



JENNIFER M. GRANHOLM  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
LANSING



STEVEN E. CHESTER  
DIRECTOR

April 9, 2009

Mr. Wallace R. Evans, Chairperson  
St. Clair County Board of Commissioners  
200 Grand River, Suite 203  
Port Huron, Michigan 48060

Dear Mr. Evans:

The locally-approved Amendment to the St. Clair County Solid Waste Management Plan (Plan Amendment) received by the Department of Environmental Quality (DEQ) on February 10, 2009, is hereby approved.

The Plan Amendment allows primary importation of septage and other liquid waste approved for beneficial addition from Macomb, Sanilac, and Lapeer Counties for the operation of the Bioreactor Research, Development, and Demonstration Project in the St. Clair County Solid Waste Management Plan. The DEQ has determined that the Plan Amendment complies with the provisions of Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and its administrative rules.

The DEQ would like to thank St. Clair County for its efforts in addressing its solid waste management issues. If you have any questions, please contact Ms. Rhonda Oyer Zimmerman, Chief, Solid Waste Management Unit, Storage Tank and Solid Waste Section, Waste and Hazardous Materials Division, at 517-373-4750.

Sincerely,

Steven E. Chester  
Director  
517-373-7917

cc: Senator Judson Gilbert II  
Representative John Espinoza  
Representative Jennifer Haase  
Representative Phil Pavlov  
Mr. Geoffrey Donaldson, St. Clair County  
Ms. Janice Littlefield, St. Clair County  
Mr. Jim Sygo, Deputy Director, DEQ  
Ms. JoAnn Merrick, Chief of Staff, DEQ  
Ms. Carol Linteau, Legislative Director, DEQ  
Mr. George Bruchmann, DEQ  
Mr. Steve Sliver, DEQ  
Mr. Larry AuBuchon, DEQ  
Ms. Rhonda Oyer Zimmerman, DEQ  
Ms. Christina Miller/St. Clair County File, DEQ



## COUNTY OF ST. CLAIR

Metropolitan Planning Commission  
WILLIAM KAUFFMAN, DIRECTOR



February 9, 2009

Ms Christina Miller  
Environmental Quality Analyst  
DEQ - Waste and Hazardous Materials Division  
P.O. Box 30241  
Lansing, Michigan 48909-7741

**RE: UPDATE OF ST. CLAIR COUNTY'S SOLID WASTE MANAGEMENT PLAN**

Dear Ms. Miller:

Enclosed are copies of the draft amendments to the 2000 Update of the St. Clair County Solid Waste Management Plan. The reason for amending the Solid Waste Plan is to allow importation of septage, and other liquid waste approved for beneficial addition, from Macomb, Sanilac, and Lapeer counties to the Smiths Creek Landfill Septage Bioreactor Research, Development, and Demonstration Project (RDDP).

At the close of the public hearings and the ninety-day review period, the St. Clair County Metropolitan Planning Commission staff revised the plan, as directed by the Solid Waste Management Planning Committee, in response to public comment received during that time. The revisions to the October 23, 2006 draft amendments that were sent to your division during the public comment period are limited to those comments and suggestions forwarded by Christina Miller, Solid Waste Management Unit, MDEQ on February 9, 2007.

On April 2, 2007, the Solid Waste Management Planning Committee took action to approve draft amendments to the Plan. The St. Clair County Board of Commissioners approved the Plan and submitted it to the thirty-one communities that make the St. Clair County Planning area which resulted in over 67% if the communities approving the plan.

We note that subsequent to the approval of the Plan Amendments by the St. Clair County Board of Commissioners, the St. Clair County Septage Bioreactor Project is now operational.

Waste & Hazardous  
Materials Division

FEB 10 2009

A Government of Service

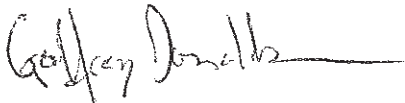
Ms Christina Miller  
DEQ - Waste and Hazardous Materials Division

February 9, 2009  
Page Two

Our thanks to you and your colleagues for providing technical assistance along the way during this plan amendment process.

If you have any further questions regarding the 2007 Amendments to the St. Clair County Solid Waste Management Plan or the processes in the County used to amend the plan, please feel free to contact the Metropolitan Planning Commission at (810) 989-6950.

Sincerely,

A handwritten signature in dark ink, appearing to read "Geoffrey Donaldson", with a long horizontal flourish extending to the right.

Geoffrey Donaldson  
Senior Planner

cc: Ms. Janice Littlefield, Chair, Solid Waste Management Planning Committee  
Ms. Rhonda Oyer Zimmerman, DEQ

# **2007 Amendments to the 2000 Update of St. Clair County Solid Waste Management Plan**

## **Municipal Approval**

**July 2007**

**Objective:** Amend plan to allow importation of septage, and other liquid waste approved for beneficial addition, from Macomb, Sanilac, and Lapeer counties to the Smiths Creek Landfill Septage Bioreactor Research, Development and Demonstration Project (RDDP).

### **Proposed Plan Amendments:**

1. Page I-5, Executive Summary; add the following paragraph at the end:

#### **2006 PLAN AMENDMENT**

In accordance with the permitting, construction, and licensure of a Bioreactor Cell as a Research Development and Demonstration Project pursuant to Part 115 of Act 451, the Plan is amended to allow the primary importation of SEPTAGE AND OTHER LIQUID WASTE APPROVED FOR BENEFICIAL ADDITION, from Macomb, Sanilac, and Lapeer counties. This importation of SEPTAGE AND OTHER LIQUID WASTE APPROVED FOR BENEFICIAL ADDITION is deemed necessary in order to provide adequate septage volume for operation of the Bioreactor Cell and achieve the Demonstration Project goals of:

Improved Waste Compaction at the Landfill  
Extended Life of the Landfill  
Enhanced Production of Landfill Gas  
Protection of Surface Water within the Collection Area Watershed

2. Page II-11, Data Base, Transportation; add following paragraph at end:

#### **2006 PLAN AMENDMENT**

The 2006 Plan Amendment recognizes the operation of a Bioreactor Cell at the Smiths Creek Landfill pursuant to a Research Development and Demonstration Project permit and operating license (Demonstration Project) issued in accordance with Part 115 of Act 451. The Demonstration Project requires the primary importation of SEPTAGE AND OTHER LIQUID WASTE APPROVED FOR BENEFICIAL ADDITION from Macomb, Sanilac, and Lapeer counties. Accordingly, the 2006 Plan Amendment authorizes the primary importation of SEPTAGE AND OTHER LIQUID WASTE APPROVED FOR BENEFICIAL ADDITION from these counties to the Smiths Creek Landfill.

Transportation of SEPTAGE AND OTHER LIQUID WASTE APPROVED FOR BENEFICIAL ADDITION, to the site will occur using the access routes described above. Private haulers, under license issued by the MDEQ, will collect SEPTAGE AND OTHER LIQUID WASTE APPROVED FOR BENEFICIAL ADDITION from non-industrial sources and deliver it to the Demonstration Project.

3. Page III-2, Import Volume Authorization, Table 1-A, add the following to the end of table.

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME	AUTHORIZED CONDITIONS
<u>St. Clair</u>	<u>Macomb</u>	<u>Smiths Creek</u>	<u>*</u>
<u>St. Clair</u>	<u>Lapeer</u>	<u>Smiths Creek</u>	<u>*</u>

4. Page D-7, ATTACHMENTS, **Special Conditions**; add following:

*"3. The 2006 Plan Amendment authorizes primary importation of SEPTAGE AND OTHER LIQUID WASTE APPROVED FOR BENEFICIAL ADDITION AND ONLY SUCH SEPTAGE AND OTHER LIQUID WASTE APPROVED FOR BENEFICIAL ADDITION, from Sanilac, Macomb, and Lapeer counties for use in the Bioreactor RDDP, and subsequent use at a fully authorized Bioreactor using SEPTAGE AND OTHER LIQUID WASTE APPROVED FOR BENEFICIAL ADDITION, at Smiths Creek Landfill. This authorization is limited to the term of the RDDP Project at Smiths Creek Landfill."*

**St. Clair County**  
**Solid Waste Management Planning Committee**  
**3:00 p.m., Monday, April 2, 2007**  
Conference Room A, St. Clair County Administrative Building, 2<sup>nd</sup> Floor  
200 Grand River Avenue, Port Huron, Michigan

**Minutes**

**1. Call Meeting to Order/Roll Call**

Acting Chair Janice Littlefield called the meeting to order at 3:03 p.m.

Present: Berry, Dally, Goodman, Griffin, Heidemann, Iseler, Littlefield, Loeffler, Pale and Soule

Excused: Parkus

Absent: Appel and Wilson

Guests: Tim Lozen, Attorney

Staff: Geoff Donaldson

**2. Citizens Wishing to Address the Committee**

There were not any citizens present wishing to address the Committee.

**3. Communications**

Donaldson stated there were some handouts that included an addendum to the agenda sent out, meeting notes of the two public hearings, a flow chart, and notice from Macomb County.

The notice is about the Macomb County Solid Waste Management Plan Amendment which included the exportation of septic waste to a bioreactor landfill in St. Clair County.

Attorney Lozen asked if the Committee will send a letter supporting this? Donaldson said he had not recommended it but it would be a good idea once the amendment is reviewed and deemed it is consistent with what we need.

Donaldson will draft a letter on behalf of the Committee once he has reviewed the document to make sure it reflects what the Committee is looking for.

**Motion** by Heidemann and supported by Griffin to record and file the communications. Motion carried unanimously.

**Motion** by Iseler, supported by Soule that Donaldson draft a letter of support of the Macomb County Solid Waste Plan Amendment. Motion carried unanimously.

**4. Minutes**

**A. Meeting Minutes of March 5, 2007**

**Motion** by Pale, supported by Berry to approve the minutes as presented. Motion carried unanimously.

Moved by Commissioner Heidemann, supported by Commissioner Kearns, to receive the bids and award the contract to Vander Graff Custom Homes Construction in the amount of \$319,589. Passed by a roll call vote: Ayes – 6; Commissioner Bohm, Heidemann, Kearns, Simasko, Wall and Evans. Absent – 1: Commissioner Quain.

**Cell 7 Construction Bid Information/Recommendations - Landfill.**

Moved by Commissioner Kearns, supported by Commissioner Simasko, to receive the bids for the construction of Cell 7 at the Landfill and to award the contract for the construction of Cell 7, excluding electrical, to Melco, Inc. in the amount of \$1,595,774.95. Matt Williams, Director of the Landfill, and Beth Benoit, Senior Project Manager, were available for questions. Passed by a roll call vote: Ayes – 6; Commissioner Bohm, Heidemann, Kearns, Simasko, Wall and Evans. Absent – 1: Commissioner Quain.

**Approval of Amendments to the 2000 Update of the St. Clair County Solid Waste Management Plan**

Moved by Commissioner Heidemann, supported by Commissioner Kearns, to approve the amendments to the 2000 update of the St. Clair County Solid Waste Management Plan as presented. Passed by a voice vote.

**MMRMA Appointment Effective 6/30/07 – S. Groden**

Moved by Commissioner Kearns supported by Commissioner Heidemann, to appoint Shaun Groden as Member Representative for the Michigan Municipal Risk Management Association. Passed by a voice vote.

**Parks and Recreation Commission Appointment**

Move by Commissioner Kearns, supported by Commissioner Heidemann, to appoint George Fisher to the Parks and Recreation Commission as an alternate for Dennis Basinski. Passed by a voice vote.

**ADMINISTRATOR/CONTROLLER'S REPORT:**

Shaun Groden, Administrator/Controller, highlighted the following items:

- Survey from the State Governor
- Discussed last week's budget workshop and the next budget workshop.
- Road improvement that will be necessary for Honda plant in Capac

STATE OF MICHIGAN



JOHN ENGLER, Governor

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

*"Better Service for a Better Environment"*

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: [www.deq.state.mi.us](http://www.deq.state.mi.us)

RUSSELL J. HARDING, Director

May 4, 2001

Ms. Juanita Gittings, Chairperson  
St. Clair County Board of Commissioners  
3550 Armour Street  
Port Huron, Michigan 48060

Dear Ms. Gittings:

The Department of Environmental Quality (DEQ) received the locally approved update to the St. Clair County Solid Waste Management Plan (Plan) on January 16, 2001.

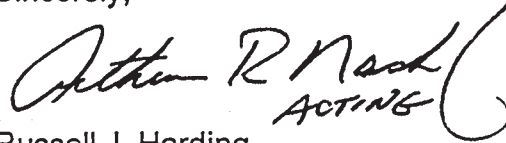
By this letter, this Plan is hereby approved and St. Clair County (County) now assumes responsibility for the enforcement and implementation of this Plan. The DEQ would like to thank the County for its efforts in addressing the County's solid waste management issues.

By approving the Plan, the DEQ has determined that it complies with the provisions of Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the Part 115 administrative rules concerning the required content of solid waste management plans. Specifically, the DEQ has determined that the Plan identifies the enforceable mechanisms that authorize the state, a county, a municipality, or a person to take legal action to guarantee compliance with the Plan, as required by Part 115. The Plan is enforceable, however, only to the extent the County properly implements these enforceable mechanisms under applicable enabling legislation. The Plan itself does not serve as such underlying enabling authority, and the DEQ approval of the Plan neither restricts nor expands the County authority to implement these enforceable mechanisms.

The Plan may also contain other provisions that are neither required nor expressly authorized for inclusion in a solid waste management plan. The DEQ approval of the Plan does not extend to any such provisions. Under Part 115, the DEQ has no statutory authority to determine whether such provisions have any force or effect.

If you have any questions, please contact Ms. Rhonda Oyer Zimmerman, Chief of the Solid Waste Management Unit, Waste Management Division, at 517-373-4750.

