 reflects waste diversion resulting from initiatives that have started since 1987, which is the MOEE's base year for determining waste diversion.</p> <p>(Reference: Chapter 3, Table 3.4; Section 3.3.2.)</p>	<p>No action required.</p>

Footnotes

1. Page, section and chapter references in the "Comment" and "Response" columns refer to the November 1993 Draft Report.
2. The "Action Taken" column refers to revisions that have been incorporated into the February 1995 Report.

Comment	Response	Action Taken
<p>The wastes under consideration in this Plan should be accurately measured before site sizing and location is finalized. Measurement should take into account seasonal variation as well as differentiation of waste class, generated by each municipality in the Plan.</p>	<p>The waste generation rates determined in Stage 1 of the WMMP were used to determine future waste quantities. These quantities were used to determine the site size (75 ha) assumed for the purposes of siting. A check of the generation rates versus the waste quantities generated in the County in 1992 indicated that the rates were still reasonably accurate for the County. The site size assumed allows the County maximum flexibility in terms of both site design and site life. (Reference: Chapter 3, Pages 6 and 7.)</p>	<p>No action required.</p>
<p>In paragraph 7.4.1 under the heading "Compensation of Municipalities" it is stated that "Bill 35 stipulates that once the County has designated a landfill site for a local municipality, the municipality cannot utilize any other facilities for waste disposal". Presuming this quotation accurately reflects the intent of Bill 35, that provision bears challenge. Although sharing in the cost of new site development, is it not to the economic benefit of the County and every ratepayer to select the most appropriately economical means available to dispose of wastes? It is the opinion of this sub-committee, that waste disposal costs will rise; however, to accept this provision will force that rise to be exponential.</p>	<p>Bill 35 does not stipulate that the County is required to designate all lower-tier municipalities to use the County's new landfill site. The County can still allow lower-tier municipalities to utilize other facilities, if the County determines that this is in their best interest. However, it is expected that it will be most cost effective to operate the new site if it is fully utilized to the maximum extent. The cost of operating the new site plus subsidizing tipping fees for some municipalities to go to other sites will likely result in overall higher costs for the County. (Reference: Chapter 7, Section 7.4.1.)</p>	<p>No action required.</p>
<p>Much groundwork has been laid for adoption of a site in Moore Township for a new landfill. We would welcome an open discussion on the merits of the site chosen as compared to others more centrally located and/or more technically advanced.</p>	<p>The siting process for the new composite facility was a rational, systematic process based on criteria agreed upon by all study participants, meeting EAA requirements. The new facility(ies) would be state-of-the-art. The County is also, however, pursuing private sector options for waste management, including landfill.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Landfill is not a viable long-term solution to waste disposal. Combustion is referred to in Chapter 4 of the Plan, yet little discussion is provided upon which a reader can determine the current "state of the art". This sub-committee would be interested in seeing more information on the "pros" and "cons" of combustion (by techniques now or soon to be available) and that the principles of the 3Rs, especially diversion, be exhausted before material is landfilled.</p>	<p>On September 11, 1992, the provincial government enacted Regulation 555/92 under the EPA thereby banning the future development of municipal waste incinerators in Ontario. As a result, combustion components were considered to be no longer an option in the WMMP. Further consideration of combustion is not warranted at this time.</p> <p>(Reference: Chapter 4, Section 4.4.)</p> <p>Regarding diversion, a central aim of the Plan is that waste diversion should be maximized to the degree possible, given the other planning objectives and considerations.</p>	<p>No action required.</p>
<p>Footnote 4 of Table 3.3 on page 3-11 qualifies the materials collected for recycling. Please clarify.</p>	<p>Table 3.3 identifies all of the types of materials collected by each of the three contractors, across all the municipalities they serve. Footnote 4 of the table provides the qualification that not all of the materials listed are collected in each municipality served.</p>	<p>No action required.</p>
<p>Tax notices should be prepared for property owners by each municipality to reflect the portion of the overall levy (or mill rate) resulting from waste disposal subdivided into its components, e.g. collection and transportation, landfill development and maintenance, professional fees.</p> <p>Adoption of such a practice would clearly demonstrate the true cost of waste disposal to the generator and would facilitate notification of a tax credit should the municipality adopt a "charge per bag" system in the future.</p>	<p>Comment noted. A more detailed breakdown of waste management costs on the tax bill would help to reflect the direct costs for waste management. This would also help to justify the need for a client cost collection program.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Volume 1, Chapters 1 and 2 Volume 3</p> <p>Could a publicist/public relations agency have been used to assist the County in raising the awareness of the general public after the Stage 1 series of open houses, since apathy was shown on the part of the public at that time?</p>	<p>Activities to raise awareness of the Master Plan which occurred during Stage 1 included: letters to local municipalities, Federal and Provincial agencies, interest groups and industries; a newsletter; newspaper advertisements in ten daily and weekly newspapers; questionnaires regarding current municipal waste management systems and current waste generation and disposal practices; and two series of Open Houses.</p> <p>At that time, these activities were considered to be a more than adequate means of raising public awareness. As the WMMP process continued, some members of the public took advantage of the consultation opportunities. It is common, however, in waste management planning processes for the majority of the public to pay little attention to the process until potential sites for a new facility have been identified. Hence, a lot of time and taxpayers' money could have been spent on a publicist/public relations agency but it may not have made much of a difference. However, opportunities for public input were provided throughout the process to date, and will continue to be provided.</p>	<p>No action required.</p>
<p>The Municipal Councillor Workshop was a good idea with approximately 30 councillors attending representing eleven municipalities. After the program was expanded in 1989 (Section 2.5) and the establishment of a PAC, perhaps there should have been more of these workshops.</p>	<p>The Municipal Councillors Workshop held on November 20, 1989, was well attended by approximately 30 councillors. This presentation was made after a two year pause on the Master Plan to review the work completed in Stage 1 in 1986 and Stage 2 in 1987. Other presentations have been made to municipal councillors at various points in the planning process.</p>	<p>No action required at present. Future presentations will be held as required.</p>
<p>Should there have been more small public information centres set up scattered throughout the County and City of Sarnia instead of the few large ones at Wyoming and Sarnia?</p>	<p>Having more small public information centres scattered throughout the County instead of a few large ones could have been undertaken. At the time, it was felt that two information centres were enough, as having more small information centres would have increased costs and may have not resulted in greater attendance. It is very difficult to project how many people will show up at the centres, regardless of the location.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>The site selection workshops were excellent. Unfortunately, in our opinion, they were not well attended by the public. In no way do we feel the consultants were at fault for this apathy on the part of Lambton County citizens. The consultants' efforts to inform the residents, through newspaper advertisements and newsletters, throughout the County and Sarnia of such a major undertaking could not have been handled any more effectively than it was.</p> <p>In regards to the consultation with Moore Township Council (Section 2.5.5(b)) January 16, 1991, this sub-committee feels that Dillon staff were negligent in not informing Council, property owners and media present, that PAC members were not politicians. We believe it was important to clarify that we are members of the general public from the various municipalities of Lambton County and that the PAC's impact on the site selections were done following all the restrictions, criteria and guidelines set down and that politics was not a part of that process. Moore Township had an equal opportunity to have a member on PAC, plus an alternate and possibly a member at large, if they had so desired.</p>	<p>Comment noted.</p> <p>We agree that PAC was not and is not a political body. At no time did Dillon staff misrepresent PAC's role and this is supported by public documents such as the November 1989 and March 1993 Newsletters, and in correspondence seeking representatives. Until 1993, PAC members requested that they be involved in a "background" role, and they indicated that they did not want to be in the "limelight", particularly during public presentations related to site selection. The County respected this request. PAC representatives took a somewhat more public role during the November 1993 Information Centre, at their request.</p> <p>The minutes of the PAC meetings, and other documentation related to the formation and activities of the PAC, provide sufficient evidence of the non-political nature of the PAC.</p> <p>All municipalities in the County had equal opportunity to be represented on the PAC. From 1989 to 1991 and in 1993/94, there were representatives from Moore Township on the PAC, and there were three representatives from Moore in the site selection workshops.</p>	<p>No action required.</p> <p>No action required.</p>

Comment	Response	Action Taken
<p>Volume 1, Overall</p> <p>We feel there has been an overall assumption made by M.M. Dillon Limited that the County of Lambton will be taking responsibility of all waste management operations and wastes. But, a contradiction is made in the recommendations of the 8.0 Implementation chapter "that the responsibility for waste collection remain with the lower tier municipalities". It is recommended that the County initiate a co-ordinating role between the local municipalities for implementing the waste diversion strategy.</p>	<p>Comment noted. Nowhere in the Master Plan Report is it stated that it is assumed that the County will be taking responsibility for all waste management activities and all wastes. In Chapter 3, it is stated that it was assumed that the County will be responsible for the handling and disposal of municipal wastes that have been traditionally collected by local contractors and municipal forces. As indicated in Chapter 8, it is recommended that the responsibility for waste collection remain with the lower-tier municipalities. The County would assume control of waste collection in future only if required for successful implementation of the system.</p> <p>(Reference: Chapter 3, Section 3.1.1.2; Chapter 8, Section 8.3.)</p>	<p>No action required.</p>
<p>Volume 1, Chapter 5</p> <p>We question the feasibility of Central Composting when a large part of the County is rural. An aggressive home composting program would be more beneficial when considering cost vs benefit.</p>	<p>It is agreed that the collection of household organics for central composting is less effective in rural areas than in urban areas. It was assumed that the collection of organics would be limited to urban areas such as Sarnia, Petrolia and Forest and that the diversion of household organics in rural areas could be achieved primarily through more aggressive distribution of backyard composters. The text in Chapter 5 will be upgraded to more clearly indicate this assumption.</p> <p>(Reference: Chapter 5, Section 5.2.3; Appendix 2G, Page 8.)</p>	<p>The descriptions of the diversion strategies on pages 5-18 to 5-27 have been revised to make it more clear that leaf and yard waste collection and wet/dry collection would be limited to urban areas that presently receive curbside Blue Box collection. Reference was also added to the fact the County is presently helping to fund a wet/dry collection pilot study in Wyoming.</p>
<p>We question the need of a Material Recovery Facility when we would be competing against private sector, again considering cost vs benefit.</p>	<p>Comment noted. In the WMMP, it is recognized that the existing privately owned MRFs may be suitable for the County's needs. If not, then an option available to the County is to construct a suitable MRF at the proposed composite waste management facility.</p> <p>(Reference: Chapter 5, Page 5-18.)</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Re: Section 5.1.1: How can the County assess the existing waste diversion when they do not have responsibility or control of waste generated by lower tier municipalities? To comply with legislation, it should be lower tier responsibility to identify waste diversion initiatives. Therefore the County does not have the ability to incorporate initiatives into an overall waste diversion strategy.</p>	<p>The County is responsible for the "receiving, dumping and disposal of waste ..." as outlined in the <i>Sarnia-Lambton Act, 1989</i>. With the County already responsible for waste disposal, the importance of having some control over waste diversion, and the processing efforts leading to reduced disposal, is increased. The County may assume additional waste management responsibilities, such as waste diversion and processing, by passing a by-law under Section 209 of the <i>Municipal Act</i>.</p> <p>(Reference: Chapter 8, Section 8.3.)</p>	<p>No action required.</p>
<p>Re: Section 5.1.2:</p> <p>We do not see the need of the County to be involved in Industrial, Commercial and Institutional (IC&I) source waste diversion systems.</p> <p>The County has no legal right to be involved with private sector business. The County could give incentives to encourage and guide IC&I private sector businesses to develop initiatives.</p> <p>Although the County is not responsible for lower tier operations, they could offer incentives to expand education and awareness programs, e.g. backyard composter education and sales.</p>	<p>It is assumed in the WMMP that in the future the County will be responsible for the quantities of institutional and commercial wastes that were previously redirected away from the County's landfill sites. As a result, the need for County involvement in diverting these wastes away from disposal is increased. It is acknowledged that the County has no legal right to enforce the private sector to divert wastes. The provincial government has already looked after this by promulgating the new 3Rs Regulations. The County could still provide assistance to establishments that are required to comply with the Regulations and provide incentives to those that are not.</p> <p>(Reference: Chapter 3, Section 3.1.2; Chapter 8, Section 8.3.)</p> <p>Comment noted. Public education on the 3Rs and backyard composter distribution were recognized as important initiatives in the recommended long-term waste diversion strategy for Lambton County. An increased role in these responsibilities by the County would ensure a co-ordinated effort across the County.</p> <p>(Reference: Chapter 5, Section 5.2.4; Chapter 8, Section 8.3.)</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Re: Section 5.1.3: The County does not have authority to be responsible for recycling operations of lower tier municipalities.</p>	<p>The County could assume responsibility for recycling operations in lower-tier municipalities by passing a by-law under Section 209 of the <i>Municipal Act</i>. It is recommended that, at a minimum, the County serve in a co-ordinating role in the recycling operations of the lower-tier municipalities in order to bring about a unified approach to diversion across the County, maximizing efficiency and cost effectiveness. In order to fully implement the waste diversion strategy, the County may have to assume full responsibility for waste diversion and processing.</p>	<p>No action required.</p>
<p>We feel it is not the County's place to become involved with identifying and developing markets for recyclables. Likewise, it is not the County's place to attract recycling industries into the area. It is not feasible for the County to go into the business of establishing market businesses.</p> <p>The sub-committee agrees with bans. Before material bans are imposed, an alternative disposal option should be provided.</p>	<p>Please refer to the response to the comment by the Public Works Committee regarding Page 8-3 of Chapter 8. Businesses that accept recyclables do not only provide jobs in an expanding field but they also provide the added benefit of providing a market for recyclables collected in the County.</p> <p>Comment noted. Material bans are part of the County's existing waste management system and are assumed to be part of the long-term diversion strategy.</p> <p>(Reference: Chapter 5, Page 5-6.)</p>	<p>The consultant team acknowledges that the County's current position on this issue is as follows:</p> <ul style="list-style-type: none"> ● the County agrees that it is within its mandate to identify possible uses for reused or recycled materials in its own operations (e.g. the possible use of recycled materials in road work) ● the County agrees that the Economic Development Commission could identify existing users of recyclables and encourage new users to locate in the County in conjunction with its ongoing economic development work ● the County feels that the private sector is better positioned to carry out the other types of initiatives mentioned, including market analyses and waste audit workshops or courses. <p>References in the Report related to market development for recyclables have been revised to reflect the County's current position on this issue.</p>

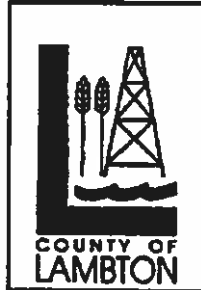
Comment	Response	Action Taken
<p>The County needs a more aggressive backyard composting educational and sales program. Also, more public awareness given to the need and benefits of composting vs the cost of landfill.</p>	<p>Comment noted. Public education on the 3Rs and backyard composter distribution were recognized as important initiatives in the recommended long-term waste diversion strategy for Lambton County. An increased role in these responsibilities by the County will ensure a co-ordinated effort across the County. (Reference: Chapter 5, Section 5.2.4; Chapter 8, Section 8.3.)</p>	<p>No action required.</p>
<p>The County should designate a person to look after the implementation of the short-term diversion strategy; this same person could also implement the long-term strategy.</p>	<p>In Chapter 8, it is recommended that the County employ a Waste Diversion Co-ordinator/Manager to look after the implementation of the long-term diversion strategy. The person would work under the Administrator of the Waste Management Department. (Reference: Chapter 8, Section 8.4.)</p>	<p>No action required.</p>
<p>Re: Section 5.2, Source Separation/Recycling Strategies: We recommend co-ordination of 3Rs strategy.</p>	<p>Recommendation acknowledged. Chapter 8 of the Master Plan Report recommends that the County become more involved in waste diversion in order to ensure a co-ordinated effort in the implementation of the waste management system and diversion strategy. (Reference: Chapter 8, Section 8.3.)</p>	<p>No action required.</p>
<p>We recommend two stream collection in rural and three stream in urban if a study proves feasible, but question, who is responsible and has authority for collection.</p>	<p>It is assumed that two stream collection in rural areas refers to waste and recyclables collections and three stream in urban areas refers to waste, recyclables and leaf and yard waste collections in urban areas. This is consistent with the recommended long-term waste diversion strategy for the County. It is recommended that the lower-tier municipalities remain responsible for waste collection. It is recommended that the County assume a more significant role in waste diversion and, if necessary, assume responsibility for diversion initiatives. (Reference: Chapter 8, Section 8.3.)</p>	<p>No action required.</p>
<p>We recommend a direct cost program for waste collection be established (user pay).</p>	<p>Recommendation noted. A direct cost program for waste collection is included in the recommended long-term waste diversion strategy.</p>	<p>No action required.</p>

Comment	Response	Action Taken
Organic Collection - We question whose responsibility and authority for collection.	It is assumed that two stream collection in rural areas refers to waste and recyclables collections and three stream in urban areas refers to waste, recyclables and leaf and yard waste collections in urban areas. This is consistent with the recommended long-term waste diversion strategy for the County. It is recommended that the lower-tier municipalities remain responsible for waste collection. It is recommended that the County assume a more significant role in waste diversion and, if necessary, assume responsibility for diversion initiatives. (Reference: Chapter 8, Section 8.3.)	No action required.
Other Collection - We recommend household hazardous waste depots be established permanently. Also, the feasibility of a roving depot in the County at least twice year.	Recommendation noted. The collection of household hazardous wastes is included in the recommended long-term waste diversion strategy for the County. (Reference: Chapter 5, Section 5.2.3.)	No action required.
We recommend recycling depots be established at public work yards for municipalities that do not have curbside recycling programs. Also offer blue boxes to the household as a reminder tool.	Drop-offs for enhanced collection of dry recyclables for communities that do not receive Blue Box collection is included as part of the recommended long-term waste diversion strategy for the County. Providing a Blue Box for households served by depots would improve participation. (Reference: Chapter 5, Section 5.2.2., page 5-15)	The description of recycling depots on page 5-15 has been updated to include a recommendation that households served by depots should also receive a Blue Box.
We recommend that the County continue to work with existing private sector companies instead of competing.	The County continues to pursue ways in which the private sector could serve future waste management needs. However, the County has to have reasonable public sector options available until agreements with the private sector are in place.	No action required.
Re: Household Composting: We recommend a more aggressive educational program.	Enhanced public education on the 3Rs is included in the recommended long-term waste diversion strategy for the County. (Reference: Chapter 5, Section 5.2.4.)	No action required.

Comment	Response	Action Taken
<p>Re: Central Composting: We recommend to amend the C of A for the Sarnia site as needed and is feasible for food wastes.</p>	<p>The recommended long-term waste diversion strategy for the County does not include the collection and composting of household organics at a central location. Expanded backyard composter distribution is recommended for diverting household organics from disposal. This conclusion was reached following an evaluation of alternative diversion strategies, where diversion potential, ease of implementation, potential impacts and costs were considered. (Reference: Chapter 5, Section 5.2.4.)</p>	<p>No action required.</p>
<p>Re: Materials Recovery: We recommend the use of existing private sector facilities rather than competing.</p>	<p>In the long-term diversion strategy, it was recommended that the County continue to use the private sector MRFs that presently serve the County. If these facilities prove to be inadequate, then an option available to the County is to construct an MRF at the proposed Composite Waste Management Facility. Generally, it was assumed in the WMMP that the County would pursue public sector solutions for waste management needs unless and until private sector solutions are in place. The County is, however, actively pursuing possible private sector solutions. (Reference: Chapter 1, Section 1.1.)</p>	<p>No action required.</p>
<p>Strategy 3 with Enhanced Blue Box with Direct Cost is the Preferred System.</p>	<p>Strategy 3, which features Enhanced Blue Box collection and Direct Cost waste collection, was determined to be the most preferred long-term diversion strategy for the County. (Reference: Chapter 5, Section 5.2.2, page 5-5.)</p>	<p>No action required.</p>
<p>Volume 1, Chapter 8</p>		
<p>Re: Section 8.1.2: Concur with Dillon's recommendations. A concerted effort by all the parties involved is needed for successful implementation of Master Plan.</p>	<p>Comment noted.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Re: Section 8.4: We recommend that the appropriate administrative body be put in place to oversee implementation issues and the Public Works Committee be responsible for facilitating the implementation of the long-term waste management system and diversion strategy with private sector contractor.</p>	<p>It is recommended that the Public Works Committee be responsible for facilitating the implementation of the long-term waste management system and diversion strategy. Implementation will be administered by the Director of Public Works in conjunction with the Administrator of the Waste Management Department. It is also stated that, if the County assumes control over waste diversion and processing, the most appropriate approach regarding private sector contracts would be to have a single County-wide contract for the diversion initiatives, or to have a small number of regional contracts. (Reference: Chapter 8, Section 8.4, Section 8.5.)</p>	<p>No action required.</p>
<p>Re: Section 8.5: The County should retain a professional management consultant to evaluate and determine the appropriate accounting procedures or method of financing.</p>	<p>Recommendation noted. This recommendation is included in Section 8.5 of Chapter 8.</p>	<p>No action required.</p>
<p>Re: Section 8.6: Clarification of the issue of responsibility and authority needs to be addressed.</p>	<p>The recommended administrative structure for the recommended waste management system and diversion strategy is described in detail in Section 8.4 of Chapter 8.</p>	<p>No action required.</p>
<p>Re: Transfer Stations: The County should compensate municipalities that have haul distances of more than 30 km from the County Landfill, since transfer stations are not feasible.</p>	<p>In Chapter 7, the economic feasibility of transfer stations was considered and five options were identified that address the issue of how the lower-tier municipalities could be compensated for the additional costs to haul wastes to the new site. One option was for the County to directly subsidize the lower-tier municipalities for increased haul costs. A decision was not documented in the WMMP on which option would be most preferred because political considerations were considered to have a significant bearing on the acceptability of the options. However, political considerations are considered to be separate from the technical analysis. (Reference: Chapter 7, Section 7.4.1.)</p>	<p>The County has not made a decision on whether the lower-tier municipalities should be subsidized in some manner for increased haul distances to the new proposed landfill site. No further action is required at this time.</p>

Comment	Response	Action Taken
<p>Re: Landfill: The County should retain ownership of the landfill and contract operations to private sector contractors.</p>	<p>The long-term planning assumption used in the Master Plan was that the County would pursue public sector solutions for waste management needs unless and until private sector solutions are in place. This implies that the County will continue to pursue approval of a County-owned site until a private sector solution is found. This does not exclude the possibility of the County contracting out operations to private sector contractors even if a publicly owned site is developed. (Reference: Chapter 1, Section 1.1.)</p>	<p>No action required.</p>
<p>Volume 1, Chapter 6</p>		
<p>The goals and objectives of the Waste Management Master Plan were met with respect to the siting of the composite facility. The criteria established by a public forum and employed by the consultants were effective in selecting the most appropriate site.</p>	<p>Comment noted.</p>	<p>No action required.</p>



LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN

PUBLIC ADVISORY COMMITTEE

REVIEW OF DRAFT WMMP DOCUMENT

June, 1994

Lambton County Waste Management Master Plan

Public Advisory Committee

Review of Draft WMMP Document

PREAMBLE

Lambton County began planning for its long-term waste management needs in 1986 utilizing the Ministry of the Environment's waste management master planning process. The Public Advisory Committee (PAC) has been an integral part of the development of the Lambton County Waste Management Master Plan (LCWMMP) since late 1989. With the preparation and submission of a draft WMMP document by the County's consultant, M. M. Dillon, in November 1993 the PAC undertook to review the document and provide the LCWMMP Steering Committee with its comments.

The PAC, at its meeting December 7, 1993 passed the following motion:

#6: Lorenz/Kowalyshyn: That PAC divide its member list into four sub-groups at the January 1994 meeting; take two months to review the draft Lambton County Waste Management Master Plan document; discuss and finalize comments from the sub-groups at the March meeting; and subsequently pass these comments to the WMMP Steering Committee for their review and action.

On January 25, 1994, the Public Advisory Committee developed the necessary review sub-committees by geographical area as follows:

<u>North-East</u>	<u>North-West</u>	<u>Central</u>	<u>South</u>
M. Dale	J. Kowalyshyn	S. Durance	F. Turner
R. Wilcocks(Chair)	J. Shelley	M. Hendra	M. Wright (Chair)
R. Huctwith	B. Killey (Chair)	A. Wagner	C. Griffiths
B. Brenner	B. Lorenz	L. Martin (Chair)	O. Dobbyn
	I. MacRae		

The geographical sub-committees were assigned the following sections of the draft Waste Management Master Plan report to review:

North-East:

Consultation Program:

Volume 1, Chapter 1 -	Introduction
Chapter 2 -	Public and Agency Consultation
plus Volume 3 -	Public and Agency Consultation
	Appendices

Central:

Waste Management Systems:

- Volume 1, Chapter 1 - Introduction
- Chapter 3 - Current Status of Waste Management in Lambton County
- Chapter 4 - Description of the Development of the Recommended Waste Management System
- Chapter 7 - Economic Feasibility of Transfer Stations
- plus Volume 2 - Technical Appendices

South:

Diversion Strategy and Implementation:

- Volume 1, Chapter 1 - Introduction
- Chapter 5 - Waste Diversion Strategies
- Chapter 8 - Administration And Implementation
- plus Volume 2 - Technical Appendices

North-West:

Composite Facility Siting:

- Volume 1, Chapter 1 - Introduction
- Chapter 6 - Site Selection For Long-Term Composite Facility
- plus Volume 4 - Site Selection Appendices

The PAC committed to preparing an interim report for their February 1994 meeting and then a final report which would be considered at their March meeting.

The four sub-committees fulfilled their commitment and submitted their reports at the March PAC meeting. The sub-committee reports were accepted by PAC through the following motions.

- #5: Turner/Wright: That the PAC sub-committee report on the WMMP Consultation Program be accepted as presented.
- #8: Martin/Kowalyszyn: That the PAC sub-committee report on the WMMP Waste Management Systems be accepted as amended.
- #9: Huctwith/Hendra: That the PAC sub-committee report on the WMMP Diversion Strategy and Implementation be accepted as presented.
- #10: Wright/Wilcocks: That the PAC sub-committee report on the WMMP Composite Facility Siting be accepted as presented.

The Public Advisory Committee at its June 1994 meeting reviewed Chapter 8, Volume 1 (Administration and Implementation) along with the South Sub-committee's report.

Lambton County Waste Management Master Plan

Public Advisory Committee

Review of Draft WMMP Document

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Lambton County Waste Management Master Plan
Introduction and Public and Agency Consultation Review
Report Vol 1, Chapter 1 & 2, Vol 3

by: Sub Group - North-East Committee
R. Wilcocks (Chair)
B. Brenner
M. Dale
R. Huctwith

A Waste Management Master Plan is a long comprehensive process. Public and agency consultation throughout all stages is required.

The consultants responsibility was to inform the public, residents, businesses and industries of Lambton County, that waste management needs a long-term outlook on management of municipal waste. It is this sub-committee's belief that the consultant met its requirements in fulfilling this duty.

There were, however, some concerns which were raised and we felt should be addressed:

1. Beginning in February of 1986, the flow of information that was given to the public appeared to be well presented and followed the MOEE's advisory document and the Ontario Environmental Assessment Act's requirement of obtaining (or trying to obtain) public input. However, after the Stage 1 series of 4 open houses showed so much apathy on the part of the public (12 people attended the first one, 13 the second, 18 at the third and 4 attended the fourth) perhaps some changes should have been made. This sub-committee wondered if a publicist/public relations agency could have been used to assist the County in raising the awareness of the general public.
2. The Municipal Councillor Workshop was a good idea with approximately 30 councillors attending representing 11 municipalities. After the program was expanded in 1989 (section 24) and the establishment of a PAC, perhaps there should have been more of these workshops.
3. This sub-committee wonders if there should have been more small public information centres scattered throughout the County and City of Sarnia instead of the few large ones at Wyoming and Sarnia.
4. The site selection workshops were excellent. Unfortunately, in our opinion, they were not well attended by the public. In no way do we feel the consultants were at fault for this apathy on the part of Lambton County citizens. The consultants efforts to inform the residents, through newspaper advertisements and newsletters, throughout the County and Sarnia of such a major undertaking could not have been handled any more effectively than it was.

5. In regards to the Consultation with Moore Township Council (2.5.5(B)) January 16, 1991 this sub-committee feels that Dillon staff were negligent in not informing the council, property owners and media present, that PAC members were not politicians. We believe it was important to clarify that we are members of the general public from various municipalities of Lambton County and that the PAC's impact on the site selections were done following all the restrictions, criteria and guidelines set down and that politics was not a part of that process. Moore Township had equal opportunity to have a member on PAC, plus an alternate and possibly a member at large, if they had so desired.

**Lambton County Waste Management Master Plan
Current Status, Development and Transfer Station Review
Report Vol 1, Chapter 1, 3, 4 & 7, Vol 2**

by: Sub Group - Central Committee
L. Martin (Chair)
S. Durance
M. Hendra
A. Wagner

The Draft of the Master Plan as presented answers many questions; however, it raises others which we recommend be addressed prior to formal publication. Those questions are enumerated.

1. The chronological narrative writing style of the Draft tends to inhibit clarity of presentation of conclusions and recommendations.

It is the recommendation of this sub-committee that an executive summary of no more than 2 pages in length preface each chapter. That summary should highlight the salient facts, recommendations and conclusions presented in the chapter. Duplicates of those individual summary pages could then be drawn together to form an Executive Summary of the Master Plan.

This 16 page summary document would accurately mirror the content of the Plan and would serve as a meaningful working document for the benefit of legislators, public servants, and those of the general public who are directly affected by implementation of the Plan.

2. The sub-committee is concerned for the accuracy of the data presented, particularly those quantifying waste generation. Since these data form the foundation for this whole planning process, the significance of precision is evident.

Lacking the ability to accurately measure waste generation within the county, an estimate was arrived at in 1985, by questioning municipal administrators, industries, other waste generators and disposal site operators. That estimate has been validated by comparison with MOE guidelines and subsequent calculations and estimate. However, attributing a waste generation rate of 1.5 kg per capita per day to residents of Enniskillen (Table D-1) begs to be challenged. In the opinion of this sub-committee, it is unlikely that any of the municipalities who did not provide organized collection services at the time of the enquiry, would have more than a guess in respect to quantity of waste generated by their residents.

Those municipalities providing collection services could refer to tonnage billed by the contractor. However, in the absence of scale facilities, those data also reflect estimates rather than actuals.

Table 3.4 reflects a calculation of waste diversion. Unfortunately it does not accurately reflect the fact that within rural areas, one need not buy a composter

in order to return organic waste to the soil. Nor has it required a waste disposal crisis to alert rural dwellers to this capability.

Thus, this sub-committee recommends that the wastes under consideration in this Plan be accurately measured before site sizing and location is finalized. Measurement should take into account seasonal variation as well as differentiation of waste class, generated by each municipality in the Plan.

3. In paragraph 7.4.1 under the heading "Compensation of Municipalities" it is stated "Bill 35 stipulates that once the county has designated a landfill site for a local municipality, the municipality cannot utilize any other facilities for waste disposal." Presuming this quotation accurately reflects the intent of Bill 35, that provision bears challenge. Although sharing in the cost of new site development, is it not to the economic benefit of the county and every ratepayer to select the most appropriately economical means available to dispose of wastes?

It is the opinion of this sub-committee, that waste disposal costs will rise; however, to accept this provision will force that rise to be exponential.

4. Much groundwork has been laid for adoption of a site in Moore Township for a new landfill. This sub-committee would welcome an open discussion on the merits of the site chosen as compared to others more centrally located and/or more technically advanced.
5. Landfill is not a viable long term solution to waste disposal. Combustion is referred to in Chapter 4 of the Plan, yet little discussion is provided upon which a reader can determine the current "state of the art". This sub-committee would be interested in seeing more information on the "pros" and "cons" of combustion (by techniques now or soon to be available) and that the principles of the 3Rs, especially diversion, be exhausted before material is landfilled.
6. Footnote 4 of Table 3-3 on page 3-11 qualifies the materials collected for recycling. This sub-committee would appreciate clarification.
7. This sub-committee recommends that tax notices prepared for property owners by each municipality, reflect the portion of the overall levy (or mill rate) resulting from waste disposal subdivided into its components eg. collection and transportation, landfill development and maintenance, professional fees.

Adoption of such a practice would clearly demonstrate the true cost of waste disposal to the generator and would facilitate notification of a tax credit should the municipality adopt a "charge per bag" system in the future.

Lambton County Waste Management Master Plan
Diversion Strategy and Implementation Review
Report Vol 1, Chapter 1, 5 & 8, Vol 2

by: Sub Group - South Committee
M. Wright (Chair)
F. Turner
C. Griffiths
O. Dobbyn

Recommendation: It is the view of our group to have a Chapter Summary at the beginning of each chapter with Recommendations highlighted to make more prominent; then list the rationale and explanations.

We feel there has been an overall assumption made by M.M. Dillon Limited that the County of Lambton will be taking responsibility of all waste management operations and wastes. But, a contradiction is made in the recommendations of the 8.0 Implementation chapter "that the responsibility for waste collection remain with the lower tier municipalities".

Comment: The County to initiate a co-ordinating role between the local municipalities for implementing the waste diversion strategy.

5.0 Waste Diversion Strategies

Central Composting - Our committee questions the feasibility when a large part of the County is rural. An aggressive home composting program would be more beneficial when considering cost vs. benefits.

Material Recovery Facilities - Our committee questions the need of a facility when we would be competing against private sector, again considering cost vs. benefits.

5.1 Short-Term Diversion Strategy

5.1.1 Our question is: How can the County assess the existing waste diversion when they do not have responsibility or control of waste generated by lower tier municipalities. To comply with legislation it should be lower tier responsibility to identify waste diversion initiatives.

5.1.2 Therefore the County does not have the ability to incorporate initiatives into a overall waste diversion strategy.

It is the opinion of our sub-committee that we do not see the need of the County to be involved in Industrial, Commercial and Institutional (IC&I) source waste diversion systems.

The County has no legal right to be involved with private sector business. The County could give incentives to encourage and guide IC&I private sector businesses to develop initiatives.

Although the County is not responsible for lower tier operations they could offer incentives to expand education and awareness programs eg. backyard composter education and sales.

5.1.3 Proposed Short-Term Diversion Initiatives

Recycling Programs

The County does not have authority to be responsible for recycling operations of lower tier municipalities.

We feel it is not the County's place to become involved with identifying and developing markets for recyclables. Likewise it is not the County's place to attract recycling industries into the area. It is not feasible for the County to go into business of establishing market businesses.

Material Bans

The sub-committee agrees with bans.

Comment: Before materials bans are imposed, that an alternative disposal option is provided.

Household Composting Programs

Recommendation: The County needs a more aggressive backyard composting educational and sales program. Also more public awareness given to the need and benefits of composting vs. the cost of landfill.

5.1.5 Implementation of the Short-Term Strategy

Comment: The County designate a person to look after the implementation of the short-term diversion strategy, this same person could also implement the long-term strategy.

Note: PAC recommendation September 28, 1993, not acted on.

5.2 Long-Term Waste Diversion Strategy

Recommendations:

Source Separation/Recycling

- Strategy:
- (i) We support and strongly recommend that the County continue to co-ordinate 3R's strategy.
 - (ii) We recommend two stream collection in rural areas. Three stream in urban areas; if a study proves feasible, but question, who would be responsible and have authority for collection.
 - (iii) We recommend a direct cost program for waste collection be established (user pay).
 - (iv) **Comment:** Organic Collection - We question who's responsibility and authority for collection.
 - (v) Other Collection - We recommend household hazardous waste depots be established permanently. Also the feasibility of a roving depot in the County at least twice a year.
 - (vi) We recommend recycling depots be established at public works yards for municipalities that do not have curbside recycling programs. Also offer blue boxes to the household as a reminder tool.
 - (vii) We recommend that the County continue to work with existing private sector companies instead of competing.

Household Composting

- (viii) We recommend a more aggressive educational program.

Central Composting

- (ix) We recommend to amend the C of A for the Sarnia site as needed and is feasible for food wastes.

Materials Recovery

- (x) We recommend the use of the existing private sector facilities rather than competing.

Recommendation: Strategy 3 with Enhanced Blue Box With Direct Cost is the preferred system. (see attached)

5.2.5 Waste Diversion Survey

Total of 729 completed and returned. A low return ratio, but cannot do anything about it.

8.0 Administration and Implementation of the Master Plan

8.1.2 Concur with M.M. Dillon's recommendations. A concerted effort by all the parties involved is needed for successful implementation of Master Plan.

8.4 Administrative Structure

We recommend that the appropriate administrative body be put in place to oversee implementation issue and the Public Works Committee be responsible for facilitating the implementation of the long term waste management system and diversion strategy with private sector contractor.

8.5 Financing the Waste Management System

Comment: That the County retain a professional management consultant to evaluate and determine the appropriate accounting procedures or method of financing to develop.

8.6 Implementation Activities and Schedule

Waste Collection

Clarification of the issue of responsibility and authority needs to be addressed.

Transfer Stations

Recommendation: That the County compensate municipalities that have haul distances of more than 30 km from County Landfill since transfer stations are not feasible.

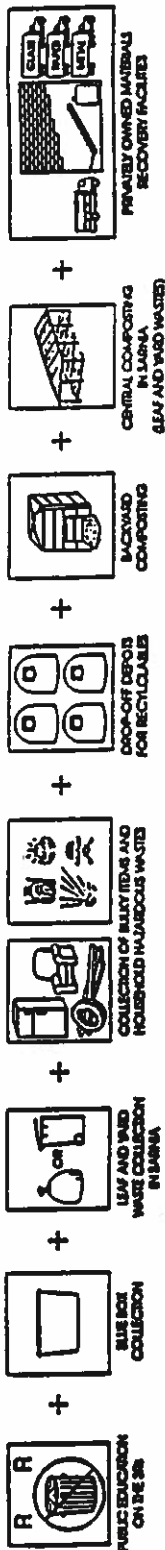
Landfill

Recommendation: That the County retain the option of ownership of landfill and contract operations to private sector contractors.

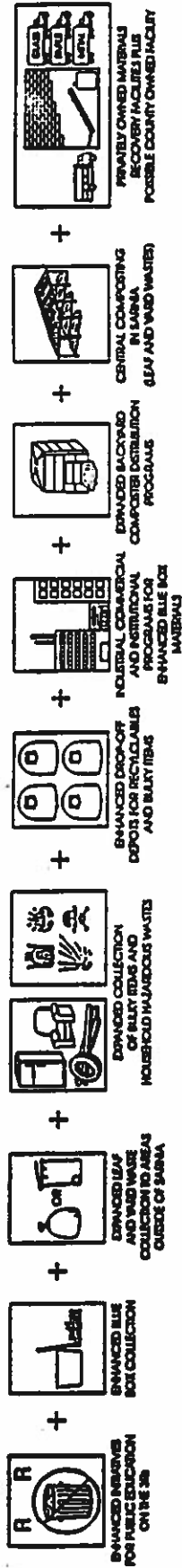
FIGURE 5.1

ALTERNATIVE LONG-TERM WASTE DIVERSION STRATEGIES

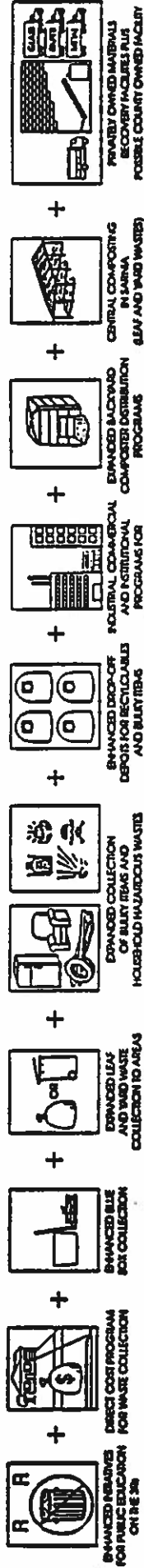
STRATEGY 1: EXISTING



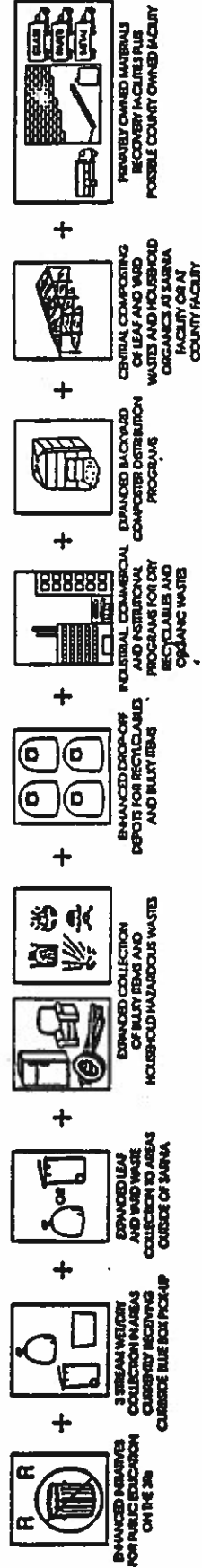
STRATEGY 2: ENHANCED BLUE BOX



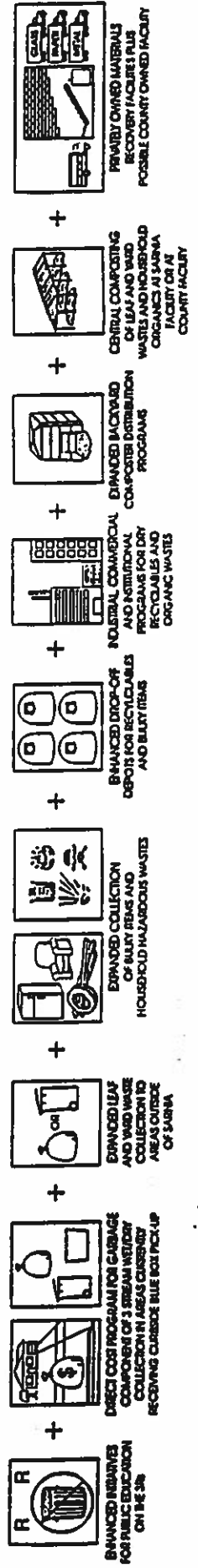
STRATEGY 3: ENHANCED BLUE BOX WITH DIRECT COST



STRATEGY 4: 3 STREAM WET/DRY COLLECTION



STRATEGY 5: 3 STREAM WET/DRY COLLECTION WITH DIRECT COST



Strategy 3 (Enhanced Blue Box with Direct Cost)

This strategy is similar to Strategy 2 except that it includes a direct cost waste collection program to be implemented County-wide. In this strategy, local municipalities and residents would be required to pay for garbage collection and disposal based on the amount they dispose. Enhanced Blue Box collection of dry recyclables and seasonal collection and composting of leaf and yard wastes would continue and would be free of charge. In addition, backyard composters for single-family residences and large three bin composters for multi-family housing complexes and apartment buildings would be aggressively promoted and distributed. The direct cost program would help to maximize public participation in these initiatives. The diversion initiatives included in this Strategy are listed in Table 5.2.

A municipal direct cost collection program has been operating in Grand Bend since October 1992. In this program, residents are required to purchase tags for their garbage bags from local merchants for \$2.00 each. According to municipal officials in Grand Bend, this program has resulted in significant reductions in the amounts of wastes put out for collection and has increased the effectiveness of the existing Blue Box collection and backyard composter programs. Problems such as illegal dumping of waste or bag tag theft have not occurred as a result of the program (per.comm., Paul Turnbull, March 22, 1993). Direct costs programs have also been implemented in the Town of Gananoque, the Townships of Westmeath and McNab in Renfrew County, and a number of communities in the United States. The general experience with these programs has been that the advantages outweigh the disadvantages. Direct cost waste collection programs have yet to be proven in large cities. This is due to the larger number of households in large cities and the problems inherent with implementing direct cost programs in apartment buildings.¹

¹ M.M. Dillon Limited, Lambton County Waste Management Master Plan - Draft Volume 1 - Master Plan Report (November, 1993) pp.5-27, 5-28

Lambton County Waste Management Master Plan

Introduction and Site Selection Report Vol 1, Chapter 1 & 6, Vol 4

by: Sub Group - North-West Committee

B. Killey (Chair)

J. Kowalyshyn

B. Lorenz

I. MacRae

J. Shelley

The group's task was to examine the procedure utilized to determine the site of the composite facility and determine if the chosen site met all the criteria set out by the public committee and the consultants.

As a participant in the original public workshop, Bob explained the proceedings of the workshop to the group. At the workshop, the participant defined the criteria which would be employed to determine the site. None of the actual pieces of property were identified until farther along in the process. Some of the points brought out in the workshop;

- redundant to study the hydrogeology of the County - most area soils are suitable for a landfill
- select the lowest category of agricultural land - does not imply that the siting areas were poor soils
- preference for industrial zoned land - could be taken out of industrial class if needed - waste processing installations are a type of process plant
- close to established roads - increase in traffic needs to be taken into consideration
- maintain a minimum distance from actively used buildings
- maintain a minimum distance from environmentally sensitive areas
- disrupt woodlots as little as possible
- avoid low areas.

From the general areas defined by the criteria above, a field of 70 potential candidate areas were identified. By applying stricter criteria, the list was narrowed down to 11 sites which could accommodate a 75 hectare parcel of land necessary to include a landfill, a material recycling facility and a compost site. The list was shortened even further by weighting the various criteria groups and applying them to the selected sites. In January of 1993, Moore Council requested that the present Moore landfill and adjacent land be included in the list of preferred sites (Site K). Therefore, four sites, I, H, K and D, were

extensively evaluated individually and against each other in order to determine the preferred site. At the end of the process, the preferred site was Site I.