Sincerely,



Russell J. Harding  
Director  
517-373-7917

cc: Senator Dan L. DeGrow  
Representative Judson Gilbert II  
Representative Lauren M. Hager  
Mr. Arthur R. Nash Jr., Deputy Director, DEQ  
Mr. Timothy R. Sowton, Legislative Liaison, DEQ  
Mr. Jim Sygo, DEQ  
Ms. Joan Peck, DEQ  
Ms. Rhonda Oyer Zimmerman, DEQ  
Dr. Benedict Okwumabua, DEQ – Southeast Michigan  
Ms. Lynn Dumroese, DEQ  
St. Clair County File



**METROPOLITAN PLANNING COMMISSION**

***County of St. Clair, Michigan***

200 GRAND RIVER, SUITE 202  
PORT HURON, MICHIGAN 48060  
(810) 989-6950 FAX (810) 987-5931  
GORDON RUTTAN, DIRECTOR

WASTE MANAGEMENT DIVISION

JAN 16 2001

**RECEIVED**

January 10, 2001

Mr. Seth Phillips, Chief  
Solid Waste Management Unit  
Waste Management Division  
Department of Environmental Quality  
P.O. Box 30241  
Lansing, Michigan 48909

**RE: UPDATE OF ST. CLAIR COUNTY'S SOLID WASTE MANAGEMENT PLAN**

Dear Mr. Phillips:

Enclosed is a revised copy of the 2000 Update of the St. Clair County Solid Waste Management Plan. At the close of the public hearings and the ninety-day review period, the St. Clair County Metropolitan Planning Commission staff revised the plan, as directed by the Solid Waste Management Planning Committee, in response to public comment received during that time. There have been but minor revisions to the March 27, 2000 draft that was sent to your division during the public comment period.

On July 31, 2000, the Solid Waste Management Planning Committee took action to approve the plan. The St. Clair County Board of Commissioners approved the Plan and submitted it to the thirty-one communities that make the St. Clair County Planning area which resulted in over 67% if the communities approving the plan.

We note that subsequent to the approval of the Plan Update by the St. Clair County Board of Commissioners, Howard Solid Waste Transfer & Reclamation Facility has changed ownership and is now World Waste Services. In addition, the recycling drop-off container that is listed as being in Ira Township is now located at the Brockway Township Hall.

*A Government of Service*



Mr. Seth Phillips, Chief  
Solid Waste Management Unit  
Waste Management Division  
Department of Environmental Quality

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January 10, 2001  
Page Two

Our thanks to you and your staff for providing technical assistance along the way during this plan update process. If you have any further questions regarding the 2000 Update of the St. Clair County Solid Waste Management Plan or the processes in the County used to complete the plan, please feel free to contact the Metropolitan Planning Commission at (810) 989-6950.

Sincerely,

A handwritten signature in cursive script, appearing to read "Gordon Ruttan".

Gordon Ruttan  
Planning Director

cc: Ted Frantz, Chair, Solid Waste Management Planning Committee

# **2000 UPDATE OF THE ST. CLAIR COUNTY SOLID WASTE MANAGEMENT PLAN**

***Draft  
January 10, 2001***

***For MDEQ Approval***

***Prepared by  
St. Clair County Metropolitan Planning Commission Staff***

***As directed by the  
St. Clair County Solid Waste Management Planning Committee***

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## **COUNTY BOARD OF COMMISSIONERS**

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Pat Acciavatti, Chairperson  
Lee Masters, Vice Chairperson  
Donald E. Dodge  
Juanita Gittings  
Judith A. Keegan  
Patrick Quain  
Don Wismer

---

## **ST. CLAIR COUNTY METROPOLITAN PLANNING COMMISSION (THE DESIGNATED PLANNING AGENCY)**

---

Steven Cooper, Chairperson  
David Haynes, Vice Chairperson  
Dorothea Knight, Secretary  
Martin Barnes  
Don Dodge  
Dan Lockwood  
Ken Reeves  
Frank Schoonover  
Robert Sheehy  
Robert Tansky  
Charles Williams

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## **PROJECT STAFF**

---

Gordon Ruttan, Planning Director  
Geoff Donaldson, Environmental Planner  
J. Lawrence O'Keefe, Resource Recovery  
Coordinator/Landfill Manager  
Trevor Floyd, GIS Analyst  
Dale Whithead, Secretary  
Carol Backstrom, Secretary

---

## **ST. CLAIR COUNTY SOLID WASTE MANAGEMENT PLANNING COMMITTEE**

---

### **GENERAL PUBLIC**

Karen Holk  
Robert Lixey  
Janice Littlefield

### **REGIONAL PLANNING AGENCY**

Amy Mangus

### **COUNTY GOVERNMENT**

Lee Masters

### **CITY GOVERNMENT**

Timothy Klunder

### **Township Government**

Patricia Iseler, Secretary

### **ENVIRONMENTAL INTEREST**

Michele Biernot-Kinna  
Catherine Cumbow

### **INDUSTRIAL WASTE GENERATOR**

Stephen J. Bentley

### **SOLID WASTE INDUSTRY**

Ted Frantz, Chairperson  
Aberdeen Howard  
Matthew Lewandowski  
Randy Teufel, Vice Chairperson

---

**PLAN FORMAT**  
**FOR PREPARING**  
**COUNTY SOLID WASTE MANAGEMENT PLANS**

**AS REQUIRED BY SECTION 11539a OF  
PART 115, SOLID WASTE MANAGEMENT, OF  
THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT  
1994 PA 451, AS AMENDED**



**John Engler, Governor  
Russell J. Harding, Director**

**Michigan Department of Environmental Quality  
Waste Management Division**

**This document is available to download from our Internet site at:  
<http://www.deq.state.mi.us./wmd/sections/swpshome.html>**

**EQP 5210 (8-97)**

## 2000 PLAN UPDATE COVER PAGE

MDEQ information is denoted by the font "CG Times -10" throughout this report as shown here. Information provided by St. Clair County is denoted by the font "Arial - 12" throughout this report as shown here. Inserts and attachments appear in their original format.

The Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), Part 115, Solid Waste Management, and its Administrative Rules, requires that each County have a Solid Waste Management Plan Update (Plan) approved by the Michigan Department of Environmental Quality (DEQ). Section 11539a requires the DEQ to prepare and make available a standardized format for the preparation of these Plan updates. This document is that format. The Plan should be prepared using this format without alteration. Please refer to the document entitled "Guide to Preparing the Solid Waste Management Plan Update" for assistance in completing this Plan format.

**DATE SUBMITTED TO THE DEQ:** January 10, 2001.

If this Plan includes more than a single County, list all counties participating in this Plan.

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The following lists all the municipalities from outside the County who have requested and have been accepted to be included in the Plan, or municipalities within the County that have been approved to be included in the Plan of another County according to Section 11536 of Part 115 of the NREPA. Resolutions from all involved County boards of commissioners approving the inclusion are included in Appendix E.

<u>Municipality</u>	<u>Original Planning County</u>	<u>New Planning County</u>
Memphis	St. Clair	Macomb

**DESIGNATED PLANNING AGENCY PREPARING THIS PLAN UPDATE:**

St. Clair County Metropolitan Planning Commission

**CONTACT PERSON:** Mr. Gordon Ruttan, Director

**ADDRESS:** St. Clair County Metropolitan Planning Commission  
200 Grand River Avenue; Suite 202  
Port Huron, MI 48060

**PHONE:** (810) 989-6950      **FAX:** (810) 987-5931

**E-MAIL:** N/A.

**CENTRAL REPOSITORY LOCATION(S):** St. Clair County Metropolitan Planning Commission, 200 Grand River Avenue; Suite 202, Port Huron, Michigan 48060

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# EXECUTIVE SUMMARY

The following summarizes the solid waste management system selected to manage solid waste within the County. In case of conflicting information between the executive summary and the remaining contents of the Plan update, the information provided in the main body of the Plan update found on the following pages will take precedence over the executive summary.

## OVERALL VIEW OF THE COUNTY (attach additional pages as necessary)<sup>1</sup>

Township or Municipality Name	Population <sup>2</sup>	% Land Use		Ag	% of Economic Base*			
		Rural	Urban		For	Ind	Com	Other
<u>Algonac</u>	<u>4923</u>	<u>13</u>	<u>87</u>	<u>7</u>	<u>0</u>	<u>1</u>	<u>9</u>	<u>83</u>
<u>Berlin Twp.</u>	<u>3174</u>	<u>95</u>	<u>5</u>	<u>85</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>15</u>
<u>Brockway Twp.</u>	<u>1942</u>	<u>96</u>	<u>4</u>	<u>85</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>15</u>
<u>Burtchville Twp.</u>	<u>4059</u>	<u>87</u>	<u>13</u>	<u>67</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>32</u>
<u>Capac</u>	<u>1704</u>	<u>64</u>	<u>36</u>	<u>54</u>	<u>0</u>	<u>4</u>	<u>12</u>	<u>30</u>
<u>Casco Twp.</u>	<u>5263</u>	<u>88</u>	<u>12</u>	<u>70</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>25</u>
<u>China Twp.</u>	<u>3448</u>	<u>86</u>	<u>14</u>	<u>70</u>	<u>0</u>	<u>3</u>	<u>2</u>	<u>25</u>
<u>Clay Twp.</u>	<u>10894</u>	<u>78</u>	<u>22</u>	<u>26</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>71</u>
<u>Clyde Twp.</u>	<u>6214</u>	<u>86</u>	<u>14</u>	<u>46</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>51</u>
<u>Columbus Twp.</u>	<u>3941</u>	<u>88</u>	<u>12</u>	<u>68</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>30</u>
<u>Cottrellville Twp.</u>	<u>3771</u>	<u>86</u>	<u>14</u>	<u>73</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>25</u>
<u>East China Twp.</u>	<u>3547</u>	<u>53</u>	<u>47</u>	<u>40</u>	<u>0</u>	<u>22</u>	<u>3</u>	<u>35</u>
<u>Emmett</u>	<u>325</u>	<u>84</u>	<u>16</u>	<u>79</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>18</u>
<u>Emmett Twp.</u>	<u>2158</u>	<u>96</u>	<u>4</u>	<u>80</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>18</u>
<u>Fort Gratiot Twp.</u>	<u>11223</u>	<u>54</u>	<u>46</u>	<u>39</u>	<u>0</u>	<u>3</u>	<u>5</u>	<u>53</u>
<u>Grant Twp.</u>	<u>1693</u>	<u>95</u>	<u>5</u>	<u>77</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>22</u>
<u>Greenwood Twp.</u>	<u>1403</u>	<u>96</u>	<u>4</u>	<u>86</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>12</u>
<u>Ira Twp.</u>	<u>6839</u>	<u>84</u>	<u>16</u>	<u>71</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>26</u>
<u>Kenockee Twp.</u>	<u>2469</u>	<u>94</u>	<u>6</u>	<u>82</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>16</u>
<u>Kimball Twp.</u>	<u>8478</u>	<u>78</u>	<u>22</u>	<u>42</u>	<u>1</u>	<u>2</u>	<u>6</u>	<u>49</u>
<u>Lynn Twp.</u>	<u>967</u>	<u>98</u>	<u>2</u>	<u>84</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>16</u>

<sup>1</sup> SEMCOG 1995 Land Use Cover

<sup>2</sup> SEMCOG 2020 Regional Development Forecast

Township or Municipality Name	Population	% Land Use		Ag	% of Economic Base*			
		Rural	Urban		For	Ind	Com	Other
<u>Marine City</u>	<u>5195</u>	<u>43</u>	<u>57</u>	<u>40</u>	<u>0</u>	<u>11</u>	<u>13</u>	<u>36</u>
<u>Marysville</u>	<u>9505</u>	<u>33</u>	<u>67</u>	<u>26</u>	<u>0</u>	<u>18</u>	<u>9</u>	<u>48</u>
<u>Mussey Twp.</u>	<u>2133</u>	<u>94</u>	<u>6</u>	<u>81</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>17</u>
<u>Port Huron</u>	<u>33003</u>	<u>10</u>	<u>90</u>	<u>2</u>	<u>0</u>	<u>11</u>	<u>18</u>	<u>69</u>
<u>Port Huron Twp.</u>	<u>8743</u>	<u>50</u>	<u>50</u>	<u>23</u>	<u>0</u>	<u>5</u>	<u>10</u>	<u>61</u>
<u>Riley Twp.</u>	<u>3150</u>	<u>92</u>	<u>8</u>	<u>81</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>17</u>
<u>St. Clair</u>	<u>6021</u>	<u>31</u>	<u>69</u>	<u>16</u>	<u>0</u>	<u>8</u>	<u>7</u>	<u>69</u>
<u>St. Clair Twp.</u>	<u>5959</u>	<u>83</u>	<u>17</u>	<u>59</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>35</u>
<u>Wales Twp.</u>	<u>2848</u>	<u>92</u>	<u>8</u>	<u>76</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>20</u>
<u>Yale</u>	<u>2092</u>	<u>46</u>	<u>54</u>	<u>41</u>	<u>0</u>	<u>5</u>	<u>16</u>	<u>39</u>

Total Population                    167478

\*Ag = Agriculture; For = Forestry; Ind = Industry; Com = Commercial; Oth = All Other Economic Bases  
Additional listings, if necessary, are listed on an attached page.

## EXECUTIVE SUMMARY

In Accordance with the State of Michigan Solid Waste Management Act (Part 115 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended), the St. Clair County Solid Waste Management Plan provides guidance toward sound management principles through its policies, processes, and recommendations for the next five and ten years. The following is an overview, of the plan content, the plan's recommendations for programs and facilities necessary to handle the County's solid waste.

The introduction of the plan sets goals and objectives for the protection of public health, and the environment, as well as for the effective handling, processing, and disposing of solid waste generated within the St. Clair County.

The plan identifies population and economic characteristics of St. Clair County. Existing transportation networks, as well as current and planned land use are examined and illustrated on maps in following chapters. All season roads, on which waste haulers can transport waste to disposal sites with minimal impact, are shown. Because soils and hydrological information was discussed in previous Solid Waste Management Plans, this Plan does not point to any of these characteristics.

The county population is expected to increase between 2000 and 2010 by 9% to 182,766. With the population increase, the estimated tons of solid waste generated rise from 464,468 tons annually in 2000 to 487,940 tons by 2010 (an increase of 5%). This increase in estimated tons of solid waste is not proportionate to the expected increase in population because the level of fly ash generation is expected to remain level. Final volume estimates depend on the amount of compaction in the landfill as well as possible future expansion. Current and future estimates of waste by selected waste categories are also noted.

The center of waste generation was determined to be located in the eastern and southern portions of the County in the communities along the St. Clair River and Lake St. Clair. The cities of Port Huron and Marysville, and Fort Gratiot Township have nearly a third of the population of St. Clair County and generate over a third of St. Clair County solid waste (excluding fly ash generation). The center of waste generation for industrial waste is along the industrial corridors in Port Huron and Marysville.

The system of waste handling and disposal in St. Clair County is reviewed. A survey of waste haulers was conducted in 1998 and 1999 to identify private waste haulers serving the cities, villages and townships of the County. Nine haulers were identified in 1999 as being responsible for most residential and commercial waste collection.

A transfer facility/processing plant as well as two licensed landfill facilities are identified. These operations are: Smiths Creek Landfill, Range Road Property (Type III) Detroit Edison Co., and Howard Solid Waste Transfer and Reclamation Facility. Details of the waste quantity, operating status, waste types received, and site size are included in the Solid Waste Disposal Areas and Facility Descriptions sections of this Plan.

The County feels that existing, licensed facilities noted within the Solid Waste Disposal

Areas of this Plan will address county disposal needs for the five and ten year planning periods. By monitoring annual volume usage of the landfills and remaining disposal capacity, the County can sustain its capacity to provide waste disposal for the five and ten year planning periods and beyond.

In the event that an emergency closes landfill facilities and prevents the use of landfills in the facility plan, a contingency plan provides for inter-county agreements with specific terms for waste type, quantity, and time limits.

One of the goals of this Plan is to reduce the quantity and volume of St. Clair County's solid waste stream that must be disposed of in landfills. The means by which this goal will be met include waste reduction and resource recovery. The plan identifies several public and private efforts that work towards reducing the quantities and volumes of waste needing disposal. While there weren't any communities that arranged for curbside collection of recyclables in the 1990 Plan Update, this Plan identifies at least ten communities with curbside recycling arrangements. In addition, several communities have arrangements for yard waste collection.

St. Clair County has been actively involved in resource recovery since the 1990 Plan Update. The Resource Recovery program has expanded to include the County Office of Resource Recovery which administers a Recycling Drop-Off Program as well as a Household Hazardous Materials Collection Program. Other efforts of the Resource Recovery Office include public information and educational efforts.

The plan acknowledges the management system in place and reflects on current roles and recommended policies and programs to assure compliance with the plan. Responsible parties of the plan within the County government, and brief accounts of their duties in planning, implementation, and enforcement are noted.

Public participation is a vital element in the preparation of a Plan. The final sections of this plan give details on the public involvement process in the preparation of this plan as well as the planning committee's appointment procedure and the structure of the planning committee. Appendix C is reserved for further public comment, staff response, minutes of the public hearings, and similar records.

## **CONCLUSIONS**

In conclusion, it is believed that through the efforts of the staff of the St. Clair County Metropolitan Planning Commission under the direction of the St. Clair County Solid Waste Management Planning Committee and under the review of local communities and the St. Clair County Board of Commissioners, this plan will provide for St. Clair County a workable, enforceable plan for the handling and disposal of solid waste generated in the county.

With the needs of the County set firmly in mind, this plan continues a goal set in the 1990 Plan of "self-sufficiency". St. Clair County plans to be self-sufficient and continues to implement flow control restraints on the importation or exportation of solid waste for disposal

from or to other counties in Michigan. While present landfill capacity is sufficient to handle County waste for the plan period, the County also plans to direct its efforts and resources to waste recovery, to reduce dependency on landfills through composting, recycling, education, waste reduction and reuse as recommended in the Plan. Through careful and thorough implementation of the plan, the county will be able to continue to deal effectively with its solid waste disposal needs in the future.

## **SELECTED ALTERNATIVES**

St. Clair County's selected alternative is to retain the current solid waste management system. The solid waste management system selected is one in which landfill disposal continues as the primary means of disposal with increased emphasis placed on source reduction, recycling and composting. An overview of the major components of this system follows:

- **Collection and Transportation of Solid Waste:** The existing collection and transportation system will remain in place. Solid waste collection services will continue to be provided to all county residents, businesses, and industries. There are no governmentally operated municipal collection systems in St. Clair County. Nine hauling companies collect most of the County's residential waste. While it is not this plan's intent to preclude involvement by municipalities from providing solid waste collection services to citizens within their respective jurisdictions, this plan also encourages municipalities to consider the benefits of contracting for solid waste services, although such arrangements are certainly not mandated.
- **Disposal of Solid Waste:** Smiths Creek Landfill and Range Road Property (Type III) Detroit Edison Company will continue to meet St. Clair County's solid waste disposal needs for the five and ten year planning periods and beyond. Landfills in Sanilac and Huron Counties are available to provide additional disposal capacity on an emergency, contingency basis.<sup>1</sup>
- **Resource Recovery:** The St. Clair County Resource Recovery Office will continue to manage recycling drop-off containers located throughout the county. Curbside recycling services and private recycling firms are established in many communities, and are described in detail in the following pages. This plan encourages all local municipalities to provide recycling opportunities for their residents, either through arrangements for curbside collection of recyclables or the provision of recycling drop-off sites.
- **Household Hazardous Materials:** The St. Clair County Resource Recovery Office will continue to manage the Household Hazardous Materials Collection Site at Smiths Creek Landfill. Another site may be established in the southern part of the county by the Resource Recovery Office. The St. Clair County Household Hazardous Materials Collection program is described in detail in the following pages. This plan encourages the County to work in partnership with public and private industry to provide expanded opportunities for separation and collection of potentially hazardous

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<sup>1</sup> See Appendix D for special conditions affecting import or export of solid waste.

materials from residents.

- **Composting:** Two private composting facilities process the majority of yard wastes collected from residents and businesses in St. Clair County. Currently, there are five municipalities that arrange for curbside collection of yard wastes. Some communities provide drop-off sites for yard wastes and special items like Christmas Trees. "Backyard" composting by residents will continue to be encouraged. The MSU Extension Office and the Master Gardener Program will continue to operate compost bin sales and presentations. This plan encourages all local municipalities to provide composting opportunities for their residents, either through arrangements for curbside collection or the provision of yard waste drop-off sites.
- **Resource Conservation and Waste Reduction:** Resource conservation and waste reduction will be encouraged through voluntary efforts of residents, businesses and industries. The Resource Recovery Office should investigate ways to expand public information and education in this area.
- **Public Information and Education:** The Resource Recovery Office will continue to produce and operate informational and educational materials and programs for residents, businesses and industries in St. Clair County. Those programs and materials offered by MSU Extension offices will continue as well. This plan encourages public and private partnerships that aim to educate the public in the areas of solid waste disposal, resource recovery, resource conservation and composting. Entities such as environmental organizations, private non-profit groups, and others, are encouraged to become involved in public information and education efforts.

# INTRODUCTION

## GOALS AND OBJECTIVES

To comply with Part 115 and its requirements, each Plan must be directed toward goals and objectives based on the purposes stated in Part 115, Sections 11538.(1)(a), 11541.(4) and the State Solid Waste Policy adopted pursuant to this Section, and Administrative Rules 711(b)(i) and (ii). At a minimum, the goals must reflect two major purposes of Solid Waste Management Plans:

- (1) To utilize to the maximum extent possible the resources available in Michigan's solid waste stream through source reduction, source separation, and other means of resource recovery and;
- (2) To prevent adverse effects on the public health and the environment resulting from improper solid waste collection, transportation, processing, or disposal, so as to protect the quality of the air, the land, and ground and surface waters.

This Solid Waste Management Plan works toward the following goals through actions designed to meet the objectives described under the respective goals which they support:

Goal 1: Fulfill the requirements of Part 115 of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA Part 115) for solid waste management planning

Objective 1a: File "Notice of Intent" naming the St. Clair County Metropolitan Planning Commission as the Designated Planning Agency (DPA) responsible for plan preparation.

Objective 1b: Form a Solid Waste Management Planning Committee pursuant to section 11534 of NREPA Part 115.

Objective 1c: Inventory and describe the existing solid waste management system in St. Clair County including all existing facilities where solid waste is being transferred, treated, processed, or disposed of.

Objective 1d: Estimate solid waste generation for five and ten year projections with regards to current disposal capacity.

Objective 1e: Conduct a public participation program which shall encourage the participation and involvement of the public and municipalities in the development and implementation of the solid waste management plan.

Goal 2: Continue to be self-sufficient in managing the solid waste generated in St. Clair County.

Objective 2a: Manage the use of landfills in St. Clair County so as to maximize the

life of all existing landfills in St. Clair County.

Objective 2b: Encourage maximum compaction of waste.

Objective 2c: Assure that solid wastes, source separated recyclable materials, and yard wastes are handled, processed and diverted from disposal in landfills.

Objective 2d: Prohibit importation of solid waste for disposal from other counties in Michigan.

Objective 2e: Prohibit exportation of solid waste generated in St. Clair County for disposal in other counties in Michigan.

Goal 3: Protect public health and the environment from the adverse effects of improper solid waste collection, transportation, processing and disposal.

Objective 3a: Promote solid waste practices that avoid adverse effects on the public health and environment.

Objective 3b: Assure that all non-hazardous solid waste generated in St. Clair County is collected and recovered, processed, or disposed of at facilities which comply with state laws and rules governing location, design and operation.

Objective 3c: Provide sufficient disposal capacity to accommodate the solid waste generated in St. Clair County for a 10-year planning period.

Objective 3d: Develop a countywide licensing and inspection program for solid waste haulers and solid waste transporting units.

Objective 3e: Promote the county household hazardous waste drop off/collection programs.

Objective 3f: Encourage municipalities to explore contracting with a single hauler for residential pickup of solid waste, recyclables and yard waste within the municipality.

Goal 4: Develop and promote public education programs on solid waste management.

Objective 4a: Educate citizens on appropriate solid waste handling and disposal techniques.

Objective 4b: Notify citizens about opportunities for solid waste management such as recycling, household hazardous waste collections/drop-offs, and special concerns through radio, television, flyers, and newspaper

announcements.

Objective 4c: Encourage the purchase of recycled content materials by promoting America Recycles Day and similar public event programs.

Goal 5: Reduce the quantity and volume of St. Clair County's solid waste stream that must be disposed of in landfills by increasing municipal solid waste diversion rates from current levels to a county average of 22 % by 2004 and 25 % by 2009.

Objective 5a: Identify existing community recycling programs, compost facilities, and solid waste management education programs in use in St. Clair County.

Objective 5b: Encourage continued participation in existing programs and expansion of these programs in communities that do not provide source reduction, source separation, composting and recycling.



# DATA BASE

Identification of sources of waste generation within the county, total quantity of solid waste generated to be disposed, and sources of the information. (Attach additional pages as necessary)

The Waste Stream is comprised of four categories of waste:

- (1) Municipal Solid Waste (**MSW**),
- (2) Construction and Demolition Debris (**CDD**),
- (3) Industrial Special Wastes (**ISW**),
- (4) and Ash.

MSW consists of residential waste, commercial waste and industrial waste. CDD is comprised of construction and/or demolition debris. Ash, which is generated during the coal-burning processes of energy production, consists of bottom ash, economizer ash and fly ash. ISW are wastes that do not fit into other categories. These include treatment of sludge, bulky items, tires, foundry sand, sawdust, agricultural waste, and contaminated soils.

The following database is derived from four sources:

- Fiscal Year 1998 MDEQ *Report of Solid Waste Landfill in Michigan*,
- Volumes reported by waste haulers operating in St. Clair County,
- 1994 state-wide waste stream estimates calculated by Oakland County Solid Waste Planning, and
- Detroit Edison reported amounts of ash generated annually at their St. Clair, Belle River, and Marysville power plants.

## Average Generation per Resident/Commercial employee<sup>1</sup>/Industrial Employee<sup>2</sup>

Residential – 3.77 lbs per day (365 days/year) – generated

Commercial – 8.07 lbs per working day (260 days/year) – generated

Industrial – 10.6 lbs per working day (260) days/year) – generated

CDD – 0.7 lbs per capita per day (365 days/year) – generated

ISW – ISW and CDD together comprise 20% of the statewide waste stream or 25% of MSW

Ash – Ash volumes are reported as estimated by Detroit Edison<sup>3</sup>

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<sup>1</sup> Commercial employees are defined as those who are occupied in Standard Industrial Classification (SIC) Codes 40-97.

<sup>2</sup> Industrial employees are defined as those who are occupied in Standard Industrial Classification (SIC) Codes 1-39.

<sup>3</sup> The ash volumes reported by Detroit Edison represent only quantities to be disposed of at their Range Road Property (Type III) and they include some small amounts of ash generated by Cargill Salt. Some ash is site-seperated and sold for recycling.

Waste Type	Current Annual Volume	Five-Year Annual Volume	Ten-Year Annual Volume
Residential Waste	115,229 tons	120,438 tons	125,748 tons
Commercial Waste	53,422 tons	58,203 tons	61,395 tons
Industrial Waste	18,923 tons	19,174 tons	19,209 tons
CDD	21,102 tons	22,363 tons	23,348 tons
ISW	25,792 tons	27,091 tons	28,240 tons
Ash	230,000 tons	230,000 tons	230,000 tons
<b>Total Waste Generated</b>	<b>464,468 tons</b>	<b>477,269 tons</b>	<b>487,940 tons</b>

**TOTAL QUANTITY OF SOLID WASTE GENERATED:**

464,468 ☒ Tons or ☐ Cubic Yards in 2000 (identify unit of time)

**TOTAL QUANTITY OF SOLID WASTE NEEDING DISPOSAL:**

430,946 ☒ Tons or ☐ Cubic Yards in 2000 (identify unit of time)

## DATA BASE

Inventory and description of all solid waste disposal areas within the County or to be utilized by the County to meet its disposal needs for the planning period.

### Definitions and Kinds of Disposal Areas

**Sanitary Landfill:** The Part 115 of the NREPA, 1994 PA 451, as amended, definition of "Sanitary Landfill" is a type of disposal area consisting of one or more landfill units and the active work areas associated with these units. Sanitary landfills shall be classified as one of the following types of landfills:

- **Type II Landfill:** a municipal solid waste landfill and includes a municipal solid waste incinerator ash landfill.
- **Type III Landfill:** any landfill which is not a municipal solid waste landfill or hazardous waste landfill and includes any of the following:
  - Construction and demolition landfills
  - Industrial waste landfills
  - Landfills which accept waste other than household waste, municipal solid waste incinerator ash, or hazardous waste from conditionally exempt small quantity generators.