The representative from Moore had a concern that the expenditure of public money would be better served if the present Moore landfill site was the selected site. He felt that as the site was already an operating landfill, a landfill extension would cost less than siting a new landfill. However, all factors must be weighted and evaluated equally for all sites in order to pass the review procedures.

Some questions that have arisen regarding the site chosen are:

- concerns about the closeness to the St. Clair River (approximately 1.5 km.)
 - no specific ones
- negative effects upon Sombra residents - however, measures to reduce any nuisances would apply to any location
- distance from the largest waste source, Sarnia - the actual traveltime from Sarnia to the site is comparatively not that great
- the preferred site is owned by Terra - their future plans for the area have not been discussed
- odour - close to a chemical plant, not necessarily an issue
- leachate treatment system - it is indicated that the present facility at the Sarnia landfill site will be used.

Recommendation: This committee feels that the goals and objectives of the Waste Management Master Plan were met with respect to the siting of the composite facility. The criteria established by a public forum and employed by the consultants were effective in selecting the most appropriate site.

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

SCHEDULE 3E-6

**MOEE - EA BRANCH
COMMENTS AND RESPONSES
FEBRUARY 1995**

**LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN
DRAFT MASTER PLAN REPORT REVIEW
MOEE - EA BRANCH COMMENTS AND RESPONSES**

Comment	Response	Action Taken
<p>Section One: The Undertaking</p> <p>Since the Master Plan Report does not provide an explicit statement of the "purpose of the undertaking", the proponent should define the "purpose of the undertaking", as described in Section 3.1 of the <i>Interim Guidelines</i>. For example, the proponent could provide the statement of purpose as follows: <i>To provide a system to manage "x" waste quantity, generated in municipality "A" (or municipalities "B" or "C"), for a 25 year planning period consisting of ... (state composition of the waste stream).</i></p> <p>The description of the preferred undertaking, Site I, is absent in the "Draft Report". The Branch understands that the Master Plan Report was prepared to comply with the "Terms of Reference" dated September 16, 1985, and was not intended to be an environmental assessment document. Should the County elect to prepare an environmental assessment for submission to the Minister, the preferred undertaking will need to include a description of the preferred undertaking, as described above. For further details, please see Section 3.7 of the Ministry's <i>Interim Guidelines</i>.</p> <p>The proponent should clearly explain that there is a "need" for the type of undertaking proposed.</p>	<p>The purpose of the Master Plan process was to develop the best system for the long-term management of municipal solid wastes in Lambton County. This purpose, the types of wastes addressed, and the planning period are identified on pages 1-1 and 1-2 of the Draft Report. The calculation of existing and future waste types and quantities to be managed was an "output" of the study process (see Chapter 3).</p> <p>The Master Plan process resulted in the identification of a number of possible "undertakings". At least one of these - the development of a new landfill at preferred Site I - would require approvals under the <i>Environmental Assessment Act</i> (EAA) and the <i>Environmental Protection Act</i> (EPA) (as well as other required approvals).</p> <p>In the event the County decides to apply for approvals for a new landfill at Site I, an EAA/EPA-level submission would be prepared. The purpose, need for, and description of the undertaking would be documented in the submission.</p> <p>However, the County may decide to meet future waste disposal needs through the private sector. In this event, no approvals submissions by the County would be required.</p>	<p>No action required.</p>

Footnotes

1. Page, section and chapter references in the "Comment" and "Response" columns refer to the November 1993 Draft Report.
2. The "Action Taken" column refers to revisions that have been incorporated into the February 1995 Report.

Comment	Response	Action Taken
<p>It is important that there be a direct link established between the abilities of the preferred waste management system and the size of any new facilities required in support of the system.</p>	<p>Agreed. During the Master Plan process, certain assumptions were defined and agreed upon for the purposes of planning, including assumptions about the size of site potentially required for a new composite waste management facility. The assumptions used in the planning process are reasonable but, in general, very conservative or "worst case" assumptions about future requirements. This allows the County maximum flexibility and security with respect to future needs. In the event the County decides to proceed with an EAA/EPA-level submission for a new landfill and/or other facilities requiring approvals, the actual size requirements would be defined and documented at that time.</p>	<p>No action required.</p>
<p>The proponent should indicate in the final environmental assessment submission all the approvals required in order to construct and operate the proposed landfill site, including other approvals required under the jurisdiction of other agencies.</p>	<p>In the event the County decides to seek approvals for a new landfill, the relevant approvals requirements would be identified.</p>	<p>No action required.</p>
<p>Section Two: Consideration of Alternatives</p>		
<p>Provide clarification as to whether the following criteria, documented in Section 4.2.1 of the Master Plan Report, are "screening" or "assessment" criteria:</p> <ol style="list-style-type: none"> 1) Technology/Policy; 2) Significant Environmental Impacts and Risks; 3) Cost; and 4) Applicability/Benefits. 	<p>The criteria listed in Section 4.2.1 of the Master Plan Report were intended to be screening criteria. The purpose of these criteria was to eliminate potential waste management system components which may not be suitable for the County. The screening exercise was completed in Stage 1 of the Master Plan. The process followed was to assess each component with respect to each criterion, including consideration of mitigation and enhancement measures and net effects. Advantages/disadvantages were assessed and conclusions drawn as to whether or not the component should be retained for consideration in Task 2.</p>	<p>The text in Section 4.2.1 has been modified to clarify this.</p>

Comment	Response	Action Taken
<p>Clearly define the following categories identified in Section 4.2.1 and Figure 4.1:</p> <ol style="list-style-type: none"> 1) Common to All Systems; 2) System Dependent; 3) Independent Essential; and 4) Independent Optional. 	<p>The text referred to is actually in Section 4.2.2.</p> <p>In Step 1 of the Master Plan study, the waste management system components remaining after the screening exercise were reviewed to identify those components which required further evaluation and those which did not and could be deferred until later stages of the development of alternative systems. The components were reviewed and categorized into one of the four following groups:</p> <ol style="list-style-type: none"> 1) Common to all systems - components compatible with all potential waste management systems and which would provide a definite benefit to all systems. These components were added to the systems once the systems were defined and optimized. 2) System Dependent - components which were dependent on the inclusion of or location of other components. Further consideration of these components was deferred until the systems were defined and the locations for other components was determined. 3) Independent Essential - components considered to be essential to any waste management system (e.g. landfill disposal) but independent of any of the other components included in the systems. Further consideration of these components was deferred until the systems were defined. 4) Independent Optional - components considered to be optional for waste management systems and independent of any other components included in the systems. These components were evaluated to determine a preferred alternative. The preferred alternative was then combined with other components from the other categories listed above to create alternative waste management systems. 	<p>The text in Section 4.2.2 has been modified to include the definitions listed in the response.</p>

Comment	Response	Action Taken
<p>In screening for reasonable waste management system components, explain how the proponent identified the technologies of combustion and refuse derived fuel as "independent optional" components, in Section 4.2.1.</p>	<p>The text referred to is actually in Section 4.2.2.</p> <p>Please refer to the preceding response which provides a definition of the independent optional components. When Stage 2A was started in the Fall of 1986, the list of available waste management system components from Stage 1 was reviewed to determine which components needed additional evaluation before potential waste management systems could be developed. Incineration components were included in the review because this work was carried out previous to the provincial government's ban on incineration in 1992. The components "combustion with and without energy recovery" and "refuse derived fuel and prepared waste burning" were considered to be non-essential, or optional, components. These components were also considered to be independent of any of the other components included in the waste management systems. As a result, the incineration components were placed into the "independent optional" category. The independent optional components were evaluated to choose a preferred component. The preferred component was then combined with components in the other categories to create alternative waste management systems.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Explain why certain waste management system components were deferred during the screening process until later stages of the study.</p>	<p>Please refer to the two previous responses for more information on the review of components and the development of alternative waste management systems. Some components were deferred after the screening of the long list of potential waste management system components in order to simplify the development of alternative systems. Components considered to be common to all systems were deferred because those components were assumed to be included in any system, no matter what other components were included in the system. These components were added to the alternative systems once the systems were developed. Components considered to be dependent on other components in the system were deferred until the systems were developed. Once the systems were developed, they were refined by adding in dependent components as needed. Components considered to be essential to all waste management systems but independent of other components in the system were deferred until the alternative systems were developed. The independent essential components were also added to the systems once they were developed. The remaining components were considered to be optional for systems but independent of other components included in the systems. These components were evaluated to identify a preferred independent optional component. The preferred component was then used to develop alternative waste management systems.</p>	<p>No action required.</p>
<p>Include a description of the Stage 1 evaluation (screening) of the waste management components, referred to in Section 4.2.1 of the Master Plan Report, in the final environmental assessment submission.</p>	<p>A description of the Stage 1 screening and review of waste management system components, as described in Sections 4.2.1 and 4.2.2 of the Master Plan Report, could be included in an EAA/EPA-level submission, in the event the County decides to apply for approvals for an undertaking.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Explain why the "centralized composting" component was not subject to the same Stage 1 screening analysis that the materials recovery facility (MRF) component was subject to, in Section 4.4.</p>	<p>In Stage 1 of the Master Plan, centralized composting was subjected to the screening analysis and was included as a component to be considered for alternative waste management systems (i.e. centralized composting was not screened out). After the screening analysis was completed, the components were reviewed to identify components which could be deferred until later stages of system development. Centralized composting and the incineration components were identified as independent optional components because they were not essential to the systems and were independent of the other components in the systems. The independent optional components were evaluated to determine a preferred component, which was combustion with energy recovery. When the potential waste management systems were updated in 1993, the screening and evaluation of the independent optional components was revisited. The two incineration components were removed because they did not comply with the screening criteria (because of Regulation 555/92 which bans the development of incinerators in Ontario). Centralized composting was left in, and it was also considered to be appropriate to add in the materials recovery facility (MRF) component as an independent optional component. However, the MRF component was not included as a component in the screening exercise completed in Stage 1 in 1986. The MRF component was subject to a screening analysis similar to the analysis completed in Stage 1 in 1986. It was not necessary to include the centralized composting component in this analysis because centralized composting was included in the original Stage 1 screening analysis.</p>	<p>No action required.</p>
<p>Though the proponent has described the waste management technologies proposed in the Stage 2A Report, the proponent should ensure that a description is provided for each of the "updated" alternative waste management system options, included in Section 4.4 of the Master Plan Report.</p>	<p>Descriptions of the updated alternative waste management system options could be included in an EAA/EPA-level submission, in the event the County decides to apply for approvals for an undertaking.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>The proponent is encouraged to provide explicit statements of rationale for considering "alternatives to" in the final environmental assessment submission.</p>	<p>Explicit statements of rationale for the "alternatives to" could be included in an EAA/EPA-level submission, in the event the County decides to apply for approvals for an undertaking.</p>	<p>No action required.</p>
<p>Indicate what the "current use" is for the clay-based lands with Class 3 to 7 agricultural capability and clay-based industrial-type lands which make up the site selection study area. It is not clear whether these are future or present land use designations under the Official Plan.</p>	<p>As explained in Section 6.3, the site selection study area included two types of clay-based lands: clay-based lands with Class 3 to 7 agricultural capability plus clay-based industrial-type lands, regardless of agricultural capability.</p> <p>With respect to the clay-based "Class 3 to 7" lands, the "classes" are an indication of the production potential of the land as defined by the Canada Land Inventory (CLI) system. The "classes" are not Official Plan designations, and do not indicate the current use of the lands. Current use is addressed at later stages in site selection (during the comparisons of the sites).</p> <p>The "industrial-type" clay-based lands were identified based on the designations outlined in Lambton County municipal Official Plans. Official Plan designations indicate the intended uses of the lands, as approved by municipalities and the province, not necessarily the current uses.</p>	<p>No action required.</p>
<p>Explain why the "75 ha" was a key assumption for site size throughout the screening process to identify a long list of sites. What is the 75 ha site size requirement based on?</p>	<p>The 75 ha site size assumption was based on an estimate of the area required to accommodate a composite waste management facility (landfill/CCF/MRF) that would have the capacity to handle 100% of the County's wastes for a 20-year period (a "worst-case" scenario). The site size estimate incorporated conservative estimates of the land area required for a landfill, central composting facility, materials recovery facility, on-site treatment and operations areas, and buffer areas.</p> <p>The actual site size required could be smaller for various reasons, but it was considered reasonable to employ a "worst-case" assumption for planning purposes. An adequate range of excellent siting alternatives resulted from the process.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>It is difficult to follow the screening process that identified nine "siting areas". The Branch needs to better understand how the initial seventy candidate areas were screened down to nine siting areas, as described in Section 6.5.</p>	<p>The 70 candidate areas were first reviewed to identify the ones which were a minimum size of 75 ha. A total of 21 candidate areas met this requirement. The siting area constraint criteria as presented in Table 6.4 were then applied within these 21 candidate areas. A total of 29 separate siting areas were identified. These siting areas were then reviewed to identify those which were at least 75 ha in size.</p> <p>A total of nine siting areas were identified to be large enough for at least one 75 ha site.</p>	<p>No action required.</p>
<p>Clearly define the "high intensity agricultural use" criterion in Section 6.6.</p> <p>Explain how seven of the sixteen "potential sites" were eliminated in identifying a long list of sites in Section 6.6.</p>	<p>High intensity agricultural use refers to current predominant use of land for crops such as corn and soybeans.</p> <p>The elimination of the 7 sites was consistent with the priority accorded to high quality agricultural lands early in the process. The predominance on these sites of a combination of Class 3 lands, high intensity agricultural use and agriculturally-compatible designation causes these lands to be considered comparable to non-industrial Class 2 lands, an original screening criterion. This was coupled with the fact that the seven sites had no obvious advantages over other potential sites.</p> <p>The decision to eliminate the 7 candidate sites was reviewed and agreed upon in the public siting workshops, and by the other study participants.</p>	<p>This definition has been added to the text in Section 6.6</p> <p>No action required.</p>
<p>The proponent is encouraged to provide explicit statements of rationale for each "alternative method" in the final environmental assessment submission.</p>	<p>In the event the County decides to proceed with an EAA/EPA-level submission for a new landfill and/or other facilities, the statements of rationale could be included in the submission.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Section Three: Consideration of All Aspects of the Environment</p> <p>With respect to the evaluation of "alternatives to", the full scope of the "environment" was considered, as documented in Section 4.5 of the Master Plan Report and the Stage 2B Report.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>The proponent considered the full scope of the "environment" in screening the long list of sites to a short list of sites in Section 6.7 of the Master Plan Report. However, it was not necessary for the proponent to consider the full scope of the environment in a screening exercise.</p>	<p>To identify a short list of sites, a full comparative evaluation of the long list of sites was conducted, not a screening exercise. The comparative evaluation of the long list of sites is documented in Section 6.7 of the Draft Report.</p>	<p>No action required.</p>
<p>The full scope of the "environment" was considered, with respect to the evaluation of "alternative methods", as documented in Section 6.8 of the Master Plan Report.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Since the final assessment of the preferred site has not yet been completed, the Branch is unable to provide comments at this time regarding the scope of the "environment".</p>	<p>Comment noted. In the event the County decides to seek approvals for a new facility (or facilities) at Site I, a detailed assessment would be completed and included in an EAA/EPA-level submission.</p>	<p>No action required.</p>
<p>Section Four: Systematic Evaluation of the Net Environmental Effects</p> <p>Document the results of the "concordance analysis" and its associated "sensitivity tests" conducted for the comparative evaluation of the alternative diversion strategies in Section 5.2.4 of the Master Plan Report.</p>	<p>The results of the comparative evaluation of the alternative diversion strategies and sensitivity tests using the concordance analysis method will be added to Section 5.2.4 of the Master Plan Report.</p>	<p>The comparative evaluation and associated sensitivity test results have been added to Section 5.2.4.</p>

Comment	Response	Action Taken
<p>Upon reviewing Sections 6.7.5 and 6.7.6 of the Master Plan Report, it was found that the proponent did not formally evaluate advantages and disadvantages, developed from a "net effects analysis" for each of the long list of sites. In other words, the Branch does not recognize the "Ranking of Sites by Criteria Group" documented in Section 6.7.5 as a comparative evaluation in keeping with the requirements of the EA Act. Instead, the Branch considers the proponent's methodology to be consistent with a screening process which, under certain conditions, is considered an acceptable methodology for evaluating a long list of sites. However, the Branch recommends that the County clearly describe the evaluation methodology that was used for the "Ranking of Sites by Criteria Group" in the environmental assessment document.</p>	<p>The process to select a short list of sites from the long list of 11 sites was an evaluation process, not a screening process. A screening process requires that all alternatives meet the requirements of all screening criteria. If an alternative fails to meet the requirements of all criteria, it is eliminated. In a comparative evaluation process, criteria are used to identify and evaluate relative differences between alternatives.</p> <p>In the Lambton WMMP siting process, a screening process was employed to reduce the initial list of 16 potential sites to a more manageable number for the long list comparison. This screening step is documented in Section 6.6. The comparative evaluation of the long list was then carried out.</p> <p>As is explained in Section 6.7.3, for the comparative evaluation of the long list of sites, mitigation was limited to non-site specific measures as presented in Table 6.7, which are applicable to any of the sites. More site specific mitigation would require a conceptual landfill design and detailed on-site data (e.g. hydrogeologic drilling). As this information was not available at this stage in the site selection process, it was not possible to conduct a meaningful net effects analysis. Although the generic mitigation measures could have been incorporated into the data tables, the "net effects" column would have been the same as the data column for each site. Therefore, the preparation of lengthy "net effects tables" would have been a "paper exercise" with no meaningful contribution to decision-making. For this reason, the comparative evaluation of the long list of sites was based on data collected for each of the indicators.</p> <p>Section 6.7.7 discusses the results of the qualitative and quantitative evaluation. Trade-offs of advantages and disadvantages are discussed in the text describing the qualitative evaluation beginning on page 6-43.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Define the preference categories of high, medium and low used by the study team to rank sites in each criteria group in Section 6.7.6.</p> <p>Explain how the "preference categories" were used to rank sites within each "criteria category".</p> <p>According to Section 6.7.6 of the Master Plan Report, most of the study team members grouped the sites by "preference categories" within each criteria group. Please indicate how the study team members grouped the sites by preference categories for each of the remaining criteria groups.</p>	<p>As explained in Section 6.7.6, study team members were advised to indicate only significant differences among the sites. Recognizing that the analysis was undertaken without detailed on-site investigations, and without facility conceptual design, and that the sites were all geographically close to one another and in many ways shared similar characteristics, the study team members were advised to group the sites by three preference categories. Although, some of the disciplines may have been able to distinguish further among the sites, these differences would have been of less significance and not necessary to identify a short list of sites.</p> <p>The preference categories of high, medium and low are a relative measure of preference for the 11 candidate sites. What each of the categories represent is dependent upon the criteria applied within each of the disciplines. As a result, there is no universal definition of high, medium or low applicable to all disciplines. The reasons why a site was ranked within a particular preference category are explained in the discipline assessment summaries in Section 6.7.6.</p>	<p>No action required.</p>
<p>Provide a rationale for concluding that "no significant difference between the sites" exist for the <i>Local/regional aquifer characteristics</i> criterion, in Section 6.7. What was the basis for this conclusion?</p>	<p>The rationale is stated in the last paragraph on page 6-33 and in the first paragraph on page 6-34.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>It appears that trade-offs were made in ranking the sites under the <i>Natural Ecosystems</i> and <i>Land Use</i> criteria groups, in Section 6.7.6. If trade-offs were made, it would be advantageous to explicitly document the trade-offs to enhance the "traceability" of the process.</p>	<p>For the <i>Natural Ecosystems</i> evaluation of the long list of sites, a trade-offs analysis was not done. For each indicator, impact levels were scored on a low, medium or high scale which was based on the amount of habitat type by study area addressed by each indicator. For example, for the indicator <i>moderate quality forest</i>, 0-3 ha was scaled as "low", 4-9 ha scaled as "medium" and 10 ha or more as "high". The overall impact score for a site was based on the highest impact score of any of the indicators for that site. Clarification will be added to the text to reflect this approach.</p> <p>Likewise for the <i>Land Use</i> criteria group a trade-offs analysis was not used. As stated on page 6-39, Sites D, H, I and K were considered to have the least potential for land use impacts and were considered the most preferred of the eleven potential sites. It is also stated that the land use criteria were weighted equally. Therefore, preferences among the sites were based on differences in the data. As indicated on page 6-40, the data related to <i>existing uses in the site vicinity</i> and to <i>designated/proposed uses in the site vicinity</i> provided the main distinctions between the most preferred (D, H, I and K), moderately preferred (B, C and E), and least preferred (A, F, G, and J) sites. Sites D, H, I and K were the most preferred since they have the highest compatibility with the proposed waste management facility with respect to either existing uses in the vicinity or future uses in the vicinity, or both. Some revisions and clarifying points will be added to pages 6-39 and 6-40 to enhance the discussion.</p>	<p>Some additions and clarifications have been added to the text as noted in the response.</p>

Comment	Response	Action Taken
Clearly define the <i>Agriculture</i> criterion documented in Section 6.7.6 and Table 6.8	The <i>Agriculture</i> criteria addressed the potential for loss of agricultural resource lands and disruption to lands in the site vicinity. Specific items addressed included whether the land is designated for agricultural activity in the Official Plan and whether lands designated for agriculture were also being used for agricultural production at the time of the assessment. The specific indicators applied are defined in Table 6.6.	No action required.
Explain why the <i>Other Resources</i> criteria category was removed from the Master Plan Report, starting from Table 6.10.	There were no <i>other resources</i> identified on any of the sites. The criterion was therefore not applicable from then on.	No action required.
Provide additional rationale to explain why Sites H, I and K are considered the most preferred under the <i>Land Use</i> criteria category, in Section 6.7.6.	<p>The reviewer's comment that "Sites H, I and K are considered the most preferred" appears to be based on the first sentence of the last paragraph on page 6-39. This paragraph pertains to only one of the evaluation criteria (<i>compatibility with existing land uses in the site vicinity</i>) and not the overall evaluation.</p> <p>The first sentence in the second paragraph on page 6-39 states that "Sites D, H, I and K were considered to have the least potential for land use impacts and were thus ranked most preferred". This statement will be revised to clarify the fact that it pertains to the overall land use evaluation and not just one criterion.</p>	The clarification noted in the response has been incorporated.
Explain how seven criteria under the <i>Social/Cultural</i> criteria group, in Table 6.9, were reduced to only four criteria by Table 6.10.	As explained in Table 6.9, two criteria, <i>potential disruption to community/recreation features along access routes</i> and <i>potential disruption to heritage features</i> had no features identified and thus were not applicable any further in the analysis. As also explained in Table 6.9, the criterion <i>potential for buffering of landfill</i> was changed to an indicator under the criteria <i>potential disruption to residents in site vicinity</i> and <i>potential disruption to residents along access routes</i> . As a result, the original seven criteria were reduced to four criteria.	No action required.

Comment	Response	Action Taken
<p>Given the information in Table 6.8 (p. 7) and Section 6.7.6, as it relates to the indicator <i>future designated and proposed land uses in the site vicinity</i>, it is difficult to distinguish the differences between Sites B and C from D, H and I, as a result of the comparative analysis. Explain why these sites differ.</p>	<p>With respect to <i>compatibility with future designated and proposed land uses</i>, the details regarding the conclusion that Sites D, H and I were the most preferred and Sites B and C were "moderately preferred" are found on page 7 of Table 6.8. As shown on the table:</p> <ul style="list-style-type: none"> • all of the lands within 500 m of Sites H and I are designated for industrial uses in the applicable Official Plans; • almost all of the lands within 500 m of Site D are designated for industrial or waste disposal uses, with the exception of a small area which is designated "Agricultural"; • in comparison, a larger proportion of the lands surrounding Sites B and C are designated "Agricultural"; the same is true for the lands within 500 m to 1 km of these two sites; • In general, Sites D, H and I are mostly surrounded by lands designated for industrial uses while Sites B and C are surrounded by more agricultural lands. In addition, a residential severance has been granted within 500 m to 1 km of Site B. 	<p>Table 6.8 has been revised to show the proportions of the surrounding lands which are designated for particular uses.</p>
<p>From the information documented in Section 6.7.6 and the data provided in Table 6.8 under the <i>Land Use</i> criteria category, provide a clarification to explain whether there is a prominence of industrial or non-industrial type lands on Sites A, F, G and J.</p>	<p>The existing land uses on Sites A, F, G and J are indicated on the bottom of page 5 of Table 6.8 and are shown on Figures 6.9, 6.14, 6.15 and 6.18. With the exception of a small part of Site A which is vacant industrial land, the existing land uses on these sites are agricultural (non-industrial).</p>	<p>No action required.</p>
<p>Site J appears to be excluded from the analysis made under the <i>Transportation</i> criteria category in Section 6.7.6. In fact, according to Table 6.8, it would appear that Site J should be documented as having a Moderate Impact/Cost.</p>	<p>With respect to the <i>Transportation</i> criteria, Site J was ranked as moderate and was mistakenly omitted from the <i>Transportation</i> discussion in Section 6.7.6. The text will be revised accordingly.</p>	<p>The text has been revised as noted.</p>

Comment	Response	Action Taken
<p>Describe how the numerical weights were determined by the study team in Section 6.7.7 for the "Overall Ranking of Sites" to identify a short list of sites.</p>	<p>The numerical weights were selected by the study team based on the site characteristics (i.e. relative differences, significance of potential impacts) and based on input from the public with respect to criteria rankings during the workshops. Recognizing that the weight selection is subjective, a second qualitative evaluation was conducted.</p>	<p>No action required.</p>
<p>Explain why there was a need for a two step comparative evaluation process: quantitative concordance analysis and a qualitative (descriptive) evaluation, as documented in Sections 6.7.5 and 6.7.6 of the Master Plan Report.</p>	<p>A two-step comparative evaluation process was undertaken to increase the confidence in the site selection results. A higher level of confidence is attained if similar results are arrived at through two separate methods, as was the case for this evaluation.</p>	<p>No action required.</p>
<p>Describe in more detail the qualitative "dominance approach" used to evaluate the long list of eleven sites in Section 6.7.7. The Branch has some difficulty understanding how Sites G and J were eliminated.</p>	<p>The purpose of the "dominance approach" was to identify whether there were any sites which were less preferred or equal to all other sites for all criteria. These sites would be considered to have no advantages (and thus no trade-offs) over any of the other sites and would therefore be eliminated from further evaluation.</p> <p>Site G was found to be "dominated" by all the other sites and was thus eliminated. In the Draft Report, Site J is also reported to be dominated by Site D. If the purpose of the evaluation had been to identify a single preferred site, Site J could have been eliminated as it is dominated by at least one other site. However, as the purpose of this evaluation was to identify a short list of sites, Site J was improperly eliminated as it was not dominated by all the other sites. As a result, the documentation of the quantitative evaluation will be revised to include Site J. The overall results of the evaluation will not be affected.</p>	<p>The documentation of the quantitative evaluation has been revised to include Site J.</p>
<p>Indicate whether the advantages and disadvantages of the mine remaining sites identified in Table 6.13 are based on the "Ranking of Sites by Criteria Group" exercise in Section 6.7.6.</p>	<p>The advantages and disadvantages identified in Table 6.13 were based on the site discipline rankings of high, medium and low, and on the site data.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Explain why Site E was slightly favoured over Site K, in the trade-off analysis, in Section 6.7.7.</p>	<p>Contrary to the reviewer's comment, it is explained in Section 6.7.7 that in fact Site K was considered to be slightly more preferred than Site E. The advantages of Site K with respect to <i>Social</i> (the only applicable high ranked criterion), <i>Land Use</i> and <i>Cost</i> were considered to offset the advantages of Site E with respect to <i>Natural Ecosystems</i> and <i>Agriculture</i>.</p>	<p>No action required.</p>
<p>Indicate the basis for using Site C in the "paired comparisons" in Section 6.7.7.</p>	<p>Site C was arbitrarily selected as the "common" site for the paired comparisons against Sites D, H, I and K as it is alphabetically the first in the list. Selection of an alternate "common" site for the paired comparison would not have changed the results.</p>	<p>No action required.</p>
<p>According to Section 6.7.6, the <i>Economics</i> criteria group was eliminated. Explain why <i>Economics</i>, as it relates to "costs", was considered in comparing sites, later in Section 6.7.7.</p>	<p>Contrary to the reviewer's comment, the <i>Economics</i> criteria group was not eliminated. It is explicitly addressed at the end of Section 6.7.6. As outlined, with respect to <i>Economics</i>, Sites G and J were considered less preferred, while all the other sites were considered to be equally preferred. Since Sites G and J had been eliminated through the dominance approach, the <i>Economics</i> criteria group could not assist in distinguishing among the remaining sites and, on that basis, it was not considered to be applicable any further. However, as Site J has now been carried into the qualitative evaluation (see previous response), further discussion of the <i>Economics</i> criteria group will be added. Costs associated with the landfill were addressed under a separate criteria in the long list comparison. Both <i>Economics</i> and <i>Cost</i> were considered in both the qualitative and quantitative (Concordance) evaluations.</p>	<p>Further discussion of the <i>Economics</i> criteria group has been added to Section 6.7.6 due to the previous revision related to the discussion of Site J.</p>
<p>Given the nature of the qualitative evaluation in screening the long list to a short list of sites, any trade-offs in the decision-making process to select one site over another should be explicitly documented.</p>	<p>The process used to select the short list of sites from a long list was a comparative evaluation process, not a screening process. The rankings of the sites within each criteria group are discussed in Section 6.7.6, whereas the trade-offs made among criteria groups to select the short list of sites are discussed in Section 6.7.7.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Prior to applying any qualitative comparative evaluation, the proponent should establish logical decision rules, those rules used to sort sites. A series of rules should be described before applying the comparative evaluation to the long list of eleven sites.</p>	<p>A logical, step-by-step process for the long list comparison was established, and is described in Sections 6.7.1 to 6.7.5. The process followed to conduct the qualitative comparison involved a consideration of the criteria group ranks and the preferences attributed to the sites by each criteria group. Trade-offs were then made on a site-by-site basis with respect to the criteria which were applicable to each site comparison (i.e. where there was a significant difference) to arrive at a short list of sites.</p>	<p>No action required.</p>
<p>Explain whether the same "relative weights or importance" values for the short list evaluation were the same for the long list or were these weights re-established for the short list, in Section 6.8.</p>	<p>As explained in Section 6.8.4, the same criteria group weights used in the comparative evaluation of the long list of sites were used in the first run of the concordance analysis for the comparative evaluation of the short list of sites.</p>	<p>No action required.</p>
<p>With the exception of the <i>Land Use</i> criteria group, document whether the proponent conducted a "net effects analysis" for each criteria category, as described in Section 3.6 (Figure 3) of the Ministry's <i>Interim Guidelines</i>.</p>	<p>Net effects tables have been prepared for all disciplines with respect to the comparative evaluation of the short list of sites. These tables were included in the March 1994 Draft WMMP Report, Site Selection Appendices, Volume 4. However, the net effects tables did not contribute anything new to the analysis, as the data collected provided the only meaningful basis for the comparative evaluation. (See related response on page 20 of this table.)</p>	<p>Net effects tables for the "short list" sites have been prepared, were included in the March 1994 Draft, and have been included in the February 1995 Report.</p>
<p>Explain why Table 6.15 suggests that Site K is worst than Sites D, H and I (i.e. contains the fastest vertical hydraulic gradient) while Section 6.8.3 documents that Site K is the second best as it relates to vertical hydraulic gradient.</p>	<p>The reviewer has confused hydraulic conductivity data reported in Table 6.15 with hydraulic gradient data discussed in Section 6.8.3. With respect to hydraulic conductivity, the conductivity of Site K is slightly higher than that at Sites D, H, and I. However, from an overall hydrogeological perspective, all four sites exhibit very low hydraulic conductivity (i.e., the slight difference at Site K is not significant). With respect to hydraulic gradient data, Site K is second best.</p>	<p>No action required.</p>
<p>Clearly document the trade-offs made for each criteria indicator within each criteria category in Section 6.8.3. For example, the analysis for each criteria indicator under the <i>Social</i> criteria category is documented in Section 6.8.3 as derived from Table 6.15.</p>	<p>Additions will be incorporated into the text to ensure that the analyses for all criteria are evident.</p>	<p>Appropriate additions have been incorporated into the text.</p>

Comment	Response	Action Taken
<p>The proponent should clearly document how the overall conclusions were derived as they relate to <i>Surface Water</i>, in Section 6.8.3, in comparing the short list of sites. It appears that trade-offs were made and it is difficult to understand these trade-offs.</p>	<p>The <i>Surface Water</i> weighted impact analysis produced a score for each candidate site. The site scores and data collected for each candidate site were compared to determine any distinguishable differences between sites in order to assign relative site ranks.</p> <p>The weighted impact analysis scored Sites I, H, D and K as first, second, third and fourth, respectively. The <i>Surface Water</i> discipline determined that Sites I and H displayed distinguishable differences (which were reflected in their site scores) and were therefore assigned relative ranks of 1 and 2 respectively.</p> <p>A review of Sites D and K showed clear differences (higher potential for effects) from Sites I and H, but when compared to one another, they were judged to have an equal potential for effects on surface water (reflected in the close site scores). As a result, the <i>Surface Water</i> discipline assigned both Sites D and K a relative rank of 3.</p>	<p>No action required.</p>
<p>The environmental assessment document should explain whether or not the analysis documented in Section 6.8.3 was derived from the data in Table 6.15.</p>	<p>The assessment and evaluation of the short list of sites was based primarily on the data presented in Table 6.15, as stated in Section 6.8.2.</p>	<p>No action required.</p>
<p>It would appear that the conclusions pertaining to <i>Agriculture</i> in Section 6.8.3 are based entirely on <i>potential loss of farm units</i> and <i>agriculture land</i> criteria. Explain why the conclusions for <i>Agriculture</i> are based on only two out of the nine criteria, noted in Table 6.15.</p>	<p>All <i>Agriculture</i> indicators outlined in Table 6.15 were considered in the evaluation of the short listed sites. Clarification will be added to the text in Section 6.8.3 to reflect this.</p>	<p>Clarification has been added to the text in Section 6.8.3, as noted in the response.</p>

Comment	Response	Action Taken
<p>The rationale is absent as to why the ranking resulted in Sites H, I, D and K for <i>Land Use</i>. Identify the specific criteria that were applied to reach this ranking.</p>	<p>The <i>Land Use</i> section starting on page 6-91 is a summary of Appendix 4E, "Land Use Impact Assessment" (Volume 4, November 1993 Draft Report). The criteria which were used to evaluate the four sites are listed on Tables 4.1, 4.2, 4.3 and 4.4 of Appendix 4E. The same criteria were used to comparatively evaluate the net impacts of the four sites, as shown on Table 4.5. The criteria listed consist of the following:</p> <ul style="list-style-type: none"> • impacts on existing urban structure; • conformity to provincial policy statements and guidelines; • conformity to Lambton County Official Plan; • conformity to Township of Moore Official Plan; • compatibility with Official Plan land use designations in surrounding 1 km area; • compliance with Moore Township Zoning By-Law; • compatibility with surrounding zoning in 1 km area; • potential impacts on existing and proposed land uses on-site and in surrounding 1 km area; • potential impacts on existing and future development potential of property occupied by site; • potential impacts on existing development opportunities in surrounding 1 km area; • impacts on future (year 2016) urban structure. 	<p>In preparing the February 1995 Report, revisions were made to Section 6.8 and to Appendix 4E to further clarify the comparison of the four sites with respect to land use considerations. The criteria list, and the impact assessment discussion, have been modified to better highlight the most relevant land use information. The <i>Land Use</i> criteria are now identified as follows:</p> <ul style="list-style-type: none"> • impacts on existing urban structure; • conformity to Lambton County Official Plan; • conformity to Township of Moore Official Plan; • compatibility with Official Plan land use designations in surrounding 1 km area; • compatibility with existing land uses on-site and in surrounding 1 km area; • compatibility with proposed land uses on-site and in surrounding 1 km area; • potential impacts on development potential of property occupied by site; • potential impacts on development opportunities in surrounding 1 km area; • impacts on future (year 2016) urban structure.
<p>Explain how "small differences" between sites were distinguishable in order to assign a ranking to them, within a criteria category in Section 6.8.3. For instance, the small differences between sites for the <i>Transportation</i> criteria resulted in a ranking of "most preferred" to "least preferred", while the small differences between sites for <i>Hydrogeology</i> and <i>Design and Operations</i> resulted in all the sites being "equally" ranked.</p>	<p>The individual disciplines interpreted whether or not there were meaningful differences between the sites. In addition to the data itself, the level of confidence in the data and the margin of error were taken into account in distinguishing site preference levels. These factors were taken into account by the <i>Hydrogeology</i> discipline in determining that there were no significant differences among the four sites, as explained in Volume 1, Section 6.8.3, and in Volume 4, Appendix 4A. Contrary to the reviewer's comment, the sites were not equally ranked with respect to <i>Design and Operations</i>; Site K was considered less preferred than the others.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>It would appear that the proponent's approach to predicting effects for each criteria category, with the exception of <i>Land Use</i>, does not explicitly incorporate a consideration of the "gross effects" to the environment; that is, effects expected to occur in the absence of mitigation. Most predict gross effects, suggest mitigative measures for these effects, and then identify the "net effects" to the environment. If mitigation is not considered necessary or reasonable, the proponent should note how and why this conclusion was reached.</p>	<p>Net effects tables for the short listed sites were added to each of the site selection appendices (Volume 4) for the March 1994 Draft Report.</p> <p>However, as indicated in Sections 6.7.3 and 6.8.2, the comparative evaluations of the long list of sites and, subsequently, the short list of sites were based on the data collected. The mitigation assumed for the comparison of the long list is outlined in Table 6.7. A meaningful identification and analysis of "net effects" for the "long list" comparison was not possible for the reasons stated on page 6-29. Similarly, for the "short list" comparison, although potential effects, mitigation measures and net effects were identified and considered in preparing the March 1994 Draft Report, the data collected provided the most meaningful basis for comparative evaluation.</p>	<p>No action required.</p>
<p>The advantages and disadvantages for each of the "alternative sites" appear to be absent in Section 6.8 of the Master Plan Report. Even though the concordance evaluation methodology was based on the ranking of sites for all categories, the proponent should document the advantages and disadvantages to the environment for each site.</p>	<p>A table could be prepared for an EAA/EPA-level submission which describes the advantages and disadvantages of each of the short listed sites, in the event the County decides to apply for approvals for an undertaking.</p>	<p>No action required.</p>
<p>Section Five: Consultation with Affected Parties</p>		
<p>The proponent should document the purpose of Newsletter No. 1 in Section 2.2.</p>	<p>A copy of Newsletter No. 1 is provided in Volume 3, Schedule 3A-2. As documented in the first bullet in Section 2.2, the newsletter described the purpose of the Master Plan, the Master Plan process, and how the public could participate in its preparation.</p>	<p>No action required.</p>
<p>Explain how the comments received at the November 1989 Public Information Centres were responded to and incorporated into the proponent's planning process. Schedule 3D-6 of Volume 3 only tabulates the comments received.</p>	<p>The comments were responded to verbally at the Public Information Centre by Dillon and County staff. The comments received were reviewed by study team members and contributed to the background information for the planning process. As a result of the more detailed analyses and consultation done after November 1989, those initial comments were addressed.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Provide clarification as to how the participants at Workshop No. 3 determined and agreed that the facility should be at least 71 ha.</p>	<p>Four site size scenarios were described to the workshop participants. The four scenarios were, in essence, as follows:</p> <ol style="list-style-type: none"> 1) Landfill only; assume 100% of County wastes requiring disposal. 2) Landfill only; assume 50% of County wastes requiring disposal. 3) Landfill plus CCF and MRF; assume 100% of County wastes requiring disposal. 4) Landfill plus CCF and MRF; assume 50% of County wastes requiring disposal. <p>Following discussion, the workshop participants agreed that the third scenario would, for the purposes of planning, allow the County maximum flexibility. The size requirement was later revised from 71 ha to 75 ha in response to two revisions: (1) a Steering Committee decision that, for the purpose of siting, it should be assumed that all of the County's municipal waste would go to the new facility (i.e., existing County sites would be closed), and (2) the fact that buffers between the facilities were blended.</p>	<p>No action required.</p>
<p>Document whether the public and government agencies had input on the criteria groupings for the systems evaluation in Section 4.3.3.</p>	<p>The public and government agencies were given the opportunity but did not comment on the criteria groupings used to evaluate waste management systems in Stage 2B of the Master Plan (see Section 4.3.3 of the Master Plan Report). The draft results of the evaluation of the systems were presented at Stage 2B Open Houses in November 1987. The results of the evaluation of the systems were also presented at a joint City/County Council meeting held in November 1987. None of the comments received at the Open Houses or at the joint City/County meeting addressed the criteria groupings used in the evaluation. This is documented at the end of Section 4.3.3.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Explain whether the public was consulted on the "composite site" idea in Section 4.6.</p>	<p>The composite site concept was discussed at the Site Selection Workshop held on October 11, 1990. The workshop included members of the Public Advisory Committee (PAC), as well as other interested members of the public from across the County. Several different site scenarios were considered at the workshop. Workshop participants resolved that a composite site having a minimum area of 71 ha (later revised to 75 ha) should be identified. The site size of 75 ha was then used in the site selection process.</p>	<p>No action required.</p>
<p>In Section 5.2.4, p. 5-29, clarify whether the public and government agencies were consulted to identify the four evaluation criteria, the rationale for using them, and the importance or "weight" assigned to them.</p>	<p>Public and government agencies were not consulted during the identification of the four evaluation criteria used to evaluate the alternative diversion strategies. However, the Draft Master Plan Report, which documents the criteria, the weights used, and the results of the evaluation, was distributed to the public and to government agencies. No comments have been received that address the evaluation criteria and the weights used.</p>	<p>No action required.</p>
<p>Table 5.3, in Section 5.2.4, requires clarification. For instance, it is not clear how the diversion rates for IC&I wastes were assumed to be 10% to 60%.</p>	<p>The municipal waste stream considered in the Master Plan was divided into two components: 1) Residential wastes; 2) Industrial, Commercial and Institutional (IC&I) wastes. This was necessary because little was known about the amount of waste diversion taking place with the municipal-type IC&I wastes. To compensate for this, six different possible scenarios for the amount of IC&I waste being diverted were considered. The diversion rates for the scenarios ranged from 10% to 60%. Each of the five alternative diversion strategies for residential wastes was combined with each of the six scenarios for IC&I wastes. For each combination, the overall diversion rate for the total municipal waste stream was determined. The results of the analysis are presented in Table 5.3 of the Master Plan Report.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Section Six: Provision of Clear and Complete Documentation</p> <p>Ontario Regulation 334 requires the proponent to submit an "executive summary" of the environmental assessment no more than 40 pages in length with the environmental assessment submission to the Minister.</p>	<p>Comment noted. In the event the County decides to proceed with an EAA/EPA-level submission for a waste management undertaking, an "executive summary" will be prepared.</p>	<p>No action required.</p>
<p>Clarify which specific MOEE advisory document is being referred to on p. 1-3 in Section 1.2.</p>	<p>The title and issue dates of the MOEE advisory document are correctly identified on page 1-3. The quotes included in the first paragraph on page 1-3 are taken from the November 1988 version of the Advisory Document.</p>	<p>No action required.</p>
<p>On p. 1-4, Section 1.2, the documentation indicates that the "MOEE recommends that WMMPs be developed in accordance with the requirements of the EAA". However, the Master Plan Report should clearly indicate that the "WMMPs must be developed in accordance with the requirements of the EAA".</p>	<p>The first sentence in the third paragraph on page 1-4 will be revised to read: "The MOEE requires that WMMPs be developed in accordance with the requirements of the EAA."</p>	<p>The first sentence in the third paragraph has been revised as noted.</p>
<p>On pp. 1-4 and 1-6, the Master Plan Report should read: "In February 1992, the Waste Reduction Office (WRO) was established by the Minister".</p>	<p>The date noted in the first sentence of page 1-4 will be revised to read: "February 1992". In the Draft Report, no reference is made to the establishment of the WRO on page 1-6.</p>	<p>The date noted on page 1-4 has been revised as noted.</p>
<p>The documentation in Section 1.2 on p.1-4 should reflect the new 3Rs regulations which were approved in March 1994.</p>	<p>The documentation in Section 1.2 of the Master Plan Report will be updated to reflect the approval of the 3Rs Regulations. References to the 3Rs Regulations in other portions of the Master Plan documentation will also be updated.</p>	<p>The updates have been incorporated as noted.</p>
<p>The two waste management systems highlighted in Section 1.3, p. 1-5, of the Master Plan Report should document the 3Rs components that are included in the two systems, as described later in the Master Plan Report.</p>	<p>The two waste management systems listed in Section 1.3 of the Master Plan Report will be updated to include the 3Rs components: source separation/recycling and household composting. These components were assumed to be common to all systems.</p>	<p>The update has been incorporated as noted.</p>
<p>Where can UMA Engineering and the Consolidated Environmental Group's review of the Master Plan and the site selection process, referenced in Section 2.5.5 and M.M. Dillon's response be found?</p>	<p>A copy of the UMA Engineering Ltd./Consolidated Environmental Group Ltd. submission, and Dillon's response, could be added to Volume 3 if considered appropriate by the County.</p>	<p>Copies of the submission and Dillon's response have been added to Volume 3.</p>

Comment	Response	Action Taken
Page 1-5 of Section 1.3 states that the Stage 2B Report was prepared in October 1987 while Figure 4.1 in Section 4.0 states that the Stage 2B Report was prepared in May 1988. Which is the correct date?	The Draft Stage 2B Report was issued in October 1987, with a Final Stage 2B Report issued in May 1988. The date noted on page 1-5 will be revised to read: "May 1988".	The date noted has been revised.
Section 1.5, "The Study Area", could include more information or make reference to sections where more information on the study area can be found (i.e. Stage 1 Report?).	Section 1.5 is intended to provide a concise overview of some key facts about Lambton County. Further information is not considered necessary for this section of the document. Additional information about various aspects of the County appears throughout the document within the context of the waste management planning analyses.	No action required.
The source of calculations for "Past, Present and Future Waste Quantities" (i.e. Appendix 2D, Volume 2) could be cited at the beginning of Section 3.1.2 rather than the end of this section.	The reference to Appendix 2D in Volume 2 will be moved to the beginning of Section 3.1.2.	The reference is now cited at the beginning of Section 3.1.2.
Revise Section 4.4, as it pertains to "new 3Rs Regulations", on p. 4-14, to reflect the new and approved 3Rs Regulations (March 1994).	Section 4.4 of the Master Plan Report will be updated to reflect the approval of the 3Rs Regulations in March 1994.	The update has been incorporated as noted.
There appears to be an inconsistency between the total additional diversion figure of 1,700 tonnes per year documented in Table 5.1 on p. 5-4 and the figure of 1,800 tonnes per year found in Section 5.1.4, p. 5-9.	The figure of 1800 tonnes found in Section 5.1.4, page 5-9 is incorrect and will be changed to the correct figure of 1700 tonnes.	The correction has been made.
In Section 5.2.3, Table 5.2, Strategy 4, under "Direct Cost Collection", it would appear that the direct cost collection program would operate in Grand Bend. Shouldn't the proposed direct cost collection program cover the entire County of Lambton?	In Waste Diversion Strategy 4 it was assumed that there would be wet/dry collection without direct cost collection. In Strategy 4, it was assumed that direct cost collection would only be implemented in the areas where it was already operating - Grand Bend and Bossanquet. Diversion Strategy 5 assumes both wet/dry collection and direct cost collection implemented throughout the County.	No action required.
Was it the proponent's intent to include a more detailed scaled version of Figure 6.4 in the back pocket? If so, it is absent.	As stated in Section 6.3, it is Figure 6.5 for which a more detailed scale version is presented in the back pocket.	No action required.
The "Air" component of the definition of the "environment" under the EA Act should read Subsection 1(c)(i) as opposed to 2(c)(i), in Table 6.1 of Section 6.6.	Comment noted. Table 6.1 will be revised accordingly.	The revision to Table 6.1 has been made.