**Transfer Facility:** The Part 115 of the NREPA, 1994 PA 451, as amended, definition of "Solid Waste Transfer Facility" is a tract of land, a building and any appurtenances, or a container, or any combination of land, buildings, or containers that is used or intended for use in the rehandling or storage of solid waste incidental to the transportation of the solid waste, but is not located at the site of generation or the site of disposal of the solid waste.

- **"Type A" Transfer Facility** is designed and operated to receive solid waste primarily from mechanically unloaded vehicles.
- **"Type B" Transfer Facility** is designed and operated to receive domestic and commercial solid waste from vehicles unloaded by hand.

**Processing Plant:** The Part 115 of the NREPA, 1994 PA 451, as amended, definition of "Solid Waste Processing Plant" is a tract of land, building, unit, or appurtenance of a building or unit or a combination of land, buildings, and units that is used or intended for use for the processing of solid waste or the separation of material for salvage or disposal, or both, but does not include a plant engaged primarily in the acquisition, processing, and shipment of ferrous or nonferrous metal scrap, or a plant engaged primarily in the acquisition, processing, and shipment of slag or slag products.

### Solid Waste Disposal Areas

The 1998 Facility Survey identified three disposal areas within the County that were being used by the County to meet its disposal needs:

**Smiths Creek Landfill:** St. Clair County has owned and operated Smiths Creek Landfill as

a Type II landfill since 1969. The Smiths Creek Landfill is operated as a profit/loss center where the daily activities and operations are managed to receive and dispose of residential, commercial and industrial waste. The Smiths Creek Landfill is a Type II site and is prohibited from receiving and disposing of hazardous materials. The landfill is located in a sparsely populated area of Kimball Township (and part of St. Clair Township) on Smiths Creek Road. The total area of the facility property is 364.5 acres, of which 157 acres are currently permitted for disposal. This plan recognizes future expansion of the facility that would include vertical expansion as well as a small amount of lateral expansion. Possible future expansion does not involve increasing the total area of the facility property. Current projected remaining capacity of the landfill is estimated to be 5,700,000 in-place cubic yards. Possible future expansions at the Smiths Creek Landfill would result in an additional 9,100,000 cubic yards of capacity and an increase from 15 years of estimated lifetime to 35.9 years of landfill lifetime.

Range Road Property (Type III) Detroit Edison Co.: The coal-burning electric power plants of Detroit Edison generate large quantities of ash as a by-product of burning coal. The company owns and operates a Type III landfill for disposal purposes. The site is known as the Detroit Edison Ash Disposal Area or Range Road Property, Type III Landfill. The site is located in China Township, Section 12, at 366 Range Rd. south of Bree. The site area is 456.67 acres with an estimated available capacity (as of 1999) of 18,750,000 cubic yards. Annual usage is at a rate of 250,000 cubic yards per year. Apparent remaining life for this landfill dedicated to ash disposal is 75 years. The major contributors of ash to the Detroit Edison Ash Disposal Area are the large St. Clair and Belle River power plants located nearby. Detroit Edison contracts with a private hauler to transport ash from the plants to the disposal site.

Detroit Edison has increased the recycling of coal ash from its Belle River-St. Clair complex over the past 10 years, consequently reducing its disposal needs. The 1990 St. Clair County Solid Waste Management Plan identified an annual volume usage at this facility to be 320,000 cubic yards. Current annual usage recognizes a decrease 70,000 cubic yards annually since 1990. In order to assure minimal environmental impact and to preserve the availability of this site for at least the next seventy-five (75) years, Detroit Edison is committed to maximize the recycling and minimize the land filling of its coal ash. In order to insure that this commitment continues, Detroit Edison agrees to place the following conditions on the Range Road ash facility:

- Utilization of the facility shall be limited to ash generated at coal burning facilities located within St. Clair and Huron Counties.
- Ash imported from Huron County shall be limited to that generated at Edison's Harbor Beach Power Plant and shall also be limited to an annual average of one truckload per day.
- Edison shall make its best efforts to sell for recycling at least twice the amount of ash from the Belle River/St. Clair complex as it disposes from the Harbor Beach plant.

Howard's Solid Waste Transfer and Reclamation Center: The Howard Solid Waste Transfer and Reclamation Facility is located on the north side of Dove Rd., west of

Michigan Rd., in Port Huron Township. This Plan designates Howard's Solid Waste Transfer and Reclamation Center as a licensable transfer facility and processing plant. A proposed expansion approved by the Solid Waste Management Planning Committee (2/27/89) includes: a 55' x 100' addition to the first transfer/processing building, a compost area, and a recycling drop-off center. Approximately 45,000 cubic yards of refuse was deposited at the transfer station in 1998. Waste is hauled to Smiths Creek Landfill for final disposal. Scrap metal and other recyclable materials obtained from on-site reclamation are sold on the recycling market.

## DATA BASE

### FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Smiths Creek Landfill

County: St. Clair Location: Kimball and St. Clair Twps. Town: T6N Range: R16E Section(s): 32  
(Kimball Twp.) and 5 (St. Clair Twp.)

Map identifying location included in Attachment Section: ☒ Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes: N./A.

☒ Public ☐ Private Owner: St. Clair County

#### Operating Status (check)

☒ open  
☐ closed  
☒ licensed  
☐ unlicensed  
☐ construction permit  
☐ open, but closure  
☐ pending ☐

#### Waste Types Received (check all that apply)

☒ residential  
☒ commercial  
☒ industrial  
☒ construction & demolition  
☒ contaminated soils  
☒ special wastes \*  
other: \_\_\_\_\_

\* Explanation of special wastes, including a specific list and/or conditions:

Sludge, Foundry Sand, Coal slag dust, Asbestos, Lime Slurry, Salt brine and Medical Waste.

#### Site Size:

Total area of facility property: 364.5 acres

Total area sited for use: 264.5 acres

Total area permitted: 157.0 acres

Operating: 63.8 acres

Not excavated: 37.0 acres

Current capacity: 5,700,000 ☐ tons or ☒ yds<sup>3</sup> (Remaining future capacity  
14,800,000 yd<sup>3</sup>)

Estimated lifetime: 15 years (Future expansion 35.9 years)

Estimated days open per year: 312 days

Estimated yearly disposal volume: 768,000 ☐ tons or ☒ yds<sup>3</sup>

(if applicable)

Annual energy production:

Landfill gas recovery projects: N./A. megawatts

Waste-to-energy incinerators: N./A. megawatts

## FACILITY DESCRIPTIONS

Facility Type: Type III Landfill

Facility Name: Range Road Property (Type III) Detroit Edison Co.

County: St. Clair Location: China Twp. Town: 4N Range: 16E Section(s): 12

Map identifying location included in Attachment Section: ☒ Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes: N./A.

☐ Public ☒ Private Owner: Detroit Edison Co.

### Operating Status (check)

- ☒ open
- ☐ closed
- ☒ licensed
- ☐ unlicensed
- ☐ construction permit
- ☐ open, but closure
- ☐ pending

### Waste Types Received (check all that apply)

- ☐ residential
- ☐ commercial
- ☐ industrial
- ☐ construction & demolition
- ☐ contaminated soils
- ☒ special wastes \*
- ☐ other: \_\_\_\_\_

\* Explanation of special wastes, including a specific list and/or conditions:

## Ash produced from the burning of coal

### Site Size:

Total area of facility property: 456.47 acres

Total area sited for use: 456.47 acres

Total area permitted: 456.47 acres

Operating: 456.47 acres

Not excavated: N./A. acres

Current capacity: 18,750,000 ☐ tons or ☒ yds<sup>3</sup>

Estimated lifetime: 75 years

Estimated days open per year: 300 days

Estimated yearly disposal volume: 250,000 ☐ tons or ☒ yds<sup>3</sup>

(if applicable)

Annual energy production:

Landfill gas recovery projects: N./A. megawatts

Waste-to-energy incinerators: N./A. megawatts

## FACILITY DESCRIPTIONS

Facility Type: Transfer Facility/Processing Plant

Facility Name: Howard Solid Waste Transfer & Reclamation Facility

County: St. Clair Location: Port Huron Twp. Town: 6N Range: 17E Section(s): 18

Map identifying location included in Attachment Section: ☒ Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes: Smiths Creek Landfill

☐ Public ☒ Private Owner: Aberdeen Howard

### Operating Status (check)

☒ open  
☐ closed  
☒ licensed  
☐ unlicensed  
☐ construction permit  
☐ open, but closure  
☐ pending

### Waste Types Received (check all that apply)

☒ residential  
☒ commercial  
☒ industrial  
☒ construction & demolition  
☐ contaminated soils  
☐ special wastes \*  
☐ other: \_\_\_\_\_

\* Explanation of special wastes, including a specific list and/or conditions:

### Site Size:

Total area of facility property: 15 acres  
Total area sited for use: 7 acres  
Total area permitted: 3.5 acres  
Operating: N/A. acres  
Not excavated: N/A. acres  
Current capacity: \_\_\_\_\_ ☐ tons or ☐ yds<sup>3</sup>  
Estimated lifetime: \_\_\_\_\_ years  
Estimated days open per year: 286 days  
Estimated yearly disposal volume: 45,000 ☐ tons or ☒ yds<sup>3</sup>

(if applicable)

Annual energy production:  
Landfill gas recovery projects: N/A. megawatts  
Waste-to-energy incinerators: N/A. megawatts

## DATA BASE

### **SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION INFRASTRUCTURE**

The following describes the solid waste collection services and transportation infrastructure that will be utilized within the County to collect and transport solid waste.

#### Collection:

While most of the County's seven cities and two villages have their residential waste collection provided for under municipal contracts with private haulers, the residents in the rural townships rely on a "free market" system that requires residents to arrange for collection on an individual basis. The exceptions are the townships of: China, Clay, Cottrellville, East China, Greenwood and Ira.

The following table indicates which firms contract directly with communities for collection of residential waste. There are no municipal contracts for collection of commercial or industrial waste.

COMMUNITIES	HAULERS		
	BFI	Waste Management	World Waste
City of Algonac		X	
City of Marine City	X		
City of Marysville		X	
City of Port Huron		X	
City of St. Clair		X	
City of Yale		X	
Village of Capac	X		
Village of Emmett			
Berlin Twp.			
Brockway Twp.			
Burtchville Twp.			
Casco Twp.			
China Twp.		X	
Clay Twp.		X	
Clyde Twp.			
Columbus Twp.			
Cottrellville Twp.		X	
East China Twp.		X	
Emmett Twp.			
Fort Gratiot Twp.			
Grant Twp.			

Greenwood Twp.		X	
Ira Twp.			X
Kenockee Twp.			
Kimball Twp.			
Lynn Twp.			
Mussey Twp.			
Port Huron Twp.			
Riley Twp.			
St. Clair Twp.			
Wales Twp.			

The nine hauling companies responsible for most residential and commercial collection were identified in the 1998 Hauler's Survey:

- BFI/Great Lakes
- Howard's
- JR's Trash Removal
- Marcotte Disposal
- Metro Sanitation
- Sterling Sanitation
- Total Commercial Waste
- Waste Management
- World Waste

There are several other hauling firms operating in St. Clair County that collect industrial waste, building and demolition waste, and roofing materials. The amounts of waste collected by these small haulers are negligible when compared to the waste quantities collected by the hauling firms listed above.

#### Transportation:

In St. Clair County either the County Road Commission or local units of government (cities and villages) maintain roads totaling 1,311 miles. Of that, 275 miles are within the cities and villages, and 1,036 are found in the townships.

Expressway: I-94 serves as the principle route between Port Huron and Detroit. I-69 serves as the principal route between Port Huron and Flint and continues to Lansing, Battle Creek and Indianapolis. These routes cover 52 miles within the County.

Major Arterial: The Pine Grove and Gratiot Avenue corridors are key roadways through St. Clair County. Prior to the development of I-94, Gratiot Avenue roadway served as the highway between Detroit and Port Huron. This roadway still serves a vital function as it connects the various communities along its length through the County. M-19 traverses the western part of the country north and south between Macomb and Sanilac counties. The communities of Memphis, Emmett and Yale as well as I-69 are destination points.

**Arterial:** There are a number of roadways that move traffic throughout the County and provide connections between adjacent communities. M-29 is a key roadway as it provides the principal means of access between the various communities along the St. Clair River. The primary function of these roads is to move traffic. Access to these roads must be properly managed in order to maintain safe and effective movement.

**Collector:** The collectors serve to assemble traffic from local roads and subdivision streets of residential neighborhoods and deliver it to the arterial. Collectors will also serve to provide access to abutting properties. Many individual subdivisions will contain one or more collector streets that funnel traffic from the local streets and connect them with adjacent neighborhoods.

**Local Streets:** Local streets serve primarily to provide access to property and homes. Roadways are generally short and discontinuous, and generally only provide connection to one or two collector streets.

**Roadway Volumes and Capacity:** The vast majority of roads in St. Clair County are two lane roads. Most four and five lane roads are found within the urbanized areas of Port Huron and St. Clair. A review of traffic volumes indicates that many roads in St. Clair County carry less than 8,000 vehicles per day. Much of the higher volume roadways are located around the Port Huron area and along the waterfront (M-29).

Map 1 shows the Active Disposal Areas in St. Clair County and Major Thoroughfares.



# Active Disposal Areas and Major Thoroughfares

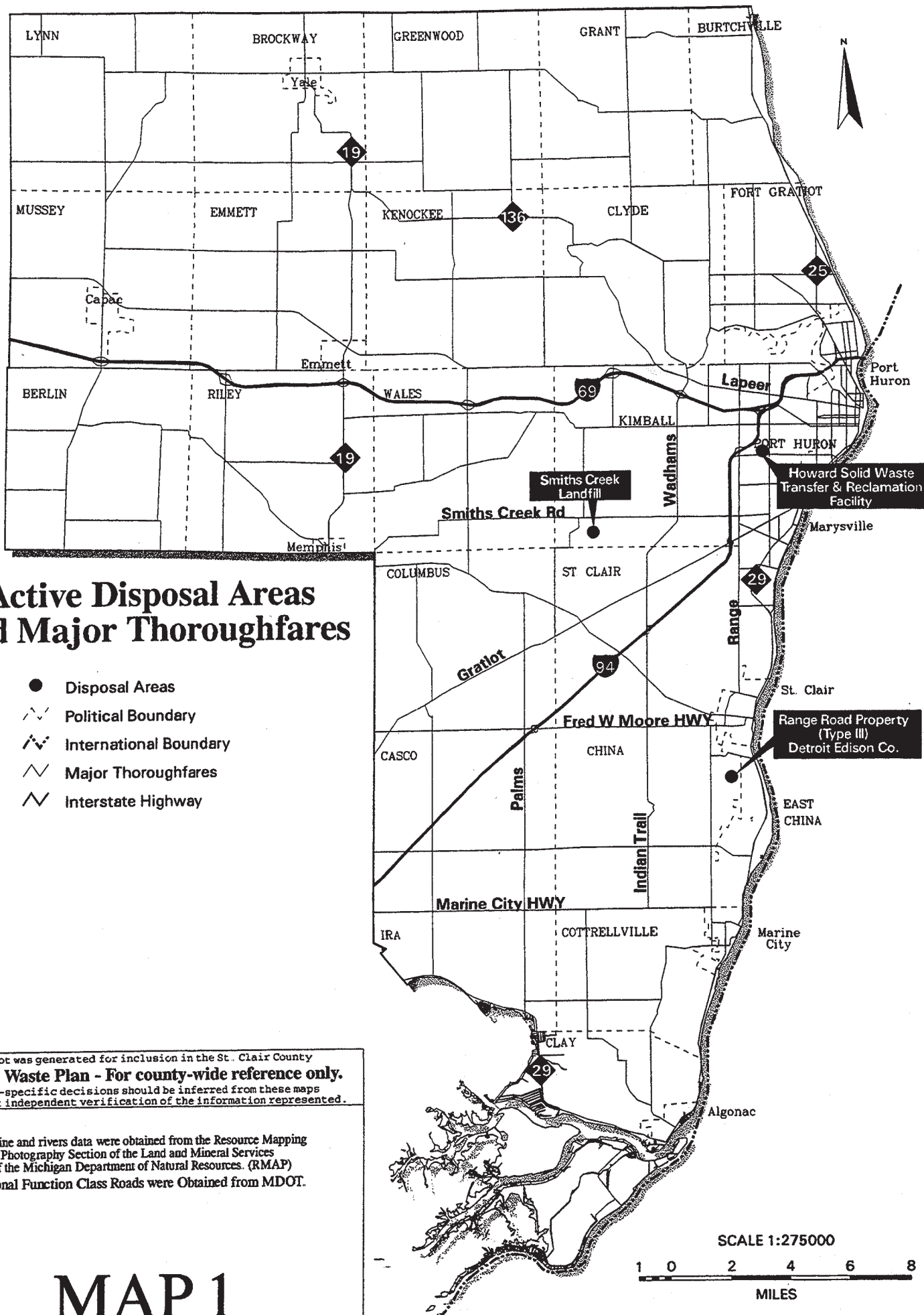
- Disposal Areas
- Political Boundary
- International Boundary
- Major Thoroughfares
- Interstate Highway

This plot was generated for inclusion in the St. Clair County  
**Solid Waste Plan - For county-wide reference only.**  
No site-specific decisions should be inferred from these maps  
without independent verification of the information represented.

## Sources:

The shoreline and rivers data were obtained from the Resource Mapping  
and Aerial Photography Section of the Land and Mineral Services  
Division of the Michigan Department of Natural Resources. (RMAP)  
The National Function Class Roads were Obtained from MDOT.

# MAP 1





## **DATA BASE**

### **EVALUATION OF DEFICIENCIES AND PROBLEMS**

The following is a description of problems or deficiencies in the existing solid waste system.

The Solid Waste Management Planning Committee formed a subcommittee to discuss and evaluate deficiencies and problems in the existing solid waste system in order to help formulate goals and objectives of the selected solid waste management system. Listed are some of the problems or deficiencies identified:

1. There is not an easy way to gather and track waste generation in the County. Efforts could be made to develop better communication between generators, haulers and solid waste facility operators.
2. Market availability and high labor costs continue to hamper recycling efforts in the County.
3. Low disposal costs discourage resource recovery.
4. Items such as batteries and used motor oil continue to enter the waste stream despite efforts of the Household Hazardous Waste Drop Off Program.
5. Lack of education programs dealing with solid waste management and resource recovery.
6. Lack of licensed Construction and Demolition Debris landfill.

## DATA BASE

### DEMOGRAPHICS

The following presents the current and projected population densities and centers for five and ten year periods, identification of current and projected centers of solid waste generation including industrial solid waste for five and ten year periods as related to the Selected Solid Waste Management System for the next five and ten year periods. Solid waste generation data is expressed in tons or cubic yards, and if it was extrapolated from yearly data, then it was calculated by using 365 days per year, or another number of days as indicated.

The Waste Stream is comprised of four categories of waste:

- (1) Municipal Solid Waste (**MSW**),
- (2) Construction and Demolition Debris (**CDD**),
- (3) Industrial Special Wastes (**ISW**),
- (4) and Ash.

Population projections and waste generation rates are reported in the table below. Waste generation rates have been previously noted in the Plan Section "Database."

Waste Projections (tons per year)							
Community	Year	Waste Types					
		Population	Residential	Commercial	Industrial	CDD	ISW
Algonac	2000	4,923	3387	1159	174	629	551
	2005	4,970	3419	1292	192	635	591
	2010	5,010	3447	1385	207	640	620
Berlin Twp.	2000	3,174	2184	86	179	405	207
	2005	3,499	2407	118	187	447	231
	2010	3,836	2639	143	196	490	255
Brockway Twp.	2000	1,942	1336	102	174	248	155
	2005	2,083	1433	123	186	266	170
	2010	2,223	1529	138	186	284	179
Burtchville Twp.	2000	4,059	2793	313	207	519	309
	2005	4,248	2923	407	186	543	336
	2010	4,434	3051	467	187	566	360
Capac	2000	1,704	1172	604	57	218	240
	2005	1,744	1200	657	65	223	258
	2010	1,787	1230	703	63	228	271

Casco Twp.	2000	5,263	3621	136	229	672	325
	2005	5,485	3774	230	244	701	361
	2010	5,683	3910	289	258	726	388
China Twp.	2000	3,448	2372	902	943	440	614
	2005	3,679	2531	1072	976	470	675
	2010	3,901	2684	1166	1022	498	720
Clay Twp.	2000	10,894	7495	1287	361	1392	894
	2005	11,677	8034	1497	400	1492	991
	2010	12,407	8536	1640	437	1585	1068
Clyde Twp.	2000	6,214	4275	326	176	794	400
	2005	6,608	4546	436	198	844	451
	2010	6,968	4794	501	230	890	491
Columbus Twp.	2000	3,941	2712	153	261	503	279
	2005	4,200	2890	227	277	537	312
	2010	4,498	3095	263	291	575	337
Cottrellville Twp.	2000	3,771	2595	276	260	482	301
	2005	3,997	2750	346	284	511	334
	2010	4,205	2893	388	303	537	359
East China wp.	2000	3,547	2440	2438	99	453	791
	2005	3,659	2517	2759	117	467	881
	2010	3,818	2627	2991	132	488	950
Emmett	2000	325	224	89	0	42	36
	2005	333	229	103	0	43	40
	2010	335	230	111	0	43	42
Emmett Twp.	2000	2,158	1485	121	132	276	159
	2005	2,427	1670	161	141	310	183
	2010	2,701	1858	186	145	345	202
Fort Gratiot Twp.	2000	11,223	7722	7045	113	1434	2286
	2005	12,079	8311	8131	121	1543	2598
	2010	12,960	8917	8931	127	1656	2838
Grant Twp.	2000	1,693	1165	104	153	216	140
	2005	1,889	1300	146	176	241	165
	2010	2,075	1428	168	187	265	181
Greenwood Twp.	2000	1,403	965	67	91	179	102
	2005	1,549	1066	68	107	198	112
	2010	1,686	1160	63	117	215	120

Ira Twp.	2000	6,839	4705	779	1586	874	894
	2005	7,342	5051	916	1714	938	982
	2010	7,872	5416	1004	1812	1006	1052
Kenockee Twp.	2000	2,469	1699	225	176	315	210
	2005	2,723	1873	295	189	348	241
	2010	2,966	2041	335	201	379	265
Kimball Twp.	2000	8,478	5833	1264	480	1083	811
	2005	8,951	6156	1560	546	1143	923
	2010	9,445	6498	1610	576	1207	964
Lynn Twp.	2000	967	665	39	216	124	106
	2005	981	675	64	209	125	112
	2010	993	683	79	215	127	117
Marine City	2000	5,195	3574	1937	1160	664	1004
	2005	5,282	3634	2138	1257	675	1082
	2010	5,368	3693	2251	1326	686	1132
Marysville	2000	9,505	6540	4698	3242	1214	2406
	2005	9,820	6756	5142	3496	1255	2594
	2010	10,113	6958	5441	3529	1292	2690
Memphis (part)	2000	394	271	215	32	50	80
	2005	421	290	237	34	54	86
	2010	448	308	260	33	57	93
Mussey Twp.	2000	2,133	1468	291	57	272	182
	2005	2,366	1628	390	68	302	220
	2010	2,591	1783	443	72	331	244
Port Huron	2000	33,003	22707	18757	4840	4216	7360
	2005	32,272	22204	18330	4106	4123	7037
	2010	31,745	21841	18098	3529	4055	6812
Port Huron Twp.	2000	8,743	6015	5058	1003	1117	1902
	2005	9,149	6295	5669	1076	1169	2091
	2010	9,512	6544	6082	1084	1215	2213
Riley Twp.	2000	3,150	2167	107	207	402	218
	2005	3,564	2452	157	226	455	254
	2010	3,977	2736	196	241	508	285
St. Clair	2000	6,021	4143	2414	1061	769	1136
	2005	6,382	4391	2679	1145	815	1239
	2010	6,741	4638	2876	1215	861	1321

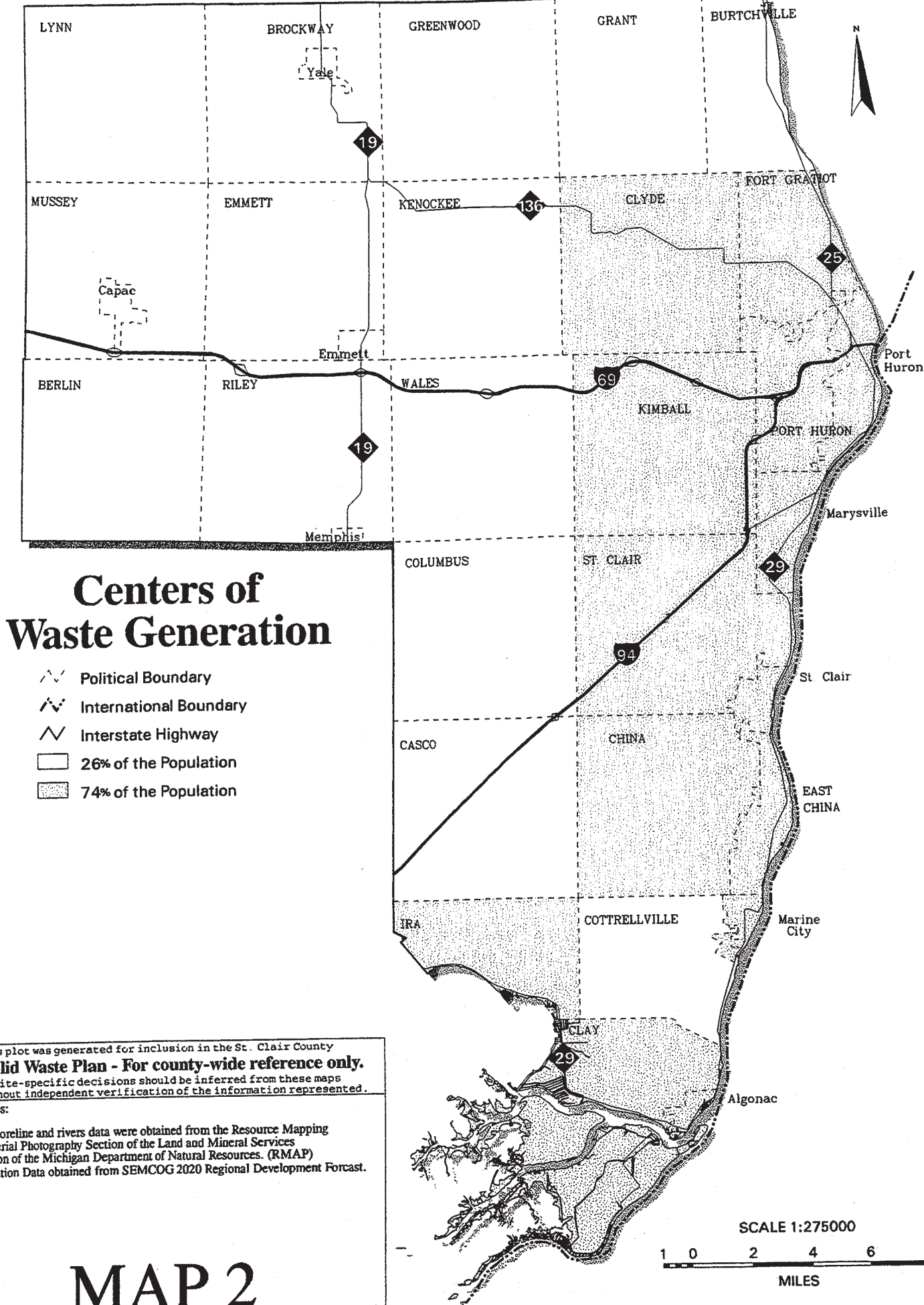
St. Clair Twp.	2000	5,959	4100	1047	861	761	741
	2005	6,508	4478	1292	904	831	838
	2010	7,096	4882	1391	960	907	901
Wales Twp.	2000	2,848	1960	191	374	364	267
	2005	3,058	2104	272	328	391	285
	2010	3,255	2240	317	306	416	300
Yale	2000	2,092	1439	1193	18	267	396
	2005	2,105	1448	1289	19	269	420
	2010	2,117	1457	1351	21	270	437
<b>TOTALS</b>	<b>2000</b>	<b>167,478</b>	<b>115229</b>	<b>53422</b>	<b>18923</b>	<b>21102</b>	<b>25792</b>
	<b>2005</b>	<b>175,050</b>	<b>120435</b>	<b>58203</b>	<b>19174</b>	<b>22363</b>	<b>27091</b>
	<b>2010</b>	<b>182,766</b>	<b>125746</b>	<b>61395</b>	<b>19209</b>	<b>23348</b>	<b>28240</b>

The population projections and waste generation rates reported in the preceding table identify the centers of waste generation including industrial solid waste as being located in the eastern and southern parts of the County. More specifically, the center for solid waste generation is along the communities bordering the St. Clair River and Lake St. Clair. The following table provides information on the population and waste generation rates for these areas.