Comment	Response	Action Taken
In Section 6.6, Table 6.4, is the statement: "Presence of and areas within 500 m of future committed residential development" correct?	Commas will be added to the statement, as follows: "Presence of, and areas within 500 m of, future committed residential development"	The commas have been added, as noted, for clarification.
"Siting Area 2" appears to be absent from Table 6.5 in Section 6.6.	Initially, a Siting Area (No. 2) was identified within Candidate Area 20. Further work identified that these lands were within the hydrogeologic constraint area. These lands were therefore deleted.	A footnote has been added to Table 6.5 to explain the fate of Siting Area 2.
There appears to be two 12Cs documented in Table 6.5 of Section 6.6 under Candidate Area 39. A clear rationale should be provided to explain the existence of Site 12C.	There is only one Siting Area 12C. Two sites (Sites B and C) were, however, identified within this Siting Area.	No action required.
It is not clear what Figure 6.5 in Section 6.6 represents. Is this figure based on the "revised" industrial designation definition and when was this figure produced, i.e. "date"?	Yes, Figure 6.5 is the Study Area based on the revised interpretation of the <i>industrial lands</i> criterion as explained in Section 6.3.	A date has been added to the figure.
It would appear that Figure 6.6 is absent from the Master Plan Report.	As explained in Section 6.4, Figure 6.6 is in a back pocket of the document.	No action required.
Site F under the indicator, <i>Local ground water use</i> documents forty potential users in Table 6.8, however, it does not appear on p. 6-34 of the Master Plan Report where the results of each indicator is addressed. The data in Table 6.8 for the indicators <i>Site Stratigraphy</i> and <i>Presence and extent of existing buffers</i> under the <i>Social/Cultural Environment</i> criteria category also appear to be absent in Section 6.7.6.	The following sentence will be inserted before the last sentence of para. 3 on page 6-34, "Site F had 40 potential groundwater users". The following statement will be added after para. 6 on page 6-34 "Only well record data were used to determine site stratigraphy for all sites". The indicator <i>presence and extent of existing buffers</i> will be added to the discussion.	The revisions have been incorporated as noted.
According to the ranking on p. 6-36 in Section 6.7.6 of the Report, Site I contains "0" residences in examining the criterion, <i>Potential disruption to residences in the vicinity</i> , however, Table 6.8 documents 1 residence. Provide the correct data for the above indicator.	Table 6.8 is correct. Site I has one residence within 500-1000 m.	The text has been corrected.

Comment	Response	Action Taken
<p>It is not clear from p. 6-40 and Table 6.11 in Section 6.7.6, whether Site K is moderately or most preferred. Page 6-40 would suggest moderately (i.e. medium impact) while Table 6.11 would suggest most preferred (i.e. low impact).</p>	<p>The reference to Site K being moderately preferred is made with respect to the criterion <i>compatibility with future designated and proposed land uses in the site vicinity only</i>. Overall, Site K is a highly preferred site from a land use perspective, relative to many of the other options on the "long list".</p>	<p>The text has been clarified.</p>
<p>According to Section 6.7.6, Site B is less preferred than Site E for the Social criteria category, however, Site B is equal or more preferred than Site E on the basis of Social according to Table 6.11 in Section 6.7.6. Provide clarification.</p>	<p>As outlined in Section 6.7.6 at the end of the <i>Social/Cultural Environment</i> subsection, Sites B and E are both considered to be moderately ranked overall. This corresponds to Table 6.11 where both sites are ranked as "M".</p>	<p>No action required.</p>
<p>In Table 6.7, is "assumed mitigation" equivalent to "non-site specific mitigation measures" as noted on p. 6-29?</p>	<p>Yes.</p>	<p>No action required.</p>
<p>Is the information documented in Section 6.7.6 derived from Table 6.8? It would appear that Section 6.7.6 suggests that the information relating to <i>land ownership</i> for Sites D, H, I and K was obtained from Table 6.8. Clearly identify the data source for the analyses under the <i>land ownership</i> criteria category.</p>	<p>As outlined at the beginning of Section 6.7.6, the comparative evaluation of the 11 sites is based on the data presented in Table 6.8. To restate this for each criteria group/criteria would be repetitive.</p>	<p>No action required.</p>
<p>It would appear that the "Legends" in Figures 6.9 and 6.19 are incomplete. For example, the boundary lines that represent Candidate Site Area, 500 m off-site and 1,000 m off-site, should appear in the Legend for each figure noted above.</p>	<p>These items will be added to the legends.</p>	<p>The items have been added to the legends as noted.</p>
<p>It is unclear why the Cost criteria group used in the long list of sites was replaced by the <i>Design and Operations</i> criteria group in the short list of sites evaluation in Table 6.16 and Section 6.8.3.</p>	<p>Cost considerations were included under the <i>Design and Operations</i> criteria group. It was not a matter of Cost being replaced by <i>Design and Operations</i> but that the scope was expanded to consider landfill capacity as well as cost under one criteria group. This increased level of detail and expansion of the scope of analysis was consistent with the overall site selection approach whereby detail was increased as the options decreased, and the analysis became more focused.</p>	<p>No action required.</p>
<p>The criteria category "name" tends to change back and forth between <i>Hydrogeology</i> and <i>Ground Water</i> prior to Table 6.16. For consistency, indicate which criteria category name is correct.</p>	<p><i>Hydrogeology</i> is the correct name.</p>	<p>This has been revised.</p>

Comment	Response	Action Taken
<p>Please clarify whether the information documented on p. 6-37, Table 6.10 and Table 6.17 for the Cost criterion group, is weighted highly/moderate or moderate.</p>	<p>The Cost criteria group was ranked of high/moderate importance.</p>	<p>No action required.</p>
<p>Section 8.3 refers to Section 209 of the <i>Municipal Act</i>. Bill 7 should be referred to instead.</p>	<p>Bill 7 outlined proposed changes to Section 209 of the <i>Municipal Act</i>. Bill 7 was approved in November 1993 and the proposed changes have now been incorporated into Section 209 of the <i>Municipal Act</i>. Therefore, it is more accurate to refer to Section 209 of the <i>Municipal Act</i> rather than Bill 7.</p>	<p>No action required.</p>
<p>A proposed time schedule for implementation of the system should be included in Section 8.6.</p>	<p>A proposed time schedule for implementation of the waste management system will be added to Section 8.6.</p>	<p>The proposed implementation schedule has been included (see Figure 8.2).</p>



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November 24, 1994

Ms. Jane Marsh, Chair
Lambton County Waste Management Plan
Steering Committee
County of Lambton
Hwy 21, Box 3000
Wyoming, Ontario
N0N 1T0

COPY

Dear Ms. Marsh:

RE: Lambton County Waste Management Master Plan "Draft" Report

Thank you for the opportunity to comment on the "Draft" Master Plan Report. I apologize for the unavoidable delay in responding to your submission. Overall, it would appear that the proponent's submissions have addressed the study's "Terms of Reference" and should provide the proponent with an adequate source of information to prepare the final environmental assessment document, as required under the *Environmental Assessment Act*.

The attached comments have been prepared by the Environmental Assessment Branch in response to the County of Lambton ("the proponent") Waste Management Master Plan's following "draft" submissions dated November 1993:

- Volume 1, Master Plan Report
- Volume 2, Technical Appendices
- Volume 3, Public and Agency Consultation Appendices
- Volume 4, Site Selection Appendices

The Branch acknowledges that the proponent has prepared a Master Plan Report to address the "Terms of Reference" dated September 16, 1985. However, the Draft Report has been reviewed in light of the requirements of the *Environmental Assessment Act*, the *Ministry's Interim Guidelines on Environmental Assessment Planning and Approvals (1989)* and *Guidelines and Policy on Pre-Submission Consultation in the EA Process (1987)*. The attached comments are organized into the following sections:

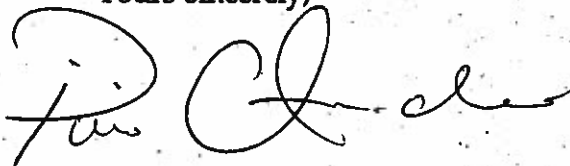
- Section One: The Undertaking
- Section Two: Consideration of Alternatives
- Section Three: Consideration of all Aspects of the Environment
- Section Four: Systematic Evaluation of Net Environmental Effects
- Section Five: Consultation with Affected Parties
- Section Six: Provision of Clear and Complete Documentation

The following statements summarize the Branch's concerns:

- The "purpose of the undertaking" should be clearly documented.
- The proponent is encouraged to provide explicit statements of rationale for the "alternatives to", "alternative methods" and the "undertaking."
- Provide clarification as to how the seventy "candidate areas" were screened down to nine "siting areas".
- The comparative evaluation involving the "Ranking of Sites by Criteria Group" should be more clearly documented to better understand the trade-offs that were made to reduce the long list of eleven sites to a short list of four sites.
- Overall, the County has addressed the Ministry's policy requirements on consultation, however, clarification is required to explain how the public and government agencies' comments were incorporated into the planning process.
- In preparing the final environmental assessment documentation, the proponent should provide clarification on the various comments identified in Section Six to enhance the traceability of the planning process.

The Branch recommends that the proponent address the attached comments, in consultation with the Branch, prior to formally submitting the environmental assessment document to the Minister.

Yours sincerely,



Piero Amodeo
Environmental Planner
Environmental Assessment Branch

cc: Mr. John McNeely, Approvals Branch, MOEE
Mr. Gary Kay, Southwestern Region, MOEE
Mr. Orrie Wigle, Sarnia District Office, MOEE
Mr. Jim Kutya, County of Lambton
Ms. Catherine Fletcher, M.M. Dillon Ltd. ✓

**EA BRANCH COMMENTS
ON THE
COUNTY OF LAMBTON "DRAFT"
WASTE MANAGEMENT MASTER PLAN REPORT**

SECTION ONE: THE UNDERTAKING

For the undertaking, the *Environmental Assessment Act (EA Act)* requires proponents to provide a description of the purpose, description of and a statement of rationale for the undertaking. In keeping with the Ministry's *Interim Guidelines on Environmental Assessment: Planning and Approvals, July 1989*, the proponent's statement of need for the preferred undertaking has also been reviewed in this section. The *Interim Guidelines* also ask that the proponent set out the approvals that will be required to proceed with the undertaking.

Purpose of the Undertaking

Subsection 5(3)(a) of the *EA Act* requires that a description of the purpose of the undertaking be provided. The purpose of the undertaking sets the parameters for the identification of "alternatives to" by stating the problem or opportunity the proponent has chosen to address in the planning process. The purpose of the undertaking should be broad enough to ensure that the consideration of "alternatives to" is not unduly restricted.

- Since the Master Plan Report does not provide an explicit statement of the "purpose of the undertaking", the proponent should define the "purpose of the undertaking", as described in Section 3.1 of the *Interim Guidelines*. For example, the proponent could provide the statement of purpose as follows: *To provide a system to manage 'x' waste quantity, generated in municipality 'A' (or municipalities 'B' or 'C'), for a 25 year planning period consisting of... (state composition of the waste stream).*

Description of the Undertaking

The undertaking for the proponent is the one alternative that is preferred over the others after an evaluation of advantages and disadvantages is conducted. Subsection 5(3)(b)(i) of the *EA Act* requires a description of the undertaking which should clearly specify what the proponent is seeking approval for under the *EA Act*. The description should include information on location, construction, dimensions, emissions, effluents, etc., of the undertaking. The description should also include matters such as mitigation, monitoring and contingency planning.

- The description of the preferred undertaking, Site I, is absent in the "Draft" Report. The Branch understands that the Master Plan Report was prepared to comply with the "Terms of Reference" dated September 16, 1985 and was not intended to be an environmental assessment document. Should the County elect to prepare an environmental assessment for submission to the Minister, the environmental assessment will need to include a description of the preferred undertaking, as described above. For further details, please see Section 3.7 of the Ministry's *Interim Guidelines*.

Statement of Rationale for the Undertaking

Subsection 5(3)(b)(i) of the *EA Act* also requires the proponent to provide a statement of rationale which represents a summary explanation of the decisions that were made throughout the process to select the undertaking from the alternatives considered. In describing the rationale for the undertaking, the proponent can address the issue of "need". Though not a requirement of the *EA Act*, the *Interim Guidelines* suggests that a proponent provide a statement of "need" for the proposed undertaking. Proponents are welcome to address "need" from their own perspective. In many cases, the issue of "need" has been addressed from two perspectives:

- (1) a proponent demonstrates that there is a need for the type of undertaking proposed; and,
- (2) establishes to what degree the proposed undertaking can address the identified need.

Proponents are encouraged to establish that there is a "need" for change or action and relate this "need" to the preferred undertaking. Please refer to Section 3.8 of the *Interim Guidelines* for more information on rationale and need.

- The proponent should clearly explain that there is a "need" for the type of undertaking proposed.
- It is important that there be a direct link established between the abilities of the preferred waste management system and the size of any new facilities required in support of the system.

Approvals Being Sought

Development of a landfill by the County of Lambton at Site I is the only component of the recommended long-term waste management system which requires approval under the *Environmental Assessment Act*, as documented in the Master Plan Report.

- The proponent should indicate in the final environmental assessment submission all the approvals required in order to construct and operate the proposed landfill site, including other approvals required under the jurisdiction of other agencies.

SECTION TWO: CONSIDERATION OF ALTERNATIVES

The formation and subsequent evaluation of reasonable alternatives is a fundamental part of a planning process under the *EA Act*. The *Interim Guidelines* direct proponents to first identify and evaluate "alternatives to" and then identify and evaluate "alternative methods".

Alternatives To

Subsection 5(3)(b)(iii) of the *EA Act* requires a proponent to consider alternatives to the undertaking. The *Interim Guidelines* interpret "alternatives to" as functionally different ways of fulfilling the purpose of the undertaking i.e., reduction, reuse, recycling, centralized compost and landfill(s). Proponents should identify a wide range of alternatives that address the purpose of the undertaking and evaluate those that are considered reasonable.

Proponents should identify what they consider to be a reasonable range of alternatives. The "do nothing" alternative is to be included in an evaluation and serves as a "bench mark" from which all other alternatives are evaluated. The "do nothing" alternative assists the Minister or the Environmental Assessment Board in deciding whether or not the preferred undertaking should be approved.

Screening Process

The purpose of a screening exercise is to define a reasonable set of alternatives for evaluation. This process is a common element in environmental planning and is considered to be an acceptable methodology for defining reasonable alternatives. Screening criteria should be developed in consultation with the public and affected parties. It is important that the screening process be documented, including any assumptions made, to enable participants and reviewers to understand how the criteria were identified.

The proponent has considered "alternatives to" through a screening process. However, the Branch has identified the following concerns as they relate to screening of the "alternatives to":

- Provide clarification as to whether the following criteria, documented in Section 4.2.1 of the Master Plan Report, are "screening" or "assessment" criteria:
 - (1) Technology/Policy
 - (2) Significant Environmental Impacts and Risks
 - (3) Cost
 - (4) Applicability/Benefits

- **Clearly define the following categories identified in Section 4.2.1 and Figure 4.1:**
 - (1) **Common to All Systems**
 - (2) **System Dependent**
 - (3) **Independent Essential**
 - (4) **Independent Optional**
- **In screening for reasonable waste management system components, explain how the proponent identified the technologies of combustion and refuse derived fuel as "independent optional" components, in Section 4.2.1.**
- **Explain why certain waste management system components were deferred during the screening process until later stages of the study.**
- **Include a description of the Stage 1 evaluation (screening) of the waste management components, referred to in Section 4.2.1 of the Master Plan Report, in the final environmental assessment submission.**
- **Explain why the "centralized composting" component was not subject to the same Stage 1 screening analysis that the Materials Recovery Facility (MRF) component was subject to, in Section 4.4.**

Description and Rationale

Subsection 5(3)(b)(iii) of the *EA Act* requires a proponent to provide a description of, and a statement of rationale for, the "alternatives to" of carrying out the undertaking.

A description of each alternative ensures an understanding of the alternative and enables the potential effects on the environment to be identified. Statements of rationale summarize the decisions that were made throughout the planning process. Such statements explain why an alternative is being evaluated at a given point in the planning process.

- **Though the proponent has described the waste management technologies proposed in the Stage 2A Report, the proponent should ensure that a description is provided for each of the "updated" alternative waste management system options, included in Section 4.4 of the Master Plan Report.**
- **The proponent is encouraged to provide explicit statements of rationale for considering "alternatives to" in the final environmental assessment submission.**

Alternative Methods

Subsection 5(3)(b)(ii) of the *EA Act* requires a proponent to consider alternative methods to the undertaking. The *Interim Guidelines* interpret "alternative methods" as different ways of doing the same activity; that is, different ways of implementing the preferred "alternative to". Historically, in waste management studies the "alternative method" consideration for the landfill component is commonly the landfill site selection process.

Screening Process

The intent of the screening process in the "alternative methods" consideration is the same as that for the "alternatives to". The screening process is used to identify and consider a range of alternatives that are reasonable.

The proponent has adequately considered "alternative methods" through a screening process. However, the Branch has identified the following concerns as they relate to screening of the "alternative methods":

- Indicate what the "current use" is for the clay-based lands with Class 3 to 7 agricultural capability and clay-based industrial-type lands which make up the site selection study area. It is not clear whether these are future or present land use designations under the Official Plan.
- Explain why the "75 ha" was a key assumption for site size throughout the screening process to identify a long list of sites. What is the 75 ha site size requirement based on?
- It is difficult to follow the screening process that identified nine "siting areas". The Branch needs to better understand how the initial seventy candidate areas were screened down to nine siting areas, as described in Section 6.5.
- Clearly define the "high intensity agricultural use" criterion in Section 6.6.
- Explain how seven of the sixteen "potential sites" were eliminated in identifying a long list of sites in Section 6.6.

Description and Rationale

Subsection 5(3)(b)(ii) of the *EA Act* requires a proponent to provide a **description** of, and a **statement of rationale** for, the "alternatives methods" of carrying out the undertaking.

A description of each alternative ensures an understanding of the alternative and enables the potential effects on the environment to be identified. Statements of rationale explain why an alternative is being evaluated at a given point in the planning process.

- The proponent is encouraged to provide explicit statements of rationale for each "alternative method" in the final environmental assessment submission.

SECTION THREE: CONSIDERATION OF ALL ASPECTS OF THE ENVIRONMENT

When evaluating alternatives, the *EA Act* requires proponents to consider not only the natural and biophysical environment, but also "the social, economic and cultural conditions that influence the life of man or a community". Proponents normally consider the broad scope of the 'environment' by establishing evaluation criteria and proponents should ensure that the criteria include all components of the 'environment' specified by the *EA Act*. The same set of criteria should be used throughout the entire planning process; the reasons for selecting the criteria should be clearly defined and explained. The level of detail or scope of inquiry, as driven by the criteria, will normally increase as one progress through the planning process.

Alternatives To

- With respect to the evaluation of "alternatives to", the full scope of the "environment" was considered, as documented in Section 4.5 of the Master Plan Report and the Stage 2B Report.

Alternative Methods

- The proponent considered the full scope of the "environment" in screening the long list of sites to a short list of sites in Section 6.7 of the Master Plan Report. However, it was not necessary for the proponent to consider the full scope of the environment in a screening exercise.
- The full scope of the "environment" was considered, with respect to the evaluation of "alternative methods", as documented in Section 6.8 of the Master Plan Report.

Preferred Undertaking

- Since the final assessment of the preferred site has not yet been completed, the Branch is unable to provide comments at this time regarding the scope of the "environment".

SECTION FOUR: SYSTEMATIC EVALUATION OF NET ENVIRONMENTAL EFFECTS

Subsection 5(3)(d) of the *EA Act* requires a proponent to explicitly evaluate the advantages and disadvantages for each alternative. However, prior to conducting the evaluation, the proponent is required to address subsections 5(3)(c)(i), 5(3)(c)(ii) and 5(3)(c)(iii) of the *EA Act*, by undertaking a "net effects analysis".

Subsection 5(3)(c)(i) requires the proponent to describe the environment that will or might be expected to be affected directly or indirectly by the proposed undertaking and its alternatives. Subsection 5(3)(c)(ii) requires the proponent to provide a description of the environmental effects that will likely result from each alternative. Subsection 5(3)(c)(iii) requires the proponent to describe the actions necessary to "prevent, change, mitigate or remedy" the potential effects to the environment of the undertaking and its alternatives. Section 3.6 and Figure 3 of the Ministry's *Interim Guidelines* provides further information as it relates to a "net effects analysis".

Alternatives To

- Document the results of the "concordance analysis" and its associated "sensitivity tests" conducted for the comparative evaluation of the alternative diversion strategies in Section 5.2.4 of the Master Plan Report.

Alternative Methods

Long List of Sites

- Upon reviewing Sections 6.7.5 and 6.7.6 of the Master Plan Report, it was found that the proponent did not formally evaluate advantages and disadvantages, developed from a "net effects analysis" for each of the long list of sites. In other words, the Branch does not recognize the "Ranking of Sites by Criteria Group" documented in Section 6.7.5 as a comparative evaluation in keeping with the requirements of the *EA Act*. Instead, the Branch considers the proponent's methodology to be consistent with a screening process which, under certain conditions, is considered an acceptable methodology for evaluating a long list of sites. However, the Branch recommends that the County clearly describe the evaluation methodology that was used for the "Ranking of Sites by Criteria Group" in the environmental assessment document.
- Define the preference categories of high, medium and low used by the study team to rank sites in each criteria group in Section 6.7.6.
- Explain how the "preference categories" were used to rank sites within each "criteria category".

- According to Section 6.7.6 of the Master Plan Report, most of the study team members grouped the sites by "preference categories" within each criteria group. Please indicate how the study team members grouped the sites by preference categories for each of the remaining criteria groups.
- Provide a rationale for concluding that "no significant difference between the sites" exist for the *Local/regional aquifer characteristics* criterion, in Section 6.7. What was the basis for this conclusion?
- It appears that trade-offs were made in ranking the sites under the *Natural Ecosystems* and *Land Use* criteria groups, in Section 6.7.6. If trade-offs were made, it would be advantageous to explicitly document the trade-offs to enhance the 'traceability' of the process.
- Clearly define the *Agriculture* criterion documented in Section 6.7.6 and Table 6.8.
- Explain why the *Other Resources* criteria category was removed from the Master Plan Report, starting from Table 6.10.
- Provide additional rationale to explain why Sites H, I and K are considered the most preferred under the *Land Use* criteria category, in Section 6.7.6.
- Explain how 7 criteria under *Social Cultural* criteria group, in Table 6.9, were reduced to only 4 criteria by Table 6.10.
- Given the information in Table 6.8 (p. 7) and Section 6.7.6, as it relates to the indicator *future designated and proposed land uses in the site vicinity*, it is difficult to distinguish the differences between Sites B and C from D, H and I, as a result of the comparative analysis. Explain why these sites differ.
- From the information documented in Section 6.7.6 and the data provided in Table 6.8 under the *Land Use* criteria category, provide clarification to explain whether there is a prominence of industrial or non-industrial type lands on Sites A, F, G and J.
- Site J appears to be excluded from the analysis made under the *Transportation* criteria category in Section 6.7.6. In fact, according to Table 6.8, it would appear that Site J should be documented as having a Moderate Impact/Cost.
- Describe how the numerical weights were determined by the study team in Section 6.7.7 for the "Overall Ranking of Sites" to identify a short list of sites.

- Explain why there was a need for a two step comparative evaluation process: quantitative concordance analysis and a qualitative (descriptive) evaluation, as documented in Sections 6.7.5 and 6.7.6 of the Master Plan Report.
- Describe in more detail the qualitative "dominance approach" used to evaluate the long list of 11 sites in Section 6.7.7. The Branch has some difficulty understanding how Sites G and J were eliminated.
- Indicate whether the advantages and disadvantages of the nine remaining sites identified in Table 6.13 are based on the "Ranking of Sites by Criteria Group" exercise in Section 6.7.6.
- Explain why Site E was slightly favoured over Site K, in the trade-off analysis, in Section 6.7.7.
- Indicate the basis for using Site C in the "paired comparisons", in Section 6.7.7.
- According to Section 6.7.6, the *Economics* criteria group was eliminated. Explain why. *Economics*, as it relates to "costs", was considered in comparing sites, later in Section 6.7.7.
- Given the nature of the qualitative evaluation in screening the long list to a short list of sites, any trade-offs in the decision-making process to select one site over another should be explicitly documented.
- Prior to applying any qualitative comparative evaluation, the proponent should establish logical decision rules, those rules used to sort sites. A series of rules should be described before applying the comparative evaluation to the long list of 11 sites.

Short List of Sites

- Explain whether the same "relative weights or importance" values for the short list evaluation were the same for the long list or were these weights re-established for the short list, in Section 6.8.
- With the exception of the *Land Use* criteria group, document whether the proponent conducted a "net effects analysis" for each criteria category, as described in Section 3.6 (Figure 3) of the Ministry's *Interim Guidelines*.
- Explain why Table 6.15 suggests that Site K is worst than Sites D, H and I (i.e. contains the fastest vertical hydraulic gradient) while Section 6.8.3 documents that Site K is the second best as it relates to vertical hydraulic gradient.

- Clearly document the trade-offs made for each criteria indicator within each criteria category in Section 6.8.3. For example, the analysis for each criteria indicator under the *Social* criteria category is documented in Section 6.8.3 as derived from Table 6.15.
- The proponent should clearly document how the overall conclusions were derived as they relate to *Surface Water*, in Section 6.8.3, in comparing the short list of sites. It appears that trade-offs were made and it is difficult to understand these trade-offs.
- The environmental assessment document should explain whether or not the analyses documented in Section 6.8.3 was derived from the data in Table 6.15.
- It would appear that the conclusions pertaining to *Agriculture* in Section 6.8.3 are based entirely on *potential loss of farm units* and *agriculture land* criteria. Explain why the conclusions for *Agriculture* are based on only 2 out of the 9 criteria, noted in Table 6.15.
- The rationale is absent as to why the ranking resulted in Sites H, I, D, and K for *Land Use*. Identify the specific criteria that were applied to reach this ranking.
- Explain how "small differences" between sites were distinguishable in order to assign a ranking to them, within a criteria category in Section 6.8.3. For instance, the small differences between sites for the *Transportation* criteria category resulted in a ranking of "most preferred" to "least preferred", while the small differences between sites for *Hydrogeology* and *Design and Operations* resulted in all the sites being "equally" ranked.
- It would appear that the proponent's approach to predicting effects for each criteria category, with the exception of *Land Use*, does not explicitly incorporate a consideration of the "gross effects" to the environment; that is, effects expected to occur in the absence of mitigation. Most predict gross effects, suggest mitigative measures for these effects, and then identify the "net effects" to the environment. If mitigation is not considered necessary or reasonable, the proponent should note how and why this conclusion was reached.
- The advantages and disadvantages for each of the "alternative sites" appear to be absent in Section 6.8 of the Master Plan Report. Even though the concordance evaluation methodology was based on the ranking of sites for all criteria categories, the proponent should document the advantages and disadvantages to the environment for each site.

SECTION FIVE: CONSULTATION WITH AFFECTED PARTIES

Pre-Submission Consultation

This section assesses whether the proponent consulted with affected parties prior to formally seeking approval for the preferred undertaking. Pre-submission consultation (PSC), though not a requirement of the *EA Act*, is considered by the Ministry to be an important component of the environmental assessment planning process, i.e., policy requirement.

Proponents are encouraged to make the planning process a co-operative venture with affected parties. To achieve this, early consultation with affected parties is essential. The Ministry's *Interim Guidelines* suggest that proponents seek to involve all affected parties, as early as possible, so that their concerns can be identified and addressed before irreversible decisions and commitments are made on the chosen approach or specific proposal. The *Interim Guidelines* recommend that the planning process be constructed around the involvement and contributions of the affected parties. This position is also advocated through the Ministry's *Guidelines and Policy on Pre-Submission Consultation in the EA Process*, November 1987.

The County has addressed the Ministry's policy requirements on consultation, however, clarification is required for the following matters:

- The proponent should document the purpose of Newsletter No. 1, in Section 2.2.
- Explain how the comments received at the November 1989 Public Information Centres were responded to and incorporated into the proponent's planning process. Schedule 3D-6 of Volume 3 only tabulates the comments received.
- Provide clarification as to how the participants at the Workshop No. 3 determined and agreed that the facility should be at least 71 ha.
- Document whether the public and government agencies had input on the criteria groupings for the systems evaluation, in Section 4.3.3.
- Explain whether the public was consulted on the "composite site" idea, in Section 4.6.
- In section 5.2.4, page 5-29, clarify whether the public and government agencies were consulted to identify the four evaluation criteria, the rationale for using them, and the importance or "weight" assigned to them.
- Table 5.3, in Section 5.2.4 requires clarification. For instance, it is not clear how the diversion rates for IC&I wastes were assumed to be 10% to 60%.

SECTION SIX: PROVISION OF CLEAR AND COMPLETE DOCUMENTATION

The final environmental assessment should strive to document accurately the planning process that was followed in a clear and understandable manner. The proponent should also explain how the principles of environmental assessment were addressed in the planning process. In preparing EA documentation, clarity is an objective, as well as completeness and precision.

Overall, the proponent's planning process has been adequately documented, however, the following comments should be considered by the County:

- Ontario Regulation 334 requires the proponent to submit an "executive summary" of the environmental assessment no more than 40 pages in length with the environmental assessment submission to the Minister.
- Clarify which specific MOEE advisory document is being referred to on page 1-3, in Section 1.2.
- On page 1-4, Section 1.2, the documentation indicates that the "MOEE recommends that WMMPs be developed in accordance with the requirements of the EAA." However, the Master Plan Report should clearly indicate that the "WMMPs must be developed in accordance with the requirements of the EAA."
- On page 1-4 and 1-6, the Master Plan Report should read: "In February 1992, the Waste Reduction Office (WRO) was established by the Minister".
- The documentation in Section 1.2 on page 1-4 should reflect the new 3Rs regulations which were approved in March 1994..
- The two waste management systems highlighted in Section 1.2, page 1-5, of the Master Plan Report should document the 3Rs components that are included in the two systems, as described later in the Master Plan Report.
- Where can UMA Engineering and the Consolidated Environmental Group's review of the Master Plan and the site selection process, referenced in Section 2.5.5 and M.M. Dillon's response be found?
- Page 1-5 of Section 1.3 states that the Stage 2B Report was prepared in October 1987 while Figure 4.1, in Section 4.0, states that the Stage 2B Report was prepared in May 1988. Which is the correct date?
- Section 1.5, "The Study Area", could include more information or make reference to sections where more information on the study area can be found (i.e. Stage 1 Report?).

- The source of calculations for "Past, Present and Future Waste Quantities" (i.e. Appendix 2D, Volume 2) could be cited at the beginning of Section 3.1.2 rather than the end of this section.
- Revise Section 4.4, as it pertains to "new 3Rs Regulations" on page 4-14, to reflect the new and approved 3Rs Regulations (March 1994).
- There appears to be an inconsistency between the total additional diversion figure of 1,700 tonnes per year documented in Table 5.1 on p. 5-4 and the figure of 1,800 tonnes per year found in section 5.1.4, p. 5-9.
- In Section 5.2.3, Table 5.2, Strategy 4, under "Direct Cost Collection", it would appear that the direct cost collection program would operate in Grand Bend. Shouldn't the proposed direct cost collection program, cover the entire County of Lambton?
- Was it the proponent's intent to include a more detailed scaled version of Figure 6.4 in the back pocket? If so, it is absent.
- The "Air" component of the definition of the "environment" under the *EA Act* should read subsection 1(c)(i) as opposed to 2(c)(i), in Table 6.1 of Section 6.6.
- In Section 6.6, Table 6.4, is the statement: "Presence of and areas within 500 m of future committed residential development" correct?
- "Siting Area 2" appears to be absent from Table 6.5, in Section 6.6.
- There appears to be two 12Cs documented in Table 6.5 of Section 6.6 under Candidate Area 39. A clear rationale should be provided to explain the existence of Site 12C.
- It is not clear what Figure 6.5 in Section 6.6 represents. Is this figure based on the "revised" industrial designation definition and when was this figure produced i.e. "date" ?
- It would appear that Figure 6.6 is absent from the Master Plan Report.
- Site F under the indicator, *Local ground water use* documents 40 potential users in Table 6.8, however, it does not appear on page 6-34 of the Master Plan Report where the results of each indicator is addressed. The data in Table 6.8 for the indicators *Site Stratigraphy* and *Presence and extent of existing buffers* under the *Social/Cultural Environment* criteria category also appear to be absent in Section 6.7.6.

- According to the ranking on p. 6-36, in Section 6.7.6 of the Report, Site I contains "0" residences in examining the criterion *potential disruption to residences in the vicinity*, however, Table 6.8 documents 1 residence. Provide the correct data for the above indicator.
- It is not clear from p. 6-40 and Table 6.11, in Section 6.7.6, whether Site K is moderately or most preferred. Page 6-40 would suggest moderately (ie. med. impact) while Table 6.11 would suggest most preferred (ie. low impact).
- According to Section 6.7.6, Site B is less preferred than Site E for the *Social* criteria category, however, Site B is equal or more preferred than Site E on the basis of *Social* according to Table 6.11, in Section 6.7.6. Provide clarification.
- In Table 6.7, is "assumed mitigation" equivalent to "non-site specific mitigation measures" as noted on p. 6.29?
- Is the information documented in Section 6.7.6 derived from Table 6.8? It would appear that Section 6.7.6 suggests that the information relating to *land ownership* for Sites D, H, I and K was obtained from Table 6.8. Clearly identify the data source for the analyses under the *land ownership* criteria category.
- It would appear that the "Legends" in Figures 6.9 to 6.19 are incomplete. For example, the boundary lines that represent Candidate Site Area, 500 m off-site and 1000 m off-site should appear in the Legend for each figure, noted above.
- It is unclear why the *Cost* criteria group used in the long list of sites was replaced by the *Design and Operations* criteria group in the short list of sites evaluation in Table 6.16 and Section 6.8.3.
- The criteria category "name" tends to change back and forth between *Hydrogeology* and *Ground Water* prior to Table 6.16. For consistency, indicate which criteria category name is correct.
- Please clarify whether the information documented on p. 6-37, Table 6.10 and Table 6.17 for the *Cost* criterion group is weighted highly/moderate or moderate.
- Section 8.3 refers to Section 209 of the Municipal Act. Bill 7 should be referred to instead.
- A proposed time schedule for implementation of the system should be included in Section 8.6.

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

SCHEDULE 3E-7

**MOEE - APPROVALS BRANCH
COMMENTS AND RESPONSES
FEBRUARY 1995**

**LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN
DRAFT MASTER PLAN REPORT REVIEW
MOEE - APPROVALS BRANCH COMMENTS AND RESPONSES**

Comment	Response	Action Taken
<p>Ministry of Environment and Energy, Approvals Branch</p> <p>The first priority of the Ministry and the plan is to reduce, reuse and recover waste. The document does not clearly reflect the emphasis of this priority in that the depth of the document focuses on site selection as the primary concern. There does not appear to be any aggressive initiative proposed to promote the 3Rs. The document could be improved through the inclusion of a treatise on existing and potential consumers of recycled goods and an active plan to support these types of initiatives. What recycle opportunities exist and what are the related economics? A Waste sales team approaching Chemical Valley Industries as possible consumers might result in a very real reduction in waste. The draft proposes an enhanced blue box program which, although an improvement, is not described in detail and does not exhibit the characteristics one might expect from the first priority of the plan. Detailed descriptions of the Material Recycling Facility are absent as well as the descriptions of the compost site. Also, the disposal of compost and its leachate has not been addressed. While it is not necessary at this stage to go into any great level of detail in the description, some indication of magnitude and unit operation would be helpful for the decision-makers.</p>	<p>The information and analyses related to waste diversion are reflected throughout the Master Plan document. In particular, please refer to Volume 1 - Chapter 3, Sections 3.2 and 3.3; Chapter 4, Sections 4.2, 4.4 and 4.5; Chapter 5, Chapter 8 and Volume 2 - Appendices 2E and 2G. The emphasis on waste diversion was also evident in various public information materials, a resident survey and public presentations (see Volume 3). Waste diversion is further reflected in all materials related to the site selection process, since the proposed composite waste management facility was assumed to include not just a disposal facility (landfill) but also two diversion facilities (a MRF and a composting facility).</p> <p>The development of the recommended waste management system, and the long-term waste diversion strategy, involved a systematic evaluation of reasonable alternatives. In our view, the level of detail was adequate to allow for effective decision-making, at the EAA-level.</p> <p>The recommended long-term waste diversion strategy ("Strategy 3") includes much more than the enhanced blue box program mentioned by the reviewer (see Volume 1, Chapter 5, Figure 5.1 and page 5-35). The strategy will, when implemented, allow the County to comply with the provincial government's waste diversion objective of at least 50% by the year 2000.</p>	<p>No further action required at present, except as noted below.</p>

Footnotes

- References in the "Comment" and "Response" columns refer to the March 1994 Draft Report.
- In the "Action Taken" column, "no action required" refers to the Draft Report Review process, and indicates that no revisions were required for the February 1995 Report. Future action/consultation will be undertaken with review agencies, and other interested parties, in the event the County decides to proceed with detailed assessment studies and to apply for EAA/EPA-level approvals for an undertaking.

Comment	Response	Action Taken
<p>Two major impacts from municipal landfills are litter and odour. The study has not detailed any wind/weather information which could be expected to influence the description of the impact zone. A windrose would be a valuable addition to the figures. Does the presence of the St. Clair River topography result in any atypical wind patterns that merit consideration?</p> <p>Is it practical to recover litter blown into a major watercourse like the St. Clair River?</p> <p>The nature of the industrial pond on the site south of H and I would make litter recovery in this area difficult.</p> <p>It is suggested that there is a flaw in the public involvement component of the plan by not exposing our U.S. neighbours to the final stages of the site selection when they own property within the watershed of potential sites. There should be at least both agency and private contacts for both Sites H and I. The intent of the public involvement process is to make the public aware of activities that may impact their lives. The current document does not reflect the sharing of the information with the U.S.</p>	<p>The administration and implementation of the diversion initiatives is addressed in Volume 1, Chapter 8, with respect to policies, requirements, distribution of responsibilities, staffing and financing. If the County decides that a new County-owned Materials Recovery Facility and/or central composting facility will be required, details regarding their development will be addressed during future studies. It is quite possible, however, that the County will be able to arrange contracts with private sector diversion facilities.</p> <p>In the event the County decides to pursue EAA/EPA-level approvals for a new landfill/facility, the detailed assessment studies would address possible nuisance effects such as litter and odour. Appropriate impact management measures would be developed as part of these studies.</p>	<p>No action required</p>
<p>As indicated in Volume 4, Schedule IV of Appendix 4F - Visual Impact Assessment, residents living across the river in the United States are outside of the 3.0 km Study Area. The U.S. residents would not be able to see the proposed waste management facility due to existing vegetation, distance, the existing heavy industrial uses (e.g. Terra and ICI), and site development measures such as plantings, berming and fencing.</p> <p>In the event the County decides to pursue EAA/EPA-level approvals for a new landfill/facility, the detailed assessment studies would include provision for consultation with U.S. residents across the river.</p>	<p>No action required.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>The definition of viewer for the weighing of the viewshed parameter fails to recognize the resource of both the river and parkway tourist and recreation traffic as having appropriate significance. They are significant. The St. Clair Parkway is a resource for the County and Province and should not be diminished through lack of recognition. Transitional viewers should have status in the comparative study. There is a significant recreational component associated with the St. Clair River.</p>	<p>Viewers from the St. Clair River and the parkway were discussed in Schedule IV in Appendix 4F of Volume 4. Although there is visibility in this area, it is largely screened. Views from the parkway are focused toward the river and viewers on the river have partially screened views, thus mitigating impact (see Table 2). The significance of the St. Clair Parkway, and the potential for impacts on Parkway Commission facilities, were also addressed in Section 3.3 of Appendix 4E, Volume 4. It was determined that the development of the waste management facility at any one of the four sites would not adversely affect Commission facilities.</p> <p>Viewers have not been weighted because there is no justification for indicating that a person recreating on the river with a partial view will have a greater impact than a resident with a full view. These viewers are no more significant by virtue of their activity.</p> <p>Finally, the St. Clair Parkway Commission and St. Clair Region Conservation Authority were included in the Master Plan consultation process. As a result of the most recent phase of consultation, both agencies have indicated that they have no concerns or objections to the Master Plan process and recommendations.</p>	<p>No action required.</p>
<p>Volume 1 (Section 6.7.4.2) discusses constraint criteria for the off-site study zone as 1,000 m from the fill area. This would place the St. Clair River within the study area of Sites G, H and J which should exclude these sites. The assessment does not clearly reflect the proximity of the watercourse. Table 6.8 mentions Site J as being 800 m from the river. This appears to be an average rather than closest distance to the river. In Table 6.8, no mention is made of the proximity of G and H to the river. Volume 4 provides further detail of the site selection. The river as a recreational use is not dealt with in the 1,000 m area reviewed.</p> <p>The contingency factor has not been consistently applied. If 500 m is the guidance value and is doubled to 1,000 as a contingency, the same principle should also be used for the rest of the various constraints by distance criteria.</p>	<p>The criteria discussed in Section 6.7 are not constraint criteria, but are criteria used to compare the "long list" sites. For the <i>Surface Water</i> and <i>Natural Ecosystem</i> criteria groups, features on-site, adjacent to the site and within 200 m are addressed. This is appropriate given the low probability of impacts to these features beyond the distance considered. Potential impacts on viewers from the St. Clair River were considered, as discussed above.</p> <p>Regarding the 500 m and 1,000 m distance, it was considered most accurate to define specific study zones for each criteria group according to the potential for significant impacts.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Should the ground water monitoring program indicate problems in the future, the contamination could be difficult to source if adjacent to gypsum ponds and stacks. This would inhibit District compliance efforts.</p>	<p>The gypsum ponds and stacks are located south of the Moore-Sombra Townline while Sites H and I are located north of the Moore-Sombra Townline. As well, the waste fill area will be located no closer than 150 m from the Moore-Sombra Townline. Therefore, there will be a separation distance of approximately 300 m between the two potential sources of contamination.</p> <p>Presently, there is a ground water monitoring program in place to quantify impacts resulting from the gypsum ponds and stacks. The type of contamination that could potentially result for a landfill is expected to be different than the contamination resulting from the gypsum ponds and stacks.</p> <p>Therefore, given the separation distance and the difference between the potential sources of contamination, a properly designed water quality monitoring program should be capable of differentiating between the contamination sources.</p>	<p>No action required.</p>
<p>Aqueous discharges from the site have not been assessed with respect to possible sanitary sewage, wash needs of the Material Recovery Facility, treated leachate, storm water. It should be made clear whether there is an expectation of direct discharges to the St. Clair River. The implications for the cost estimate could be significant.</p>	<p>The County plans to truck leachate to the leachate treatment facility at the Sarnia Landfill site. Sanitary sewage and waste water from the MRF will also need to be trucked away, but to a sewage treatment plant. No direct discharges to the St. Clair River are contemplated. Storm water from the storm water management/sediment control pond will discharge to existing drains. In the event the County decides to pursue EAA/EPA-level approvals for a new landfill/facility, these items would be addressed further during the detailed assessment studies.</p>	<p>No action required</p>
<p>Capacity for future expansion was mentioned in various locations but never appeared to contribute to the overall assessment in any of the charts.</p>	<p>In the WMMP, the expansion of an existing landfill site beyond its already approved boundaries was considered in the same manner as the establishment of a new site. The focus of the siting process was on identifying the best location for a composite waste management facility. Lands adjacent to an existing facility were not considered either better or worse than other lands. This is consistent with the basic siting principle that all reasonable alternatives must be considered.</p> <p>(Reference: Chapter 4, Section 4.5; Appendix 2E, Pages 27 and 28.)</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>The existence of the existing waste disposal site has been assessed as insignificant based on the magnitude of the proposed operation. There are other factors which merit consideration. It is likely that any loss in property value has already occurred. There will be a long term cost for closure and monitoring regardless. This cost is likely to be increased with a greater number of closed landfills. The plan does not deal with the factor of the existing site in sufficient detail.</p>	<p>The question of property value losses that may have occurred in the past is not relevant to the comparison of the "short list" sites. In comparing the four sites, the potential "new" impacts (i.e. impacts that might be caused by the new facility) were taken into account. The costs for closure and monitoring would be insignificant compared to all other considerations. The potential for property value impacts would, however, be considered with respect to the preferred site. Consideration would be given to a Property Value Protection Plan in the development of impact management measures. Further discussion of this could be included in detailed assessment studies.</p>	<p>No action required.</p>
<p>It is recommended that landfill gas collection and destruction or utilization to minimize "greenhouse gas" emissions from landfills be considered. There is no information in the Draft Master Plan on consideration of potential methane emissions and the method of dealing with them at the preferred landfill site. This should be addressed in the EA submission for the landfill site.</p>	<p>The potential methane emissions and method of dealing with them would be addressed during detailed assessment studies.</p>	<p>No action required.</p>
<p>The waste management system should be designed and operated to minimize the use of energy for transportation. The Draft Master Plan does not explicitly provide for this criterion. The <i>Transportation</i> criteria for landfill sites comparison do include <i>vehicle kilometres travelled on public roads</i>. However, this does not necessarily compare the energy use and costs, since a shorter distance travelled may actually require more energy if, for example, there are more stops and idling time involved. A more useful criterion would have been truck travel <u>time</u>. This was evaluated for the economic feasibility study of transfer stations (using existing landfill sites in the analysis), but (not) for the potential new landfill candidate sites comparison.</p>	<p>The long list transportation criterion (<i>tonne-km travelled</i>) and short list criteria (i.e. <i>vehicle-km travelled</i>) were selected to best represent impacts on traffic safety and traffic operations. They were not specifically intended to incorporate the economic costs of energy use.</p> <p>For larger, more complex landfill siting projects, a travel time matrix is developed by the <i>Transportation</i> discipline for use by economists in estimating costs. For this project, completing such an assessment would likely yield little additional information. All the sites were located off of Highway 40 in Moore Township. The majority of the waste originates in Sarnia and would use the same basic routing to any of the sites. Therefore, the incremental fuel consumption is approximately proportional to the additional distance driven south.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>It is noted that the preferred landfill site did not rank well overall for the <i>Transportation</i> criteria which were assigned a "moderate" priority. However, the site was preferable for other higher priority criteria. The site's poorer rating in the transportation area might be mitigated by the use of transfer stations which could help to reduce energy use in waste haul. The Draft Master Plan, however, does not make a decision on whether or not a transfer system should be established. The Master Plan should clarify when and on the basis of what final criteria this decision will be made.</p> <p>The Draft Master Plan should have provided a list of the contacts made with and any concerns expressed by energy utilities. Information on possible effects on electricity and hydrocarbon facilities is scattered throughout the report. In some cases, there appears to be possible effects from potential landfill sites but there is no information on their nature and whether utilities were advised.</p>	<p>The feasibility of building and operating transfer stations was analyzed (see Volume 1, Chapter 7). It was concluded that, from an economic standpoint, it would not be cost-effective to develop transfer station(s). This is the technical conclusion, as stated in the Draft Master Plan.</p> <p>It is acknowledged, though, that for political, non-economic reasons, the County may decide that it is desirable to provide one or more transfer stations. The County's decision regarding this will be documented appropriately.</p> <p>With respect to the rankings of the four "short list" sites, even if transfer stations had been assumed, the rankings would not have changed because the short-listed sites are all in close proximity to one another.</p> <p>The list of contacts made with energy utilities is provided in Volume 3. The utilities contacted and contact dates are as follows (Schedules within the Volume are in brackets):</p> <ul style="list-style-type: none"> ● Ontario Hydro - February 1986 (3A-4); ● Union Gas - March 1986 (3A-5); ● Ontario Hydro, Union Gas - June 1986 (3A-12); ● Ontario Hydro - May 1987 (3B-1); ● Ontario Hydro - October 1987 (3C-2); ● Ontario Hydro, Union Gas - November 1989 (3D-4); and ● CN Rail, Hydro-Electric Commissions, Public Utilities Commissions, TransCanada Pipelines, Consumers Gas Co., Union Gas, Sarnia Hydro (3E-3). <p>The County has received correspondence from and will continue to keep in touch with Ontario Hydro, Union Gas, CN Rail, TransCanada Pipelines and Consumers Gas. Sarnia Hydro has no comments on the Master Plan. The Public Utilities Commissions and Hydro-Electric Commissions have chosen not to respond to the Master Plan process.</p>	<p>No action required.</p> <p>No action required.</p>

Comment	Response	Action Taken
<p>On pages 2-13 and 2-34 of Volume 1, it is noted that there are "gas storage areas" located on some of the candidate landfill sites. What exactly are these and who owns them (e.g. individual property owners or gas companies?).</p>	<p>Gas storage areas are natural formations called "reefs" found in the bedrock approximately 600-800 m below ground surface. The depth of the gas storage formation is much deeper than any possible landfill impact. Natural gas is stored in these formations by gas companies (e.g. Union Gas, Tecumseh Gas Storage) who own leases from individual property owners. The gas storage areas are administered by the Ontario Energy Board. Of the four sites, only Site K is situated in a "designated area" which is leased by Tecumseh Gas Storage. Site K is presently not located in an active gas storage area. Contact with Tecumseh Gas Storage was made to discuss potential conflicts with landfilling activity. Presently, Tecumseh has no plans for the area and the only potential foreseeable activity for the area would be drilling of an exploratory borehole at the site. If Site K had been selected as the preferred site, the exploratory borehole could be located outside the waste fill area and therefore would not conflict with landfilling activities. However, Site I has been selected as the preferred site.</p>	<p>No action required.</p>
<p>The maps for Sites H and I (Figures 6.16 and 6.17, Volume I), indicate that a "Trans-Canada Pipeline Station" is located within a kilometre of the sites. There is no information, however, on where the pipeline is located in relation to the station or landfill sites. There may be technical restraints in locating landfill sites close to pipelines (e.g. pipeline gravel bed acting as a conduit for leachate). There is no indication in the report that Trans-Canada Pipeline has been contacted about this.</p>	<p>TransCanada Pipelines has been contacted about the proposed undertaking. If any waste management activity occurs within 200 m of their pipeline, this agency would need to review the Master Plan. However, measurements on a map supplied by TransCanada Pipelines indicated that Sites H and I are approximately 700 m away.</p>	<p>No action required.</p>
<p>It is not clear why the <i>potential disruption to businesses in site vicinity</i> was not included in the criteria used to evaluate and select a landfill site amongst the short list of sites.</p> <p>As the Ministry will soon be publishing a study entitled, Municipal Solid Waste Management - Full Cost Accounting Model that may be of some value to Lambton County Waste Management Master Plan, it is suggested that the Economic Services Branch be contacted for a copy.</p>	<p>A separate Economic Impact Assessment was not included in the scope of work and budget. However, a sensitivity test was done to determine whether it would have affected the final result. It was found that the siting result would not have changed.</p> <p>We look forward to obtaining the new Full Cost Accounting Model by the Ministry. We have done some work with a previous model and have found some of the inherent assumptions invalid or problematic.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Volume 1, Figure 8-1 - The solid line attachment for the Ministry is probably not appropriate as the Ministry is not employed by the County. Rather, the Ministry supplies technical support and enforces compliance as necessary. A dashed line would be better.</p>	<p>Comment noted. The solid line on Figure 8.1 joining the Administrator of the Waste Management Department to Technical Support (e.g. MOEE representatives, consultants, waste management contractors) will be changed to a dashed line. (Reference: Chapter 8, Figure 8-1.)</p>	<p>The revision to Figure 8.1 has been made as noted.</p>
<p>Appendix 2C - The discussion on the Regulations needs to be freshened as the regulations have now been promulgated.</p>	<p>Comment noted. The discussion on existing legislation, regulations and guidelines will be updated to reflect changes such as promulgation of the new 3Rs Regulations. (Reference: Appendix 2C.)</p>	<p>The updates have been incorporated.</p>
<p>Appendix 2D, Page 15 - The text in the first paragraph cites 54,900 tonnes of waste while Table D-11 cites 53,100.</p>	<p>The correct value is 53,100 tonnes. The value given in the text will be corrected. (Reference: Appendix 2D, Page 15.)</p>	<p>The value in the text has been corrected.</p>
<p>Appendix 2G, Page 5 - The last sentence of paragraph 3 suggests urban households throw waste in gardens. Perhaps this was meant to be rural.</p>	<p>The text should read "Households in rural areas are also likely to feed food scraps to animals and pets or dump them in their gardens." The text will be corrected. (Reference: Appendix 2G, Page 5.)</p>	<p>The text has been corrected as noted.</p>
<p>Appendix 4A, Tables 3, 4, 5, 6 - These tables indicate that the net effect of the landfill would be an increase in safety for farm vehicles. This conclusion lacks foundation.</p>	<p>Changes in the Appendix will be made to clarify net effects.</p>	<p>The clarifications have been incorporated.</p>
<p>Appendix 4E, Figures 3,4, 5 - Graphics are not legible and should be redone.</p>	<p>Adjustments will be made in the printing of the figures from the Lambton County planning documents (Figures 1 to 5, Appendix 4E) to improve legibility.</p>	<p>No action required at present. Adjustments will be made at the time of printing.</p>
<p>The document does not clearly explain why there is an indentation in the perimeter of Site K. Is the indentation the Class 2 Agricultural land or is that further east?</p>	<p>The indentation in the perimeter of Site K is due to the presence of Class 2 Agricultural lands.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>Given that the above concerns are addressed, the plan data, analyses and conclusions are satisfactory, relevant and substantiated. The general level of detail is appropriate. Mitigation methods to reduce environmental effects such as berming, fencing, and monitoring are not detailed. The analyses is logical and somewhat easy to follow but somewhat repetitive.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>The range of alternatives is appropriate.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Monitoring and contingency plans such as closure are lacking.</p>	<p>Monitoring and contingency plans and compliance reporting would be addressed if the County decides to apply for EAA/EPA-level approvals for a new landfill/facility.</p>	<p>No action required.</p>
<p>The implementation seems appropriate.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>The plan has not developed to the point of considering compliance reporting.</p>	<p>Monitoring and contingency plans and compliance reporting would be addressed if the County decides to apply for EAA/EPA-level approvals for a new landfill/facility.</p>	<p>No action required.</p>
<p>The undertaking is satisfactory given that the above concerns are addressed appropriately.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>The MOEE has been involved in the undertaking since the beginning.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>In conclusion, the draft WMMP is a comprehensive plan which satisfies the process requirements for rational decision-making. The above comments and questions should be addressed prior to finalizing the plan.</p>	<p>Comment noted.</p>	<p>The comments and questions have been addressed.</p>

Ministry of
Environment
and Energy

Ministère de
l'Environnement
et de l'Énergie

250 Davisville Avenue
Toronto ON M4S 1H2

250, avenue Davisville
Toronto ON M4S 1H2

County of Lambton,
Waste Management,
Hwy 21, Box 3000
Wyoming, Ontario
N0N 1T0

RECEIVED

JUL 28 1994

M. M. DILLON LTD.
TORONTO OFFICE

July 26, 1994

Attention: Mr. James J. Kutya, P.Eng.
Administrator, Waste Management

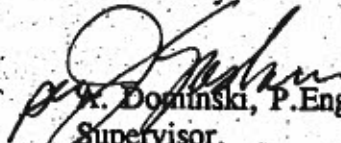
Dear Mr. Kutya:

RE: LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN
MARCH 1994 DRAFT REPORT - REVIEW COMMENTS

Enclosed is a copy of the Ministry's review comments on the March 1994 draft copy of the Lambton County Waste Management Master Plan.

Should you have any questions or wish clarification on any matter pertinent to these comments you may contact Mr. John McNeely of the Approvals Branch (tel: (416) 440-3727).

Yours truly



K. Dominski, P.Eng.
Supervisor,
Industrial Approvals
Waste Sites and Systems

cc. A. Chan M. M. Dillon Limited



REVIEW COMMENTS
LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN
MARCH 1994 DRAFT REPORT

The Ministry has reviewed the Lambton County Waste Management Master Plan Report (March 1994 draft) prepared by M.M. Dillon Limited and while overall the comments are favourable there were some sections of the report which the reviewers felt might be improved upon. It is with that purpose in mind that the following comments are submitted for consideration.

1. The first priority of the Ministry and the plan is to reduce, reuse and recover waste. The document does not clearly reflect the emphasis of this priority in that the depth of the document focuses on site selection as the primary concern. There does not appear to be any aggressive initiative proposed to promote the 3 R's. The document could be improved through the inclusion of a treatise on existing and potential consumers of recycled goods and an active plan to support these types of initiatives. What recycle opportunities exist and what are the related economics? A Waste sales team approaching Chemical Valley industries as possible consumers might result in a very real reduction in waste. The draft proposes an enhanced blue box program which, although an improvement, is not described in detail and does not exhibit the characteristics one might expect from the first priority of the plan. Detailed descriptions of the Material Recycling Facility are absent as well as the descriptions of the compost site. Also the disposal of compost and its leachate has not been addressed. While it is not necessary at this stage to go into any great level of detail in the description, some indication of magnitude and unit operation would be helpful for the decision-makers.
2. Two major impacts from municipal landfills are litter and odour. The study has not detailed any wind/weather information which could be expected to influence the description of the impact zone. A windrose would be a valuable addition to the figures. Does the presence of the St. Clair river topography result in any atypical wind patterns that merit consideration?
3. Is it practical to recover litter blown into a major watercourse like the St. Clair River?
4. The nature of the industrial ponds on the site south of H and I would make litter recovery in this area difficult.
5. It is suggested that there is a flaw in the public involvement component of the plan by not exposing our U.S. neighbours to the final stages of the site selection when they own property within the viewshed of potential sites. There should be at least both agency and private contacts for both sites H and I. The intent of the public involvement process is to make the public aware of activities that may impact their lives. The current document does not reflect the sharing of the information with the U.S.

6. The definition of viewer for the weighing of the viewshed parameter fails to recognize the resource of both the river and parkway tourist and recreation traffic as having appropriate significance. They are significant. The St. Clair Parkway is a resource for the County and Province and should not be diminished through lack of recognition. Transitional viewers should have status in the comparative study. There is a significant recreational component associated with the St. Clair River.

7. Volume 1, (Sect. 6.7.4.2) discusses constraint criteria for the off-site study zone as 1000 m. from the fill area. This would place the St. Clair River within the study area of sites G, H and J which should exclude these sites. The assessment does not clearly reflect the proximity of the watercourse. Table 6.8 mentions site J as being 800 m. from the river. This appears to be an average rather than closest distance to the river. In Table 6.8, no mention is made of the proximity of G and H to the river. Volume 4 provides further detail of the site selection. The river as a recreational use is not dealt with in the 1000 m area reviewed.

The contingency factor has not been consistently applied. If 500 m is the guidance value and is doubled to 1000 as a contingency, the same principle should also be used for the rest of the various constraint by distance criteria.

8. Should the groundwater monitoring program indicate problems in the future, the contamination could be difficult to source if adjacent to gypsum ponds and stacks. This would inhibit District compliance efforts.

9. Aqueous discharges from the site have not been assessed with respect to possible sanitary sewage, wash needs of the Materials Recovery Facility, treated leachate, stormwater. It should be made clear whether there is an expectation of direct discharges to the St. Clair river. The implications for the cost estimate could be significant.

10. Capacity for future expansion was mentioned in various locations but never appeared to contribute to the overall assessment in any of the charts.

11. The existence of the existing waste disposal site has been assessed as insignificant based on the magnitude of the proposed operation. There are other factors which merit consideration. It is likely that any loss in property value has already occurred. There will be a long term cost for closure and monitoring regardless. This cost is likely to be increased with a greater number of closed landfills. The plan does not deal with the factor of the existing site in sufficient detail.

12. It is recommended that landfill gas collection and destruction or utilization to minimize "greenhouse gas" emissions from landfills be considered. There is no information in the Draft Master Plan on consideration of potential methane emissions and the method of dealing with them at the preferred landfill site. This should be addressed in the E.A. submission for the landfill site.

13. The waste management system should be designed and operated to minimize the use of energy for transportation. The Draft Master Plan does not explicitly provide for this criterion. The "Transportation" criteria for landfill sites comparison do include "vehicle

kilometers travelled on public roads". However this does not necessarily compare the energy use and costs, since a shorter distance travelled may actually require more energy if, for example there are more stops and idling time involved. A more useful criterion would have been truck travel time. This was evaluated for the the economic feasibility study of transfer stations (using existing landfill sites in the analysis), but for the potential new landfill candidate sites comparison.

It is noted that the preferred landfill site did not rank well overall for the "Transportation" criteria which were assigned a "moderate" priority. However, the site was preferable for other higher priority criteria. The site's poorer rating in the transportation area might be mitigated by the use of transfer stations which could help to reduce energy use in waste haul. The Draft Master Plan however does not make a decision on whether or not a transfer system should be established. The Master Plan should clarify when and on the basis of what final criteria this decision will be made.

14. The Draft Master Plan should have provided a list of the contacts made with and any concerns expressed by energy utilities. Information on possible effects on electricity and hydrocarbon facilities is scattered throughout the reports. In some cases there appears to be possible effects from potential landfill sites but there is no information on their nature and whether utilities were advised. For example:

On pages 2-13 and 2-34 of Volume I, it is noted that there are "gas storage areas" located on some of the candidate landfill sites. What exactly are these and who owns them (e.g. individual property owners or gas companies)?

The maps for sites H and I (Figures 6.16 and 6.17, Volume 1), indicate that a "Trans-Canada Pipeline Station" is located within a kilometer of the sites. There is no information however on where the pipeline is located in relation to the station or landfill sites. There may be technical restraints in locating landfill sites close to pipelines (e.g. pipeline gravel bed acting as a conduit for leachate. There is no indication in the report that Trans-Canada Pipeline has been contacted about this.

15. It is not clear why "the potential disruption to businesses in site vicinity" was not included in the criteria used to evaluate and select a landfill site amongst the short list of sites.

As the Ministry will soon be publishing a study titled, Municipal Solid Waste Management - Full Cost Accounting Model that may be of some value to Lambton County Waste Management Master Plan, it is suggested that the Economic Services Branch be contacted for a copy.

Additional Comments:

- 1. Volume 1-Fig. 8-1: The solid line attachment for the Ministry is probably not appropriate as the Ministry is not employed by the County. Rather the Ministry supplies technical support and enforces compliance as necessary. A dashed line would be better.**
- 2. Appendix 2C: The discussion on the Regulations needs to be freshened as the regulations have now been promulgated.**
- 3. Appendix 2D, Pg.15: The text in the first paragraph cites 54,900 tonnes of waste while Table D-11 cites 53,100.**
- 4. Appendix 2G, Pg.5: The last sentence of paragraph 3 suggests urban households throw waste in gardens. Perhaps this was meant to be rural.**
- 5. Appendix 4A, Tables 3,4,5,6: These tables indicate that the net effect of the landfill would be an increase in safety for farm vehicles. This conclusion lacks foundation.**
- 6. Appendix 4E, Fig. 3,4,5: Graphics are not legible and should be redone.**
- 7. The document does not clearly explain why there is an indentation in the perimeter of site K. Is the indentation the Class 2 Agricultural land or is that further east?**

EA Comments:

The plan has been asked to satisfy the intent of the EA process. The following comments answer the seven typical questions asked of EA reviewers.

- 1. Given that the above concerns are addressed, the plan data, analyses and conclusions are satisfactory, relevant and substantiated. The general level of detail is appropriate. Mitigation methods to reduce environmental effects such as berming, fencing, and monitoring are not detailed. The analyses is logical and somewhat easy to follow but somewhat repetitive.**
- 2. The range of alternatives is appropriate.**
- 3. Monitoring and contingency plans such as closure are lacking.**
- 4. The implementation seems appropriate.**
- 5. The plan has not developed to the point of considering compliance reporting.**

6. The undertaking is satisfactory given that above concerns are addressed appropriately.
7. The MOEE has been involved in the undertaking since the beginning.

In conclusion, the draft WMMP is a comprehensive plan which satisfies the process requirements for rational decision-making. The above comments and questions should be addressed prior to finalizing the plan.

07/26/94

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

SCHEDULE 3E-8

**REVIEW AGENCIES
COMMENTS AND RESPONSES
FEBRUARY 1995**

**LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN
DRAFT MASTER PLAN REPORT REVIEW
REVIEW AGENCIES: COMMENTS AND RESPONSES**

Comment	Response	Action Taken
<p>Ausable-Bayfield Conservation Authority</p> <p>The four candidate sites are located outside of the Ausable-Bayfield Conservation Authority watershed boundary, therefore we have no specific concerns regarding their selection criteria. In general, we support the basic intent of the plan which is to divert as much waste as possible from the landfill stream and encourage the reduction, reuse and recycling of waste material.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Bell Canada</p>		
<p>Do not wish further correspondence regarding Master Plan.</p>	<p>Comment noted</p>	<p>No action required.</p>
<p>CN North America</p>		
<p>CN expects the proponent to identify any impacts of the project that may influence the railway operation, land or facilities (e.g., will additional rail crossings be required? Will there be increased traffic at existing crossings? Will additional maintenance and warning devices be required at crossings?)</p>	<p>In the event the County decides to pursue EAA/EPA-level approvals for a new landfill/facility, CN will be informed and consulted during the detailed assessment studies.</p>	<p>No action required at the present time.</p>
<p>Environment Canada</p>		
<p>Do not wish further correspondence regarding Master Plan.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>First Nations:</p>		
<p>Chippewas of Kettle and Stony Point</p>		
<p>No comments received.</p>	<p>No response required.</p>	<p>No action required.</p>
<p>Chippewas of Sarnia</p>		
<p>No comments received.</p>	<p>No response required.</p>	<p>No action required.</p>

Footnotes

1. References in the "Comment" and "Response" columns refer to the March 1994 Draft Report.
2. In the "Action Taken" column, "no action required" refers to the Draft Report Review process, and indicates that no revisions were required for the February 1995 Report. Future action/consultation will be undertaken with review agencies, and other interested parties, in the event the County decides to proceed with detailed assessment studies and to apply for EAA/EPA-level approvals for an undertaking.

Comment	Response	Action Taken
<p>First Nations: (Continued)</p> <p>Walpole Island</p> <p>Both preferred Sites "I" and "H" are within the First Nation's Lower Indian Reserve which is the subject of a pending specific claim. The Lower Indian Reserve was established by treaty and has never been lawfully surrendered. In fact, a portion of these lands remain unsold today. The Specific Claim Branch of the Department of Indian Affairs and Northern Development is expected to complete its review of this claim this fall and, following legal review by the Department of Justice, the First Nation anticipates negotiations with respect to this claim to commence next year.... The First Nation is prepared to undertake discussions with Lambton County to review the nature of its legal interest in the lands ... and to address its concerns related to the construction of a landfill on these lands.</p> <p>Walpole Island First Nation's concerns include:</p> <ul style="list-style-type: none"> • proximity of the preferred sites to the St. Clair River and potential for leachate contamination of the River. The First Nation relies upon the St. Clair River, not only as its source of drinking water, but also to support the fish, wildfowl and other aquatic plant and animal life which constitutes its food supply. Any contamination of the waters of the St. Clair River represent a threat to the First Nation's economic livelihood, health, welfare and traditional ways of life • while the Report identifies Site "I" as the preferred site from a surface-water perspective because it discharges to only one water course, the First Nation is concerned that, given the limited length of the water course, discharge is in essence directly into the St. Clair River, and no consideration has been given to identified downstream usage, including impacts on the First Nation. First Nation has similar concerns with respect to Site "H" 	<p>Discussions and presentations were held in the summer and fall of 1994 (see Volume 1, Chapter 2 of the Master Plan Report). Consultation will continue when appropriate in future. The question of participant funding will be addressed in the event the County decides to proceed with detailed assessment studies and to pursue EAA/EPA-level approvals for an undertaking.</p>	<p>Further consultation will occur on an as-required basis.</p>

Comment	Response	Action Taken
<ul style="list-style-type: none"> • impact upon identified forests and rare species in the vicinity of Sites "I" and "H" • Site "I" requires the largest amount of cultivated farm land • Sites "I" and "H" are furthest from the areas of waste generation, with proposed waste transportation on roads located on unsundered lands. <p>Before participating in the proposed discussions with the County, the First Nation will be required to undertake a review of the Report with the assistance of consultants to further identify and assess the implications of the proposed landfill for its people. Walpole Island First Nation requests that the County extend participant funding to reimburse the First Nation for legal and consultant costs and its own costs in undertaking this review and participating in the proposed negotiations with the County.</p>		
Hydro-Electric Commissions - Arkona, Bothwell, Oil Springs, Sarnia, Wyoming		
No comments received.	No response required.	No action required.
Indian and Northern Affairs Canada		
<p>Activities are unlikely to have significant effect on our mandate. Walpole Island and Chippewas of Sarnia First Nations bands should be provided with information for future reference. Contact names have changed as follows:</p> <p>Chief Joseph Gilbert Walpole Island First Nation R.R. 3 Wallaceburg, Ontario N8A 4K9</p> <p>Phone: 519-627-1481 Fax: 519-627-0440</p>	<p>The new contact name for Walpole Island First Nation is acknowledged and the revision to the contact list will be made. The contact name, address and phone numbers provided by Indian and Northern Affairs Canada for Chippewas of Sarnia First Nation are not accurate. The name and numbers on the County's contact list for this First Nation are accurate, as follows:</p> <p>Chief Philip Maness Chippewas of Sarnia First Nation 978 Tashmoo Avenue Sarnia, Ontario NTT 7H5</p> <p>Phone: 519-336-8410 Fax: 519-336-0382.</p>	<p>The new contact name for Walpole Island First Nation has been added to the contact list.</p>

Comment	Response	Action Taken
<p>Chief Delbert Riley Chippewas of Sarnia First Nation R.R. 1 Muncey, Ontario N0L 1Y0 Phone: 519-264-1528 Fax: 519-264-2203</p>		
<p>Lambton College The College has no concerns and does not intend to send written comments.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Lambton County Board of Education The Board does not wish to review the Draft Master Plan, but would like to be kept informed.</p>	<p>Comment noted.</p>	<p>No action required at the present time.</p>
<p>Lambton County Roman Catholic Separate School Board No comments received.</p>	<p>No response required.</p>	<p>No action required.</p>
<p>Lambton Health Unit The Health Unit has no concerns.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Management Board Secretariat No concerns to register in this matter. Please keep us posted on progress with the proposed undertaking.</p>	<p>Comment noted.</p>	<p>No action required at the present time.</p>
<p>Ministry of Agriculture and Food (Liaison between the Ministry and the consultant team occurred during development of the Master Plan. No comments received during Draft Report Review.)</p>	<p>No response required.</p>	<p>No action required.</p>
<p>Ministry of Community and Social Services Do not wish to review Master Plan but would like to be kept informed.</p>	<p>Comment noted.</p>	<p>No action required at the present time.</p>

Comment	Response	Action Taken
<p>Ministry of Culture, Tourism and Recreation</p> <p>Portions of the preferred alternative (Site D) does exhibit the potential for containing archaeological sites. All areas of potential to be impacted as a part of this project should be archaeologically assessed. Impacts to sites will need to be mitigated before construction. Our office would require an opportunity to review the results of this assessment work, as well as the results of any subsequent mitigation.</p>	<p>In the event the County decides to pursue EAA/EPA-level approvals for a new landfill/facility, the detailed assessment studies would include an archaeological assessment.</p>	<p>No action required at the present time.</p>
<p>Ministry of Education and Training</p> <p>The Ministry has no comments to make at this time except to request that school boards affected by this project be kept informed of details and proceedings. The Ministry need not remain on the review team.</p>	<p>Affected school boards were informed and consulted during the Master Plan consultation process. Future consultation with the school boards will be undertaken when appropriate.</p>	<p>No action required at the present time.</p>
<p>Ministry of Health</p>		
<p>The Public Health Branch is interested in the public health aspects of this EA. The Ministry recommends that input be received from local medical officer of health.</p>	<p>The local health unit has been included in the Master Plan consultation process.</p>	<p>No action required.</p>
<p>Ministry of Municipal Affairs</p>		
<p>Do not wish to review Master Plan but would like to be kept informed.</p>	<p>Comment noted.</p>	<p>No action required at the present time.</p>
<p>Ministry of Natural Resources</p>		
<p>The concerns of MNR (Chatham) have been adequately addressed in the Draft Report. The Ministry does not intend to send written comments.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Ministry of Northern Development and Mines</p>		
<p>The appropriateness of the recommended landraise form of waste disposal in the Lambton County study area has not been defined in subject master plan.</p>	<p>It is conventional practice for municipal solid waste (MSW) landfills to have a "landraise form". The Laidlaw landfill located near Corunna is an "entombed" landfill but accepts hazardous wastes.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>The master plan fails to consider the clayey shale deposits (Arkona Formation) in the Theford-Arkona study area of Lambton County, including quarry lands based in this shale, as suitable earth material with sufficiently low field permeabilities.</p>	<p>Contrary to the reviewers statement, the clayey shale deposits (Arkona Formation) which are at surface just north of Theford were considered in the siting process for the Master Plan. In fact, all lands in Lambton County were considered with respect to the various siting criteria applied. During the identification of the Study Area for siting, the clayey shale lands north of Theford were found to be suitable from a hydrogeologic perspective. However, those lands did not meet the agricultural criterion used in Study Area identification, and therefore they were excluded.</p>	<p>No action required.</p>
<p>Subject plan fails to consider the potential impacts of geological structures in the subsurface of the Lambton County study area such as the Kimball-Colinville fault.</p>	<p>Due to the shallow nature of the landfill, deep bedrock faults would not have an impact on landfill design.</p>	<p>No action required.</p>
<p>The master plan fails to consider any loss to the existing mineral potential for development in the subsurface of Lambton County, i.e. in addition to the well-known bedded salt deposits, the study area contains the best oil shale potential (Kettle Point Formation) in the Corunna-Wilkesport - Port Lambton and Forest-Wyoming areas. The western and northwestern parts of the Lambton County study area are underlain in the subsurface by dense, high-purity dolomites (Lucas Formation), i.e. potentially the shallowest underground resources of crushed stone for high-quality construction aggregates, dolime, magnesia, magnesium.</p>	<p>Due to the deep overburden in the study area, all mineral extraction would have to be completed using shafts/wells. Therefore, there would be no interference from the landfill and the landfill would not present any additional restrictions to mineral extractions than present land uses.</p>	<p>No action required.</p>
<p>All deep and intermediate "Site Proofing" boreholes completed by M.M. Dillon Limited in May 1991 at these preferred sites identified a surficial geological unit, 2.7m to 6m thick, consisting of "Weathered Silty Clay Till". The Ontario Geological Survey, however, in its map of the area published in 1979 identifies this surficial unit as "Glaciolacustrine clay with silt and fine grained sand".</p>	<p>The soils were identified to be weathered and fractured clay soils. They were identified as till through the appearance of small (3-5 mm) diameter gravel clasts typical of a "waterlaid" till.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>The recommended excavation depth of 5m for the suggested landraise form to landfill at any one of the "preferred sites" will be in the weathered, i.e. physically and chemically altered, surficial glaciolacustrine silty clay unit exhibiting horizontal bedding plane structures, laminations of silt-very fine grained sand, groundwater oxidation stains/laminations (as noted by "Inspector SJW"), and fractures/fissures (as noted by "Inspector RPK"). These features question the suitability of this surficial geological deposit as a "preferred" leachate container.</p>	<p>The weathered clay is explicitly stated as being an important hydrostratigraphic unit. The type and depth of weathering was considered to be not significantly different at the four short-listed sites. Sound landfill design has proven effective in mitigating leachate impact via the unweathered till.</p>	<p>No action required.</p>
<p>Uncontained leachate could migrate through the fracture network (of bedding plane, glacial unloading, weathering origin) and sandy-silty laminations in the surficial clayey glaciolacustrine and till deposits to Bowens Creek, or Clay Creek, or the more permeable sandy alluvial deposits of the St. Clair River and the river itself.</p>	<p>Noted. Sound landfill design would mitigate potential leachate migration in the weathered soils.</p>	<p>No action required.</p>
<p>Up to 5.5m of alluvial sand deposits have been encountered in our boreholes along the St. Clair River bank south of Courtwright. The master plan fails to consider any potential impact of the proposed landraise form of landfilling at any of the "preferred" sites on slope stability along the St. Clair River bank south to Mooretown and Courtwright. Slope failures causing structural damage have been noted recently along the river bank in the Corunna - Mooretown area. These ground subsidence movements may have a near-surface origin, i.e. originate from slippage of saturated, weakened surficial clayey fill deposits possibly brought about by building developments in the area.</p>	<p>The closest short-listed site (Site H) is located approximately 1000m from the river bank. Therefore, slope failures along the river bank would not be caused by, or cause impact on, the landfill.</p>	<p>No action required.</p>
<p>"Preferred" site "K" is located over the Kimball-Coinville subsurface structure. Recent slope failures along the St. Clair River bank in the Corunna-Mooretown area have been attributed by geological consultant expertise to reactivation of this fault.</p>	<p>Site K is located more than 6 km from the St. Clair River and would not be affected by slope failures along the bank.</p>	<p>No action required.</p>
<p>"Preferred" site "I" is drained by Clay Creek (St. Clair River area drainage system).</p>	<p>Comments noted.</p>	<p>No action required.</p>
<p>"Preferred" site "H" is near Clay Creek and Bowens Creek (St. Clair River area drainage system).</p>		

Comment	Response	Action Taken
<p>Subject waste management study fails to consider the extensive, thick, and impervious salt deposits of the Salina Formation, including existing mined-out cavities, underlying Lambton County as a repository alternative to landfilling; neither have the mined-out areas in existing dry rock-salt mines outside the study area, i.e. Goderich.</p>	<p>There are extreme access problems associated with using existing mined-out salt deposits in Lambton County; these could not be practically used for MSW disposal.</p> <p>Disposal at Goderich would not be viable since export is not part of the recommended waste management system for Lambton County. The exclusion of export was based on the MOEE's position that disposal sites should be located within the jurisdiction of the proponent wherever possible, and on the County's general principle that it would look after its wastes within its own boundaries.</p>	<p>No action required.</p>
<p>Ministry of Solicitor General (Ontario Provincial Police)</p>		
<p>No outstanding concerns.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Ministry of Solicitor General (Office of the Fire Marshal)</p>		
<p>Do not wish further correspondence regarding the Master Plan.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Ministry of Solicitor General (Correctional Services)</p>		
<p>Do not wish further correspondence regarding the Master Plan.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Ministry of Transportation</p>		
<p>The Ministry does not require a copy of the Draft Master Plan for review. With respect to Site "I", a Traffic Impact Study should be done for this site. When the Traffic Study is completed, our Traffic Section would like to review it, to confirm what impact the proposed traffic will generate in terms of improvements at the intersection of Highway 40 and the Moore/Sombra Townline Road.</p>	<p>The Ministry will be informed and consulted during the detailed assessment studies, in the event the County decides to pursue EAA/EPA-level approvals for an undertaking.</p>	<p>No action required at the present time.</p>
<p>Our letter of October 20, 1993 is still valid. Please keep this office informed on the progress of this study.</p>	<p>Ontario Hydro</p>	
<p>Site H appears to be least costly for Ontario Hydro, in terms of providing electrical service to the site.</p>	<p>Site H should be less costly for Ontario Hydro than Site I because a shorter length of 3 phase, 4 wire 27.6/16.2 kV line must be constructed to provide service. Sites D and K represent no cost to Ontario Hydro as the 3 phase, 4 wire 8.0/4.8 kV service is available on the Road Allowance of Highway 80.</p>	<p>No action required at the present time.</p>

Comment	Response	Action Taken
<p>Concerned about potential loss of ground clearance at Sites I and K. If the fill areas were to extend into our rights-of-ways. Should this occur, Ontario Hydro would need to either relocate the transmission lines or increase the heights of the towers. The proponent would be responsible for reimbursing Ontario Hydro for all costs associated with these activities.</p>	<p>The fill areas will be off-set 100 m from the Hydro right-of-way so there will be no loss of ground clearance.</p>	
<p>Impact of wind-blown debris a concern with all the alternative sites. Debris could foul the conductors and/or insulators and increase maintenance costs should a clean-up of our rights-of-ways become necessary.</p>	<p>This concern would be addressed in the development of impact management measures for the preferred site.</p>	
Ontario Native Affairs Secretariat		
<p>Reviewing the scientific and technical aspects of your plan is outside our mandate.</p>	<p>Comments noted.</p>	<p>No action required.</p>
<p>Pleased to hear that Chief and Council of Walpole Island First Nation, Chippewas of Sarnia and Chippewas of Kettle and Stony Point have been contacted.</p>		
<p>If further information required regarding the Secretariat's discussions with Walpole Island First Nation, please contact:</p>		
<p>Peter Waring, Negotiations Branch 416-326-4776.</p>		
Public Utilities Commissions - Alvinston, Forest, Grand Bend, Petrolia, Point Edward, Theedford, Watford		
<p>No comments received.</p>	<p>No response required.</p>	<p>No action required.</p>
Sarnia Fire Department		
<p>Do not wish to review Master Plan but would like to be kept informed.</p>	<p>Comment noted.</p>	<p>No action required at the present time.</p>
St. Clair Parkway Commission		
<p>The Commission has no comments to submit on the Draft Report.</p>	<p>Comment noted.</p>	<p>No action required.</p>

Comment	Response	Action Taken
<p>St. Clair Region Conservation Authority</p> <p>No objection to Site I as the recommended preferred site, nor to the order of preference of the short list of sites.</p> <p>When more detailed site-specific investigations are undertaken at the preferred site, consideration should be given to control of surface water runoff to pre-development conditions at the site, to protect the receiving watercourse from increased flows, erosion and sediment, and also to maintain water quality.</p>	<p>The design of the surface water control measures would be undertaken for the preferred site when applying for a Certificate of Approval under the <i>Environmental Protection Act, Ontario Water Resources Act</i> approvals would be required for ditches and ponds.</p>	<p>No action required at the present time.</p>
<p>Tecumseh Gas Storage Ltd.</p> <p>Tecumseh Gas Storage Ltd. has no concerns or comments to submit on the Draft Report.</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Trans Canada Pipelines Ltd.</p> <p>Trans Canada Pipelines has facilities which cross Lambton County. If the Draft Master Plan includes any waste management activity with 200m of our pipeline, Trans Canada would like to review this Plan.</p>	<p>The pipeline in question is approximately 700m away from the northern boundary of Site I.</p>	<p>No action required.</p>
<p>Transport Canada</p>	<p>Comment noted.</p>	<p>No action required.</p>
<p>Union Gas</p> <p>Union Gas has facilities within or near Site I. Site development should remain compatible with Union's natural gas pipeline easements. Union objects to the development of Site I without regard to Union's facilities or pre-existing registered interests.</p>	<p>Clarification on the location of natural gas pipeline easements has been obtained, and would be fully considered during detailed assessment studies.</p>	<p>Liaison has been maintained with Dan Jones of Union Gas (Chatham).</p>
<p>Consider amending Table 6.8 under LAND USE to include natural gas pipelines under Site I, as well as existing agricultural use.</p>	<p>The amendment to Table 6.8 will be made.</p>	<p>The following has been added in Table 6.8 under Land Use, Site I: "Natural gas pipeline located at southeast corner of site perimeter"</p>



ESTABLISHED 1946

AUSABLE BAYFIELD CONSERVATION AUTHORITY

Chairman: J. Robert Benner
 Vice-chairman: Harold Switzer
 General Manager/Secretary Treasurer:
 Tom B. Prout, P. Ag.

R.R. #3
 EXETER, ONTARIO N0M 1S5
 (519) 235-2610
 FAX (519) 235-1963

August 19, 1994

File: L.2.22.

County of Lambton
 Hwy. 21, Box 3000
 Wyoming, Ontario
 N0N 1T0

Attention: Annie Chan

Dear Ms. Chan

Re: Lambton County
 Waste Management Master Plan

Further to your correspondence of April 27, 1994 and my conversation with you earlier this week, we submit our comments regarding the above noted plan.

Copies of Volume 3 & 4 were forwarded for our review. The four candidate sites are located outside of the Ausable Bayfield Conservation Authorities watershed boundary, therefore we have no specific concerns regarding their selection criteria. We have enclosed these volumes with our comments for your use.

In general, we support the basic intent of the plan which is to divert as much waste as possible from the landfill stream and encourage the reduction, reuse and recycling of waste material.

I trust this information is clear. However, if you have any further questions in this regard, please do not hesitate to contact our office.

Yours truly,

AUSABLE BAYFIELD CONSERVATION AUTHORITY

Kelly Prouse
 Planner
 KP:



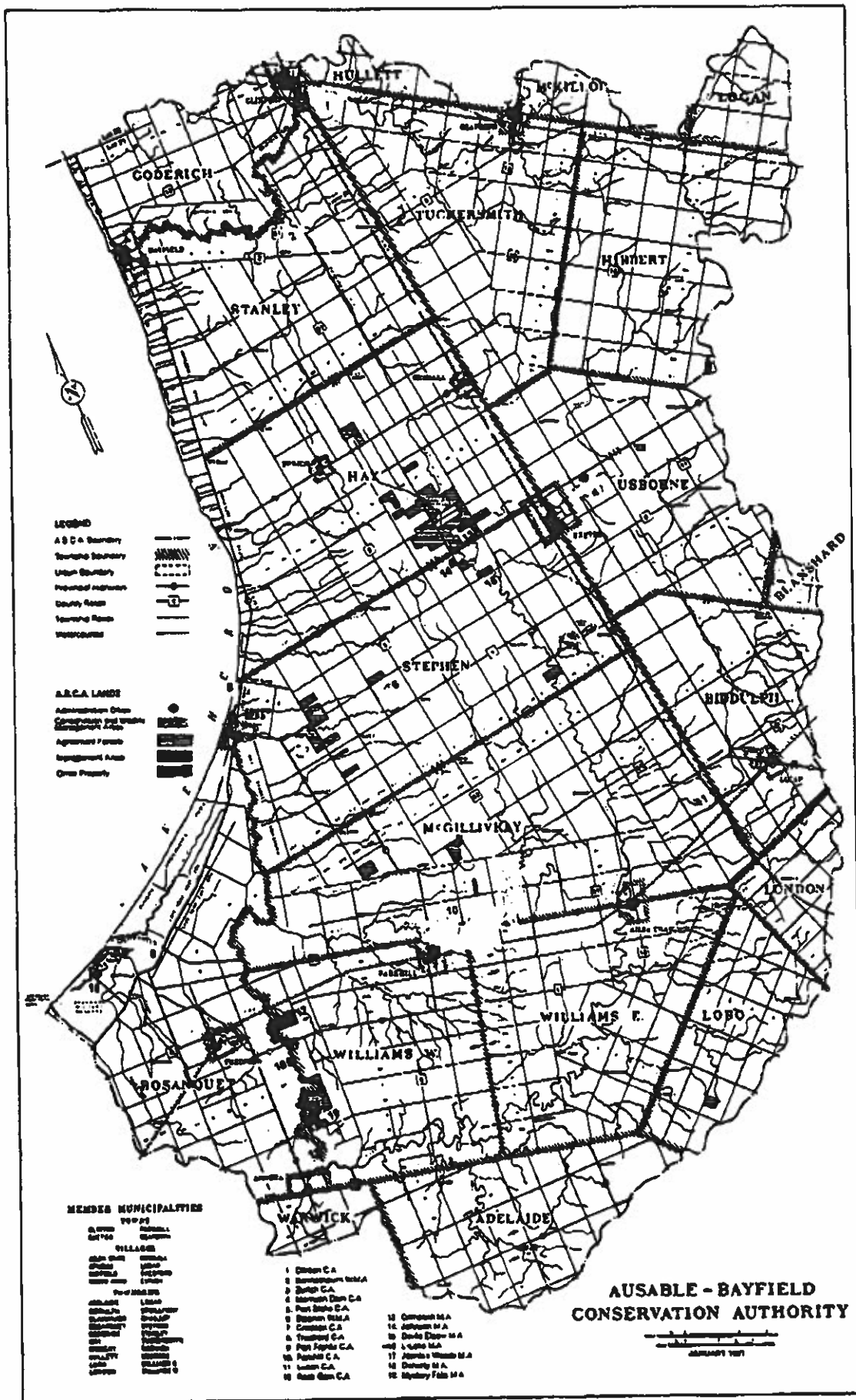
RECYCLED PAPER

AUG 22 '94 14:03



MEMBER OF THE
 ASSOCIATION OF CONSERVATION
 AUTHORITIES OF ONTARIO

5198453817 PAGE.002





Engineering & Environmental Services
Line Operations East
277 Front Street West
Suite 503
Toronto, Ontario M5V 2X7

March 18, 1994

M.M. Dillon Limited
P.O. Box 1850, Station A
North York, Ontario M2N 6K7

ATTN: Ms. Annie Chan

RE: Lambton County Waste Management Master Plan

Dear Ms. Chan:

This letter is in response to your communication dated February 14, 1994 which included notification of the creation of a Draft Waste Management Plan for the project noted above.