<b>Community</b>	<b>2000 Population</b>	<b>% of St. Clair County Population</b>	<b>Total Waste Generation, TPY</b>	<b>% of Total Waste Generation, TPY</b>
Port Huron	33,003	19.7	57,880	24.7
Fort Gratiot Twp.	11,223	6.7	18,600	7.9
Marysville	9,505	5.7	18,100	7.7
Port Huron Twp.	8,743	5.2	15,095	6.4
Clay Twp.	10,894	6.5	11,429	4.9
St. Clair	6,021	3.6	9,523	4.1
Kimball Twp.	8,478	5.1	9,471	4.0
Ira Twp.	6,839	4.1	8,838	3.8
Marine City	5,195	3.1	8,339	3.6
St. Clair Twp.	5,959	3.6	7,510	3.2
East China Twp.	3,547	2.1	6,221	2.7
Clyde Twp.	6,214	3.7	5,971	2.5
Algonac	4,923	2.9	5,900	2.5
China Twp.	3,448	2.1	5,271	2.2
<b>TOTAL</b>	<b>123,992</b>	<b>74.1</b>	<b>188,148</b>	<b>80.2</b>

These communities, which represent 74% of the population, make up the centers of waste generation in St. Clair County. Combined they represent 80% of the solid waste generated in the County. Map 2 shows the Centers of Waste Generation.







## **DATA BASE**

### **LAND DEVELOPMENT**

The following describes current and projected land development patterns, as related to the Selected Solid Waste Management System, for the next five and ten year periods.

#### **Existing Land Use:**

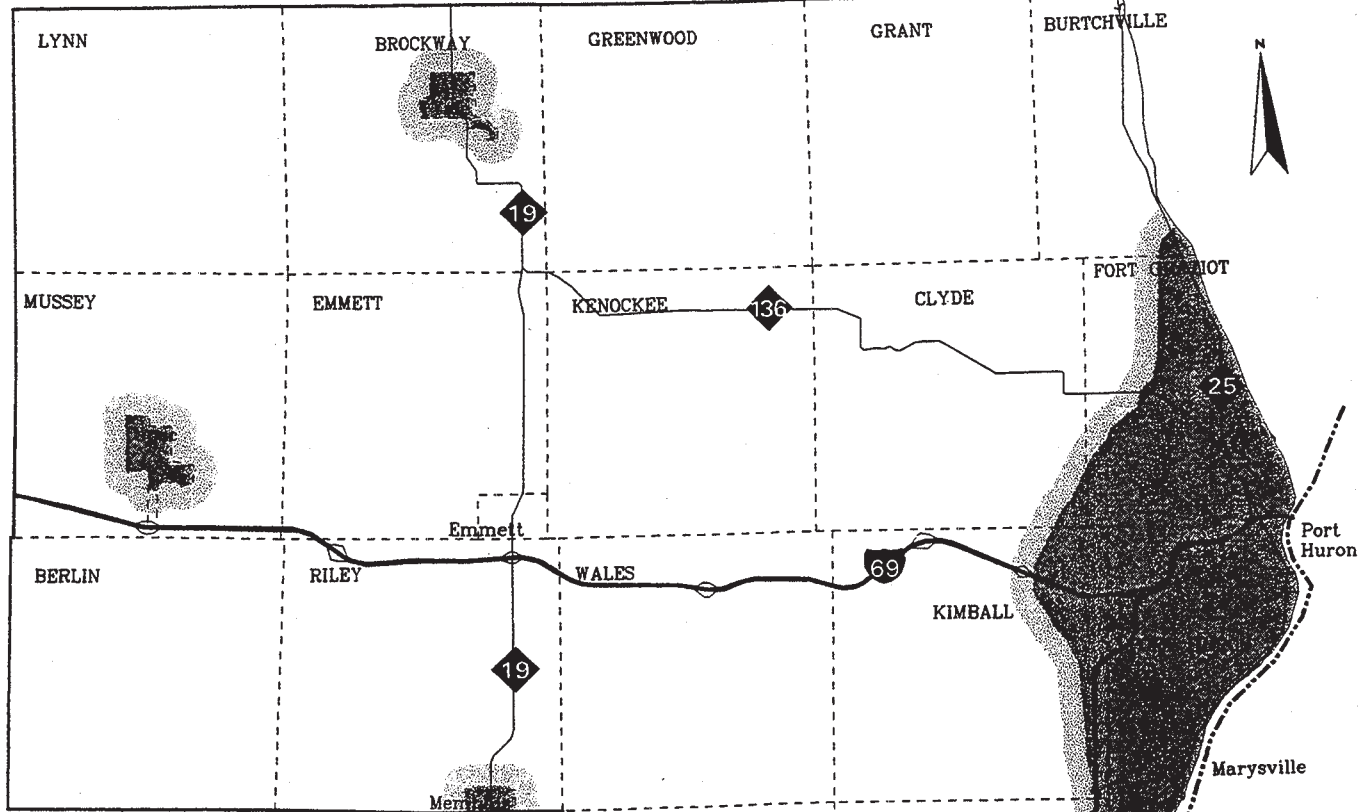
Approximately one-third of the land within the County is presently used for farming or other agricultural use. Urbanization has occurred along the County shoreline proper. A general pattern of lineal form extends along the eastern and southern County boundaries with "nodules" of urban concentration occurring at intervals of approximately five miles. The growth of these urban concentrations is generated from in and/or around the Cities of Port Huron, Marysville, St. Clair, Marine City, Algonac and New Baltimore. As a general rule, the internal structure of these urban areas has a marked resemblance to a segmented concentric zone development pattern with the waterfront being the modifying geophysical factor. At the fringe areas of each urban concentration, development extends outward in an axial fashion along major transportation routes forming a series of development wedges. Other areas of sub urbanization within the County occur in the form of smaller satellite units that include the Cities of Memphis and Yale and the Villages of Capac and Emmett.

The residential land use of St. Clair County can also be classified into three distinct types: rural-residential/agricultural, suburbanizing and urban. The rural-residential/agricultural land use areas of the County are typically those townships that have no coastal zone. Most townships with a coastal zone also have a rural-residential/agricultural land use that begins from 1,000 to 2,000 feet landward. The suburbanizing land use occurs along State trunk lines M-25 and M-29 and is about 1,000 feet landward. A majority of the urban areas within St. Clair County are found along this County's coastal zone, the exceptions being Capac and Yale. The present non-residential land use of St. Clair County is similar to that of the residential land use. A concentration of commercial and industrial land uses are found in or near urban areas or along the coastal zone of St. Clair County.

#### **Future Land Use:**

While cities that border the coastal zone are the most heavily populated areas, it is projected that townships will far out pace growth in the cities. Approximately 1,000 new residential units have been constructed throughout the County each year since the mid-1980s. Most of this has occurred in townships and coastal and southern communities. Single-family home construction outnumbers multiple-family construction by a 10-to-1 ratio. St. Clair County had nearly 53,000 households in 1990 and 57,700 in 1995, a 10% increase in five years. Growth occurred in all county communities. SEMCOG estimates the number of households to be approximately 61,300 in 2000 and will reach 75,300 by 2020.





## Land Development

- Political Boundary
- International Boundary
- Interstate Highway
- Rural Area
- Transitional Area
- Urbanized Areas

This plot was generated for inclusion in the St. Clair County  
**Solid Waste Plan - For county-wide reference only.**  
 No site-specific decisions should be inferred from these maps  
 without independent verification of the information represented.

### Sources:

The shoreline and rivers data were obtained from the Resource Mapping  
 and Aerial Photography Section of the Land and Mineral Services  
 Division of the Michigan Department of Natural Resources. (RMAP)  
 The Transitional area represents a one-half mile buffer around  
 the Urban Area freehanded by SCCMPC Staff for the County Master Plan.

# MAP 3

SCALE 1:275000





## **SOLID WASTE MANAGEMENT ALTERNATIVES** (attach additional pages as necessary)

The following briefly describes all solid waste management systems considered by the County and how each alternative will meet the needs of the County. The manner of evaluation and ranking of each alternative is also described. Details regarding the Selected Alternatives are located in the following section. Details regarding each non-selected alternative are located in Appendix B.

St. Clair County's selected alternative is to retain the current solid waste management system. The solid waste management system selected is one based on self-sufficiency and in which landfill disposal continues as the primary means of disposal with increased emphasis placed on source reduction, recycling and composting.

The existing solid waste management system provides for the proper collection, transport and disposal of solid waste in the St. Clair County planning area. Recycling and composting opportunities have been developed and seem to be expanding. Minor modifications to the system may be needed to further encourage the recycling of materials from the waste stream.

Numerous studies and evaluations or alternatives to landfill disposal have been conducted by surrounding counties and all of them have concluded that their existing solid waste management systems are the most practical, cost-effective, and environmentally sound alternative. System components were evaluated in past studies by the St. Clair County Landfill Alternatives Subcommittee and the evaluations and conclusions of those planning efforts remain valid.

The current solid waste management system addresses each of the following management components as mandated by NREPA Administrative Rules. Details regarding each of these components are listed in following sections:

Waste Reduction and Pollution Prevention includes changes in manufacturing or other processes which generate solid waste as a function of the process so that a reduced amount of waste is created. Additionally, changes may be made to the waste stream to produce a waste that contains less potential environmental pollutants. Waste reduction is primarily achieved through extensive information and education efforts, as well as State and local incentives or regulations. Waste reduction and pollution prevention occurs in a number of ways. Consumers decide to purchase products with less packaging. Commercial establishments provide products in bulk or in refillable or biodegradable containers. Offices, industries, and institutions may change processing and make management improvements resulting in less waste. St. Clair County is home to many different segments of the packaging industry. These industries have all experienced changes in how they produce packaging in order to minimize bulk and volume. In addition, the County is currently undergoing studies at Smiths Creek Landfill that are aimed at increasing volume reduction by raising the compaction ratio of in-place waste. Waste reduction and pollution prevention are considered a part of the selected solid waste management system in St. Clair County, and this plan encourages residents, industries, and commercial facilities to evaluate and implement these practices wherever possible.

Resource Conservation includes reduced resource use per product, increased product life, product reuse, and decreased consumption of products that become solid waste. Implementation of resource conservation can be accomplished through voluntary action by consumers and manufacturers or through legislative measures. Local entities can best encourage voluntary action by providing public education and promotional activities and through enacting local government procurement policies. This plan encourages increased resource conservation and identifies the public education efforts of the Resource Recovery Office. This plan also encourages the adoption of environmentally sound purchasing policies by the county, townships, cities and villages in St. Clair County. Resource Conservation is considered a part of the selected solid waste management system and this plan encourages residents, industries, and commercial facilities to evaluate and implement these practices wherever possible.

Resource Recovery includes source separation or mixed waste processing and the subsequent recovery of materials, energy savings and/or production re-use potential, and market availability for recovered materials processed by each process. Source separation involves the separation of selected materials at the source of generation. This process may be practiced at residences, commercial establishments, institutions, and industries. The recovered materials may be picked up at the site or the generator may directly haul materials to a recycling center. Mixed waste processing involves the physical or mechanical separation of recoverable materials from the waste stream after the waste is collected and transported to a solid waste processing facility, often called a reclamation facility or material recovery facility. Mixed waste processing techniques include hand sorting, screening, gravity and magnetic separation, and optical separation. Resource recovery is a part of the existing St. Clair County solid waste management system. A detailed breakdown of resource recovery activities is presented in the sections of this Plan found beginning at page III-11.

Volume Reduction includes processing by compactors, balers, shredders, and incinerators. In addition to the compaction practiced by the solid waste hauling industry with their compaction trucks and their compaction dumpsters, the solid waste is further reduced at Smiths Creek Landfill during the process of compacting in-place solid waste.

Sanitary Landfill includes disposal methods such as the trench method, the area method, or the depression method. The selected solid waste management system incorporates two of these methods with the Smiths Creek Landfill and the Range Road Property (Type III) Detroit Edison Co.

Collection Processes and Transportation includes the process of transferring the waste from the point of generation to a transfer station, processing plant, resource recovery facility, or final disposal area. In addition to the nine hauling companies responsible for most residential and commercial collection identified on page II - 10, there are several other firms which handle industrial waste, building and demolition waste, roofing materials, etc.

Ultimate Disposal Area Use includes recreational or other potential uses after the facility is properly closed and maintained. A future land use report for Smith Creek Landfill was

completed some time ago and it suggested recreational/golf course use of the property. This plan recommends capture of fees from tipping fees at Smiths Creek Landfill to fund future land studies at the landfill. Because the future capacity at Range Road Property (Type III) Detroit Edison Co. is listed as at least 75 years, there are no current future land use plans for the property.

Institutional Arrangements includes the agreements and organizational arrangements and structures that provide for public and/or private operation of solid waste collection, processing, and disposal systems. They may also include multi-jurisdictional approaches in managing solid waste. The Management Responsibilities section of this plan (pgs. III-36 through III-43) describes management and institutional arrangements necessary for the implementation of the Selected Waste Management System.

Recycling and Composting Programs: Recycling is the process whereby materials which would otherwise become solid waste are collected, either source or site separated, processed, and returned for conversion into raw materials or new products. Composting involves the natural decay of organic wastes and produces a finished product that is valuable as a mulch or soil conditioner. Leaves, grass clippings, tree and shrub prunings and other yard wastes are diverted from landfill disposal by composting. Recycling and composting programs are a part of the Selected Solid Waste Management System, and are described in detail in the following sections of this Plan beginning at pages III-11.