Be advised that CN Rail, as property owners and common carriers should be provided with further notification as well as requested to provide input into the Class Environmental Assessment Document based upon the following considerations.

- a) If it is determined that Railway property could be impacted.
- b) If it is determined that CN operations could be impacted or have an impact on the outcome of the study.

The finite limits of the Railway's technical review process do not allow for an in depth review of all the environmental assessments received. CN Rail expects that the proponent in these matters to identify any and all impacts of the project that may influence the railway operation, land or facilities. Upon the completion of this determination the Railway will expect that it will be approached with the specifics of the proposal and its effects on the railway.

1994 MAR 22 10:30
M.M. DILLON LTD.
TORONTO OFFICE

We would also like to be kept apprised of the potential impact on the points of access across the rail corridor. Will there be additional crossings required? What will be the increase in traffic at existing crossings? Will the increased traffic impact the maintenance requirements of the crossings and will additional crossing warning devices be required to protect the crossings effectively?

The extent of any of the preceding impacts should be identified and resolved with the Railway to our mutual satisfaction.

A handwritten signature in black ink, appearing to read 'D. Sutherland', written in a cursive style.

David Sutherland
Environmental & Regulatory Technologist

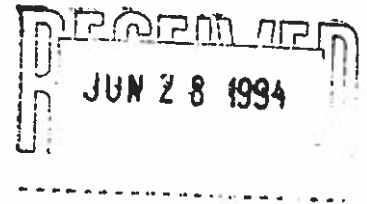
LAMBTON.DMP



RECEIVED

JUL 13 1994

M.M. BILSON LTD.
TORONTO ONTARIO



June 27, 1994

County of Lambton
Hwy. 21, Box 3000
Wyoming, Ontario
N0N 1T0

Attention: Mr. James J. Kutya, P.Eng.

Dear Mr. Kutya:

I have received Volumes 1 and 2 of Lambton County's draft Waste Management Master Plan. I have briefly reviewed the two volumes and I wish not to make any comments on behalf of Sarnia Hydro.

Yours truly,

A handwritten signature in cursive script, appearing to read 'J.D. Willock'.

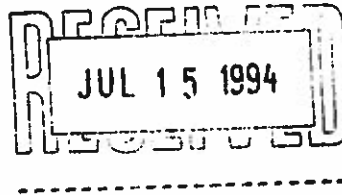
J.D. Willock
Risk Management Analyst

/el



July 11, 1994

Mr. Jim Kutyba, P. Eng.
Administrator, Waste Management
Lambton County
Highway 21, Box 3000
WYOMING, Ontario
N0N 1T0



Your file Votre référence

Our file Notre référence

Dear Mr. Kutyba:

**LAMBTON COUNTY DRAFT WASTE MANAGEMENT MASTER PLAN: VOLUME 1 -
MASTER PLAN REPORT**

Thank you for your letter of April 27, 1994 with reference to the above plan.

Please be advised that we have previously responded (and have enclosed our previous response along with this present letter). Please note, however, that the contact names at the previously noted First Nations have since changed as follows:

Walpole Island First Nation
R.R. #3
WALLACEBURG, Ontario
N8A 4K9

Chippewas of Sarnia First
First Nation
R.R. #1
MUNCEY, Ontario
N0L 1Y0

Chief Joseph Gilbert

Chief Delbert Riley

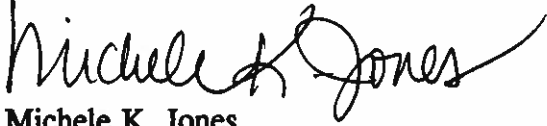
PH: (519) 627-1481
FAX: (519) 627-0440

PH: (519) 264-1528
FAX: (519) 264-2203

Should you require further information, please do not hesitate in contacting the undersigned at: (416) 973-7451.

I wish to thank you for providing us with the opportunity to comment on the draft waste management master plan.

Sincerely,

A handwritten signature in black ink that reads "Michele K. Jones". The signature is written in a cursive style with a large, looping initial "M".

Michele K. Jones
Environmental Assistant
Environment & Natural Resources
Lands & Trusts Services

25 St. Clair Ave. E., 5th Fl.
TORONTO, Ontario
M4T 1M2

Encl.



March 24, 1993

Your file: With reference

Our file: Notre référence

5000-7-NI(L28)

Mr. Jim Kutyla, P.Eng.
Administrator, Waste Management
Lambton County
Highway 21, Box 3000
Wyoming, Ontario
N0N 1T0

Lambton County Waste Management Master Plan

Thank you for your letter of March 15, 1993 with reference to the above subject.

In a preliminary review of the documentation provided, the Department of Indian and Northern Affairs has determined that the activities in the above mentioned letter are unlikely to have significant affect on our mandate. However, we request that the Walpole Island First Nation band and Chippewas of Sarnia First Nation band be provided with such information for future reference. Forwarding addresses are as follows:

Walpole Island First Nation
Chief Robert L. Williams
R.R. #3
Wallaceburg, Ontario
N8A 4K9

Chippewas of Sarnia First
Nation
Chief Phillip A. Maness
978 Tashmoo Avenue
Sarnia, Ontario
N7T 7H5

PH: (519) 627-1481
FAX: (519) 627-0440

PH: (519) 336-8410
FAX: (519) 336-0382

In closing, thank you for extending the invitation to attend the Public Information Centre for the Master Plan.

Should you require further information, please do not hesitate to contact our office at: (416) 973-7451.

Sincerely,



Michele K. Jones
Environmental Assistant
Environmental Planning

c.c: George Meadows

Canada

FAX TRANSMITTAL

TO: Mr. Paul Mantle	FAX NO: 1-519-542-6667
COMPANY: Lambton College	DATE: September 13, 1994
FROM: Annie Chan	TOTAL PAGES (including this sheet):
DILLON PROJECT NO: 92-9928-39	If you do not receive all pages of this fax, please call:
SUBJECT: Draft Lambton County Waste Management Master Plan Report	

Mr. Mantle

As per telephone conversation of August 29, 1994, this fax is to confirm that Lambton College does not intend to send comments and has no concerns on the Draft Report.

Annie Chan



160 Exmouth Street
Point Edward, Ontario N7T 7Z6
Telephone: (519)383-8331
Fax:(519)383-7092

October 3, 1994

Ms. Annie Chan
M.M. Dillon Limited
1100 Sheppard Avenue East
3rd Floor
Toronto, Ontario
M2N 6N5

Dear Ms. Chan:

In returning your review comments for the Waste Management Master Plan, I want to express my apologies.

It is my understanding that the Ministry of Environment and Energy has been involved since the beginning of the project. Our concerns would be similar, particularly with impacts to surface and ground water supplies. Assessments of these have been addressed in your research.

As we discussed, the Lambton Health Unit does not have any further concerns at this point in time. However, we would like to be kept informed on the study progress.

Sincerely,

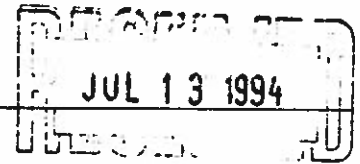
Andrew Taylor,
Public Health Inspector
Environmental Health Services

APT/aw

C.T. Greensmith

M.B., F.R.C.P. (C)

Director and Medical Officer of Health



Management
Board
Secretariat

Secrétariat
du Conseil
de gestion

Realty Group

**777 Bay Street
15th Floor
Toronto, Ontario
M5G 2E5
Tel: 585-6741
Fax: 585-4263**

June 28, 1994

**Mr. James J. Kutyba, P. Eng.
Administrator, Waste Management
County of Lambton
Hwy. 21, Box 3000
Wyoming, Ontario
N0N 1T0**

Dear Mr. Kutyba:

**RE: Lambton County
 Waste Management Master Plan
 Volume 4, Site Selection Appendices**

Thank you for the opportunity to review the document noted above.

Management Board Secretariat does not have concerns to register in this matter.

Please keep me posted on your progress with the proposed undertaking.

Yours truly,

**Ross Farewell
Environmental Planner,**

RF/Kutyba.mcm

JUL 12 1994

Ministry of
Culture, Tourism
and Recreation

Ministère de la
Culture, du Tourisme
et des Loisirs

55 Centre Street
London, Ontario
N6J 1T4
June 29, 1994

Cultural Programs Branch
(519) 433-8401; Fax: 439-1696

Your File:

To: James Kutyba
Waste Management
County of Lambton
Hwy. 21, Box 3000,
Wyoming, Ontario N0N 1T0

Our File:

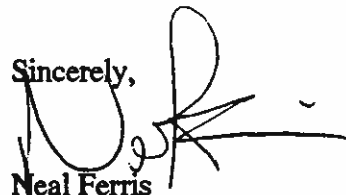
RE: Lambton County Waste Management Master Plan

A principal concern of this office is the adverse effects that undertakings such as the above mentioned might have on cultural heritage resources. If the preferred alternative selected appears as though it will impact areas of heritage potential, then our office would recommend that an assessment survey be conducted as part of the EA. If any significant remains are identified, then any negative impacts would have to be mitigated by either avoidance or excavation.

I have had a chance to review the ESR for the above mentioned project. Based on the available cultural heritage databases in this office, portions of the preferred alternative (Candidate Site I) does exhibit the potential for containing archaeological sites. Given this, as a part of the EA process all areas of potential to be impacted as a part of this project should be archaeologically assessed by a consultant licenced by this ministry (a list of licenced firms is available on request). Any impacts to sites found in the study area will need to be mitigated before the start of construction work. Our office would also require an opportunity to review the results of this assessment work, as well as the results of any subsequent mitigations.

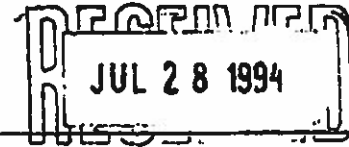
I trust that this information has been of assistance. Should you wish to discuss this further, please do not hesitate to contact me.

Sincerely,



Neal Ferris

Regional Archaeologist/Heritage Planner
Archaeology & Heritage Planning



Ministry
of Education
and Training

Ministère
de l'Éducation
et de la Formation

Mowat Block
900 Bay St
Toronto ON M7A 1L2

Edifice Mowat
900 rue Bay
Toronto ON M7A 1L2

July 26, 1994

Mr. James J. Kutyba, P. Eng.
Administrator
Waste Management
Highway 21
PO Box 3000
Wyoming, Ontario
N0N 1T0

Re: Lambton County Draft Waste Management Master Plan

Dear Mr. Kutyba:

Thank you for submitting to this office the material on the above-captioned master plan.

We do not have any comments to make at this time, other than to say that the school boards affected by such a project are kept informed of details and proceedings.

This ministry need not remain on the review team.

Yours sincerely,

A handwritten signature in cursive script that reads "S. Mitchell".

S. Mitchell
Architect, Capital Support
Capital & Operating Grants
Administration Branch

Ministry of Health
Ministère de la Santé

Public Health Branch
Direction de la santé publique

5th Floor
15 Overlea Boulevard
Toronto, Ontario
M4H 1A9
Facsimile/Télécopieur (416) 327-7438

(416)327-7427

2 March 1994

James K. Kutyba, P.Eng.
Administrator, Waste Management
Waste Management
Hwy 21, Box 3000
Wyoming, Ontario
N0N 1T0

RECEIVED

MAR 14 1994

MILLER LON LTD.
TORONTO OFFICE

RECEIVED
MAR 7 1994

Dear Mr. Kutyba:

RE: Lambton County, Waste Management Master Plan, Draft Report - Agency Review

Thank you for your correspondence regarding the above environmental assessment (EA). Dr. Richard Schabas has asked me to respond to you directly.

Although the Public Health Branch is interested in the public health aspects of this EA, we recommend that you request input from the local medical officer of health for the health unit in which the EA is located. Therefore, we have forwarded your letter to the medical officer of health. His name, address and telephone number are:

Dr. C. Greensmith
Medical Officer of Health
Sarnia-Lambton Health Unit
160 Exmouth Street
Point Edward (Sarnia), Ontario
N7T 7Z6
(519)383-8331

We appreciate your taking the time to bring this EA to our attention and have no further comment at this time.

Sincerely,



Lesbia F. Smith, MD
Senior Medical Consultant
Environmental Health and Toxicology Unit
Disease Control Service

cc: Dr. Greensmith



Ministry of
Natural
Resources

Ministère des
Richesses
naturelles

Chatham Area Office
Box 1168
Chatham, Ontario N7M 5L8
Telephone: (519)354-7340 Fax: (519)354-0313

FAX TRANSMITTAL

Date: Sept 28/94 FAX
 To: ADDIE CHAN (416) 229-4692
DILLON
 From: WAYNE ROWE
SENIOR PLANNER

pages including this page 1

Thank you for the Lambton City Report & your fax addressed to ANDY KOOPMAN.

- We are satisfied that our concerns were included in your review & subsequent report.
- We have no further comments or recommendations to make at this time.
- We would be glad to receive any final document and keep informed of future actions that may result.

For questions regarding this transmittal, please call: Wayne Rowe.



Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

November 15, 1994

Tel.: 519/438-6192
Fax: 519/672-8209

DILLON LIMITED LONDON
NO. 92.7728.39.02
NOV 17 1994

M. M. Dillon Limited
495 Richmond Street
Box 426
LONDON, Ontario
N6A 4W7

ATTENTION: Ms. Catharine Fletcher

(copy to JJK (LAMBTON))

SUBJECT: Lambton County Waste Management Draft Master Plan -
Agency Review

After careful review of subject draft master plan, the following are the critical concerns of the Ministry of Northern Development and Mines including the Ontario Geological Survey regarding the preliminary recommendations for landfilling (site selection: "Study Area" - "Preferred Sites" stages):

1. The appropriateness of the recommended landraise form of waste disposal in the Lambton County study area has not been defined in subject master plan.
2. The master plan fails to consider the clayey shale deposits (Arkona Formation) in the Thedford-Arkona study area of Lambton County, including quarry lands based in this shale, as suitable earth materials with sufficiently low field permeabilities.
3. Subject plan fails to consider the potential impact of geological structures in the subsurface of the Lambton County study area such as the Kimball-Colinville fault.
4. The master plan fails to consider any loss to the existing mineral potential for development in the subsurface of Lambton County, i. e. in addition to the well-known bedded salt deposits, the study area contains the best oil shale potential (Kettle Point Formation) in the Corunna-Wilkesport - Port Lambton and Forest-Wyoming areas. The western and northwestern parts of the Lambton County study area are underlain in the subsurface by dense, high-purity dolomites (Lucas Formation), i. e. potentially the shallowest underground resources of crushed stone for high-quality construction aggregates, dolime, magnesia, magnesium.

..... 2

November 15, 1994

ATTENTION: Ms. Catharine Fletcher

5. Subject study recommends four "preferred" sites, namely: "D", "H", "I", and "K", grouped together in the southwestern part of Moore Township near the St. Clair River and east to southeast of Courtwright. The following are our critical concerns respecting these recommended sites:

- a) All deep and intermediate "Site Proofing" boreholes completed by M. M. Dillon Limited in May 1991 at these preferred sites identified a surficial geological unit, 2.7m to 6m thick, consisting of "Weathered Silty Clay Till". The Ontario Geological Survey, however, in its map of the area published in 1979 identifies this surficial unit as "Glaciolacustrine clay with silt and fine grained sand". A deep stratigraphic borehole drilled in 1987 by the London office of the Ontario Geological Survey at the intersection of Highway 40 and Moore Township Concession II Road encountered 5m of this surficial glaciolacustrine silty clay deposit with interstratified silt and layered structure at the 1.5 - 2m and 3 - 5m depth intervals. Our borehole was part of a drilling project correlating surface and subsurface Quaternary geological deposits of the Sarnia-Port Lambton-Windsor region; results of this study were published in 1988. It is of interest to note that "Inspector SJW" of M. M. Dillon Limited also identified "numerous orange oxidation stains/laminations" in this surficial unit at the 1991 "Site Proofing" boreholes.
- b) The recommended excavation depth of 5m for the suggested landraise form of landfill at anyone of the "preferred sites" will be in the weathered, i. e. physically and chemically altered, surficial glaciolacustrine silty clay unit exhibiting horizontal bedding plane structures, laminations of silt-very fine grained sand, groundwater oxidation stains/laminations (as noted by "Inspector SJW"), and fractures/fissures (as noted by "Inspector RFK"). These features question the suitability of this surficial geological deposit as a "preferred" leachate container.
- c) Uncontained leachate could migrate through the fracture network (of bedding plane, glacial unloading, weathering origin) and sandy-silty laminations in the surficial clayey glaciolacustrine and till deposits to Bowens Creek, or Clay Creek, or the more permeable sandy alluvial deposits of the St. Clair River and the river itself.

..... 3

November 15, 1994

ATTENTION: Ms. Catharine Fletcher

Up to 5.5m of alluvial sand deposits have been encountered in our boreholes along the St. Clair River bank south of Courtwright.

- d) The master plan fails to consider any potential impact of the proposed landraise form of landfilling at any of the "preferred" sites on slope stability along the St. Clair River bank south of Mooretown and Courtwright. Slope failures causing structural damage have been noted recently along the river bank in the Corunna - Mooretown area. These ground subsidence movements may have a near-surface origin, i. e. originate from slip-page of saturated, weakened surficial clayey till deposits possibly brought about by building developments in the area.
 - e) "Preferred" site "K" is located over the Kimball-Colinville subsurface structure. Recent slope failures along the St. Clair River bank in the Corunna-Mooretown area have been attributed by geological consultant expertise to reactivation of this fault.
 - f) "Preferred" site "I" is drained by Clay Creek (St. Clair River area drainage system).
 - g) "Preferred" site "H" is near Clay Creek and Bowens Creek (St. Clair River area drainage system).
6. Subject waste management study fails to consider the extensive, thick, and impervious salt deposits of the Salina Formation, including existing mined-out cavities, underlying Lambton County as a repository alternative to landfilling; neither have the mined-out areas in existing dry rock-salt mines outside the study area, i. e. Goderich.

I would like to express my apologies for taking so long to respond, however, my review of the Lambton County Waste Management Draft Master Plan indicates the future need for participation by the Ministry of Northern Development and Mines (including the Ontario Geological Survey) starting at the early stages of inception of such plans considering such critical concerns as:

- 1) area/local, basic/applied earth science information (geological deposits and structures); and,
- 2) surface/subsurface mining and mineral potential

..... 4

November 15, 1994

ATTENTION: Ms. Catharine Fletcher

Sincerely,



Bern H. Feenstra
Resident Geologist
Southwestern District
Ontario Geological Survey
Ministry of Northern Development & Mines
667 Exeter Road
LONDON, Ontario
N6E 1L3

Tel.: 519/661-1656 Fax: 519/661-1659

BHF/ps

c. c. Mr. Paul Botelho
Policy Advisor
Financial Planning & Policy Co-ordinator
Ministry of Northern Development & Mines
159 Cedar Street
SUDBURY, Ontario
P3E 6A5



Ontario
Provincial
Police

Police
provinciale
de l'Ontario

Ministry of
the Solicitor
General

Ministère du
Solliciteur
général

90 Harbour Street Telephone/Téléphone:
Toronto, Ontario (416) 314-4314
M7A 2S1

90, rue Harbour Facsimile/Télocopieur:
Toronto (Ontario) (416) 314-4317
M7A 2S1

Project: 94 133
File reference/
Référence: 145 21
Your file reference/
Votre Référence:

June 29, 1994

County of Lambton
Waste Management
Hwy 21, Box 3000
Wyoming, Ontario
N0N 1T0

Attention: James J. Kutyba
Administrator, Waste Management

RECORDED
JUL 28 1994
M. J. ... OFFICE

RECORDED
JUL 15 1994

DEAR MR. KUTYBA:

RE: LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN

Operational Policy and Planning Branch of the Ontario Provincial Police has concluded its review of the captionally-noted proposal. Generally speaking, the interests of the police community lie with a proposal's impact on the delivery of policing services. This may include, but not be limited to, changes or disruptions to traffic flow or patterns, changes to demographics, etc.

Based upon the correspondence and reports provided, we have no outstanding concerns with this proposal. Thank you for the opportunity to provide input. In the event that you require additional input at a later date, S/Sgt. Al Squires may be contacted at (416) 314-4325.

C. M. Wyatt, Superintendent
Director
Operational Policy and Planning Branch

/AS



Ontario

Ministry
of
Transportation

Ministère
des
Transports

DILLON LONDON 17 MAR 1994

659 Exeter Road, P.O. Box 5338
London, Ontario N6A 5H2
Telephone (519) 649-3005

March 10, 1994

Mr. James J. Kutymba, P. Eng.
Administrator, Waste Management
County of Lambton
Hwy 21, Box 3000
Wyoming, Ontario
N0N 1T0

Dear Mr. Kutymba:

RE: County of Lambton
Waste Management Master Plan

Thank you for the letter dated February 14, 1994, regarding the Draft Waste Management Master Plan for Lambton County.

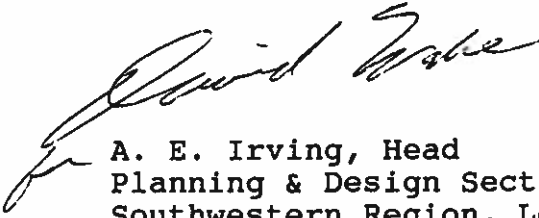
Our Mr. Geoff Sutherland indicated to Ms. Catherine Fletcher of M. M. Dillon Limited in a telephone conversation, that we would not require a copy of the Draft Master Plan. However, Ms. Fletcher did indicate by FAX that Site I was the preferred site. As a result, we have the following comments regarding Site I.

1. Our Traffic Section requires more information about Site I than the Draft Master Plan provides. As a result, a Traffic Impact Study should be done for this site. When the Traffic Study is completed, our Traffic Section would like to review it, to confirm what impact the proposed traffic will generate in terms of improvements at the intersection of Highway 40 and the Moore/Sombra Townline Road. If you require any further information please contact Mr. Joe Pascuzzo of our Traffic Section at (519) 649-3142.
2. Our letter of October 20, 1993 is still valid.

.....\2

Please keep this office informed on the progress of this study and forward any information to my attention.

Yours truly,

A handwritten signature in cursive script, appearing to read "A. E. Irving".

A. E. Irving, Head
Planning & Design Section
Southwestern Region, London

AEI/gs

c: Catherine Fletcher

Our File: 92-9928-39-02

February 28, 1994

**Mr. Geoff Sutherland
Ministry of Transportation
659 Exeter Road
P.O. Box 5338, Station D
LONDON, Ontario
N6A 5H2**

**Draft Lambton County
Waste Management Master Plan**

Dear Mr. Sutherland:

As we discussed last week, the attached is a copy of page 6-132 from Volume 1 of the Draft Master Plan.

As indicated, Site I ranked first following the evaluations of the four "short-listed" sites for the new long-term waste management facility. It has, therefore, been recommended that Site I be carried forward for EPA-level investigations.

Yours truly,

M. M. DILLON LIMITED



**CJF:bls
Encl.**

**Catherine Fletcher, M.Sc.,
Project Manager**

cc: Mr. Jim Kutumba, P.Eng. (Lambton County)



Ministry of Transportation Ontario
Ministère des Transports

RECEIVED

JCT 26 1993

M.M. DILLON LTD.
TORONTO OFFICE

659 Exeter Road, P.O. Box 5338
London, Ontario N6A 5H2
Telephone (519) 649-3005

October 20, 1993

Mr. Don P. McKinnon, M.E.S
M. M. Dillon Limited
P.O. Box 1850, Station A
North York, Ontario
M2N 6K7

Dear Mr. McKinnon:

RE: County of Lambton
Waste Management Master Plan

Thank you for the information on the proposed Waste Management Master Plan. The Survey has been completed by our Chatham District Office and mailed in.

Staff of Southwestern Region have reviewed the information provided on the 4 candidate sites. There is no concern with Candidate Sites H and I, as they are located outside of our area of permit control for Highway 40. However, a more detailed traffic analysis will be required if either of these 2 sites is selected as the preferred site. Improvements at the Highway 40 and Moore/Sombra Townline Road may be required for northbound traffic turning left at that intersection.

Site plans for Candidate Sites D and K were not provided with the information. If Highway 80 is proposed as part of the haul route, a more detailed traffic analysis will be necessary. If either of these 2 sites is located within our area of permit control for Highway 80, permits will be required. These may include:

Entrance Permits - Direct access from the Provincial Highway System will only be allowed by means of an entrance permit. In certain situations entrances may not be permitted.

Building and Land Use Permits - Site development within (a) 45m of the right-of-way of a King's Highway; (b) 180m of the centre point of a King's Highway intersection; and (c) 395m of the centre point of an intersection of a controlled access highway will require a Building and Land Use Permit.

...../2

Sign Permits - The display of any sign, notice or advertising device within 400m of any limit of a Provincial Highway will be subject to Ministry sign permit.

To obtain permits, please contact:

Mr. Peter Ginn, P.Eng.
District Engineer
Chatham District
60 Keil Drive, P.O. Box 910
Chatham, Ontario N7M 5L3

Telephone: (519) 354-1400

Once the preferred site is selected, we will be in a better position to provide more detailed comments.

Please keep this office informed on the progress of this study and forward any information to my attention.

Yours truly,



A. E. Irving, Head
Planning & Design Section
Southwestern Region, London

AEI/gs



RECEIVED

JUN 22 1994

M.M. FULLON LTD.
TORONTO OFFICE

RECORDED
JUN 10 1994

393 University Avenue, Toronto, Ontario M5G 2L6

Mr. James J. Kutyba
Administrator, Waste Management
County of Lambton
Highway 21, Box 3000,
Wyoming, Ontario
N0N 1T0

June 7, 1994

File: RS382-07730-T7

Dear Mr. Kutyba

re: **Lambton County Waste Management Master Plan
Volume IV: Site Selection Appendices**

Thank-you for providing Ontario Hydro with a copy of the above document and allowing us an opportunity to participate in the planning for the Lambton County Waste Management Master Plan. Site H would appear to be the least costly for Ontario Hydro, in terms of providing electrical service to the site.

Ontario Hydro is concerned about the potential for a loss of *ground clearance* at sites I and K, if the fill areas were to extend into our rights-of-ways. Should this occur, it would be necessary for Ontario Hydro to either relocate the transmission line, or increase the heights of the towers. The proponent would be responsible for reimbursing Ontario Hydro for all costs associated with these activities.

The impact of wind-blown debris is also a concern associated with all the alternative sites. The debris could foul the conductors and/or insulators and increase maintenance costs, should a clean-up of our rights-of-ways become necessary.

If you have any other questions, please call me at (416) 506-5625/(416) 506-7822 (FAX).

Fred Podealuk
Senior Planner
Transmission Lines Projects - Eastern/Northern

FTP/

cc: Octavio Melo
Darmo Sugeng
Dwayne Tegart

Ontario Native Affairs
Secretariat

Secrétariat des affaires
autochtones de l'Ontario

595 Bay Street
10th Floor, Suite 1009
Toronto, Ontario
M5G 2C2

595, rue Bay
10^e étage, bureau 1009
Toronto (Ontario)
M5G 2C2

Telephone: (416) 326-4740
Fax: (416) 326-4017

Téléphone : (416) 326-4740
Télécopieur : (416) 326-4017

MAR 11 1994

Ms. Catherine Fletcher
Waste Management
M.M. Dillon Limited
P.O. Box 1850, Station A
North York, Ontario
M2N 6K7

Dear Ms. Fletcher:

Thank you for opportunity to make comments on the project of **Lambton County, Waste Management Master Plan.**


Reviewing the scientific and technical aspects of your plan is outside the mandate of the Ontario Native Affairs Secretariat. However, we are concerned that when applicable, First Nations be included in your planning and consultation processes.

I understand that you've spoken with Pam Tahiliani of our office, about our interests in the area of consultation with local Aboriginal communities. I'm pleased to hear that you have been in contact with the Chief and Council of **Walpole Island First Nation, Chippewas of Sarnia and Chippewas of Kettle and Stony Point.**

As per discussion, if you require further information regarding the Secretariat's discussions with Walpole Island First Nation, please contact Mr. Peter Waring, in our Negotiations Branch, at (416) 326-4776.

Thank you for writing and please keep us informed of the progress of your work.

Yours sincerely,



Tim Eger
Director
Corporate Policy and Planning Branch

FAX TRANSMITTAL

TO: DAVID E. CRAM	FAX NO: 519 862 2294
COMPANY: ST. CLAIR PARKWAY COMMISSION	DATE: June 20, 1994
FROM: ANNIE CHAN	TOTAL PAGES (including this sheet): 1
DILLON PROJECT NO: 92 9928 39 02	If you do not receive all pages of this fax, please call: Carolyn (x342)
SUBJECT: LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN DRAFT REPORT	

MR. CRAM:

AS PER OUR TELEPHONE DISCUSSION OF JUNE 16, 1994, THIS FAX IS TO CONFIRM THAT THE ST. CLAIR PARKWAY COMMISSION HAS NO COMMENTS TO SUBMIT ON THE DRAFT REPORT.

A. CHAN

:cl



FAXED
July 5/94

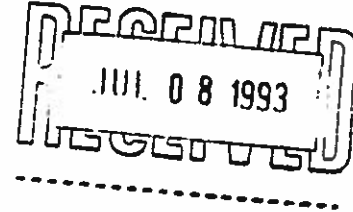
ST. CLAIR REGION CONSERVATION AUTHORITY

205 Mill Pond Crescent, Strathroy, Ontario, N7G 3P9

Tel.: 519-245-3710
Fax: 519-245-3348

July 5, 1994

County of Lambton
Waste Management
Hwy. 21, Box 3000
Wyoming, Ontario
N0N 1T0



Attention: Mr. James J. Kutuba, P. Eng.
Administrator, Waste Management

Dear Mr. Kutuba:

Re: Draft Waste Management Master Plan

Staff of the St. Clair Region Conservation Authority have reviewed the Master Plan Report and additional documentation. We provide the following comments, primarily related to the landfill component of the Master Plan, for your consideration.

Based on our mandate and review of the criteria and rationale for the comparative evaluations, we have no objection to Site I as the recommended preferred site, nor to the order of preference of the short list of sites.

It is our understanding from Chapter 8 of the Report (Page 8-21) that more detailed site-specific investigations of the preferred site will still be undertaken. As indicated in our previous correspondence, consideration should be given to control of surface water runoff to predevelopment conditions at the site, to protect the receiving watercourse from increased flows, erosion and sediment, and also to maintain water quality.

Thank you for the opportunity to comment on the project to this stage. We would appreciate being informed about the final decision on the preferred site.

Yours truly,

A handwritten signature in cursive script that reads "Irene Posliff".

Irene Posliff
Senior Planner

ip/

FAX TRANSMITTAL

TO: Mr. Ray Schnegelsberg	FAX NO: 1-519-862-1168
COMPANY: Tecumseh Gas Storage	DATE: September 13, 1994
FROM: Annie Chan	TOTAL PAGES (including this sheet):
DILLON PROJECT NO: 92-9928-39	If you do not receive all pages of this fax, please call:
SUBJECT: Draft Lambton County Waste Management Master Plan Report	

Mr. Schnegelsberg:

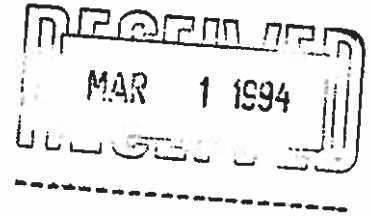
This fax is to confirm that Tecumseh Gas Storage has no concerns or comments to submit on the Draft Report.

Annie Chan



TransCanada PipeLines

TRANSCANADA PIPELINES TOWER, 111 - FIFTH AVENUE S.W.
P.O. BOX 1000, STATION M, CALGARY, ALBERTA T2P 4K5
(403) 267-6100



February 23, 1994

Mr. James J. Kutyba, P. Eng.
Administrator, Waste Management
County of Lambton
Hwy. 21, Box 3000
Wyoming, Ontario N0N 1T0

Dear Mr. Kutyba:

Re: Lambton County Waste Management Master Plan
Draft Report - Agency Review

On February 22, 1994, we received your letter dated February 4, 1994, informing TransCanada PipeLines that the above report will be reviewed and requesting our comments.

TransCanada PipeLines has facilities which cross through Lambton County. I have attached a map which shows the location of our pipeline.

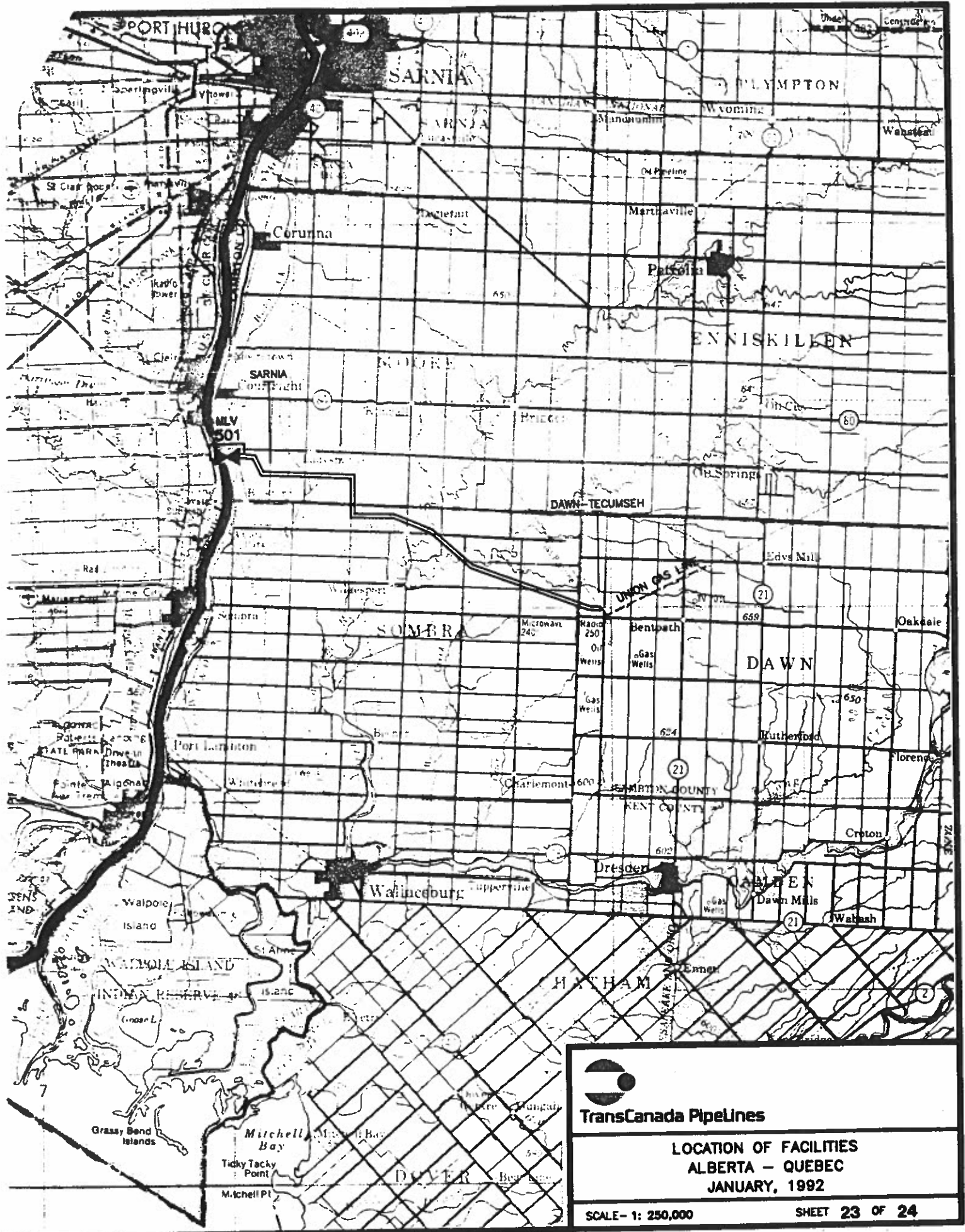
If the draft Master Plan has any waste management activity within 200 metres of our pipeline, TransCanada would like to review this plan. Please forward any material for review to Tracy Braun, Manager Environmental Affairs.


Thank you for keeping us informed of development near our pipeline.

Yours truly,

Janice Lattin
Technician I
Right-of-Way

cc: Tracy Braun
Patty Cooper



 **TransCanada Pipelines**

**LOCATION OF FACILITIES
ALBERTA - QUEBEC
JANUARY, 1992**

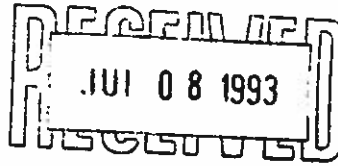
SCALE - 1: 250,000 SHEET 23 OF 24



Transport Canada Transports Canada

Airports Aéroports

4900 Yonge Street
Suite 300, 4th Floor
North York, Ontario
M2N 6A5



Your file Votre référence

Our file Notre référence

5168-1-555 (PKC/PKP)

June 30, 1994

Mr. James J. Kutyba, P.Eng.
Administrator, Waste Management
County of Lambton
Highway 21, Box 3000
Wyoming, Ontario
N0N 1T0

Re: Lambton County Waste Management Master Plan

Dear Mr. Kutyba:

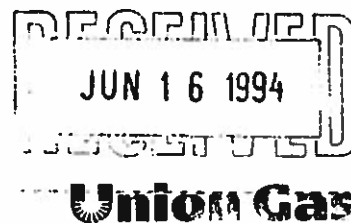
Thank you for your letter dated April 27, 1994, circulating a copy of the Waste Management Master Plan to this Department for review and comment,

This Department has no comments on this Plan and therefore has no further interest in this matter.

Yours truly,

D.J. MacLean
Regional Director General
Airports

Union Gas Limited
Executive Offices
50 Keil Drive North
Chatham, Ontario
N7M 5M1
Tel. (519) 436-4577
Fax (519) 436-5218



Douglas A. Sulman, Q.C.
Vice President
General Counsel
and Secretary

June 15, 1994

**Administrator, Waste Management,
County of Lambton,
Hwy. 21, PO Box 3000,
WYOMING, Ontario
N0N 1T0**

Attention: Mr. J. Kutyba

Dear Mr. Kutyba:

Re: Lambton County Waste Management
Master Plan

I am in receipt of drafts of Parts 1 and 2 of the above plan.

Union Gas Limited has attempted to monitor the progress of the above project over the last few years. We have taken the position that the Plan should consider existing land uses by registered encumbrancers, ie. in our case, natural gas pipelines.

On prior occasions, I have written indicating that Union Gas has facilities within or near the area known as Site "I". As I see this site is now the preferred site, I wish to again reaffirm our position that Site development should remain compatible with Union's natural gas pipeline easements.

I wish to make you aware that Union objects to the development of Site "I" without regard to Union's facilities or pre-existing registered interests.

Specifically, you may wish to consider amending TABLE 6.8 under LAND USE to include natural gas pipelines under Site I, as well as existing agricultural use.

Yours very truly,

A handwritten signature in black ink, appearing to read "D.A. Sulman".

D.A. Sulman, Q.C.

:aj

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

**SCHEDULE 3E-9
GORE & STORRIE TECHNICAL REVIEW**

**LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN
RESPONSES TO GORE AND STORRIE TECHNICAL REVIEW**

Item	Subject	Response	Action Taken
<p>1. Section 1 Subsection 1.1 Page 1-2</p>	<p>PRIVATE SECTOR SOLUTIONS TO SOLID WASTE MANAGEMENT</p>	<p>As noted in the Draft Master Plan and in the September 1, 1994 draft responses to the Public Works Committee Comments, the Master Plan focuses on the identification of public sector (County) waste management solutions. However, in parallel, the County has pursued possible private sector solutions, and will continue to do so.</p>	<p>No action required.</p>
<p>2. Section 1 Subsection 1.3 Page 1-6 (Appendix 2E, Volume 2)</p>	<p>RATIONALIZATION OF NEED - HISTORICAL PERSPECTIVE</p>	<p>The Master Plan has established that there will be a need for some new disposal capacity during the planning period. As indicated in Section 3.1.2 of Volume 1, Chapter 3, and in Appendix 2D of Volume 2, it has been established that without waste diversion, the County will require approximately 2 million tonnes of landfill capacity for the 20 year period starting in 1996 and ending in 2015. With 50% waste diversion, the total landfill requirement would be reduced to approximately 1 million tonnes for the same 20 year period.</p> <p>The predicted disposal capacity requirements were based on the updated population projections and review of waste generation rates carried out in 1993, not on a 1989 information base.</p> <p>Given the requirement for up to 2 million tonnes capacity, Table E-8 in Appendix 2E, Volume 2 identifies the estimated capacity that remained (as of January 1, 1989) at the sites taking municipal wastes. For the six sites assumed by the County in 1991, the total remaining capacity (in 1989) for the six sites was 323,110 tonnes. The remaining capacity today would be even less.</p> <p>The significant amount of capacity potentially available at private sector sites in Lambton County was also outlined and discussed in Appendix 2E. As noted, the possible use of private sector sites is being considered in a separate but parallel process.</p> <p>Therefore, given that up to 2 million tonnes capacity would be required, and the municipally owned capacity is less than the 1989 total of 323,110 tonnes, a need for some new disposal capacity was established.</p>	<p>No action required.</p>

Footnotes

1. Page, section and chapter references in the "Item" and "Response" columns refer to the March 1994 Draft Report.
2. The "Action Taken" column refers to revisions that have been incorporated into the February 1995 Report.

Item	Subject	Response	Action Taken
3. Section 2 - Public and Agency Consultation	PUBLIC CONSULTATION ACTIVITIES	<p>Given that a need for some new disposal capacity was established, the siting process focused on identifying a location for the new capacity. It would have been incorrect to have given greater preference to new capacity at an expanded site, as has been suggested by the reviewer. All reasonable public sector options for locating new capacity were given consideration during the siting process. Lands adjacent to existing municipal sites were considered on an equal basis with other lands in the County.</p> <p>The 1994 data requested by the reviewer regarding public and private site filled areas, landholdings, residual capacity, optimization procedures, etc. could be collected and recorded by Dillon if requested by the County. This extra information would not, however, affect or add to the statement of need as established in the Master Plan. The question of the County's continued use of private sector sites, such as the Petrolia and Warwick landfills, is being addressed separately, as already noted.</p> <p>The comprehensive public and agency consultation program has provided numerous opportunities for public and review agency input. We agree that all affected parties should continue to be informed about the Master Plan activities, including affected landowners and their neighbours. The County has continued to meet with residents and other interested groups on an as requested basis. Specific consultation activities will be implemented during the EPA-level studies.</p>	Additional consultation activities will be implemented in future if the County decides to prepare an EAA/EPA-level submission for an undertaking.
4. Section 2 Subsection 2.8.7.3 Table 2.8 Page 2-43 and Page 2-44	COST	<p>We agree that the costs provided in Tables 2.8 and 6.8 do not give the County the ultimate cost to own and operate a new MRF, CCF and landfill.</p> <p>Table 2.8 on pages 2-43 to 2-45 provides a summary of the questions and answers that were given at a public presentation that was held in the evening of November 25, 1993 at the Moore Township Civic Centre. The cost estimates were given in a verbal response to questions from the public pertaining to the cost for the landfill. As stated in the response to the question, the cost figures were approximate and a more exact figure could not be provided without detailed design drawings.</p>	Additional cost information was provided to the WMMP Steering Committee in the November 11, 1994 memo from Dillon.

Item	Subject	Response	Action Taken
		<p>The approximate cost of a new composite facility has been estimated at \$25 million and this figure is quoted in a comment found on Table 2.5 on page 2-36 of Volume 1. A more detailed cost estimate with a breakdown of separate capital, operating, maintenance and closure costs is not provided in the draft WMMP. Detailed costing would have to be done in conjunction with, and as an output of, EPA-level work.</p> <p>The issue of "cost" is also addressed in the Design and Operations Assessment found in Appendix 4C of Volume 4. The assessment documents the comparison of the four short-listed sites - D, K, H and I. As stated in Section 2.1, cost indicators were selected to identify <u>potential differences in site development cost</u>. Capital costs for features common to each site and operating, closure, and post-closure costs were not considered because costs that were common to all four sites would not have contributed to the comparison.</p> <p>Site Development Costs (i.e. for features that could be different for the specific sites) were estimated and the assumptions, method of data collection, and the rationale for each are presented. The indicators considered were: clearing and grubbing, fencing, power servicing, road works, and leachate treatment. The measured quantity, unit costs, and total cost for each site was presented in Table 3 along with a written description of the costs for each indicator.</p> <p>The reviewer suggests that the consultants should prepare "fairly detailed conceptual designs and preliminary cost estimates for the County's proposed composite waste management facility on each short-listed candidate site, including proposed Site I". Dillon did not take this approach as it was decided that detailed conceptual designs and cost estimates for each short-listed site would not influence the site selection process. As it turned out, even the detailed cost estimating for features that would be different for each site (i.e. site development costs) did not contribute to a differentiation between the sites.</p>	

Item	Subject	Response	Action Taken
<p>5. Section 2 Subsection 2.8.7.3 Table 2.8 Page 2-44</p>	<p>SOCIO-ECONOMIC - PROPERTY VALUES</p>	<p>This was also the case for the detailed comparison of the long-list of sites. As shown in Table 6.8, the difference in the estimated total present value cost between the sites was not large. As stated on page 6-40, the comparison "only included costs which differed among the sites". The conclusion was that the "difference among the sites with respect to cost is quite small".</p> <p>With respect to a new MRF and/or CCF, the Master Plan indicates that new, County-owned facilities are not needed now, but may be in the future. The recommended long-term waste diversion strategy for the County includes composting of leaf and yard wastes at a CCF(s) and processing of an enhanced variety of Blue Box materials at an MRF(s). The existing facilities in the County (e.g. the City of Sarnia's leaf and yard waste composting site and the privately owned MRFs) may be compatible with the recommended long-term strategy. This will eliminate the need to construct and operate new facilities. If the existing facilities turn out to be not suitable for the long-term diversion strategy, then the County has the option to implement a new CCF or MRF at the proposed Composite Waste Management Facility, or elsewhere if alternative siting is preferred.</p> <p>Because the future need for and role of new MRFs and CCFs in the long-term waste diversion strategy has not been finalized, the specific quantities of materials to be handled by these facilities has also not been determined. Without this information, meaningful estimates of the capital and operating costs for these facilities cannot be completed.</p> <p>It is understood, however, that members of the Steering Committee would like some further ideas about the possible cost ranges for the recommended waste management activities. Dillon will, therefore, provide some generic cost estimates/ranges based on our experiences in other projects and the available literature.</p> <p>As part of Dillon's involvement in environmental assessment site selection studies and waste management master plans, the company has compiled an extensive bibliography of articles relating to potential property value impacts associated with landfill facilities. This background literature and experience in other landfill studies across the province is the basis for the initial comment that was referenced.</p>	<p>No action required.</p>

Item	Subject	Response	Action Taken
		<p>Over 70 individual articles on property value impacts related to the siting of unwanted facilities have been reviewed. A complete listing of these articles is attached in Appendix A. A selection of these articles, which deal directly with landfill related property value impacts, are discussed here.</p> <p>In general, there is no definitive conclusion as to whether or not landfills adversely affect property values. In some instances, negative effects do occur; in other situations, no impacts are reported; and in yet other situations, property values have been reported to actually increase. The prediction of the effects of one facility on surrounding property market values is complex as the value of property is dependent upon many factors. Some of these factors will act to increase the value of a property and others will have a negative impact on property values. The location of an unwanted facility, such as a landfill, is only one of the factors that may influence the value of a particular property. General characteristics of the market such as economic conditions and employment, interest rates and supply of comparable properties will affect the market value of land and housing. In addition, locational characteristics such as the current zoning or the Official Plan designation, access to major transportation routes, proximity to urban centres, access to municipal services, views, and the local ambience or the image of the surrounding area will have an effect. Only the last three factors are affected by the presence of a landfill.</p> <p><u>SPECIFIC REFERENCES</u></p> <p>A) ARTICLES WHICH SUGGEST STABLE OR POTENTIALLY POSITIVE IMPACTS</p> <p>1) The impact of sanitary landfill facilities on residential property values was examined in "A Review of Sanitary Landfill Impacts on Property Values" (Cartee, 1989). This study reviewed a number of case studies of specific landfill facilities. The main conclusions of this review were:</p> <ul style="list-style-type: none"> • different sets of property characteristic and different functional forms led to the general conclusions that things other than proximity to the sanitary landfill were more relevant in explaining property values; 	

Item	Subject	Response	Action Taken
		<ul style="list-style-type: none"> • relating back to a 1983 study, "Effects of Sanitary Landfills on the Value of Residential Property", three of four case study neighbourhoods had not experienced declines in property values, while in the fourth case the median value of single-family, owner occupied housing units increased substantially; and • a third case study indicated that research has shown that the development of a sanitary landfill may actually enhance property values, especially where the location is relatively remote. The establishment of municipal services such as new or improved access roads, utilities, sewers, drainage, etc. has actually stimulated development in certain instances with the resulting increases in land values and new construction. <p>2) "Sanitary Landfills and Their Impact on Land" (McKechnie, Simpson-Lewis, Neimanis, 1983) was a study conducted by research officers with the Lands Directorate of Environment Canada. The authors of this study concluded that:</p> <ul style="list-style-type: none"> • it is unlikely that properties used for heavy industry will be significantly affected because activities at a landfill resemble those in many industrial areas; • in rural areas, where adjacent land has limited development potential, the impact is expected to be less than that in urban areas; • the public usually has a strong perception that a sanitary landfill will negatively affect property values; • a discrepancy often exists between the opinions of technical experts and those of the general public; and • the rehabilitation of a site to a desirable after-use such as recreational can enhance surrounding property values. 	

Item	Subject	Response	Action Taken
		<p>3) The paper, "The Significance of Property Value Guarantees as a Tool for Siting Waste Disposal Facilities" (Zeiss & Atwater, 1988), was presented at the Canadian Waste Management Conference in Winnipeg in 1988. The authors reported that their analysis showed no correlation of observed physical impacts with residential property values in host communities. They went on to conclude that "...waste facilities have inconsistent or insignificant effects on residual property values. The lack of property value impacts contradicts strongly held beliefs about waste facility impacts on property values, despite the presence of verified physical impacts and the use of a properly specified model".</p> <p>4) "An Evaluation of the Impact of a Well-Designed Landfill on Surrounding Property Values" (Bleich, Findlay, Phillips, 1991) examined the potential property value impact around a modern landfill in the Los Angeles area. The authors of this study concluded that there is no statistically measurable impact, either positive or negative, caused by the landfill. They went on to "...suggest that a landfill, if well-designed and managed, can be a good neighbour and have no statistically negative impact on surrounding property values".</p> <p>B) ARTICLES WHICH REPORT MIXED RESULTS WITH BOTH STABLE AND NEGATIVE IMPACTS</p> <p>5) In the article, "The Impact of Waste Facilities on Real Estate Values" (Price, 1987), the author reports that higher priced residential properties showed a lower rate of value increase if located within one to one and one-half miles of an active landfill in Great West Palm Beach and Broward County, Florida. No negative impacts were reported within one mile of a landfill in Sarasota or Brevard County. Nor was evidence of negative impacts found for lands located within the vicinity of the Kil-Cona Park Landfill in Winnipeg. In another case, properties in proximity to a landfill site in Westchester County, New York were found to appreciate at a lower rate than those in a comparable area with no landfill, but it was also noted that this could be at least partly attributed to other factors. Overall, the author concluded that "...findings are mixed since single family residential property values in any market are difficult to analyze and participants in this market are more unpredictable than those who may buy real estate for investment purposes".</p>	

Item	Subject	Response	Action Taken
		<p>6) The authors of "The Impact of Landfills on Residential Property Values" (Reichert, Small, Mohanty, 1992) based their findings on the results of a survey of 900 residents living near sanitary landfills. They concluded that landfills will likely have an adverse impact upon housing value when the landfill is located within several blocks of an expensive housing area. But, that no impact was experienced on land values near landfills in predominantly rural areas.</p> <p>7) "Home Values Stabilized After Landfill Gas Scare" (Pestinger and Gambill, 1990), reported on the experience in Seattle, Washington where methane gas was identified to have migrated off-site from the Midway Landfill site. On the recommendation of the Fire and Health Departments, the city offered to purchase homes in the affected area. Of the 982 eligible homes, 627 (64%) decided not to participate, and another 86 eventually withdrew from the program and stayed in their homes. A total of 269 homeowners stayed in the program and sold their homes. During the first year of the program, sales averaged 89.9% of fair market value. Three years later, during the last year of the program, sales averaged 98.7% of fair market value.</p> <p>C) ARTICLES IN WHICH NEGATIVE IMPACTS ARE REPORTED</p> <p>8) In another study, "Socio-Economic Assessment for Flanagan Road Site" (Montreal Engineering Co. Ltd. and DPA Consulting Ltd., 1982), the authors conclude that "...regardless of how well the proposed landfill development is maintained and operated, there will exist in the minds of the prospective buyer, the trepidation and uncertainty of living in the immediate environs of a landfill".</p> <p>9) "Price Effects of Landfills on House Values" (Nelson, Genereux, Genereux, 1992) applied a quantitative model to estimate the price effects of one landfill located in Ramsey, Minnesota. The empirical results of this study indicate that the landfill adversely affects single family house values in an area up to 2 miles from the landfill suggesting that these declines may be greater than 12% at the boundary of the landfill and about 6% at a distance of 1 mile from the site.</p>	

Item	Subject	Response	Action Taken																																								
<p>6. Section 2 Subsection 2.8.7.3 Table 2.8 Page 2-44 (Appendix 4D - Hydrogeologic Impact Assessment - Vol. 4)</p>	<p>HYDROGEOLOGY - SAND SEAMS</p>	<p><u>CONCLUSION</u></p> <p>In conclusion, the literature suggests that the potential for property value impacts depends on the type of land use, the timing with respect to the landfill life cycle and the distance from the landfill. Some types of properties, such as residential and commercial properties, are recognized to have a greater potential for negative property value impacts than others, such as rural areas and industrial lands. It is generally asserted that the level of potential impacts declines as the distance to the landfill increases, eventually reaching a point where no property value impact occurs. It is also generally accepted that potential negative property value impacts diminish over time as the landfill is closed and rehabilitated to a recreational after-use or open green space.</p> <p>A compensation policy, along with other possible impact management measures, will be considered by the County in future if the County decides to proceed with an undertaking.</p>	<p>No action required except for items noted below.</p>																																								
<p>The definition of "significant sand seams" is related to the thickness, grain size and frequency of sand seams encountered in the boreholes. On page 35 of Appendix 4D, it is stated "Elsewhere in Lambton County, significant glaciolacustrine soils have been identified within the unweathered till. These soils typically comprise interbedded layers of sands, silts and clays. The soil cores recovered in the investigations were carefully inspected for significant sand layers. For all sites, no significant sand layers were identified in the soil cores. Therefore, the use of a sub-indicator relating to the presence of sand layers to compare the sites is not possible." Summarized below is a listing of sand seams identified in all boreholes.</p> <table border="1"> <thead> <tr> <th>Site No.</th> <th>Borehole No.</th> <th>Depth</th> <th>Thickness</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>D</td> <td>1D</td> <td>5.3-5.8 m</td> <td>≈ 1 mm</td> <td>Occasional stringers of fine-grained sand and silt</td> </tr> <tr> <td>D</td> <td>1D</td> <td>17.0 m</td> <td>40 mm</td> <td>Fine-grained sand seam</td> </tr> <tr> <td>I</td> <td>5D</td> <td>26.7 m</td> <td>40 mm</td> <td>Silt and fine-grained sand seam</td> </tr> <tr> <td>H</td> <td>6D</td> <td>23.2 m</td> <td>5 mm</td> <td>Fine-grained silty sand</td> </tr> <tr> <td>K</td> <td>8I</td> <td>14.1 m</td> <td>2 mm</td> <td>Fine to medium sand layer</td> </tr> <tr> <td>K</td> <td>9D</td> <td>12.0 m</td> <td>25 mm</td> <td>Fine to medium sand layer</td> </tr> <tr> <td>K</td> <td>9D</td> <td>12.5 m</td> <td>10 mm</td> <td>Sand layer</td> </tr> </tbody> </table>	Site No.	Borehole No.	Depth	Thickness	Description	D	1D	5.3-5.8 m	≈ 1 mm	Occasional stringers of fine-grained sand and silt	D	1D	17.0 m	40 mm	Fine-grained sand seam	I	5D	26.7 m	40 mm	Silt and fine-grained sand seam	H	6D	23.2 m	5 mm	Fine-grained silty sand	K	8I	14.1 m	2 mm	Fine to medium sand layer	K	9D	12.0 m	25 mm	Fine to medium sand layer	K	9D	12.5 m	10 mm	Sand layer			
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Item	Subject	Response	Action Taken
		<p>As this table indicates, sand seams (maximum thickness of 40 mm) were found in five of the ten boreholes drilled in the study. In all instances, sand seams were identified at all four short listed sites. Given the depositional environment of the overburden, it would be unreasonable to assume that no sand seams would be present. However, it can also be concluded that no major interstadial sequence was identified based on the borehole results.</p> <p>Therefore, the sand seams of the four sites are not significant in either absolute terms (i.e. no obvious pathways for contaminant migration are indicated) or in relative terms (i.e. there are no major differences between the sites with respect to this).</p> <p>The depth of sand seams are at a depth (generally greater than 10 m b.g.s.) that will not allow them to supply recharge water to local stream courses.</p> <p>It is agreed that the presence of sand seams will be "exhaustively" investigated in the EPA level testing. Notably, a deep (approximately 10 m b.g.s.) test pit will be excavated at the site. The purpose of this test pit will be to map fracture frequency and orientation as well as to identify the extent and nature of any sand seams. Continuous core samples will be taken in all new boreholes at the site and the presence of sand seams will be noted throughout their depth.</p> <p>Landfill gas migration off-site through sand seams is unlikely since the water table is found generally less than 3 m below ground surface. Therefore these sand seams will be saturated and due to the low solubility of methane gas coupled with relatively low ground water flow velocities, landfill gas movement is effectively inhibited in saturated ground conditions.</p>	

Item	Subject	Response	Action Taken
		<p>The landfill will be designed addressing all MOEE regulations, policies and guidelines. Notably the "Reasonable Use Policy" will be complied with. For instance, if the sand seams identified are discontinuous and found at some depth below the base of the landfill, contaminant transport modelling may show that the presence of the sand seam(s) will not cause migration of contaminants at concentrations above those allowed by the Reasonable Use Policy with a landfill without a liner. On the other hand, if a continuous sand seam is identified immediately below the landfill liner, contaminant transport modelling of a "linerless" landfill may indicate that allowable concentrations based on the Reasonable Use Policy will be exceeded. If this is the case, engineered systems (e.g. re-compacted clay liners, geomembranes) will be considered and incorporated into the design of the landfill, as appropriate.</p> <p>Overall, the leachate management philosophy will be to incorporate sufficient design features to prevent unacceptable water quality impacts as defined by the MOEE.</p> <p>The collected leachate will be trucked to the Leachate Treatment Facility at the Sarnia Landfill (refer to Appendix 4C, pages 5, 6).</p> <p>Two indicators were not explicitly considered in the comparative analysis (Appendix 4D) for Criterion 2. These are:</p> <ul style="list-style-type: none"> • Indicator 3 - local ground water flow directions (convergent/divergent, uniform); and • Indicator 4 - depth to ground water migration pathways. <p>For Indicator 3 there is insufficient data to conclusively determine the ground water flow direction and this indicator was subsequently not used in the comparative analysis. In retrospect, uniform flow directions can be inferred by the level topography and consistent geology at all sites. Table 8 and associated text will be changed.</p>	<p>The following text has been added on page 40, Appendix 4D:</p> <p>Indicator 3 - Ground Water Flow Direction</p> <p>There is insufficient data to conclusively determine the ground water flow direction. However, uniform flow direction can be inferred by the level topography and consistent geology at all sites. Since all sites are inferred to have a uniform flow direction, it is not possible to differentiate between sites using this indicator.</p>

Item	Subject	Response	Action Taken
		<p>For Indicator 4, the depth to ground water migration pathways was thought to be reflected in both Criterion 1 - Indicator 1 and Criterion 2 - Indicator 2. In retrospect, however, this indicator can be included in the analyses. For all sites, the depth to Pathway 1 (weathered and fractured till) will be zero for all sites. For Pathway 2 (depth to bedrock aquifer) the depth to this pathway will be related to Criterion 1 - Indicator 1 - thickness of attenuation layer. All sites will be ranked equally with respect to Indicator 4. The relevant changes to the text will be made.</p>	<p>Indicator 4 - Depth to Ground Water Migration Pathways</p> <p>The depth to ground water migration pathways can be divided into the depth to the weathered and fractured clay silt till and the depth to the basal aquifer.</p> <p>Sub-Indicator 4a - Depth to Weathered and Fractured Till</p> <p>Since the weathered and fractured till occurs from ground surface, the depth to this migration pathway will be zero for all sites.</p> <p>Sub-Indicator 4b - Depth to Basal Aquifer</p> <p>The depth to the basal aquifer is the same as Criterion 4 - Indicator 1, Thickness of Attenuation Layer.</p> <p>The depth to the basal aquifer at the different sites ranged from 32.5 m to 38.5 m. It is considered that depths of greater than 30 m are not significant and differentiation beyond 30 m is not significant.</p> <p>The indicators noted above have been added to Tables 8 to 12. All indicator and sub-indicator scores are the same (1) for all sites.</p>

Item	Subject	Response	Action Taken
		<p>Other responses regarding Appendix 4D:</p> <ul style="list-style-type: none"> • Table 8 of Appendix 4D will be revised to be consistent with Table 4. • The minor discrepancies in depths of features in BH9D noted in the descriptive text (page 21) will be corrected. • The naturally occurring gas encountered at Site K was at a high enough pressure to inhibit the installation of a monitoring well. The well was left overnight to equilibrate. When this did not happen, it was decided, for safety reasons, to seal the borehole. • Table 8 will be corrected. 	<p>Table 8 has been revised.</p> <p>Paragraph 6 of page 21 has been revised to read:</p> <p>"At Site K, at the deep borehole BH9D, the weathered zone extended to 3.9 m bgs. The overburden then became a massive grey silty clay till. A 25 mm thick fine-grained sand seam was found at 12.0 m bgs, and a 10 mm thick sand seam was identified at 12.5 m bgs. At 32.6 m bgs, a zone of laminated homogenous clays was found which are of lacustrine origin. Beneath this zone, at 36.1 m bgs, silty clay till was found. Immediately beneath..."</p> <p>Table 8 has been corrected.</p>

Item	Subject	Response	Action Taken
		<ul style="list-style-type: none"> Regional influences were not the only factor considered when reviewing vertical hydraulic gradient data. The data is inconsistent, as Table 5 indicates. For instance, drilling location 1 compared to location 2 (Site D), and drilling location 6 compared to location 7 (Site H) are illustrations of variations of vertical gradients on the same site. Also, monitoring well 1D was drilled further into bedrock than 5D or 6D which may explain, in part, the higher piezometric head in this well. The text will be amended to provide a fuller explanation of vertical hydraulic gradients. Page 15 will be changed to indicate that 2 well casing volumes were targeted for development purposes. 	<p>Page 42 (see fourth paragraph), Appendix 4D has been changed to read:</p> <p>"A comparison of hydrogeological conditions at the site indicates that the overburden soils have very low hydraulic conductivities. Vertical gradients, which induce downward movement of ground water, are somewhat higher at Sites H and I than at Site D. The data does indicate that vertical gradients are variable at each site. The reason for the low gradient measured at Site D is the relatively high piezometric head in the basal aquifer. The monitoring well (1D) installed in the basal aquifer at Site D, was drilled to a deeper depth than at Sites H and I, which may explain, in part, the higher piezometric head in the basal aquifer at Site D. Due to these reasons, it is considered that the differences in vertical gradients are not sufficient reason to rank any site as preferred over the others.</p> <p>Page 15, paragraph 5 has been changed to read:</p> <p>"A target of two well casing volumes...."</p>

Item	Subject	Response	Action Taken
<p>7. Section 3 Subsection 3.1 i) Page 3-2</p>	<p>IC&I WASTES</p>	<ul style="list-style-type: none"> The wells in this study are installed in low permeability soils, therefore it is not possible to "develop" the wells in any meaningful way due to their long time to recover to static levels or to "make" water during pumping. Nevertheless, since water was not used in drilling the wells (see page 15) the need to remove the residues from drilling is not necessary. For wells drilled in 1993 (location 8, 9 and 10), sufficient time was not available to develop the wells before in-situ tests. No development was undertaken at wells that did not have in-situ tests or water samples taken (locations 2, 3, 4, 7, 8, and 10). Monitoring well 5D was not developed because the sampling system was stuck in the well (see page 17). Similar problems were encountered with 1I and 6S but the sampling system problems were corrected and the wells were subsequently tested in July 1993. 	
		<p>Based on comments from other sources, in addition to the comments resulting from the Gore and Storrle Technical Review, it is acknowledged that there is a need for further clarification of the role of IC&I wastes. This clarification will be added to the Master Plan. It will be similar to the response provided below.</p> <p><u>Wastes Considered in the Master Plan</u></p> <p>A basic premise in developing the Master Plan was that the only wastes which would be considered would be wastes which historically have been collected by local collection contractors and municipal forces, or have been disposed in municipal landfill sites. In the Master Plan these wastes are defined as municipal wastes and include residential wastes, some residential-type IC&I wastes (e.g. light commercial and institutional wastes), and some other types of wastes (e.g. residential-type wastes from hospitals and farm operations, wastes from parks and conservation areas, and some sewage sludges). Waste generation rates and future generation quantities were determined using historical quantities of municipal wastes as defined in the Master Plan.</p>	<p>The text in the response has been added to Subsection 3.1. In addition, a figure has been added that illustrates the types of wastes included in the WMMP and the types of wastes not included in the WMMP and the relative proportion of the quantities involved.</p>

Item	Subject	Response	Action Taken
		<p><u>Wastes Not Considered in the Master Plan</u></p> <p>Wastes not considered in the Master Plan include IC&I wastes which have not traditionally been disposed in municipal landfill sites including solid hazardous and liquid wastes, biomedical wastes, wastes from Indian Reserves, and animal carcasses. The County has traditionally not been responsible for these types of wastes and it is reasonable to assume that the County will continue to not be responsible for these wastes in the future.</p> <p>Lambton County is unique compared to most other municipalities in Southern Ontario with respect to how IC&I wastes are handled. Traditionally, most of the large generators of IC&I waste in the County have been responsible for the disposal of their wastes and have either utilized their own landfill sites or they have used other privately owned sites.</p> <p><u>Redirected IC&I Wastes</u></p> <p>For purposes of simplification, three general classifications have been established to define wastes in Lambton County. These classifications are defined as follows:</p> <p>A - Residential wastes, which have traditionally been disposed in municipal landfill sites in the County.</p> <p>B - Residential-type IC&I wastes which have traditionally been disposed in municipal landfill sites. These wastes primarily originate from commercial and institutional establishments.</p> <p>C - IC&I wastes, which traditionally have not been disposed in municipal landfill sites.</p> <p>The relationships between A, B and C wastes are illustrated in Figure 1 (Appendix B). Waste classes A and B were considered in the Master Plan.</p>	

Item	Subject	Response	Action Taken
		<p>In 1988 the County increased tipping fees at the Sarnia Landfill site in order to extend the remaining capacity of the landfill. This resulted in the redirection of the majority of B type wastes generated in the Sarnia area to private landfill sites. The quantity of wastes redirected was estimated to be approximately 32,500 tonnes per year.</p> <p>Historically, the County has been responsible for the disposal of residential-type IC&I or B type wastes in the past. It is reasonable to expect that if tipping fees were reduced to historical levels, B type wastes would return to municipal landfill sites. On this basis, it is also reasonable to expect that the County will be responsible for the disposal of the B type wastes in the future.</p> <p>Based on the above discussion:</p> <ol style="list-style-type: none"> 1) The County does expect that C type wastes will continue to be disposed in privately owned IC&I landfills and that the County will not be responsible for these wastes in the future. 2) The IC&I wastes that the County is planning to manage in the future are the B-type portion or the residential-type IC&I wastes which have traditionally been disposed in municipal landfill sites. The historical quantity was estimated to be 32,500 tonnes per year (excluding waste diversion). It would not be reasonable to assume that the County will be responsible for C type wastes because historically the County has not been responsible for these wastes and likely will not be in the future. 3) Existing municipal landfills in the County cannot handle the C type or IC&I wastes. The new proposed County landfill will only be licensed to handle municipal wastes, which includes A and B type wastes. 4) The new proposed County landfill has been sized to handle A and B type wastes, but not the C type wastes. 	

Item	Subject	Response	Action Taken
<p>8. Section 3 Subsection 3.1 iii) Page 3-3</p>	<p>OTHER WASTES</p>	<p>The County has historically not been responsible for the disposal of wastes generated by the three First Nations. The three First Nations are presently responsible for the handling and disposal of their own wastes. It was assumed in the Master Plan that, in the future, residents of the First Nations will continue to be responsible for the handling and disposal of their own wastes. As a result, wastes from the First Nations were not included in future waste quantity estimates for the County.</p> <p>Nevertheless, at times in the past, the First Nations have made use of County landfills, and the County continues to be willing to negotiate similar agreements in the future.</p>	<p>No action required.</p>
<p>9. Section 3 Subsection 3.2.3 Page 3-13 and 3-14</p>	<p>HOUSEHOLD COMPOSTING</p>	<p>The recommended long-term waste diversion strategy for the County identified in the Master Plan includes backyard composting and leaf and yard waste composting plus user pay waste collection. The main advantage of this strategy is that it is based on initiatives already present in the County. It is recognized that wet/dry collection has the potential to divert a higher degree of the residential organic waste stream from disposal. However, wet/dry collection is more complicated and likely more difficult and costly to implement.</p> <p>Results of some studies conducted in Ontario on the effectiveness of backyard composting indicate that backyard composting can potentially result in the diversion of significant quantities of residential organic wastes. In Pickering and in Waterloo, programs have been tested where composters have been distributed free of charge to residents interested in receiving them. In both of these studies it was found that 70 to 80% of the residents accepted the composters and 80 to 90% of the residents who accepted them were still using them one year later. The implementation of a user pay waste collection program can help to significantly increase participation in backyard composting programs. A pilot study was conducted in West Garafraxa Township, Wellington County, to determine the impacts that user pay waste collection has on recycling and backyard composting programs. It was found in the test area where user pay was implemented that 77% of the residents in the test area were composting kitchen and yard wastes. Based on these results, the possibility exists that the Provincial Government's 50% diversion objective could be achieved using a waste diversion system that relies on backyard composting and leaf and yard waste composting for the diversion of residential organics.</p>	<p>Reference has been added to Subsection 3.2.2 to the wet/dry pilot study taking place in Wyoming and the importance that the results of this study will play in determining the feasibility of implementing wet/dry collection programs in the County in the future.</p>

Item	Subject	Response	Action Taken
		<p>In the evaluation of the alternative waste diversion strategies that were identified in the Master Plan, waste diversion potential was considered to be the most important evaluation criteria. However, other criteria used in the evaluation considered ease of implementation of the strategies, potential for impacts from new facilities, and costs. The analysis indicated that the recommended strategy was most preferred. Dillon could, if requested by the County, provide a breakdown of the incremental tonnages that will be diverted from each component of the recommended long-term waste diversion strategy. However, this would not change the conclusion that the recommended strategy is most preferred.</p> <p>The analysis of the alternative waste diversion strategies was completed using data available at the time (e.g. Fall 1993). It is reasonable to expect that in the future, the level of expertise in waste diversion in Ontario will increase as more municipalities gain experience in implementing more advanced waste diversion programs. This will result in an improvement in the ability to determine which types of waste diversion programs are most suitable for different areas. The County has already taken a step towards obtaining this expertise by helping to fund the wet/dry pilot study presently occurring in Wyoming. This study will help to provide insight into the feasibility of implementing wet/dry collection programs in both Lambton County and in smaller communities (all of the wet/dry pilot studies that have been conducted so far in Ontario have been done in communities much larger than Wyoming).</p> <p>A recommendation of the Master Plan is that the Plan, as a minimum, should undergo a formal review every five years. Updates to the Plan may be made more frequently, particularly due to the constantly evolving and expanding area of waste diversion. During these reviews, the potential of the recommended waste diversion strategy to allow the County to attain the Provincial Government's waste diversion objective should be considered. The possibility exists that in the future it may be determined that wet/dry collection should be added to the long-term diversion strategy.</p>	

Item	Subject	Response	Action Taken
<p>10. Section 4 Subsection 4.6 Page 4-21 Description of the Development of the Recommended Waste Management System</p>	<p>SITING OF COMPOSITE WASTE MANAGEMENT FACILITY</p>	<p>To conclude, it is important to consider: a) the possibility exists that the Provincial Government's 50% diversion objective could be achieved using a waste diversion system that relies on backyard composting and leaf and yard waste composting for the diversion of residential organics; b) the recommended strategy attempts to maximize the use of existing diversion initiatives in the County; c) the recommended strategy is preferred when other issues, such as ease of implementation and cost, are considered; and d) the evaluation of alternative diversion strategies will be updated in the future as part of periodic reviews of the Master Plan.</p> <p>This item focuses on two related issues:</p> <ul style="list-style-type: none"> • the question of multiple sites for disposal (i.e. more than one landfill site); and • the question of locating the landfill, MRF and CCF at a composite site, as opposed to separate sites. <p>Extensive formal evaluations of multiple-site versus single-site disposal options, and separate-site versus composite-site options are considered not reasonable or necessary for the Lambton WMMP. With respect to disposal, the County currently has a multiple landfill site system. Variations of the existing multiple landfill site system were originally identified and evaluated during Stages 1 and 2 of the Master Plan, as discussed in Volume 1, Chapter 4. However, once it had been determined that some new landfill capacity would be required, the County decided that it would like the option of phasing out some or all of the existing sites once new capacity had been identified and developed. For the County, a single site would have advantages in terms of minimizing costs, providing better service and minimizing the potential environmental impacts, as indicated both in Volume 1, Chapter 4 (pages 4-21 and 4-22) and Chapter 6 (page 6-4).</p>	<p>No action required.</p>

Item	Subject	Response	Action Taken
		<p>Also, a single new site would allow the County to provide all generators with disposal capacity having an equivalent, high level of technical and environmental quality.</p> <p>With respect to separate facilities versus composite site options, the reasoning was similar. The decision to find a location in the County that could accommodate three facilities (landfill, MRF and CCF) was based on the fact that a composite site would allow the County to minimize costs and impacts, and maximize service assuming a sound site of sufficient size could be found.</p> <p>The above decisions (to find a single, new location for landfilling, and to find a location for a composite landfill/MRF/CCF facility) together became a premise or assumption for the siting process. This siting assumption is not, however, "locked in"; it does not prevent the County from keeping one or more of the existing sites open, continuing the existing and expanded use of a facility such as the Sarma Composting Facility, or examining other siting options for a new County MRF (if required in the future). The siting assumptions simply provide the County with maximum flexibility.</p> <p>Therefore, the reviewer's "air of uncertainty" perhaps arises from the fact that the Master Plan documents a planning process that focused on identifying effective waste management solutions while allowing the County to maintain a reasonable degree of flexibility during implementation.</p> <p>In the event that a technically and environmentally sound site of adequate size had not been found, the original siting assumptions would have been reassessed and revised accordingly. In the case of Lambton County, this was not a problem. An adequate number of suitable potential sites was found.</p> <p>The siting assumptions, like other key siting decisions, were identified, debated and agreed upon during the public site selection workshops. They were then reviewed and confirmed on a number of occasions with the Steering Committee, Public Advisory Committee, Council members, and other study participants.</p> <p>With respect to waste haulage costs, the potential to "equalize" waste haulage costs to the new site has been addressed in Volume 1, Chapter 7.</p>	

Item	Subject	Response	Action Taken
<p>11. Section 4.7, Pages 4-22 and 4-23 Summary of Public Input on the Development of the Recommended Waste Management System</p>	<p>PUBLIC INPUT TO THE DEVELOPMENT OF EVALUATION CRITERIA</p>	<p>The evaluation criteria used to evaluate the alternative long-term waste diversion strategies were developed by Dillon based on our experience on other similar studies and our knowledge of waste diversion activities and evaluation procedures. Opportunities were provided to the public to comment on the alternative strategies through the March 1993 Newsletter and Information Centre. The input that was received confirmed that the selection of the recommended strategy was appropriate. In addition, extensive public and agency review of the Draft Master Plan is still ongoing and has not resulted in the need for revision to the assessment of the alternative diversion strategies.</p>	<p>No action required.</p>

Item	Subject	Response	Action Taken
<p>12. Section 5, Subsection 5.1.3 Pages 5-5 Waste Diversion Strategies, Proposed Short-Term Diversion Initiatives, Recycling Programs</p>	<p>MARKETING RECYCLABLES</p>	<p>It is recognized that the private sector (both the waste generators and waste management companies) has a significant part to play in achieving waste diversion, including the identification and development of markets for recyclables. However, the County has the ability to provide incentives and facilitate market development in ways that the private recycling contractors may not be able to do individually. The County's role would be to augment services provided by the private sector, not duplicate them. The overall objective would be to maximize waste diversion and minimize the quantities of non-reusable, non-recyclable, and non-compostable waste sent to landfill for disposal.</p> <p>The County could, for example, provide staff assistance or funding to conduct market analyses. This would involve an overall assessment of the materials collected, the markets currently used, and the other options available. The County could also identify possible uses for reused or recycled materials in its own operations. The Economic Development department(s) could assist in identifying existing users of recyclables, and/or in encouraging new users to locate in the County. Waste audit workshops or courses could be offered to small businesses, industries, and institutions (i.e. that currently use County facilities) to assist in identifying new materials for reuse or recycling.</p> <p>The Master Plan includes a number of recommendations regarding the administration and implementation of the Plan and the recommended long-term waste diversion strategy. Recommendations specific to the need for a new Materials Recovery Facility (MRF) and the role of the existing private sector facilities include:</p> <ul style="list-style-type: none"> • Determine the availability of existing central compost and materials recovery facilities as part of the County's long-term diversion strategy and the need for the County to develop its own facilities. • Determine costs for all existing waste management programs and facilities, and identify future waste system costs. • Retain a professional management consultant to assist in developing the appropriate "true cost" accounting method for the system. 	<p>The consultant team acknowledges that the County's current position on this issue is as follows:</p> <ul style="list-style-type: none"> • the County agrees that it is within its mandate to identify possible uses for reused or recycled materials in its own operations (e.g. the possible use of recycled materials in road work) • the County agrees that the Economic Development Commission could identify existing users of recyclables and encourage new users to locate in the County in conjunction with its ongoing economic development work • the County feels that the private sector is better positioned to carry out the other types of initiatives mentioned, including market analyses and waste audit workshops or courses. <p>References in the Report related to market development for recyclables have been revised to reflect the County's current position on this issue.</p>

Item	Subject	Response	Action Taken
<p>13. Section 5 Subsection 5.1.3 Page 5-6 Proposed Short-Term Diversion Initiatives</p>	<p>MATERIAL BANS</p>	<p>The development of a true cost accounting method for the waste management system will include consideration of the costs associated with the private-sector MRFs and their role in the waste management system. This means that if the County decides to construct its own MRF at the proposed composite waste management facility, then consideration of the financial impacts to the private sector would be calculated as part of the true cost accounting method. The financial impacts that this decision would have on the private sector MRFs would be an important component of the justification for the decision, regardless of what the actual decision is. It would be the responsibility of the management consultant to determine the most appropriate method of calculating financial impacts.</p> <p>The impact that the banning of certain materials has had on the County's waste diversion rates is not known. The existing bans have been phased in over several years, the list of banned materials is different for existing landfill sites, and sufficient waste disposal quantity information is not available to determine the impacts that these bans have had on diversion rates. The majority of the existing bans were implemented during 1987 and 1988 and so some of the bans may not contribute towards the calculation of the waste diversion rate.</p> <p>In the Master Plan it is recommended that the County only implement new material bans when an alternative is provided. The purpose of landfill bans is to maximize the quantity of wastes diverted away from landfill disposal to reduction, reuse and recycling initiatives. Waste exchange programs and "Reuse" centres represent two potential diversion initiatives for banned materials.</p> <p>It is assumed that many of the existing landfill bans will be implemented at the new proposed County landfill. This would be feasible for the County because these materials are already banned and it is therefore reasonable to assume that alternative options are available for these materials.</p>	<p>No action required.</p>

Item	Subject	Response	Action Taken
<p>14. Section 5 Subsection 5.1.5, Page 5-10 Implementation of the Short-Term Strategy</p>	<p>CITIZENS ADVISORY COMMITTEE</p>	<p>As part of the short-term waste diversion strategy, it was recommended that a standing committee be established to oversee the implementation of the strategy. The WMMP Public Advisory Committee endorsed this recommendation at their meeting on September 28, 1993. The standing committee will include a broader cross-section of representatives compared to the Steering Committee. This committee will consist of County councillors, County staff (e.g. County Waste Management Administrator), the public (e.g. representatives of the PAC) and private-sector recycling/waste management contractors. The committee could also include representation from the IC&I sectors as well as local academics and educators if the County foresees benefits from including these additional representatives.</p> <p>For the implementation of the long-term waste management system and the recommended long-term diversion strategy, it was recommended that the County play a large role in, or assume responsibility for, waste diversion and processing. With the County playing a much larger role in the waste management system, it is likely that it will be more efficient for the County to deal with implementation issues directly rather than through the standing committee. The existing WMMP Steering Committee may be appropriate for this role, but it is assumed that the Steering Committee will be disbanded once the Master Plan is completed. As a result, it was recommended that the Public Works Committee be responsible for facilitating the implementation of the long-term waste management system and diversion strategy.</p>	<p>No action required.</p>
<p>15. Section 5, Subsection 5.2.3, Page 5-18 Development of Alternative Strategies</p>	<p>WASTE DIVERSION (TONNAGE) FORECASTS</p>	<p>It is agreed that estimates of the tonnage of waste that will be diverted by each component in the alternative diversion strategies would provide additional information for the reader. However, the alternative diversion strategies were assessed based on the ability of the systems to divert wastes as a whole, not by the ability of the individual components to divert wastes. Therefore, the additional information would not be useful for the decision making process.</p> <p>The short-term and long-term diversion strategies were developed individually. The recommended long-term strategy was designed to start where the recommended short-term strategy ended. The diversion quantities associated with the components of the short-term strategy are separate from the quantities associated with the components of the long-term strategy.</p>	<p>No action required.</p>

Item	Subject	Response	Action Taken
<p>16. Section 5, Subsection 5.2.4 Pages 5-27, 5-28 Strategy 4 (3 Stream Wet/Dry Collection) and Strategy 5 (Wet/Dry Collection Program with Direct Cost)</p>	<p>WET/DRY SOURCE SEPARATION</p>	<p>The steps that the County should take to achieve 50 to 60% diversion of the IC&I wastes for which the County will be responsible cannot be defined at present. As indicated in the response to Item 7, the County will only be responsible for residential-type IC&I wastes (e.g. the B type wastes). The quantities of these wastes that have been diverted from landfill disposal through diversion programs (e.g. Blue Box programs etc.) are not known because this waste stream was previously redirected away from municipal landfill sites to private sites. However, in the future, the County plans to accept B type wastes at the proposed new County landfill site. Scales will be installed at the new site, and this will enable the County to monitor quantities of IC&I wastes entering the site and the quantities being diverted from disposal through recycling programs.</p> <p>Please refer to the response to Item 9, which provides a complete discussion on the evaluation and selection of the recommended long-term waste diversion strategy. The recommended long-term waste diversion strategy includes backyard composting, leaf and yard waste composting and user pay waste collection. Even though wet/dry collection programs do have the potential to allow higher proportions of waste to be diverted from disposal, the evaluation of the alternative diversion strategies considered other factors besides waste diversion, such as ease of implementation, potential for impacts from new facilities, and costs. The recommended diversion strategy was determined to be preferred when these additional criteria were considered.</p> <p>It was not recommended in the Master Plan that the County conduct pilot studies for wet/dry collection programs because wet/dry collection is not included in the recommended long-term diversion strategy. This does not preclude the County from conducting a wet-dry collection pilot study if the need or opportunity presents itself. As noted in the response to Item 9, the County is helping to fund a wet/dry pilot study in Wyoming which started in September of this year. The results of this study can be used to determine if wet/dry collection will be a feasible option that will enable the County to reach the Provincial Government's 50% diversion objective. This will be an important issue to be considered in future updates of the Master Plan.</p>	<p>Reference has been added regarding the wet/dry pilot study taking place in Wyoming and the importance that the results of this study will play in determining the feasibility of implementing wet/dry collection programs in the County in the future.</p>

Item	Subject	Response	Action Taken
<p>17. Section 5 Subsection 5.2.4 Vol. 1, Page 5-30 Evaluation of Alternative Waste Diversion Strategies</p>	<p>COST OF PLAN IMPLEMENTATION</p>	<p>The Lambton County WWMP represents a planning and decision making exercise to develop the best system for the long-term management of municipal solid wastes in the County. As part of the decision-making process, estimates of operating costs for the alternative long-term waste diversion strategies were calculated. These estimates are presented in Table G-4, Appendix 2G of Volume 2. These estimates were calculated to help determine the most preferred diversion strategy for the County. Additional details on what it may cost to implement the short-term and long-term diversion strategies are not needed for the decision making process and would be considered to be beyond the scope of the study. How implementation costs should be determined and budgeted are considered in Section 8.5 of Volume 1. This section deals with financing of the waste management system.</p> <p>It should also be considered that additional details on what it may cost to implement the short-term and long-term diversion strategies would not be meaningful because there are a number of issues regarding the implementation and operation of the long-term diversion strategy that need to be resolved by the County. These issues directly affect the implementation costs. These outstanding issues include:</p> <ul style="list-style-type: none"> • The need for new materials recovery and central composting facilities is not known. • The number of local municipalities that will adopt user pay waste collection is not known. • The role that the County will play in implementing the long-term diversion strategy has been determined. <p>The Terms of Reference for the Master Plan indicate areas of specific concern that should be considered. The areas include methods of charging back costs of waste handling, processing, and disposal (e.g. user charges tip fees, charges to waste generators outside the study area, per capita or assessment charges), municipal or private ownership of facilities, and municipal or private (contract) operation of facilities. User pay waste collection was considered as part of the development of the recommended long-term waste diversion strategy for the County. The implementation of user pay and the financing of the waste management system are discussed in Section 8.5 of Volume 1. Ownership and operation of facilities is addressed in Section 8.3 of Volume 1.</p>	<p>Additional cost information was provided to the WMMP Steering Committee in the November 11, 1994 memo from Dillon.</p>

Item	Subject	Response	Action Taken
<p>18. Section 6 Subsection 6.3 Page 6-6 Site Selection for Long-Term Composite Facility</p>	<p>STUDY AREA IDENTIFICATION</p>	<p>As explained in Volume 1, Chapter 6, page 6-6, the Moore Township landfill site and adjacent lands were originally excluded since the unconstrained area (based on the interpretation of the Study Area criteria at that time) was not large enough to accommodate a site. At that point, "Site K" did not exist. Site K was created later due to a revision in the interpretation of a Study Area criterion, which was discussed and agreed upon by the various study participants.</p> <p>In finalizing the boundaries for Site K, it was determined that the addition of approximately 11 ha of Class 3 agriculturally designated land, in high intensity agricultural use, would improve the feasibility of the site from a design and operations perspective. Site K, however, would have been large enough and would have remained on the "short list" even without these lands.</p> <p>As the reviewer has noted, 7 sites had been screened out due to the predominance of similar lands (i.e. Class 3 agriculturally designated lands in high intensity agricultural use). Because these sites were composed predominantly of "high intensity" agricultural lands they were, unlike Site K, not large enough once the "high intensity" lands had been eliminated.</p> <p>Despite the improvement in the configuration of the site, Site K was nevertheless found to be least preferred, both from a design and operations perspective and in the overall evaluation of the four sites.</p> <p>As shown on Figure 1 of Appendix 4C, there are a number of other site features in addition to the landfill areas (Items 2, 3 and 4 listed on the figure). These other features are the:</p> <ul style="list-style-type: none"> • storm water management pond • stockpile area • landfill equipment compound and maintenance building • leachate treatment facility • materials recovery facility • composting facility, and • weigh scales 	<p>No action required.</p>

Item	Subject	Response	Action Taken
<p>19. Section 6 Subsection 6.6 Pages 6-9</p>	<p>IDENTIFICATION OF SITES</p>	<p>The above features and the landfill area account for about one-half of the total area (approximately 37.5 ha). The other half of the total site area is made up of the buffer zone around the site perimeter and internal buffer areas between site features.</p> <p>No new MRF or CCF facilities are recommended for development by the County at present. If at some point in the future a new County MRF and/or CCF is required, the composite facility site could be used, or a decision could be made to undertake a siting process for an alternative location(s). For further discussion of the composite facility siting assumptions and process, please see the response to Item 10.</p> <p>If faced with unlimited time and budget, it would be theoretically possible to evaluate all lands within a study area at the highest level of detail. Such an approach, however, is not practical or reasonable. Site selection processes employ screening criteria to efficiently eliminate less suitable lands from further consideration. Comprehensive, "full-criteria" evaluations of screened areas are not appropriate. Effective site search processes are designed to quickly and efficiently focus on those lands considered to be more suitable for the type of facility being considered. Such an approach was employed for the Lambton WMMP.</p> <p>High intensity agricultural use refers to current predominant use of land for crops such as corn and soybeans.</p> <p>The seven potential sites in question were "screened out" at an appropriate stage in the process. The elimination of the 7 sites was consistent with the priority accorded to high quality agricultural lands early in the process. The predominance on these sites of a combination of Class 3 lands, high intensity agricultural use and agriculturally-compatible designation caused these lands to be considered comparable to non-industrial Class 2 lands, an original screening criterion. This was coupled with the fact that the seven sites had no obvious advantages over other potential sites.</p> <p>The decision to eliminate the 7 candidate sites was reviewed and agreed upon in the public siting workshops, and by the other study participants.</p> <p>Site D is designated for industrial use. Therefore, agricultural capability and use were overridden, and the site was included in the long list of 11 potential sites.</p>	<p>No action required.</p>

Item	Subject	Response	Action Taken
		<p>As explained on pages 6-8 and Table 6.5, there were 21 candidate areas with a minimum size of 75 ha. After the application of the siting area constraint criteria, 29 siting areas were identified within the 21 candidate areas. Nine of the 29 siting areas were found to be 75 ha or larger and were retained. Based on the 9 siting areas, a long list of 18 candidate sites was developed (the 16 original sites, of which 7 were later eliminated plus the 2 sites (J and K) added later in the process).</p> <p>The tenth site is Site J as explained on page 6-9.</p> <p>The purpose of Workshop No. 2 was to develop a list of constraint criteria to identify candidate areas. At Workshop No. 3 a second set of constraint criteria to be applied within the candidate areas was developed. These were applied to identify siting areas within the candidate areas. Criteria to position sites within the siting areas were also developed at Workshop No. 3.</p>	
20. Section 6 Subsection 6.6 to 6.10 Pages 6-8 to 6-130	IDENTIFICATION AND EVALUATION OF SITES	Recommendation noted.	No action required.
21. Section 6 Subsection 6.9 Page 6-131	FIRST NATION LAND CLAIMS	Comment acknowledged.	No action required.
22. Section 7 Pages 7-1 to 7-16	ECONOMIC FEASIBILITY OF TRANSFER STATIONS	<p>The transfer station feasibility study was intended to be a generic study to investigate the economic feasibility of implementing transfer stations. The study was conducted at a generic level because it was not known specifically which area(s) would be served by transfer stations. The area served affects the waste quantities handled by the facility which in turn influences the type of station design which is most effective. Three generic concepts for stations were considered. The first two concepts were dismissed because technical review of the designs suggested that they may not be suitable for some areas. The third design concept, which was used in the study, was considered potentially suitable for all areas of the County.</p> <p>It is possible that there are transfer station designs that are better for a specific area than the generic design that was used in the feasibility study. Should the County decide to implement transfer stations to serve the County, then it is assumed that more detailed investigations would be carried out to determine the most efficient design compatible with the waste quantities to be handled.</p>	No action required.