#### Alternative Solid Waste Management Systems

The 1983 St. Clair County Solid Waste Management Plan and the 1990 St. Clair County Solid Waste Management Plan provided detailed descriptions of various alternative strategies for the solid waste management. These alternative strategies included waste reduction strategies, waste reuse strategies, household hazardous waste management strategies, composting strategies, recycling strategies, and incineration, with energy recovery strategies. The Alternative Strategies sections of these two documents evaluated several solid waste management components in detail. The advantages and disadvantages of the various components were discussed as well as the: technical feasibility; economic feasibility; access to land; environmental impacts and public acceptability. One alternative management system that is considered further is discussed below.

The St. Clair County Landfill Alternatives Study Committee (SCCLASC) examined the feasibility of a waste-to-energy (WTE) in both the 1983 and 1990 St. Clair County Solid Waste Management Plans. The SCCLASC reviewed the feasibility of a facility owned and operated by the county as well as a facility that would serve a larger regional area or sub portion of the state. The 1983 plan recommended a wait and see approach regarding incineration. The 1990 plan concluded that based on a comparison with landfill tipping fees, incineration is not feasible for St. Clair County as an alternative to landfill disposal.

After assessing the experiences of other communities with operating incinerators, specifically Jackson County, Kent County and Detroit, this plan maintains that WTE is not a viable alternative to landfill disposal.



# THE SELECTED SOLID WASTE MANAGEMENT SYSTEM

The Selected Solid Waste Management System (Selected System) is a comprehensive approach to managing the County's solid waste and recoverable materials. The Selected System addresses the generation, transfer and disposal of the County's solid waste. It aims to reduce the amount of solid waste sent for final disposal by volume reduction techniques and by various resource conservation and resource recovery programs. It also addresses collection processes and transportation needs that provide the most cost effective, efficient service. Proposed disposal areas locations and capacity to accept solid waste are identified as well as program management, funding, and enforcement roles for local agencies. Detailed information on recycling programs, evaluation, and coordination of the Selected System is included in Appendix B. Following is an overall description of the Selected System:

## Selected Solid Waste Management System

The selected solid waste management system retains the current solid waste management system where residential, commercial, and industrial waste is collected by private or municipal contract. Landfill disposal continues as the primary means of solid waste disposal with increased emphasis placed on source reduction, recycling and composting. Private haulers are used to transport solid waste and deliver it to a sanitary landfill or a transfer facility/processing plant.

St. Clair County Office of Resource Recovery provides several drop-off recycling locations to county residents. Private firms also provide recycling for contract communities, through both drop-off sites, or by curbside collection. Glass, paper, plastic, metal, white goods, tires and used motor oil are recycled. Yard waste and grass clippings are disposed at public and private composting facilities.

St. Clair County has sufficient landfill space to meet its needs for the five year and ten year planning periods and beyond. Under the direction of the Solid Waste Management Planning Committee and under the review of local communities and Board of Commissioners, the selected solid waste management system will provide for St. Clair County an effective system for the handling and disposal of solid waste generated in the county.

A detailed description of elements of the solid waste management plan follows.

# SELECTED SYSTEM

## IMPORT AUTHORIZATION

If a Licensed solid waste disposal area is currently operating within the County, disposal of solid waste generated by the EXPORTING COUNTY is authorized by the IMPORTING COUNTY up to the AUTHORIZED QUANTITY according to the CONDITIONS AUTHORIZED in Table 1-A.

Table 1-A

### CURRENT IMPORT VOLUME AUTHORIZATION OF SOLID WASTE

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME <sup>1</sup>	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS <sup>2</sup>
<u>St. Clair</u>	<u>Huron</u>	<u>Range Road Property (Type III) Detroit Edison Co.</u>	<u>          </u>	<u>          </u>	<u>          </u>
<u>St. Clair</u>	<u>Huron</u>	<u>Smiths Creek Landfill</u>			<u>C, *</u>
<u>St. Clair</u>	<u>Sanilac</u>	<u>Smiths Creek Landfill</u>			<u>C, *</u>

<sup>1</sup> Facilities are only listed if the exporting county is restricted to using specific facilities within the importing county.

<sup>2</sup> Authorization indicated by P = Primary Disposal; C = Contingency Disposal; \* = Other conditions exist and detailed explanation is included in Appendix D-6.

# SELECTED SYSTEM

If a new solid waste disposal area is constructed and operating in the future in the County, then disposal of solid waste generated by the EXPORTING COUNTY is authorized by the IMPORTING COUNTY up to the AUTHORIZED QUANTITY according to the AUTHORIZED CONDITIONS in Table 1-B.

Table 1-B

## FUTURE IMPORT VOLUME AUTHORIZATION OF SOLID WASTE CONTINGENT ON NEW FACILITIES BEING SITED

IMPORTING COUNTY	EXPORTING COUNTY	FACILITY NAME <sup>1</sup>	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS <sup>2</sup>
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—

☐ Additional authorizations and the above information for those authorizations are listed on an attached page.

<sup>1</sup> Facilities are only listed if the exporting county is restricted to using specific facilities within the importing county.

<sup>2</sup> Authorization indicated by P = Primary Disposal; C = Contingency Disposal; \* = Other conditions exist and detailed explanation is included in the Attachment Section.

# SELECTED SYSTEM

## EXPORT AUTHORIZATION

If a Licensed solid waste disposal area is currently operating within another County, disposal of solid waste generated by the EXPORTING COUNTY is authorized up to the AUTHORIZED QUANTITY according to the CONDITIONS AUTHORIZED in Table 2-A if authorized for import in the approved Solid Waste Management Plan of the receiving County.

Table 2-A

### CURRENT EXPORT VOLUME AUTHORIZATION OF SOLID WASTE

EXPORTING COUNTY	IMPORTING COUNTY	FACILITY NAME <sup>1</sup>	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS <sup>2</sup>
<u>St. Clair</u>	<u>Sanilac</u>	<u>Tri City RDF</u>	—	—	<u>C, *</u>
<u>St. Clair</u>	<u>Huron</u>	<u>Cove</u>	—	—	<u>C, *</u>

☐ Additional authorizations and the above information for those authorizations are listed on an attached page.

<sup>1</sup> Facilities are only listed if the exporting county is restricted to using specific facilities within the importing county.

<sup>2</sup> Authorization indicated by P = Primary Disposal; C = Contingency Disposal; \* = Other conditions exist and detailed explanation is included in Appendix D-6.

If a new solid waste disposal area is constructed and operates in the future in another County, then disposal of solid waste generated by the EXPORTING COUNTY is authorized up to the AUTHORIZED QUANTITY according to the AUTHORIZED CONDITIONS in Table 2-B if authorized for import in the approved Solid Waste Management Plan of the receiving County.

Table 2-B

FUTURE EXPORT VOLUME AUTHORIZATION OF SOLID WASTE  
CONTINGENT ON NEW FACILITIES BEING SITED

EXPORTING COUNTY	IMPORTING COUNTY	FACILITY NAME <sup>1</sup>	AUTHORIZED QUANTITY/ DAILY	AUTHORIZED QUANTITY/ ANNUAL	AUTHORIZED CONDITIONS <sup>2</sup>
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—
—	—	—	—	—	—

☐ Additional authorizations and the above information for those authorizations are listed on an attached page.

<sup>1</sup> Facilities are only listed if the exporting county is restricted to using specific facilities within the importing county.

<sup>2</sup> Authorization indicated by P = Primary Disposal; C = Contingency Disposal; \* = Other conditions exist and detailed explanation is included in the Attachment Section.

## SELECTED SYSTEM

## SELECTED SYSTEM

### SOLID WASTE DISPOSAL AREAS

The following identifies the names of existing disposal areas which will be utilized to provide the required capacity and management needs for the solid waste generated within the County for the next five years and, if possible, the next ten years. Pages III-7-1 through III-7-5 contain descriptions of the solid waste disposal facilities which are located within the County and the disposal facilities located outside of the County which will be utilized by the County for the planning period. Additional facilities within the County with applicable permits and licenses may be utilized as they are sited by this Plan, or amended into this Plan, and become available for disposal. If this Plan update is amended to identify additional facilities in other counties outside the County, those facilities may only be used if such import is authorized in the receiving County's Plan. Facilities outside of Michigan may also be used if legally available for such use.

#### Type II Landfill:

Smiths Creek Landfill

#### Type A Transfer Facility:

Howard Solid Waste Transfer &  
Reclamation Facility

#### Type B Transfer Facility:

None

#### Type III Landfill:

Range Road Property (Type III)  
Detroit Edison Company

#### Processing Plant:

Howard Solid Waste Transfer &  
Reclamation Facility

#### Incinerator:

None

#### Waste Piles:

None

#### Waste-to-Energy Incinerator:

None

#### Other:

None

Additional facilities are listed on an attached page. Letters from or agreements with the listed disposal areas owners/operators stating their facility capacity and willingness to accept the County's solid waste are in the Attachments Section.

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type II Landfill

Facility Name: Smiths Creek Landfill

County: St. Clair Location: Kimball and St. Clair Twps. Town: T6N Range: R16E Section(s): 32  
(Kimball Twp.) and 5 (St. Clair Twp.)

Map identifying location included in Attachment Section: ☒ Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes: N/A.

☒ Public ☐ Private Owner: St. Clair County

Operating Status (check)

- ☒ open  
☐ closed  
☒ licensed  
☐ unlicensed  
☐ construction permit  
☐ open, but closure  
☐ pending ☐

Waste Types Received (check all that apply)

- ☒ residential  
☒ commercial  
☒ industrial  
☒ construction & demolition  
☒ contaminated soils  
☒ special wastes \*  
other: \_\_\_\_\_

\* Explanation of special wastes, including a specific list and/or conditions:

Sludge, Foundry Sand, Coal slag dust, Asbestos, Lime Slurry, Salt brine and Medical Waste.

Site Size:

Total area of facility property: 364.5 acres  
Total area sited for use: 264.5 acres  
Total area permitted: 157.0 acres  
Operating: 63.8 acres  
Not excavated: 37.0 acres  
Current capacity: 5,700,000 ☐ tons or ☒ yds<sup>3</sup> (Remaining future Capacity 14,800,000 yd<sup>3</sup>)  
Estimated lifetime: 15 years (Future expansion 35.9 years)  
Estimated days open per year: 312 days  
Estimated yearly disposal volume: 768,000 ☐ tons or ☒ yds<sup>3</sup>

(if applicable)

Annual energy production:

Landfill gas recovery projects: N/A. megawatts  
Waste-to-energy incinerators: N/A. megawatts

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Type III Landfill

Facility Name: Range Road Property (Type III) Detroit Edison Co.

County: St. Clair Location: China Twp. Town: 4N Range: 16E Section(s): 12

Map identifying location included in Attachment Section: ☒ Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes: N/A.

☐ Public ☒ Private Owner: Detroit Edison Co.

Operating Status (check)

- ☒ open  
☐ closed  
☒ licensed  
☐ unlicensed  
☐ construction permit  
☐ open, but closure  
☐ pending

Waste Types Received (check all that apply)

- ☐ residential  
☐ commercial  
☐ industrial  
☐ construction & demolition  
☐ contaminated soils  
☒ special wastes \*  
☐ other: \_\_\_\_\_

\* Explanation of special wastes, including a specific list and/or conditions:

Ash produced from burning of coal

Site Size:

Total area of facility property:	<u>456.47</u>	acres
Total area sited for use:	<u>456.47</u>	acres
Total area permitted:	<u>456.47</u>	acres
Operating:	<u>456.47</u>	acres
Not excavated:	<u>N/A.</u>	acres
Current capacity:	<u>18,750,000</u>	<input type="checkbox"/> tons or <input checked="" type="checkbox"/> yds <sup>3</sup>
Estimated lifetime:	<u>75</u>	years
Estimated days open per year:	<u>300</u>	days
Estimated yearly disposal volume:	<u>250,000</u>	<input type="checkbox"/> tons or <input checked="" type="checkbox"/> yds <sup>3</sup>

(if applicable)

Annual energy production:

Landfill gas recovery projects: N/A. megawatts

Waste-to-energy incinerators: N/A. megawatts

SELECTED SYSTEM

FACILITY DESCRIPTIONS

Facility Type: Transfer Facility/Processing Plant

Facility Name: Howard Solid Waste Transfer & Reclamation Facility

County: St. Clair Location: Port Huron Twp. Town: 6N Range: 17E Section(s): 18

Map identifying location included in Attachment Section: ☒ Yes ☐ No

If facility is an Incinerator or a Transfer Station, list the final disposal site and location for Incinerator ash or Transfer Station wastes: Smiths Creek Landfill

☐ Public ☒ Private Owner: Aberdeen Howard

Operating Status (check)

- ☒ open  
☐ closed  
☒ licensed  
☐ unlicensed  
☐ construction permit  
☐ open, but closure  
☐ pending

Waste Types Received (check all that apply)

- ☒ residential  
☒ commercial  
☒ industrial  
☒ construction & demolition  
☐ contaminated soils  
☐ special wastes \*  
☐ other: \_\_\_\_\_

\* Explanation of special wastes, including a specific list and/or conditions:

Site Size:

Total area of facility property: 15 acres

Total area sited for use: 7 acres

Total area permitted: 3.5 acres

Operating: N/A. acres

Not excavated: N/A. acres

Current capacity: \_\_\_\_\_ ☐ tons or ☐ yds<sup>3</sup>

Estimated lifetime: \_\_\_\_\_ years

Estimated days open per year: 286 days

Estimated yearly disposal volume: 45,000 ☐ tons or ☒ yds<sup>3</sup>

(if applicable)

Annual energy production:

Landfill gas recovery projects: N/A. megawatts

Waste-to-energy incinerators: N/A. megawatts

## **SELECTED SYSTEM**

### **SOLID WASTE COLLECTION SERVICES AND TRANSPORTATION:**

The following describes the solid waste collection services and transportation infrastructure which will be utilized within the County to collect and transport solid waste.

The existing collection and transportation system, as previously described on pages II-9 through II-14, will remain in place. The list of solid waste haulers and transportation firms listed on these previous pages is subject to change over time due to municipal contracts, mergers, and other factors.

While several communities in St. Clair County currently have municipal contracts in place for the collection of residential waste, the solid waste management planning committee recommends that more communities become involved in similar agreements.