Item	Subject	Response	Action Taken
		<p>The use of a generic transfer station design in the feasibility study likely did not affect the overall result of the study. As part of the feasibility study, a number of sensitivity tests were completed. One of the tests involved reducing the transfer station operating costs by 50%. However, this did not influence the overall conclusion that transfer stations will result in a cost rather than a benefit to the County.</p> <p>The transfer station feasibility study does not contain firm recommendations on whether or not transfer stations should be studied further because this is a decision that needs to be made by the County. Even though it was proven that transfer stations would result in a cost rather than a benefit to the County, other considerations, such as compensating local municipalities for additional haul costs, could also influence the feasibility of implementing transfer stations from the County's perspective.</p> <p>If the County should decide to implement transfer stations, then the County should determine what areas of the County will be served by the stations and conduct the necessary studies to get the facility approved and built. Consideration of the types of studies that will be needed was considered to be beyond the scope of the feasibility study.</p>	
23. Section 7 Subsection 7.4.1 Page 7-10	COMPENSATION TO MUNICIPALITIES	<p>It was considered in the transfer station feasibility study that consolidating the County's future waste disposal activities at the composite waste management facility will impose significant changes to the existing system with respect to the distances that most local municipalities will have to haul their wastes. The transfer station feasibility study determined that transfer stations may help to lessen the impacts related to these changes, but likely at a higher cost to the County. It was recognized in the study that the County may still wish to implement transfer stations as a way to reduce impacts to local municipalities and waste collection contractors. Five options for future action available to the County were presented at the end of the study. These options included do nothing, use existing private landfill sites, modify the existing tax levy system, implement a direct cost system, and implement a direct cost system with transfer stations. Adoption of any one of these options or of any other future policy regarding transfer stations is a decision that has yet to be made by the County. The economic feasibility for transfer stations could be re-evaluated as part of the periodic updates of the Master Plan.</p>	No action required.

Item	Subject	Response	Action Taken
24. Section 8 Pages 8-1 to 8-15	ADMINISTRATION AND IMPLEMENTATION OF MASTER PLAN	<p>Section 8.4 in Volume 1 of the Master Plan presents the recommended jurisdictional framework for the waste management system. It was determined that the County does not necessarily need to assume responsibility for waste collection. This is because control of waste collection is not required by the County to achieve participation in other aspects of the recommended waste management system and diversion strategy. Since waste collection is contracted out to local contractors in the County, there does not appear to be a need to centralize this component of the system. In other areas within Ontario where the County governments have assumed waste management powers, the responsibility for collection has remained with the lower tier municipalities.</p> <p>In Chapter 8 of Volume 1 of the Master Plan a discussion on the administration and implementation of the Master Plan is presented. This discussion identifies a number of fundamental decisions that must be made before any of the components and diversion initiatives of the waste management system can be implemented. These decisions address basic questions such as who does what, how it is to be administered, how it will be financed, and when it should be done. Until these decisions are made by the County, it is not possible to develop more detailed implementation and financial plans for the components of the waste management system and diversion strategy.</p>	No action required.

EXECUTIVE SUMMARY

Gore & Storrie Limited has been retained by the Township of Moore and the Township of Sombra to provide a technical review of the report entitled, "Lambton County Waste Management Master Plan -Draft" (Volumes 1-4) prepared by M.M. Dillon Limited in March 1994.

In general, the draft Master Plan Report is well organized and well written. However, there are several key issues which require further clarification, as summarized below:

Private Sector Solutions to Solid Waste Management

- Before the County makes any final decision to develop its proposed County landfill site, public tenders should be called to ascertain whether one or more waste management companies in the private sector could provide the County with a better, more cost-effective solution in meeting its short-term and long-term residual waste disposal requirements. Other opportunities to privatize the County's solid waste management system should be studied further, prior to implementing the proposed long-term waste diversion strategy.

Public Consultation Activities

- Based on fairly recent feedback from the affected property and their neighbours, the County should now step up its activities in the area of public consultation in an effort to keep the local residents better informed on the County's on-going and future work activities. (See Schedule B for public comments)
- The County should give "top priority" to the matter of compensation for the affected stakeholders and their neighbours, before the draft WMMP is formally ratified and approved by County council.

Costs of the Composite Waste Management Facility

- The consultants should be requested to firm up their preliminary cost estimates for the proposed composite waste management facility, since the preliminary cost estimates which are quoted in the draft WMMP are somewhat vague and inconclusive with respect to what it may ultimately cost the County to own and operate the proposed MRF, CCF and landfill.

Socio-economic - Property Values

- The economic impact of landfill development on local property values is one issue that needs to be studied further by the County in negotiating a fair and equitable compensation agreement with the affected property owners and their neighbours, including local businesses and industries.

- If the County has not already done so, it should retain the services of an experienced real estate/land appraiser to assist in this area.

IC&I Wastes

- Before the draft WMMP is finalized, the County should provide additional details on how it intends to integrate its future 3Rs waste diversion/solid waste disposal programs with those of the private (IC&I) sector. Depending on which waste diversion forecast figures are used, the Draft WMMP raises some serious doubts as to whether the County will actually be able to meet or exceed the Province's 50 % waste diversion target by the year 2000, both in the residential (municipal) and IC&I sectors.

Household Composting

- In addition to urban/rural household composting, and in an effort to minimize its dependency on landfill disposal, the County should consider setting up its own wet/dry pilot testing program - perhaps in Sarnia and some of the other larger population centres where most of the compostable waste material is generated. As pointed out in the draft WMMP, several other Ontario municipalities are currently studying the merits of this approach through the use of selective pilot testing programs.

Composite Waste Management Facility

- The consultants are asked to review the major steps leading up to the decision to recommend a composite site for the proposed MRF, CCF and landfill, as opposed to evaluating separate sites for each facility. By considering separate sites for each facility, it may have been possible to minimize the impact of landfill development on productive agricultural land, save transportation/energy costs and reduce the impact of (direct haul) solid waste transfer on the future cost of 3Rs programs and municipal waste collection.

Implementation of the Short-Term Strategy

- The Short-Term Waste Diversion Strategy Report recommends that the County establish a new committee consisting of representatives from the County, the municipalities and the recycling contractors, in co-operation with the WMMP PAC. This is a very good suggestion; except such a Committee should also include representatives from the IC&I sector, as well as local academics and educators.

Strategy 4 (3 Stream Wet/Dry Collection) and Strategy 5 (Wet/Dry Collection Program with Direct Cost)

- Before the draft WMMP is finalized, the County should enter into detailed negotiations with each of the local blue box recycling contractors to determine their willingness and perceived costs to expand their present blue box recycling

operations to include wet/dry source separation programs (especially in some of the larger communities, such as Sarnia) as part of the County's long-term waste diversion strategy.

Costs to Implement Waste Diversion Strategies

- The draft WMMP should include additional details on what it may actually cost to implement the County's proposed short-term and long-term waste disposal strategies. It would be helpful, if these costs were broken down on a per-capita, per-household and per-municipality basis.

Landfill Site Selection Process

- The consultants are asked to clarify their landfill site selection methodology, as the draft WMMP raises several important EA-related questions on the screening methods used to identify candidate areas and candidate sites on Class 3-7 agricultural lands and industrially-designated land.

Traceability of the Results of the Landfill Site Search

- Based on the information presented in the draft WMMP - but pending further clarification on all the issues raised by this technical review - it is our opinion that the consultants have rendered fair and reasonable judgement in evaluating Site D, K, I and J. Subject to the comments received from the government review agencies and other interested parties, it is our opinion that the County should make plans to carry Site I forward as the preferred site for EPA-level site testing.

Economic Feasibility of the Transfer Stations

- At the most appropriate time, the County should reconsider and re-evaluate the technical, economic and environmental feasibility of solid waste transfer in Lambton County. This is especially true for some of the northern-tier municipalities, where in spite of the low waste tonnages forecasted, round-trip haul distances for conventional rear-loader packer trucks are considered excessive. For some of the other out-lying rural municipalities, solid waste transfer stations with slightly modified designs - to those describe in the draft WMMP - should be considered to reduce the future costs of municipal waste collection.

Administration and Implementation of the Master Plan

- The final WMMP should include a more detailed Implementation Plan and more concise Financial Plan for each waste management system component which is recommended in the County's short-term and long-term waste diversion strategy.

TECHNICAL REVIEW COMMENTS

COMMENTS ON VOLUME 1 - MASTER PLAN REPORT (With Applicable Cross-References to Volumes 2, 3 and 4)

Note: The following abbreviations are used throughout this technical review submission:

- EA** - Environmental Assessment
- CCF** - Central (leaf and yard waste) composting facility
- EAA** - Environmental Assessment Act (Ontario)
- EPA** - Environmental Protection Act (Ontario)
- MRF** - Material recovery facility (Blue box recyclables)
- MOEE** - Ontario Ministry of the Environment and Energy
- WMMP** - Waste Management Master Plan

Item 1 - Section 1, Sub-Section 1.1, Page 1-2

Subject: *Private Sector Solutions to Solid Waste Management*

Comment:

As a way of reducing costs and possibly improving basic levels of service, more and more municipalities are coming to rely on the private sector for waste collection and waste disposal services. In addition, several private waste disposal operators have either reduced their tipping fees, or are in the process of dropping them in an effort to stay more competitive in the solid waste disposal field.

The County should not only promote and support private sector initiatives in the solid waste management field, but the County should also seek to find the most environmentally sound and cost-effective solutions for solid waste disposal - in which case, much greater interaction with the private sector may now be called for.

As a result, the County should closely monitor tipping fee structures and other related developments in the private waste management industry over the next several months.

Recommendation #1:

Before the County makes any final decision to develop its new proposed County landfill site, public tenders should be called to ascertain whether one or more waste management companies in the private sector could provide the County with a better, more cost-effective solution in meeting its short-term and long-term residual waste disposal requirements.

Item 2 - Section 1, Sub-Section 1.3, Page 1-6 (Appendix 2-E, Vol.2)

Subject: *Rationalization of Need - Historical Perspective*

The consultants indicate on page 1-6, Vol. 1 that "in late 1988, it was determined that the City of Sarnia Landfill Site was reaching its capacity much sooner than expected. (Current estimates by the County indicate that it will be full by mid-1995)."

Table 3.1 (Page 3-8), Vol. 1 also lists the name of each existing waste disposal site, together with the area municipalities they now serve.

Comment:

One of the underlying principles of the EA planning review process is that the proponent - in this case Lambton County - must be able to demonstrate need in establishing additional landfill capacity at a new County waste disposal site. As a result, the County should up-date its 1989 database which appears in Appendix 2E, Vol. 2, and explain why the existing waste disposal sites, including the private sites are inadequate in meeting future County needs. In addition, the County should clarify why it needs to establish a new County landfill site, as opposed to expanding one or more existing sites, such as the Sarnia landfill.

Appendix 2-E, Vol. 2 suggests that at the current (circa 1989) rates of waste disposal, the County will be facing a 2,840,966 tonne shortfall in landfill capacity between 1989 and 2016 (Reference: Volume 2, Appendix 2-E, Table E-12, page 28). This total projected shortfall in landfill capacity is apparently based on the assumption that "the County will not use any existing private landfills after January 1, 1991". [Reference: Footnote 2, Table E-12, Page 28, Appendix 2E, Vol. 2]

However, in reviewing Section 3.2.6, Page 3-15, Vol. 1, it is fairly obvious that the County is still using the Philip's Petrolia landfill site and Laidlaw's Warwick landfill site, both of which are privately-owned. According to draft WMMP, as of January 1, 1989 the Petrolia and Warwick landfill sites had a total reserve capacity of 3,095,000 tonnes. [Reference: Appendix 2E, Volume 2, Table E-9, Page 20] As a result, the County is asked to clarify the following:

Question # 1:

Since the draft WMMP is expected to be a stand-alone document, Question # 1 is presented in five-parts:

- in terms of total land area, how large are the existing public and private landfill sites both in terms of their total (disturbed) landfilled area and total adjacent unused landholdings?
- what is the total approved capacity of each existing landfill as stipulated by the site's Certificate of Approval?

Townships), may be forced to hire more staff, as well as replace their existing truck fleets with larger, more-expensive, higher energy-consuming waste collection vehicles. This may result in higher costs - than those projected in the draft WMMP - for waste collection at the municipal level. Another disadvantage with the direct haul approach of this approach, is that it may force several local waste haulers out of business. If this happens, at least some of the area municipalities may have difficulty in securing reasonably-priced contracts in servicing their 3Rs, waste collection and direct-haul waste transportation needs.

Under the worst-case, scenario, the County may find that any subsequent savings it realizes from the implementation of its proposed "Direct Cost" waste management/disposal system, could be more than off-set at the local municipal level through increases in the cost of waste collection resulting from "direct haul" waste transfer.]

Question # 17:

In formulating its Draft WMMP, did the County evaluate other alternatives to waste collection, such as a County-based waste collection system with private waste collection companies working under contract to the County? If the County ultimately decides to assume responsibility for solid waste collection from the area municipalities, the draft WMMP should include a series of recommendations on how the County intends to proceed in protecting the long-term economic interests of the public and private sectors.

Recommendation #13:

At the most appropriate time, the County should reconsider and re-evaluate the technical and economic feasibility of solid waste transfer in Lambton County, especially in the northern-tier municipalities where in spite of the limited waste tonnage forecasts, round trip haul distances are considered excessive using conventional rear-loader packer trucks.

Item 24 - Section 8.0, Pages 8-1 to 8-25

Subject: *Administration and Implementation of Master Plan*

We have no specific comments on Section 8, although the final WMMP should include a more detailed Implementation Plan and a more concise Financial Plan for each waste management system component which is recommended in the County's short-term and long-term waste diversion strategy.

REFERENCES

McDaniels Research and Quantalytics Inc. 1987. *The social and financial costs of landfills serving Canada's urban centres*. Draft Final Report for the Department of Energy, Mines and Resources, December, 1987.

VHB Research & Consulting Limited, MacLaren Engineers Inc. 1991. *Cost accounting methods for landfill*. Submitted to Waste Reduction Advisory Committee February 28, 1991.

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

SCHEDULE 3E-10

**MATERIAL FOR WALPOLE ISLAND PRESENTATION
SEPTEMBER 14, 1994**



**LAMBTON COUNTY
WASTE MANAGEMENT MASTER PLAN**

**PRESENTATION TO
WALPOLE ISLAND FIRST NATION
SEPTEMBER 14, 1994**

PURPOSE OF PRESENTATION

- To provide information to Walpole Island First Nation about the Lambton County Waste Management Master Plan (WMMP)
- To obtain information/comments/concerns
- Copies of the Draft Master Plan are available for more detailed information

BRIEF HISTORY OF MASTER PLAN PROCESS

1986	Master Plan started
1986-1988	Early work (Stages 1 and 2)
1988-1989	On hold
August 1989	Revised Master Plan initiated to meet <i>Environmental Assessment Act</i> (EAA) requirements
1989-1991	EAA-level Master Plan in progress
1991/1992	On hold
January 1993	Master Plan progress resumed
November 1993	Draft Master Plan completed
1994	Review of Draft Master Plan by public and agencies

LAMBTON COUNTY WASTE MANAGEMENT MASTER PLAN

AIM

To define the best system for the long-term management of wastes within Lambton County for the next 20 to 40 years.

THE RECOMMENDED WASTE MANAGEMENT SYSTEM INCLUDES:

- Recycling/source separation
- Backyard composting
- Centralized composting
- Materials Recovery Facility
- Landfill

In the recommended system, wastes will be collected and handled through:

- Curbside collection
- Direct haul
- Waste transfer station(s) (to be determined).

WASTE DIVERSION

The first priority in any waste management plan is to find ways to reduce the amount of waste produced, and to maximize waste "diversion" (i.e. to maximize the amount of waste diverted away from disposal facilities, such as landfills).

In 1989, the Ontario Ministry of the Environment announced waste diversion objectives, and in March 1994, Ontario's 3Rs Regulations became law. Communities across Ontario are required to reduce waste disposal by 50% by the year 2000.

The 3Rs of Waste Diversion:

- REDUCE** - reduce the amount of waste produced;
- REUSE** - reuse something several times (or more) before throwing it away
- RECYCLE** - collect something and convert it into a similar or new product.

WASTE MANAGEMENT HIERARCHY

1ST: REDUCTION OF WASTE

2ND: REUSE OF MATERIALS

3RD: RECYCLING OF MATERIALS

LAST: DISPOSAL OF WASTES

SITE SELECTION FOR LONG-TERM WASTE MANAGEMENT FACILITY

In spite of activities to reduce waste, it has been determined that some new landfill capacity will be required. The County has conducted a site selection process to identify a site suitable for a new waste management facility.

It was assumed that the site chosen would accommodate three facilities:

- a Materials Recovery Facility;
- a central Composting Facility;
- a Landfill.

Public workshops were held throughout 1990 to conduct the site selection process.

SITE SELECTION APPROACH

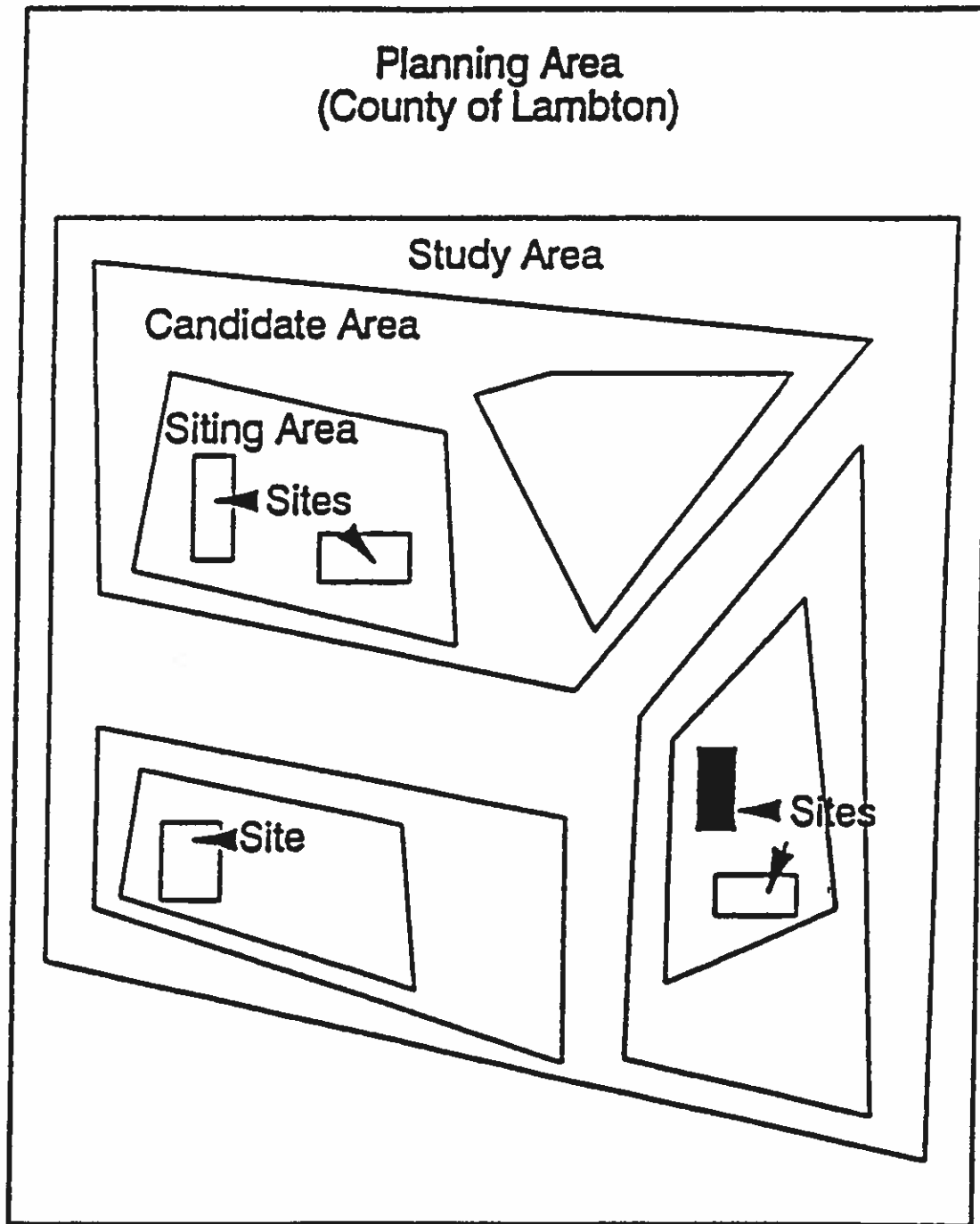
STEPS

- Identify Study Area
- Identify Candidate Areas
- Identify Siting Areas
- Identify Potential Sites
- Comparative Evaluation of Sites
- Detailed Comparison of Preferred Sites

CONSTRAINT MAPPING APPROACH

- Involves the progressive elimination of areas within the County considered less suitable for the facility - in particular, the landfill.

**SITE SELECTION
CONSTRAINT MAPPING APPROACH
CONCEPTUAL DIAGRAM**



STUDY AREA IDENTIFICATION

- All of Lambton County was assessed with respect to:
 - hydrogeologic conditions
 - population distribution.
- The final Study Area was defined based on the following:
 - clay-based lands with Class 3 to 7 agricultural capability
 - clay-based rehabilitated eroded lands and bottom lands
 - clay-based lands designated for industrial-type uses (regardless of agricultural capability).

IDENTIFICATION OF CANDIDATE AREAS

The constraint criteria used to identify the candidate areas were as follows:

NATURAL ENVIRONMENT AND RESOURCES

- Areas of Natural and Scientific Interest (ANSIs) (provincial/regional significance), with 500 m buffer.
- Class 1 to 3 wetlands (provincial/regional significance), with 500 m buffer.
- Environmentally Sensitive Areas (ESAs) identified by the University of Waterloo study team for the Lambton County Planning Department or in local municipal plans, with 500 m buffer.
- Special areas (areas with strong potential for ESA status - as identified in Background Report No. 13 to the Lambton County Official Plan).
- Areas within 500 m of major streams with significant/rare fish species.

SOCIAL / CULTURAL / LAND USE ENVIRONMENT

- Built-up areas.
- Areas within 500 m of residences and other sensitive land use features (i.e. schools).

IDENTIFICATION OF SITING AREAS

The siting areas were identified based on the following constraint criteria:

GROUND WATER

- Presence of wells (abandoned oil, gas, water and brine injection).

SURFACE WATER

- Floodplains and related hazard lands (100 and 200-year flood zones).
- Areas within 500 m of all watercourses previously not identified as outlined on 1:50,000 topographic map and 1:10,000 Ontario Base Map.

NATURAL ENVIRONMENT AND RESOURCES

- Displacement of high quality forests and management agreement areas on site.
- Presence of active oil and gas wells.

IDENTIFICATION OF SITING AREAS (Continued)

SOCIAL / CULTURAL ENVIRONMENT

- Areas within 500 m of future committed residential development.
- Presence of existing and future (committed) planned recreational features.
- Presence of known archaeological features plus a 500 m buffer.
- Presence of heritage features plus a 500 m buffer.
- Presence of existing and future approved utilities in the area.
- Presence of Indian reserves plus a 500 m buffer.
- Presence of cemeteries plus a 500 m buffer.

CRITERIA

IDENTIFICATION OF CANDIDATE AREAS

- Natural Environment and Resources
- Social/Cultural/Land Use Environment

IDENTIFICATION OF SITING AREAS

- Ground Water
- Surface Water
- Natural Environment and Resources
- Social/Cultural Environment

IDENTIFICATION OF SITES

- The siting areas that were at least 75 ha in size were carried forward for site identification.
- Potential sites (75 ha parcels) were located with emphasis on the following:
 - minimize number of landowners and property owners affected
 - maximize distance from residential areas
 - maximize site accessibility.

COMPARATIVE EVALUATION OF SITES

The sites were compared based on consideration of the following:

- potential for contamination of ground water
 - potential for contamination of surface water and downstream flooding
 - effects on natural ecosystems
 - effects on agricultural resource lands
 - social/cultural concerns
 - land use compatibility
 - transportation concerns
 - costs.
-
- Eleven sites were considered suitable and compared by specialists.
 - As a result of this exercise, four sites were considered to be preferred: D, H, I and K.

PUBLIC CONSULTATION ACTIVITIES TO DATE

- **Public Advisory Committee Meetings (ongoing since 1989)**
- **Newsletters (November 1989, March 1993)**
- **Municipal Council Presentations**
- **Public Information Centres (November 1989, March 1993, November 1993)**
- **Site Selection Public Workshops (April to November 1990)**
- **Press Conferences**
- **Property Owner Meetings**
- **WMMP Steering Committee Meetings**

FUTURE STEPS

Activity	Estimated Completion Date
Review of Draft Master Plan by Public and Agencies	January 1995
Initiate EPA-Level Studies on Preferred Site	February 1995
Completion of Final Master Plan	Mid-1995
Completion of EPA-Level Studies	Mid-1996
Completion of Final EAA-Level/EPA-Level Documents	Late 1996
Hearing	Late 1997 to Mid-1998
Site Development for New Long-Term Waste Management Facility	Late 1998 to Mid-1999

WALPOLE ISLAND FIRST NATION

How might the Lambton County WMMP affect/be of interest to Walpole Island First Nation?

- Re: Walpole Island Waste Management Strategy, waste management needs
- Re: concerns about protection of the environment
- Re: claims related to aboriginal title, aboriginal rights and treaty rights

**Lambton County Waste Management Master Plan
Volume 3 - Public and Agency Consultation**

SCHEDULE 3E-11

**MOORE-SOMBRA TOWNSHIPS - PUBLIC MEETING
SEPTEMBER 30, 1994**

PRESENTATION SUBMISSIONS

**Arthur Eyre
1519 Courtright Line
R.R. #1
Brigden, Ontario
NON IBO**

- Property Location: L20 C5

Attn: Gore & Storrie Limited

The following is a list of concerns which I feel should be addressed when your firm is making it's recommendations.

- (1) **Noise Pollution**
 - Bulldozer's, earth movers, packers, etc.
 - Trucks unloading garbage
- (2) **Air Odor Pollution**
 - Dust and debris flying in the air
 - increase in unpleasant odors from rotting waste
- (3) **Water Pollution**
 - Run-off after heavy rains
 - Increase in unpleasant odors when rain water is added to rotting garbage
- (4) **Increase Traffic**
 - Trucks bringing refuse to the landfill site
 - Safety of children - a prime concern
- (5) **Decrease in property value**
- (6) - Loss of prime agriculture land and loss of living breathing plants
- (7) - Loss of pleasant visual farmland, replaced by a large mound of garbage
- (8) - Both the Ontario Ministry of Agriculture and Tecumseh Gas Storage Ltd. have real concerns with both Sites "D" and "K".

I would like to thank you for allowing me this opportunity to express my concerns and hope my views are shared by you.


Arthur Eyre

London Life Insurance Company, Head Office 255 Dufferin Avenue
London, Ontario Canada N6A 4K1 (519)432-5281
Underwriting & Policy Change Department Terminal 131/133
FAX (519)432-5745

JUST THE FAX!

SEND TO:

NAME: Mr Jim Katsuba

COMPANY: Thornhill Ont.

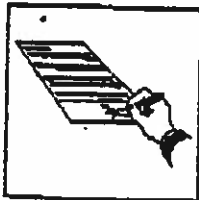
FAX #: (519) 867-3275

SENT BY:

NAME: Elsie & Reg Murray TERMINAL: 133

EXTENSION: 5366

ORIGINAL OF THESE PAGES WILL , WILL NOT BE MAILED



MESSAGE: Mr. Katsuba - please accept our
attach message as our stand
regarding the proposed land fill site
This can be presented to the land fill site
Committee during meeting of Fri. 10 A.M.
Sep 30/94.
Thrupper
Elsie

TRANSMITTING 2 PAGE(S) (INCLUDING COVER PAGE)



NOTE: IF THERE ARE ANY PROBLEMS IN RECEIVING THIS
FAX MESSAGE CALL:
INDIVIDUAL UNDERWRITING AND POLICY CHANGE
(519)432-5281/432-2000 EXTENSION 4868

To Mr. Jim Katsuba of Mooretown.

September 27, 1994

To The Landfill Site Committee

My wife and I purchased our property , the East 1/2 Lot 24 Concession 5 in Moore Township, No contracts were signed nor any actions taken towards the development of this land until the final decision was made with regard to the landfill site. Since the date of the final site selection we have incurred a significant amount of expenses (in time and monies) securing contracts for a house and services to the property with building to commence in the spring of 1995.

If the committee should choose to reverse its original decision and proceed with the proposed site at the Mooretown Landfill site, we will have no alternative but to proceed with action with the assistance of our lawyer.

Thank you

Reg/Elsie Metcalfe

September 27, 1994

James J. Kutyba, P. Eng.
Administrator, Waste Management

I am here today as a concerned taxpayer and resident of Moore Township.

It was with great disappointment and concern that I learned that the present dump site in Moore Township was still under consideration by the Lambton County Waste Management Committee as the preferred site for the long term management of waste within the County.

It is my understanding that this Waste Management Master Plan has been in the process of development since 1986 at a cost of over 1.3 million dollars. It does not seem reasonable to me that after spending this amount of time and money that the committee would take it upon itself to disregard the recommendations presented to them.

I was told sometime ago by Mayor Marsh that the reason all 4 sites were in Moore Township is because we have so much industrial land. At one Waste Management Committee meeting I attended, the comment was made that industrial land is cost prohibitive. I understand that the total cost of this project could be over \$70 million dollars. Even if land is expropriated, the cost of land acquisition has to be a very small part of the total project and I can't see that site K would be acceptable to save a few thousand dollars.

Everything my husband and I have worked for the past 30 years is within one mile of both sites D & K. We have raised our family here and plan to retire and live here for many years to come. I do not look forward to spending the later part of my life watching a mountain of garbage grow within a few hundred yards of my house and having to deal with the noise, odor, stray animals, scavenger birds and increased traffic. A good example of rodent problems and rotting garbage is the experience reported in the Sarnia Observer of one homeowner in Point Edward last week. We have been contending for years now with garbage along the roads and in our farm fields surrounding the current dump.

If we were able or willing to sell our property, it would most certainly be greatly devalued. I have asked several times what kind of compensation we might be able to get but no one seems to have any clear idea how much, within what distance or if there might be any at all. Ms. Fletcher from Dillion has made the comment on a couple of occasions that she can prove land values actually increase around landfill sites. That may be true in Toronto or some other urban area, but there is no way you can convince me that the value of our land in Moore Township will increase within sight of a dump of this magnitude.

Another concern I have is that the parcel of land to the East of site K that the Township owns and the parcel you are considering acquiring from Mr. Wolff both have heavy bush on them. I understand the County has a bylaw preventing the destruction of bush.

After attending several meetings, including two Waste Management Committee meetings in Wyoming, it seems obvious to me that the committee is very concerned about the Indian land claim on sites H & I. Sometime ago when the question of Indian land claims came up, Ms. Fletcher from Dillon's office informed us that this could not be used as one of the site selection criteria as only reservations could be excluded as land claims were for financial compensation from the federal government. At one of the meetings I attended the lawyer that was there stated that he had been in contact with both the Provincial and Federal governments and both had said the claim was for compensation only and not actual return of the land. Mr. Jacobs from Walpole Island also spoke at the same meeting and said the land claim is for financial consideration only and it is between the Federal government and the Indians with third party protection. It was also brought to our attention that there are land claims on all 4 sites.

In the identification of long list of Sites, two of the criteria were minimizing the number of landowners and property owners affected and maximizing the distance from residential areas. The current Moore site is in the middle of a residential farming community. The preferred site as proposed by Dillon is in an industrial environment already established. I would hope that when you are considering objections you would actually take time and consider where the people that are objecting actually have to live 365 days/year in relation to these sites.

At one Waste Management meeting the comment was made that you would not want people to drive down the Parkway and see it. It is my undersanding the preferred site as proposed by Dillon is actually past the first sideroad back from the Parkway. Heaven forbid someone should drive by and catch a glimpse of it, especially when they have driven by all kinds of industry much closer to the Parkway than the dump site but it is not a concern that the people that live near sites D & K would have to look at it everyday for the rest of their lives. At the same meeting most of the Committee thought it was quite amusing when someone commented that we would not have to worry about seagulls as they had driven by Sarnia landfill earlier that day and couldn't believe it - they thought every seagull in the country must have been there.

I am getting the impression that most of Moore Township councillors feel that if the site is to be in Moore and we already have a dump here then we should just keep it all in one spot. The current site is not even remotely in the same category as what is proposed. When the Township started the current landfill, we were assured it was for Moore Township only and that when they were finished with it we would not know there had ever been a dump there. What you are proposing will have a major impact on the surrounding residents and landowners for many years to come.

Brenda Robbins
Lot 19 Con 5 - Moore Township

Review of Dillon Report
w M.M.P.

Site Selection process is flawed
Sombra Twp although impacted
by sites H & I have never been
consulted.

Dillon report ~~2-17~~ 2-17

Ms. Irene Postliff
St Clair Region Conservation Auth.

In Brief stated an objection
to sites H & I as they are
adjacent to Johnston Creek,
which outlets to St Clair River
2-30

County will develop a Compensation
policy for devaluation & property
damage. Have they

Compensation to Sombra & Moore
Twp for loss of potential revenue
on Industrial lands taken.

Perhaps agricultural land should also
have been included in the study area

- Sites H & I are currently planted in Soybeans, and are effectively agricultural.
 - with an Industrial Zoning
 - ~~Why was the buffer zone reduced on site 19. (H & I).~~
- 6-19
- Why was the buffer zone to a municipal drain ~~red~~ reduced on Site 19 to 200 m from 500 m.

Steve Moran
Sombra Twp. NOP-240
892-3485

Home

892-3310

Sept. 29, 94

To Sara & Storie:

I guess the main concern I have about the LCNMMP is the selection process. Initially, it was told to us how the PAC group went through a process of eliminating class 1 & 2 agriculture land, land along water courses etc.. Then they listed damaged or Class 3 & 4 agriculture land as possible sites and then the final decision was industrial land. In the end it was a waste because the only real designation they were looking for was industrial zoned land.

Moore Township in a meeting with Council, the County and the County's Consultant tried to point this out and show the ridiculousness of the process by showing that they didn't even consider land zoned "Waste Disposal Land" in Moore Township. The consultant's only criteria was industrial land.

Only after this meeting did they reluctantly consider this site as they feared it might derail their Plan. (Not that Moore Township prefers this site). Also how many other sites in the County, such as this did they overlook in their quest for an "Industrial" site.

At this same meeting and at just about every other meeting a gravel pit in Plymton has been mentioned and people asked why it was not considered, as it is damaged land, and more central to the population. In my personal opinion the gravel pit is an "Industrial Use" piece of property.

As well, at this meeting I asked Nancy (?) if she would send me the reasons that this property was missed. She said she would, however, I never received the reasons.

At another meeting with Moore Township residents at the Moore Civic Centre last year I asked again why this property was not one of the initial site selection. Nancy said she wasn't sure but she classified it as Class 1 or Class 2 agricultural land. It seems to me that an old gravel pit is Class 1 or 2 agricultural land.

As a reviewer of the LCNMMP for Moore and Sombra Township can you please have this question answered as I am sure that they will see the Moore Plan right into the

Environmental Assessment.

Also would you see if any other damaged land or Waste Disposal Areas have been overlooked in the Study?

It was also mentioned that You have less than a month to review this. How can you do a believable first class review of the LCWMP that took years to produce in this time frame?

Sincerely,,

Chi Muller

Mr. C. Muller,
R.R. # 1 Bridgen, Ontario.
NON 180

August 4, 1994

Mayor G. Minielly
c/o Jim Kutyba, P. Eng.
Administrator, Waste Management
Lambton County
Hwy 21, Box 3000
Wyoming, Ontario

Dear Sir:

It was with great disappointment that we read your comments in the Sarnia Observer on Monday, August 1st that some officials are questioning the site selection for the Lambton County Waste facility and that an option is expanding the current Moore site.

As concerned citizens in the area, we are writing to let you know that we are still vehemently opposed to expanding the current site in Moore. We have had several meetings, discussions and letters written making our concerns known regarding the environment and social impact such as noise, air, odor, water and visual pollution, increased traffic, debris and stray animals.

In Step 4 - Identification of Long List of Sites two of the criteria were minimizing the number of landowners and property owners affected and maximizing the distance from residential areas. The current Moore site is in the middle of a residential farming community. The preferred site is in an industrial environment already established.

After spending the amount of time and millions of dollars since 1986 to develop this Lambton County Waste Management Master Plan it does not seem reasonable that the committee would go against the recommendation for the preferred site.

c.c. Fred Thomas, Bosanquet
Tom Lawson, Grand Bend
Mary Jane Marsh, Moore
Terry Burrell, Sarnia
Joseph Dedecker, Port Lambton
Mac Parker, Warwick

1	Brona Robbins	L19 C5 Moore Twp.
2	Darry Robbins	L19 C5 Moore Twp.
3	Eugene Robbins	L19 C6 Moore Twp.
4	Chad Smith	6175. CLARK PARKWAY.
5	Walter Robbins	L19 C4
6	Chad Smith	L19 C4

- 7 Diane Robbins Lt 18 Conc. 4 Moore Twp
- 8 Jeff Robbins Lt 18 Conc 4 Moore Twp.
- 9 Carol Eyras Lt 15 Conc 4 " "
- 10 Dan DeSurre Lt 16 Conc. 10 Moore Twp.
- 11 Karen Eyras ^{L 20 C 5} ~~L 15 C 4~~ Moore Twp.
- 12 ~~at w~~ Eyras ^{L 15 C 4} ~~L 20 C 5~~ Moore Twp
- 13 Eimer Judas Lot 18 Con 5 Moore
- 14 Harold Judas Lot 18 Con 5 Moore
- 15 Yvonne Gray, Lot 17, Conc 4, Moore Twp.
- 16 Don Gray " " " "
- 17 Ronald Luker Lot 15 Conc. 6 Moore "
- 18 Marlene Luker " " "
- 19 Marilyn Robbins L 14 C 5 Moore Twp
- 20 Bevel ~~M. P.~~ L 15 C 6 Moore
- 21 Helen McKee " "
- 22 Bob Anderson lot 17 Con 6
- 23 Jitske Anderson lot 17 Conc 6
- 24 R. Chad Anderson lot 16 Conc 6
- 25 Debbie Anderson lot 16 Conc 6
- 26 Bill Eyras Lot 18 Conc 7
- 27 Ethel Will Lot 18 Conc 6
- 28 Roy & Walk Lot 18 Conc 6

Mayor G. Minielly
c/o Jim Kutuba, P.Eng.

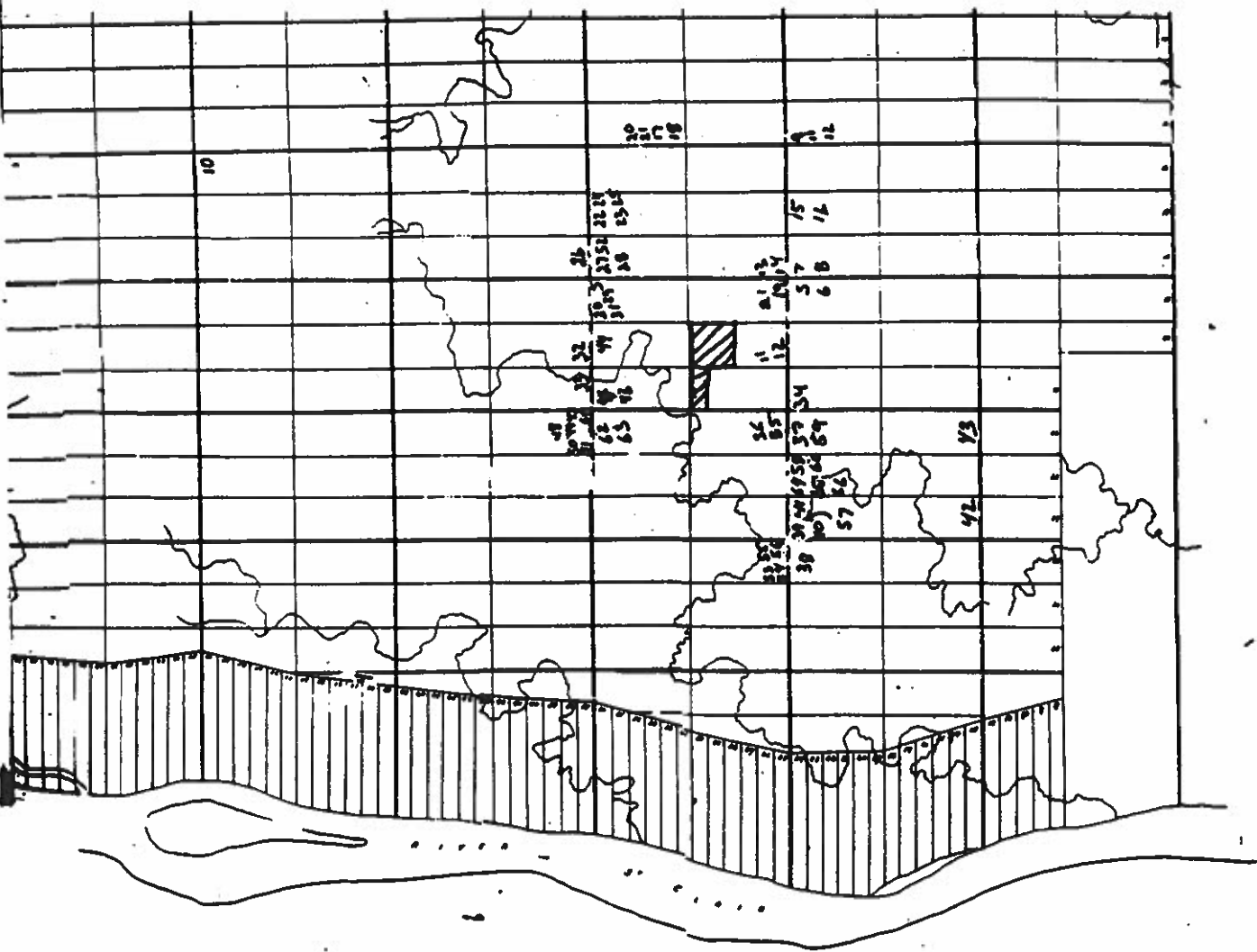
- 3 -

August 4, 1994

29	George Robbins	L 19 C 6
30	Lon Stewart	L 19 C 6
31	George James	L 19 C 6.
32	Carol Baker	L 20 C 7
33	Betty Watson	L 21 C 7.
34	Edwin Schmidt	L 21 C 4
35	Harold Robbins	L 22 C 5
36	April Robbins	L 22 C 5
37	Bob McDonald	L 22 C 4
38	Leon Seward	L 25 C 4
39	Keith McLaughlin	L 24 C 4
40	Shane McLaughlin	L 24 C 4
41	Larry Loutley	L 24 C 4
42	Graydon Munday	L 24 C 3
43	Brenda Maw	L 22 C 3
44	Michael James	L 20 C 6
45	Rebecca Anderson	L 21 C 6.
46	Mal Anderson	L 21 C 6.
47	Wing Trapp	L 22 C 7.
48	John Keady	L 22 C 7
49	Michelle Keady	L 22 C 7.

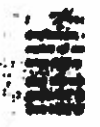
- 52. Rick Rank: Lot 22 Convs. 7
- 53. Doris Rank PT: Lot 22 Con 7
- 54. Archib Rank PT: Lot 18 Con 6
- 55. Linda K. Nantais Lot 25, Con 5.
- 56. Michael P. Nantais Lot 25. Con 5.
- 57. Genevieve O'Laughlin Lot 25 Con 5.
- 58. Alvin McLaughlin
- 59. Cindy Seward + Pat Seward Lot 24 Con 4
- 60. Fay St Pierre L 23 Con 4
- 61. Pat MacDonell L 22 c 4
- 62. Dianne St Pierre L 23 C 4
- 63. Joyce Trapp L 22, C 7
- 64. Doris Anderson Lot 22, Con 6.
- 65. Don. Anderson Lot 22 Con 6
- 66. Tom Wheeler Lot 23 Con 4.
- 67. Sandra Wheeler Lot 23 Con 4
- 68. Bill Wheeler Lot 23 Con 4

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MOORE

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September 27, 1994.

To:

Lambton County Waste Management,

Jane Marsh, Mayor,
Township of Moore;

Arnold Pole,
Chris Muller,
Susan Shaw,
Stanley Campbell,
Jack George, and
John Irwin, Councilors,
Township of Moore;

R. H. Whitman,
Clerk, Township of Moore.

We wish to express our great concern regarding the proposed expansion of the current waste facility site in Moore Township.

In the summer of 1993 we were contacted by a representative of M. M. Dillon. At this time we not only filled out a questionnaire but spent approximately one hour on the telephone stating our concerns regarding the expansion of the existing facility. We understand that Moore Township has now decided that the results of the Dillon report will be ignored and another company has been hired to conduct a "peer review". We have been advised that since 1986 there has been 1.3 million dollars spent to determine the best location of the dump site. If Gore & Storrie Limited make suggestions, opinions and recommendations that might not be to Moore Township's liking will they be ignored also and at what expense to the taxpayer? We would truly hope that the taxpayers of Moore Township will conduct their own "peer review" at

election time.

ONCE AGAIN WE WISH TO STATE OUR CONCERNS AND WOULD HOPE THAT THE MAYOR AND COUNCILORS OF MOORE TOWNSHIP LISTEN TO EXACTLY WHAT THE LANDOWNERS AS TAXPAYERS HAVE TO SAY.

Our farms have been in our family for over 100 years and were deeded to this family by Crown Deed. As concerned citizens and land owners we feel that our property which has been farmed for all of those at least 100 years, is located in very close proximity to the present site and will be affected adversely by any expansion.

We consider this property so valuable that in the Spring of this year we completed building our "dream home" on a 1 acre parcel of land which fronts onto the 6th Line of Moore. This is where we plan to retire and have our children continue our farming operation. Our life savings has been invested into our home along with our planned savings for the next several years. You can imagine how unimpressed we are with the fact that we now can look forward to the view from our beautiful new home of the eyesore of a "big dump".

We are also concerned that the location of this waste facility site will adversely affect our property value. If this does happen, can we expect to be compensated for our losses by the Township of Moore since the final decision in this matter is their's?

The roads in this area were not constructed to support the kind of traffic that an expanded waste site would bring. These trucks should be kept on the high traffic roads properly designated for vehicles of this weight. Our roads cannot stand the abuse and I am sure none of the residents of this area will be too impressed with increased taxes to pay for their improvements.

Traffic on our roads differ in many ways. We have passenger vehicles, school buses travelling to Mooretown and Corunna and in the Spring and Fall of the year many tractors use our roads to go to other farms and to take crops to the elevators in Brigden. Often these tractors pull trailers, hopper boxes full of the crops grown in this area or machinery and equipment. Remember, this is a farming community. Our farmers should not have to fight for their place on our roads with large tractor trailer trucks full of garbage.

Not only is this a farming community - it is a lovely residential area. With a residential area comes families - children and adults both who wish to ride their bicycles on the roads. The summer of 1993 showed an increase in traffic because of an expansion at the nearby Hydro plant in Courtright, and with this came an increase in the speed of the vehicles using the road. We kept our family off of the road during peak traffic hours because we felt they were unsafe. We feel we will be very restricted if these large garbage trucks start using our roads. I'm not sure

I'll feel safe in a car let alone walking or using a bicycle.

In the past few years our area has become infested with a sea gull population that feed in the dump site. If pickings are not good on a particular day, the flock moves from field to field eating seeds just recently planted or to cow pastures where the feeds are sometimes more to their liking. Not a pretty thought. We need to get rid of these parasitical birds, not add to their daily feedings by bringing more garbage into the area.

Take this dump site to where it belongs - not in the middle of a farming/residential community. This is one of the prettiest farm areas in Moore Township. We do not want this eye sore. We do not want the increased traffic. We do not want the noise. We do not want the smell. We do not want any more rats, mice, raccoons or birds. We do not want to pick up garbage off the side of the road - we do this once a week now and we really don't want it as a daily chore. We do not want increased taxes to pay for road repairs.

PLEASE - Listen to what the people most directly affected by this dump site are saying - we do not want it!

Bill and Betty Watson,
990 Moore Line,
R.R. #1,
Mooretown, Ontario.
NON 1M0

Submission - Moore Council Chambers -- September 30, 1994
- by Joyce Trapp on behalf of Wm. & Joyce Trapp
- Lot 22, Conc. 7, Moore Township

I am speaking on behalf of my husband and myself, each separate land owners, living within one mile of Sites D and K.

I find this present exercise by Moore Township Council totally beyond my comprehension.

A site study costing in excess of one million dollars has been undertaken by a qualified, reputable firm, contracted by Lambton County. Their recommendations have been published.

Why is Moore Township inflicting so much additional cost on their ratepayers - to challenge, question, and disprove the previous findings?

I am sure that you will hear many of the same concerns in each individual's presentation - such as traffic, noise, the disruption of community life, odours and litter, scavengers, rodents. Because these are such strong concerns maybe you can look also to finding means to alleviate these possible problems - if you bring this problem upon us.

We - and several other households have homes situated very close to Sideroad 21, where the entrance to Site K is located. Many wayward loads, that would not dare to travel highway thoroughfares, use this road already. A bigger operation will bring us increased traffic, noise and litter - already quite an annoyance especially inconsiderate dumping when the facility is closed - as now happens.

Industry should not object to a disposal near their facilities - that is the reason that we in Moore Township have this special honour - because we have industrially-zoned land. Why would industry object to a properly managed site?

Does Moore council not give any thought to the frustrated stress and the invasion of our personal free time by making this such an ongoing situation. They have hired people with our tax dollars to make the situation that they wish for, to happen - thus ignoring the findings of a very costly hearing.

I beg you to examine carefully the effects that the placement of a disposal site at Site D or K could have on a very cohesive neighbourhood[^] very choice homes in a very well maintained agricultural area. The southern sites have no potential for a disruption in the quality of life now enjoyed by the folk near the proposed sites on Ladysmith Road.

It lays one's mind open to the question - what is the real reason - or will we ever know - the insistence of Moore Council on the ignoring of the report commissioned by Lambton. Given the finances our group could perhaps give you a study that would prove to agree with the Lambton Cty study. I believe you are hoping for a decision in your favour from this engineering organization - financed by this municipality.

Joyce Trapp

September 27, 1994

James J. Kutyba, P. Eng.
Administrator, Waste Management

I am here today as a concerned taxpayer and resident of Moore Township.

It was with great disappointment and concern that I learned that the present dump site in Moore Township was still under consideration by the Lambton County Waste Management Committee as the preferred site for the long term management of waste within the County.

It is my understanding that this Waste Management Master Plan has been in the process of development since 1986 at a cost of over 1.3 million dollars. It does not seem reasonable to me that after spending this amount of time and money that the committee would take it upon itself to disregard the recommendations presented to them.

I was told sometime ago by Mayor Marsh that the reason all 4 sites were in Moore Township is because we have so much industrial land. At one Waste Management Committee meeting I attended, the comment was made that industrial land is cost prohibitive. I understand that the total cost of this project could be over \$70 million dollars. Even if land is expropriated, the cost of land acquisition has to be a very small part of the total project and I can't see that site K would be acceptable to save a few thousand dollars.

Everything my husband and I have worked for the past 30 years is within one mile of both sites D & K. We have raised our family here and plan to retire and live here for many years to come. I do not look forward to spending the later part of my life watching a mountain of garbage grow within a few hundred yards of my house and having to deal with the noise, odor, stray animals, scavenger birds and increased traffic. A good example of rodent problems and rotting garbage is the experience reported in the Sarnia Observer of one homeowner in Point Edward last week. We have been contending for years now with garbage along the roads and in our farm fields surrounding the current dump.

If we were able or willing to sell our property, it would most certainly be greatly devalued. I have asked several times what kind of compensation we might be able to get but no one seems to have any clear idea how much, within what distance or if there might be any at all. Ms. Fletcher from Dillion has made the comment on a couple of occasions that she can prove land values actually increase around landfill sites. That may be true in Toronto or some other urban area, but there is no way you can convince me that the value of our land in Moore Township will increase within sight of a dump of this magnitude.

Another concern I have is that the parcel of land to the East of site K that the Township owns and the parcel you are considering acquiring from Mr. Wolff both have heavy bush on them. I understand the County has a bylaw preventing the destruction of bush.

After attending several meetings, including two Waste Management Committee meetings in Wyoming, it seems obvious to me that the committee is very concerned about the Indian land claim on sites H & I. Sometime ago when the question of Indian land claims came up, Ms. Fletcher from Dillon's office informed us that this could not be used as one of the site selection criteria as only reservations could be excluded as land claims were for financial compensation from the federal government. At one of the meetings I attended the lawyer that was there stated that he had been in contact with both the Provincial and Federal governments and both had said the claim was for compensation only and not actual return of the land. Mr. Jacobs from Walpole Island also spoke at the same meeting and said the land claim is for financial consideration only and it is between the Federal government and the Indians with third party protection. It was also brought to our attention that there are land claims on all 4 sites.

In the identification of long list of Sites, two of the criteria were minimizing the number of landowners and property owners affected and maximizing the distance from residential areas. The current Moore site is in the middle of a residential farming community. The preferred site as proposed by Dillon is in an industrial environment already established. I would hope that when you are considering objections you would actually take time and consider where the people that are objecting actually have to live 365 days/year in relation to these sites.

At one Waste Management meeting the comment was made that you would not want people to drive down the Parkway and see it. It is my undersanding the preferred site as proposed by Dillon is actually past the first sideroad back from the Parkway. Heaven forbid someone should drive by and catch a glimpse of it, especially when they have driven by all kinds of industry much closer to the Parkway than the dump site but it is not a concern that the people that live near sites D & K would have to look at it everyday for the rest of their lives. At the same meeting most of the Committee thought it was quite amusing when someone commented that we would not have to worry about seagulls as they had driven by Sarnia landfill earlier that day and couldn't believe it - they thought every seagull in the country must have been there.

I am getting the impression that most of Moore Township councillorors feel that if the site is to be in Moore and we already have a dump here then we should just keep it all in one spot. The current site is not even remotely in the same category as what is proposed. When the Township started the current landfill, we were assured it was for Moore Township only and that when they were finished with it we would not know there had ever been a dump there. What you are proposing will have a major impact on the surrounding residents and landowners for many years to come.

Brenda Robbins
Lot 19 Con 5 - Moore Township

2905 ST. CLAIR GARDENS ROAD,
R.R. # 1,
SOMBRA, ONTARIO,
N0P 2H0

SEPTEMBER 27, 1994

MOORE TOWNSHIP MUNICIPAL OFFICES,
COUNCIL CHAMBERS,
1155 EMILY STREET,
MOORETOWN, ONTARIO.

CONCERNED LANDOWNERS REGARDING THE LAMBTON COUNTY LOCATION
FOR A LANDFILL SITE AND COMPOSTING AREA.

THOSE OF YOU, WHO DO NOT LIVE IN THE SOMBRA CLAY BELT, AND
HAVE NOT HAD THE EXPERIENCE OF TRYING TO KEEP ENOUGH WATER ON
YOUR LAWN TO KEEP GRASS GROWING, LET ME EXPLAIN WHY I FEEL
THE PROPOSED SITE IS FAR TOO CLOSE TO THE ST. CLAIR RIVER.

WE HAVE ALL HEARD THAT SOMBRA CLAY DOES NOT ALLOW WATER
SEEPAGE AND THEREFORE THERE IS NO DANGER TO THE WATER QUALITY
OF THE RIVER.

SOMBRA CLAY, IN DRY WEATHER DRIES AND CRACKS OPEN IN CHANNELS
AN INCH WIDE THAT ACT LIKE LITTLE PIPE LINES. GIVEN THE
NATURAL LAY OF THE LAND, THOSE CHANNELS ARE LEADING
INEVITABLY TO THE RIVER.

THE ABILITY OF WATER TO MOVE THROUGH THE CLAY IS ATTESTED TO
BY THE FACT THAT ALL THE HOMES ALONG THE ST. CLAIR PARKWAY
MUST NOW BE DISCONNECTED FROM THEIR SEPTIC SYSTEMS AND
SERVICED BY A NEW SEWAGE LINE.

THE REASON FOR THE CHANGE WAS TO GET RID OF THE SEWAGE THAT
HAD BEEN LEAKING THROUGH THE CLAY TO THE RIVER FOR YEARS.

WE ALL KNOW THAT LANDFILL AREAS- DUMPS- ARE NOT PLEASANT
PLACES. THEY OFFEND OUR SENSITIVITIES. COMMON SENSE DICTATES
THEY SHOULD BE IN OUT OF THE WAY PLACES.

WHY THEN IS THIS SITE EVEN BEING CONSIDERED ? BOUNDED ON THE
EAST BY 40 HIGHWAY, A HEAVILY TRAVELLED ROUTE USED DAILY BY
HUNDREDS OF PEOPLE TRAVELLING BETWEEN SARNIA, WALLACEBURG AND
CHATHAM: ON THE WEST BY ST. CLAIR PARKWAY, WHERE MILLIONS OF
DOLLARS HAVE BEEN SPENT TO ENHANCE THE AREA FOR THE ENJOYMENT
OF THE MASSES. AN AREA UNDER CONSIDERATION FOR A PROPOSED
BICYCLE PATH BETWEEN WALLACEBURG AND SARNIA: BOUNDED ON THE
SOUTH BY THE MOORE SOMBRA TOWNSHIP LINE, USED DAILY BY LOCAL
TRAFFIC AND NUMEROUS EMPLOYEES OF TERRA CORPORATION AND ON
THE NORTH BY # 2 SIDE ROAD WHERE HUNDREDS MORE PEOPLE TRAVEL
DAILY TO AND FROM WORK AT THE HYDRO SITE.

COULD THEY POSSIBLY FIND AN AREA WHERE FEWER PEOPLE WOULD BE EXPOSED DAILY ? I HOPE SO.

WATERS EDGE PROPERTY, BE IT ON THE LAKE OR THE RIVER IS HIGHLY PRIZED, DESIRABLE PROPERTY. THERE IS ONLY SO MUCH OF IT. SO LETS NOT SPOIL THE ENJOYMENT AND DESIRABILITY OF THESE PROPERTIES ALONG THE RIVER.

MY LAST POINT IS THIS. THE SOMBRA AREA BADLY NEEDS MORE! MORE PEOPLE, MORE BUSINESS, MORE HOMES.

A DECISION TO LOCATE THE LANDFILL SITE IN THIS AREA CERTAINLY DOES NOTHING TO ENHANCE THE POSSIBILITY OF DEVELOPING THE PROPERTY EAST OF CATHCART PARK AS A SITE FOR A SMALL MALL AND ADDITIONAL HOMES.

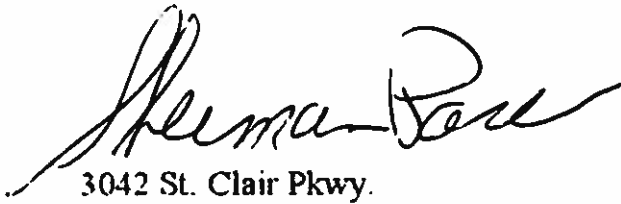
I UNDERSTAND THAT NOBODY WANTS A LANDFILL SITE IN THEIR BACKYARD. THAT'S HUMAN NATURE: - BUT SURELY THERE ARE AREAS WITH LESS EXPOSURE TO DAILY TRAFFIC AND FURTHER FROM THE RIVER FOR SAFETY SAKE.

THANK YOU.

A handwritten signature in cursive script that reads "D. H. Southcombe". The signature is written in black ink and is positioned to the right of the typed name.

DONALD H. SOUTHCOMBE

COPY: DON POORE
JOHN DEMARS
RON WHITMAN



3042 St. Clair Pkwy.
Sombra, Ontario
N0P 2H0

September 29, 1994

To Whom This May Concern:

We wish to voice our objections to the proposed location of the future Lambton County Landfill site. We find it extremely illogical to have a landfill site for the entire county located in such close proximity to the St. Clair River Parkway. I would appreciate a response to the following questions:

1. Why has there not been an Environmental Study done showing possible effects of a landfill site to surrounding waterways, forestry, etc.
2. Whose land is being purchased for this project.
3. Why has there been no notification well in advance of this issue. It tends to arouse suspicion in local residents when they are not informed until just prior to this meeting. It would seem that there is an intentional effort to keep people in the dark.
4. What is the financial impact on local taxpayers re transportation of garbage to a south western location in the county considering the bulk of the population is located in the northerly areas (Sarnia, Petrolia, Grand Bend). Would not a more central location be more beneficial.
5. There are very few people who would applaud a landfill site in their area. The very thought of accommodating such a facility raises many negative responses except to those promoters who can realize other gain. Our St. Clair Parkway is a beautiful asset not only to the communities surrounding it but to countless visitors who come each year. In all of Lambton County there are certainly more barren areas, much more suitable for a garbage dump than would be our beautiful parkway. Would you ever expect to see a bed of unattractive weeds in the middle of a botanical garden. Of course not, it would take away from the natural beauty, and so we say ***** NO **** to this proposal.

**WALPOLE ISLAND FIRST NATION
EXECUTIVE SUMMARY
THE LOWER INDIAN RESERVE**

The Lower Indian Reserve is an area of 2,675 acres which is located adjacent to the St. Clair River in what became Moore Township, north of, and adjacent to, the Walpole Island Reserve. A specific claim to this land was filed with the federal government in 1986.

The Lower Indian Reserve, part of the Walpole Island Territory, was established by the Treaty of Amherstburg of 1818 (see also Treaty #27 1/2 (1825) and #29 (1827) and was excepted from the area covered by the Treaty. The Reserve was not surrendered by those Treaties and is thus still unceded land.

The Lower Indian Reserve was allegedly surrendered conditionally for sale in 1843, and again in 1849. These alleged surrenders were contrary to the Royal Proclamation of 1763. The alleged surrender was executed in Kingston, Ontario. The Reserve was sold and patented, at less than \$2 an acre, beginning in the mid-nineteenth century. The land sales were made without an appraisal of the Reserve and the Reserve was sold at far below fair value at that time. Moreover, the Walpole Island First Nation received few, if any, of the monies, from the sales of the Lower Reserve as a result of the incompetence and corruption within the Indian Department of the day.

The federal Specific Claims Branch, Department of Indian Affairs and Northern Development did not respond to this claim for over six years. A research report and copies of the historical documentation on it were received in 1992.

After two years of clarification and additional research, Specific Claims Branch will complete its review this Fall and transmit it to the federal Department of Justice for legal review. It is expected that, according to Specific Claims Branch timetable, substantive negotiations on the Lower Indian Reserve will begin in the summer of 1995.

In addition, about 70 acres of the Lower Indian Reserve were never sold and remain unsold today. The Walpole Island First Nation has entered negotiations under the 1986 Indian Lands Agreement Legislation to re-affirm these lands as Indian Reserve lands.

27 September 1994

To Whom This Concerns:

site K+D

I'm writing down my objections ^{about} the dump being put across the road from me, because ~~1st~~ of all, the land in question is farm land, also it is home to deer and other animals, plus the swans and geese land there and down the road. 6 mile; it is their migrating route to the North in Spring - South in the Fall.

2nd: There are school buses going back & forth to to Sarnia & Moretown & Courona to pick up the children that live in this area. The traffic on this road is already heavy, and children have to be careful, how much more so will it be if the dump goes in here.

3rd: who wants the unsightly mess of paper & debris flying all over the place, and the Se Gulls flying around, the fences up to try & keep this all contained. Also the rodents will really be a problem because ~~of~~ it won't be that far back from the road. The noise from machines working ^{in there.}

4th: The test holes they drilled for ~~soil~~ ^{soil}, there were 3 holes about 10 ft. apart - 2 had water at 45 ft., the 3rd hole had water at 9 ft. what does this show? water coming from there to ditches going to river.

station 5 site K. old dump site - we are more concerned about ^{site D.} ~~site~~
Also we are ^{not} willing hosts for the dump at this site. on ^{site} ~~site~~
#8x highway. effects us more.

The social, recreational & ~~environmental~~^{environmental} impact on our community will be greatly hurt. We have the Moore Museum & the Moore Sports Complex and the St Clair Parkway in these areas which are busy every weekend of the year during the ~~the~~ tourist season.

Since I traveled quite extensively on behalf of the Incinerator fight, it seems that no matter if is incinerator or a dump site, they all seem to be in areas that are not suitable for the purpose for which they are for. For example in Orellia it was site by a lake. In another community it was by a river & forest that would have been affected. Here it is by the St. Clair River & a farming community, which is also home to quite a variety of ducks - loons - ~~gulls~~ - swans, racoons - deer etc. Have you ever stood on your back patio & ~~listen~~ heard the birds & animals in a forest area, or even in your back yard?

Then you should, maybe then you wouldn't want a dump near you. It seems More township should reject all the sites within our area, because of the impact on the public - the land - the animals - plus the birds that live there and the ones that migrate every year and use it as a resting place to & forth.

Thank you for reading this
Patricia McDonald

Dear Sirs or Madam Sept 28, 194
In regard to the proposal of a disposal
site for the County of Lambton.

I feel the site at Terra Ind. on the
Moore Sombra Townline is the best
location for a disposal site as we
already have an eyesore with the
high bank around the disposal
pit and possible pollution at Terra
Industries and another eyesore
at Tricil on the 10th concession.
with more pollution.

For what reason are you even
entertaining the thought of creating
a third eyesore in a different
location in the township is beyond
me. It seems as if you have
pleasure in creating these sites
and wish Tourists & Visitors to
our township to view these eyesore
maybe you feel these are appealing
to the public (personally don't).

The soil is so good at Terra
Ind. as ^{to} 80 Hg. let's please keep
these in the same location as
the ones we ^{already} have. There is also

(2)

no residents in the vicinity of the Terra site; on #80 Hwy. that is not the case in this regard it doesn't create any hazard to families living in the vicinity as they are about 2 miles away and the ~~devaluation~~ devaluation of private family holdings would not be affected for these reasons I ask you to consider your options very carefully and keep in mind they may propose something as unsitely across from your home or property some day and consider how you would feel if this were proposed to go across from your home.

I remain yours
Robt Macdonald.

September 29, 1994

Re: Proposed landfill site in Moore Township

To Whom It May Concern:

Dear Sir/Madame:

I hereby wish to express my concern about the proposed landfill site in Moore township. Following are some of my objections.

First of all, I am very much opposed to the short notice we, as homeowners, received with regards to the proposed meeting on Friday, September 30, 1994. It seems to me a little more notice would have been appropriate. Why not wait until after the municipal elections and let the new council take care of this matter.

In my opinion the proposed site is

- 1) too close to the St. Clair River and
- 2) should be centrally located within Lambton County thereby avoiding unnecessary costs of building transfer stations and trucking expenses.

The river is a commodity that needs to be protected at all costs, and to take even a remote chance on pollution from a landfill site is unacceptable for me and my children and grandchildren.

I hope, in the far future, they will be able to thank this committee and council for insight and wisdom.

Yours truly,



John DePooter,
2941 St. Clair Gardens Road
Sombra, Ontario
NOP 2H0

P.S. As I am unable to attend in person, with permission,
per Mr. John Bouwman

September 29, 1994

Brad & Betty Roodcroft
2903 St. Clair Gardens, RR # 1
Sombra, Ontario N0P 2H0
(519) 892-3667

County of Lambton--Waste Management
Hwy 21, Box 3000
Wyoming, Ontario
N0N 1T0

To whom it may concern:

It is our understanding that you have a proposal to locate a waste management facility in our vicinity.

We cannot see the need to place such an establishment near our much desired St. Clair River! Both the Townships of Moore and Sombra are large enough to ensure a more appropriate place.

The St. Clair Parkway is an attractive asset to our community. Keep the waste management plant away from the parkway!

Sincerely,


Brad & Betty Roodcroft
Concerned citizens

2917 St.Clair Gardeng
R.R. #1
SOMBRA, ONTARIO
NOP 2HO

page 1 of 2

Moore Township Municipal Offices,
Council Chambers,
1155 Emily Street
Mooretown, Ontario.

Some thoughts and concerns on the proposal to locate a dumpsite just North east of us.

Background:

As a family we have had this cottage for close to 40 years.

My wife Rawena is the registered property owner.

I have been the taxpayer for about 25 years. I also pay the water rates, have payed for the citywater installation, and this year for the sewermainline and hookup. So I have made a considerable contribution to the Township coffers.

I have also provided the upkeep and maintenance throughout this period.

As a family we love and enjoy this site.

CONCERNS:

We are told, there will be no run off or seepage, because because of the clay soil. Those of us who have worked with clay over the years, know of its tendency to channel, thus our water basins, Clay Creek and the St. Clair River could be adversely affected.

In the past we have been affected by airborne pollutants, from Chinook, in the form of malodorous amines, SO₂, FLYash from the Edison plant at Marine City, Ontario Hydro and Ammonia from C.I.L.

Added to this we, we should not have to face malodorous air-borne materials from the proposed dump.

This location does not seem to be consistent with the environmental fixes that have been required from C.I.L. (TERRA) CHINOOK, ONTARIO HYDRO and the Homeowners with the mandatory elimination of in good working order septic tanks.

continued

page 2

continued:

The latter at considerable expense to each of us.

This area is both beautiful and sensitive and should be protected. Therefore locate the dump farther inland and away from the River.

As the largest amount of waste will come from paces North and East of Sombra Township, locate at a more central point.

We recently had imposed on us a radical upturn in assessment and thus in property taxes.

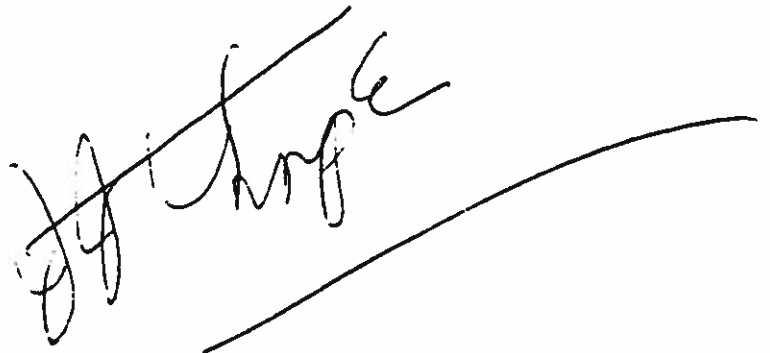
Should emissions from the dump become apparent and bother some, I doubt that we would be able to see a reversal in assessment.

I do not see how the review process can be carried out thoroughly and vigorously in such a short time period allotted GORE & STORRIE LTD. I feel that it is a mere rubberstamp effort conducted for public relations purposes only.

The summary scheduling of this meeting with so little time for consideration and consultation, is to me arrogant and cavalier. It is not consistent with good municipal government and mandate.

Thank you

John Thorpe

A handwritten signature in black ink, appearing to read "John Thorpe", is written over a horizontal line. The signature is stylized and cursive.

2923 StClair Gardens

page I of .

R.R. # I

Sombra, Ontario

NOP 2HO

September 29, 1994

Mooretownship Municipal office

Council Chambers,

1155 Emily Street

Mooretown, Ontario

I wonder if Gore & Storrie Ltd. have had sufficient time to do a thorough examination of the Waste Management Plan as formulated by Dillon & Associates to render a sound opinion. If their (Gore & Storrie Ltd.) time limit is as short as was allowed the general public, the fee for the review is probably a waste of money.

Relocating the landfill site should not be rushed to accommodate the sitting Lambton County Council, or any other council.

I suggest to you that existing councils leave this sensitive proposal till after municipal elections and installation of the newly elected people.

Do not saddle incoming council with your last meeting decisions.

Looking at the maps included with the plan, it is unfortunate that Dillon & Ass. could find only suitable land in large quantity in Moore and Sombra Township, in close proximity of the St. Clair River.

Just because this land is already zoned Heavy Industrial should not make it the prime choice for the new land fill site.

The arguments against the proposed site made by my friends and neighbours are the ones I would have made, and rather than repeat them, I fully and completely endorse them as my own.

The St.Clair River is the most valuable and noteworthy part of the Townships. Why take a chance destroying the beauty of this area by putting a dump next to it.

A dump close to the river, close to the Parkway, with all its recreational facilities, picknick areas, swimming areas, campgrounds and Provincial Parks.

On technical grounds proposed site H or I may be the preferred location.

On humanitarian, social, recreational and common sense grounds, there must be areas that are suitable, somewhere else in the County, away from sensitive areas like the river.

With my brief I present to you, briefs from other people along the river and our area.

I totally agree with their views and reasoning, as stated in their submissions, as well as they stand behind mine.

As most of these people could not arrange to be here today on such short notice, they have asked me to be their spokesperson.

Enclosed please find briefs submitted by the following

persons;	Donald H. Southcombe	2905	ST.Clair Gardens
	John Thorpe	2917	ST.Clair Gardens
	John de Pooter	2941	St. Clair Gardens
	George Pearson	2961	St.Clair Gardens
	Brad and Betty Roodcroft		St.Clair Gardens
	Michael Bouman	2921	St.Clair Gardens

Thank you,



John Bouman

296I st.Clair @ardens
R.R. # I
Sombra, Ontario
NOP 2HO

I believe that much consideration should be given to the location of the new landfill site.

What does the St.Clair Parkway mean to those people suggesting it be in close proximity to the above?

What is the rush to make a quick decision on a program of this nature ?

Wait for new councils, and have those newly elected people ,put this on their agenda.

Is it not in the best interest of taxpayers for them to have a vital role in such a costly expenditure ?

Thank you,

A handwritten signature in cursive script that reads "George H. Pearson". The signature is written in dark ink and is positioned to the right of the typed name "George Pearson".

George Pearson

PRESENTATION TO: Moore Township
Sombra Township
Gore and Storrie Limited

For the Peer Review of the Lambton County Waste Management Master Plan.

PRESENTED BY: Bob Grimshaw
Plant Manager
Lambton Manufacturing
Terra International (Canada) Inc.,

September 30, 1994

OUTLINE

PREAMBLE

REVIEW OF THE MASTER PLAN

SPECIFIC CONCERNS AND RECOMMENDATIONS

GENERAL RECOMMENDATIONS

CLOSURE

PREAMBLE

Terra International (Canada) Inc., appreciates the opportunity to provide input to the peer review process commissioned by the Moore and Sombra Township Councils. Our presentation today is based upon our submission to the Lambton County Waste Management Administrator in February 1994, which in turn was made during the public comment period following the November 25, 1993 public meeting at which time the 4 finalist sites were identified.

Terra acquired the nitrogen products operations at it's site on the Moore-Sombra Townline, now called Bickford Line, in April of 1993. As such, we became a stakeholder in the County Waste Management process. We were aware that the previous owners, ICI, had given some input at an earlier date. We understood that their input indicated a potential need to use land on Site I and H for irrigation of process water from the Phosphates operation and from the nitrogen-based operations as a means to further reduce water based loadings to the St. Clair River. With the release of the Master Plan and the preferred site selection in the fall of 1993, we perceived shortcomings that needed addressing and hence our submission in February of 1994. This presentation today will focus mainly on Terra's concerns relative to Site I, still owned by ICI Canada but diagonally adjacent to Terra's plant, and Site H, most of which is owned by Terra and which is directly beside Terra's plant.

REVIEW OF THE MASTER PLAN

- 1. We are supportive of the major elements of the Master Plan. Efforts for reduction at source, separation at source, maximum recovery of wastes, recycling through composting, and other strategies are all important and must be maximized. Proper disposal of the remaining minimum wastes is also important.**

- 2. We understand the site selection process that was used to identify the preferred sites. The process was detailed and is recognized as challenging to those charged with weighing all of the criteria and impacts while considering stakeholder interests and concerns. The land use criteria assumption that industrial zoning and industrial presence equals landfill compatability is not absolutely correct. We do wish to express our disappointment that more weight was not given to certain of the selection criteria, because of little or no recognition of issues important to Terra, namely:**
 - a) Consideration of Terra employees as "equivalent residents" during the principal hours of landfill operations.**

- b) Impact on employee and product truck traffic.**
- c) Our potential need to use Site H for irrigation.**
- d) Impact on our wildlife habitat enhancement projects established in the vicinity. This is of concern both to the company, to individual employees, and to our Lambton Ecology Group.**
- e) The risk associated with locating the landfill close to our industrial facility.**

3. In providing more detail in this presentation on these concerns, Terra is also making recommendations on how to alleviate or deal with these concerns. An overriding recommendation was that those involved in the site selection process should be requested to consider the points raised in this document and determine whether they have any affect on the prioritization of site selection. Terra's submission was reviewed with the Administrator, Mr. Jim Kutyba, on March 7, 1994, at which time he committed to this review as part of the overall review of inputs following the public comment period. We have been contacted by specialists for the details of our wildlife programs. In a follow-up in August of this year, Mr. Kutyba noted that the process was moving slowly, and that the review teams had not yet completed their work.

4. If the review in 3 above did not change the priority of site selection, Terra has determined that we can co-exist with a landfill located at Site I, providing the measures in our recommendations are incorporated into the landfill design and operation.

5. We do not agree with the findings of the selection study that there is virtually no difference between sites I and H.

Site H is too close to our plant, it is closer to the St. Clair River, and it takes away a legitimate future option for irrigation to further reduce our nitrogen loadings to the St. Clair River. We requested that we be promptly notified if there is any further movement towards selection of Site H, so that we may further discuss the options that Terra would then be forced to take.

6. Specific Concerns and Recommendations.

a) **Employee/Residents - Concerns**

The LCWMMP technical studies addressed impacts on residents around the sites under consideration. At the Terra facility, during business hours, approximately 200 employees are present roughly 2000 feet from site I and 500 feet from Site H. Outside business hours, on a 24-hour basis, approximately 30 employees are present for 12 hour periods at the plant. In the study, weighted consideration was given only to residences in the candidate site areas. For most of the proposed landfill sites, the number of residents affected would be fewer than the number of Terra employees affected.

Many of the residents would likely be employed away from their residence during landfill operating hours, hence their exposure hours would be significantly lower than those of Terra employees. Anticipated impacts on Terra employees are visual (seagulls, other predators, blowing trash) increased traffic and muddy pavement at the exit from the landfill, odours and perceived health effects. It is obvious that adequate consideration was not given to the presence of Terra and it's employees as "equivalent residents" relative to the landfill sites I&H.

Recommendations (if Site I is developed)

- **State of the art controls must be utilized to prevent seagulls and other predators from being attracted to the landfill. These would include nets, and prompt backfilling, and other "best practices" technology.**
- **Traffic at the landfill should be regulated around peak traffic periods of Terra employee working hours.**
- **Methods must be implemented to prevent accumulation of mud on the Moore-Sombra Townline road at the landfill exit and regular road cleaning schedules implemented as necessary.**
- **Landfill operations must include odour and dust control techniques.**
- **Stray trash such as blowing papers and unauthorized dumping at the landfill entrance must be controlled and regular clean-up made such that there is no deterioration in visual impact after the landfill operation commences.**

6b) Traffic - Concerns

Consideration was noted in the study to distance of travel of trucks hauling to the landfill and potential for interference with regular traffic. We assume that data from periodic spot traffic counts on Highway 40 was used as a baseline. We want to make you aware that the Moore-Sombra Townline Road and the intersection with Highway 40 is normally used by about 35 transports per day which are loaded at Terra's plant. Some of these are large dual-train units which are slower to accelerate and require wide turning angles. During peak 30 day periods in the Spring and Fall, the number of trucks rises to 175 per day. Landfill traffic added to this truck traffic and that of our own 200+ employees and regular business visitors, will significantly increase congestion and frequency of traffic accidents on both roads, especially at their intersection. The current intersection is inadequate to handle this loading. Other anticipated impacts from landfill traffic are build-up of mud on roads from traffic leaving the landfill (which creates both an eyesore and a driving hazard), increased road deterioration, increased deterioration of the two railroad crossings and the visual impact as a result of stray trash, etc., from haulage trucks. These are not just perceptions, they are real observations from other landfill operations.

Recommendations (if Site I is developed)

- **Turning lanes and acceleration lanes must be installed on Highway 40 North and South of the Moore-Sombra Townline road, along with proper intersection lighting and turning lanes on the Townline Road.**

- **Traffic lights should be installed at the Moore-Sombra Townline Road/Highway 40 intersection.**

- **Condition of the Moore-Sombra Townline Road and railway crossing must not be allowed to deteriorate due to landfill truck traffic.**

- **Traffic at the landfill should be regulated around peak traffic periods of Terra employee working hours.**

- **Methods must be implemented to prevent accumulation of mud on the Moore-Sombra Townline Road at the landfill exit and regular road cleaning schedules implemented as necessary.**

- **Stray trash such as blowing papers and unauthorized dumping at the landfill entrance must be controlled and regular clean-up made such that there is no deterioration in visual impact after the landfill operation commences.**

6c) - Wildlife - Concerns

The study assessed natural ecosystems in the candidate site areas, especially within 500 M of the candidate sites. We could find no reference to Terra/ICI wildlife enhancement programs, which began in 1991 for the purpose of enhancing Lambton Works as a wildlife habitat area. (It was subsequently confirmed that the study teams were not aware of this activity). At that time, we formed a Lambton Ecology Group of volunteer employees, outside consultants and members of the public interested in conservation programs, who helped plan and implement several projects, including the wildflower berms along the River Road and the placing of over 100 Wood Duck, Kestrel and Blue Bird nesting boxes on the west, south and north portions of the property.

Specifically, the wooded area north of site I on ICI property, contains 20 wood duck boxes and last season hosted 4 pairs of wood ducks (8 this season and 2 pair of screech owls) as well as a wide variety of indigenous species from frogs to flying squirrels to birds in a mixed hickory/oak/maple bush.

Much of this area is within 500 M of site I. It is our concern that predators such as seagulls, hawks, mice, rats, foxes and especially raccoons will be attracted to the landfill and will interfere with the established wildlife.

Because of the efforts of the Ecology Group, with Terra's assistance, we qualified as the first Canadian Wildlife Habitat Enhancement Area as recognized by the Wildlife Habitat Enhancement Council in Washington, D.C. in 1993 and 1994. Terra intends to maintain and possibly enhance the group and these programs and thus is legitimately concerned about intrusions that would limit or reduce their effectiveness.

Recommendations (If Site I is developed)

- **State of the art methods must be implemented in the operation of the landfill to prevent attraction of seagulls, rodents and predators which may devalue Terra's wildlife enhancement programs already in place around its facilities.**

- **A periodic census of the wildlife north of Site I should be taken to verify the degree of impact from the landfill operations.**

6d) Future Use of Site H - Concerns

The Lambton Works site has for several years been engaged in a program of voluntary continuous improvement to reduce chronic and accidental releases from the plant-site to the St. Clair River. This is being driven more and more by public pressure which results in legislative enforcement. In 1991, the Ministry of the Environment required that the Company document actions taken and needed to prevent spills to the St. Clair River.

As a result, a Spill Prevention Strategy for the site was developed, and committed to publicly, which included among other elements, means of on-site containment of contaminated process effluent streams and stormwater. As part of that strategy, the Company committed to a longer term Water Separation program to separate process water flows from surface stormwater streams and contain them on-site if contaminants reach unacceptable levels. Because the process operations are incapable of consuming the large volumes of water that could be accumulated, a practical option is to utilize the surplus water by irrigating on adjacent lands in support of crops grown by our lessees. This option would be foreclosed and the quality improvement of the river may be jeopardized if the second choice Site H is utilized as a landfill area.

We also wish to point out that, at the public meeting, a significant number of people expressed concern that sites I and H were too close to the St. Clair River for a landfill. We believe Site H is the only suitable portion of our property for irrigation, as the other portions are all even closer to the river.

Terra is currently developing the objectives, options and costs of the Water Separation Project, and we anticipate that it will be at least a year before we could discuss a more definitive need for irrigation on site H.

Recommendation (if Site I is developed)

If a landfill operation is established on Site I, and Terra needs to irrigate surplus water, the County would be expected to assist and support Terra in acquiring approval for irrigation on Site H, in order to eliminate any concerns due to the proximity of the landfill on Site I.

6e) **Proximity to Terra Plant- Concerns**

Under the land use criteria, the study assessed impact of the landfill operation on existing or possible future land use in the surrounding area. It does not appear that the reverse was done. No consideration was given to the potential impact of the Terra world-scale fertilizer plant on landfill activities.

As a responsible corporate citizen, Terra feels obligated to ensure that community planners are aware of risks associated with its operation. The Major Industrial Accidents Council of Canada (MIACC) sponsored by the federal government of Canada was formed after the 1984 chemical disaster in Bhopal, India. Their remit is to develop national standards and guidelines aimed at reducing the frequency and severity of major industrial accidents involving hazardous substances. One MIACC Working Group is finalizing a Risk Assessment Guideline for Municipalities and Industry for public protection from effects of major industrial accidents. Another Working Group is soliciting comment on a Guideline for Risk Assessment and Land Use Planning. It will suggest appropriate buffer zone criteria around various industrial land uses. For years, CIL and ICI had been assembling property around the plant to prevent unwarranted intrusions and both these proposed landfill sites lie within that buffer zone.

As a responsible industry with potential to seriously impact our neighbours, we are concerned at any increase in the number of potentially exposed persons within a reasonable perimeter.

The Lambton Works primary output is based on production of over 1200 tonnes per day of anhydrous ammonia. Storage capacity for ammonia on the site is up to 60,000 tonnes. anhydrous ammonia is handled under pressure, mostly as a liquid, which if released to the atmosphere vaporizes to a gas.

A concentration of 500 parts per million is considered "immediately dangerous to life and health". Weather data indicates that prevailing wind direction in the area of the plant site is from the south-west generally toward Site I and often towards Site H. Under typical 10 MPH wind conditions, dangerous gas concentrations could reach either site within three minutes from the time of an incident. A release of one tonne of liquid ammonia could result in dangerous concentrations at site H, while a release of five tonnes could be dangerous to persons working on Site I.

The history of accidental ammonia releases in our industry and at Lambton Works is very good. High standards for design, operation and maintenance of process equipment are followed to prevent incidents. However, the risk of a release can never be considered non-existent.

Hence, within our plant site, extensive emergency response programs have been developed to protect personnel on site and at the adjacent industries in the unlikely event that an accident does occur. These include alarm systems and safe collection rooms which can be sealed from outside gases and purged with breathing air stored in cylinders.

There are already a few industrial facilities adjacent to the Terra plant. (Liquid Carbonic, Airco, Cardox and ICI). Each of these have only a few personnel and each of these are partners in our emergency planning, with their own appropriate systems. It is Terra's opinion that the risk to regular and transient personnel on Site I is acceptable, providing our recommendations are diligently implemented.

e) **Recommendations** (If site I is developed)

- **The County should conduct an independent risk assessment to verify and accept the risk associated with Site I.**

- **Appropriate facilities and equipment to protect personnel must be an integral part of the operation.**

- **Emergency plans must be developed, consistent and integrated with those at the Terra plant, to alert and protect personnel at the landfill site in case of an accidental chemical release at the plant. Terra will assist the development and regular testing of such plans.**

7 Additional Recommendation (If site I is developed)

Public Landfill Operations Monitoring

Terra endorses the suggestion of a M.O.E.E. representative at the public meeting, that a Landfill Public Advisory Committee be established to monitor the design and operation of such a facility. We go further to state that it should be an essential and integral part of the project in order to help deal with our concerns and those of the public. We volunteer for membership, and expect that such a committee will begin activities at the detailed design phase of the project.

8 CLOSURE

We appreciate the opportunity to input to this Peer Review, and submit the foregoing for your consideration. We believe it represents a thoughtful and diligent approach to further the objectives of the Lambton County Waste Management Master Plan, while dealing with the realities associated with site selection.

We trust that the information provided will be helpful in the final selection and operation of a landfill site, and that we can all work together for the overall protection of the environment in our community.

We are available to answer any questions.

Terra International (Canada) Inc.,

September 30, 1994