## SELECTED SYSTEM

### RESOURCE CONSERVATION EFFORTS:

The following describes the selected system's proposed conservation efforts to reduce the amount of solid waste generated throughout the County. The annual amount of solid waste currently or proposed to be diverted from landfills and incinerators is estimated for each effort to be used, if possible. Since conservation efforts are provided voluntarily and change with technologies and public awareness, it is not this Plan update's intention to limit the efforts to only what is listed. Instead citizens, businesses, and industries are encouraged to explore the options available to their lifestyles, practices, and processes which will reduce the amount of materials requiring disposal.

The 1990 St. Clair County Solid Waste Management Plan determined that public funding is essential to the development and growth of effective resource conservation. Few if any State-wide, County-wide, or community-wide regulations could be implemented to mandate resource conservation. The State of Michigan is making an effort to develop markets for recovered materials so that they can be made into useful products. Everyone can assist by expanding their purchase/use of recycled products.

Effort Description	Est. Diversion Tons/Yr		
	Current	5th yr	10th yr
Work With MSU Extension offices and Master Gardener Program to promote Grasscycling.	*	*	*
Promote the current compost bin sales program administered by the MSU Extension offices and the Master Gardener Program.	*	*	*
Encourage resource conservation efforts in local schools, businesses, and homes through educational efforts aimed at these public sectors.	*	*	*
Continue funding the County Resource Recovery Office that manages seven recycling drop-off sites that serve unincorporated areas of the county.	115	120	125
Promote the County Household Hazardous Materials Collection Program.	11	12	13
Encourage the adoption of government environmentally sound purchasing policies by the county, townships, cities and villages in St. Clair County.	*	*	*
Encourage municipalities to enter municipal contract for solid waste handling which include curbside recycling and yard waste collections	*	*	*

\* The diversion amounts for these efforts are not quantifiable.

☐ Additional efforts and the above information for those efforts are listed on an attached page.

## SELECTED SYSTEM

### WASTE REDUCTION, RECYCLING, & COMPOSTING PROGRAMS:

#### Volume Reduction Techniques

The following describes the techniques utilized and proposed to be used throughout the County which reduces the volume of solid waste requiring disposal. The annual amount of landfill air space not used as a result of each of these techniques is estimated. Since volume reduction is practiced voluntarily and because technologies change and equipment may need replacing, it is not this Plan update's intention to limit the techniques to only what is listed. Persons within the County are encouraged to utilize the technique that provides the most efficient and practical volume reduction for their needs. Documentation explaining achievements of implemented programs or expected results of proposed programs is attached.

While increased resource conservation and volume reduction techniques are a goal of this Plan, this Plan recognizes that these efforts are limited to techniques practiced by the private solid waste industry and recycling program operators.

Smiths Creek Landfill currently experiences a compaction ratio of in-place solid waste at a 2:1 ratio. As scales are being implemented at the landfill at the time of publishing, efforts are under way to investigate whether this compaction ratio can be increased to further reduce the volume of solid waste being landfilled.

Technique Description	Est. Air Space Conserved Yds <sup>3</sup> /Yr		
	Current	5th yr	10th yr
Encourage maximum compaction of in-place landfill solid waste.	350,000 cubic yards	366,666 cubic yards	382,000 cubic yards
Wood wastes materials recovery/reduction by Mid-Michigan Recycling – Flint (and Genessee Power).	360 tons	400 tons	440 tons
Backyard composting educational efforts.	*	*	*
Recycling of ash from power generation.	150,000 cubic yards	175,000 cubic yards	200,000 cubic yards
Use of paper mill sludge in place of virgin material for Alternative Daily Cover.	60,000 cubic yards	60,000 cubic yards	60,000 cubic yards

\* The amount of airspace conserved by these efforts is not quantifiable.

☐ Additional efforts and the above information for those efforts are listed on an attached page.

### Overview of Resource Recovery Programs:

The following describes the type and volume of material in the County's waste stream that may be available for recycling or composting programs. How conditions in the County affect or may affect a recycling or composting program and potential benefits derived from these programs is also discussed. Impediments to recycling or composting programs which exist or which may exist in the future are listed, followed by a discussion regarding reducing or eliminating such impediments.

- ☒ Recycling programs within the County are feasible. Details of existing and planned programs are included on the following pages.
- ☐ Recycling programs for the County have been evaluated and it has been determined that it is not feasible to conduct any programs because of the following:
- ☒ Composting programs within the County are feasible. Details of existing and planned programs are included on the following pages.
- ☐ Composting programs for the County have been evaluated and it has been determined that it is not feasible to conduct any programs because of the following:
- ☒ Programs for source separation of potentially hazardous materials are feasible and details are included on the following pages.
- ☐ Separation of potentially hazardous materials from the County's waste stream has been evaluated and it has been determined that it is not feasible to conduct any separation programs because of the following:

According to the United States Environmental Protection Agency (EPA), national averages show the following breakdown of what is in MSW:

- (1) 38% Paper
- (2) 18% Yard Trimmings
- (3) 8% Metals
- (4) 8% Plastic
- (5) 7% Glass
- (6) 7% Food Waste
- (7) 14% Other

Most of the materials found in St. Clair County's MSW can be recycled somewhere in the county. While curbside recycling is available to residents in several coastal communities, residents in other communities rely upon both public and private recycling drop-off sites. Communities, that have curbside recycling, are listed on the following pages.

Some haulers in St. Clair County have recently made the choice to eliminate their recycling programs due to the nature of the markets for the materials they collect. Cooperation between private waste haulers and the individual communities may minimize impediments to the recycling and compost programs. Educational programs provided by the St. Clair County Resource Recovery Office raise public awareness of the benefits of recycling waste to reduce the waste stream. Increased public awareness may create more competition among private haulers to provide better recycling facilities for the public.

## SELECTED SYSTEM

There are no ordinances that require haulers to collect recyclable materials or for consumers to sort and handle recyclables outside of residential waste disposal. The Selected System does not include any for the future. The incentives to recycle will continue to be addressed by the educational materials supplied by the St. Clair County Resource Recovery Office and the various communities that participate in recycling programs.



## RECYCLING AND COMPOSTING

The following is a brief analysis of the recycling and composting programs selected for the County in this Plan. Additional information on operation of recycling and composting programs is included in Appendix A. The analysis covers various factors within the County and the impacts of these factors on recycling and composting. Following the written analysis the tables on pages III-18, 19, & 20 list the existing recycling, composting, and source separation of hazardous materials programs that are currently active in the County and which will be continued as part of this Plan. The second group of three tables on pages III-21, 22, & 23 list the recycling, composting, and source separation of hazardous materials programs that are proposed in the future for the County. It is not this Plan update's intent to prohibit additional programs or expansions of current programs to be implemented beyond those listed.

The St. Clair County Resource Recovery Office currently manages eight recycling drop-off sites which service unincorporated areas of the county. At the time of publishing these locations included:

1. Burtchville Twp. – Township Hall
2. China Twp. – Township Hall
3. Clay Twp. – Harsens Island Fire Department
4. Clay Twp. – Township Hall
5. Fort Gratiot Twp. – Department of Public Works
6. Ira Twp. – Township Hall
7. Kimball Twp. – Smiths Creek Landfill
8. Memphis – Department of Public Works

Residents may bring material to these drop off locations to be recycled. While these drop-off sites are located throughout the County not all residents use them. Many residents take advantage of curbside recycling offered by the waste hauler who services them. Some communities contract for curbside recycling in addition to the waste collection services they offer. Currently, there are Ten communities with curbside recycling available to residents in conjunction with the municipal contract for waste collection: Algonac, Marine City, Marysville, Port Huron, St. Clair, Yale, China Twp., Cottrellville Twp., East China Twp., and Ira Twp.

Commercial and industrial customers contract individually with private haulers to collect recyclables. The larger commercial and industrial businesses in the County recycle many items, particularly cardboard, paper, and metal (iron and steel). Recycling costs money and most items are not cost-effective from a business perspective. In short, if an item is cost-effective to recycle, the larger manufacturers are probably doing it already. However, the small and medium sized businesses do not usually participate because they are not as familiar with recycling opportunities or do not have sufficient volume of recyclables to qualify for attractive rates.

Curbside yard waste collection is available to the residents of at least eight communities in St. Clair County. While individual households in some of these communities must contract for it, it is part of the municipal contract for solid waste collection in the remaining communities. Some communities (like Clay Twp.) operate their own yard waste disposal/composting programs. These include the efforts of communities like the City of Marysville that provides for Christmas Tree recycling personally.

## **SELECTED SYSTEM**

In addition to its recycling and educational efforts, the St. Clair County Resource Recovery Office also manages a Household Hazardous Material Drop Off Site at Smiths Creek Landfill. This service is available to county residents on an appointment basis. In addition to the Household Hazardous Material Drop Off Site which the Resource Recovery Office Manages, it also maintains up-to-date inventories of Businesses and organizations that provide similar services.

TABLE III-1

RECYCLING:

<u>Program Name</u>	<u>Service Area<sup>1</sup></u>	<u>Public or Private</u>	<u>Collection Point<sup>3</sup></u>	<u>Collection Frequency<sup>4</sup></u>	<u>Materials Collected<sup>5</sup></u>	<u>Program Management Development</u>	<u>Operation</u>	<u>Evaluation</u>
Waste Management	Algonac	pri	c	w	A,B,E,F	5	5	5
BFI	Marine City	pri	c	w	A,B,E,F	5	5	5
Waste Management	Marysville	pri	c	w	A,B,E,F	5	5	5
Waste Management	Port Huron	pri	c	w	A,B,E,F	5	5	5
Waste Management	St. Clair	pri	c	w	A,B,E,F	5	5	5
Waste Management	Yale	pri	c	w	A,B,E,F	5	5	5
Waste Management	China Twp.	pri	c	w	A,B,E,F	5	5	5
Waste Management	Cottrellville Twp.	pri	c	w	A,B,E,F	5	5	5
Waste Management	East China Twp.	pri	c	w	A,B,E,F	5	5	5
World Waste	Ira Twp.	pri	c	w	A,B,E,F	5	5	5
Markel Recycling	all customers	pri	o	d	F,C	5	5	5

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. A = Plastics; B = Newspaper; C = Corrugated Containers; D = Other Paper;

E = Glass; F = Metals; P = Pallets; J = Construction/Demolition; K = Tires; L1, L2 etc. = as identified on page 32.

# SELECTED SYSTEM

## RECYCLING: cont.

<u>Program Name</u>	<u>Service Area<sup>1</sup></u>	<u>Public or Private</u>	<u>Collection Point<sup>2</sup></u>	<u>Collection Frequency<sup>4</sup></u>	<u>Materials Collected<sup>5</sup></u>	<u>Program Management Development</u>	<u>Operation</u>	<u>Evaluation</u>
Norton Tire - Metro 25	all customers	pri	o	d	K	5	5	5
S A Torello	all customers	pri	pick-up	arrange	J	5	5	5
St. Clair County, Smiths Creek Landfill	County wide	pub	d	d	E,F,K	2	6	6
Transcore Enterprise	all customers	pri	o	arrange	F,K,L1	5	5	5
Fetterly's Tires	all customers	pri	o	d	K	5	5	5
Firestone Tires	all customers	pri	o	d	K	5	5	5
St. Clair County, Fort Gratiot	County wide	pub	d	d	E,F	2	6	6
Great Lakes Tire And Retreading	all customers	pri	o	d	K	5	5	5
Howard Solid Waste Transfer And Reclamation Facility	all customers	pri	o	d	ABCDEFJ	5	5	5
lafrate Construction		pri	o	d	J	5	5	5

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. A = Plastics; B = Newspaper; C = Corrugated Containers; D = Other Paper; E = Glass; F = Metals; P = Pallets; J = Construction/Demolition; K = Tires; L1, L2 etc. = as identified on page 32.

RECYCLING: cont.

<u>Program Name</u>	<u>Service Area<sup>1</sup></u>	<u>Public or Private</u>	<u>Collection Point<sup>2</sup></u>	<u>Collection Frequency<sup>4</sup></u>	<u>Materials Collected<sup>5</sup></u>	<u>Program Management Development</u>	<u>Operation</u>	<u>Evaluation</u>
St. Clair County, Ira Twp.	County wide	<u>pub</u>	<u>d</u>	<u>d</u>	<u>E, F,</u>	<u>2</u>	<u>6</u>	<u>6</u>
Marysville Metro 25 Center	all customers	<u>pri</u>	<u>o</u>	<u>d</u>	<u>K</u>	<u>5</u>	<u>5</u>	<u>5</u>
Anchor Recycling	County wide	<u>pri</u>	<u>o</u>	<u>d</u>	<u>ABCDEFP</u>	<u>5</u>	<u>5</u>	<u>5</u>
St. Clair County, Burtchville Twp. County wide	County wide	<u>pub</u>	<u>d</u>	<u>d</u>	<u>E, F,</u>	<u>2</u>	<u>6</u>	<u>6</u>
St. Clair County, China Twp. County wide	County wide	<u>pub</u>	<u>d</u>	<u>d</u>	<u>E, F,</u>	<u>2</u>	<u>6</u>	<u>6</u>
St. Clair County, Memphis DPW County wide	County wide	<u>pub</u>	<u>d</u>	<u>d</u>	<u>E, F,</u>	<u>2</u>	<u>6</u>	<u>6</u>
St. Clair County, Clay Twp. County wide	County wide	<u>pub</u>	<u>d</u>	<u>d</u>	<u>E, F,</u>	<u>2</u>	<u>6</u>	<u>6</u>
St. Clair County, Clay Twp./Harsens Island	County wide	<u>pub</u>	<u>d</u>	<u>d</u>	<u>E, F,</u>	<u>2</u>	<u>6</u>	<u>6</u>

☐ Additional programs and the above information for those programs are listed on an attached page.

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. A = Plastics; B = Newspaper; C = Corrugated Containers; D = Other Paper;

E = Glass; F = Metals; P = Pallets; J = Construction/Demolition; K = Tires; L1, L2 etc. = as identified on page 32.

TABLE III-2

COMPOSTING:

<u>Program Name</u>	<u>Service Area<sup>1</sup></u>	<u>Public or Private</u>	<u>Collection Point<sup>3</sup></u>	<u>Collection Frequency<sup>4</sup></u>	<u>Materials Collected<sup>5</sup></u>	<u>Program Management Development</u>	<u>Operation</u>	<u>Responsibilities<sup>2</sup></u>	<u>Evaluation</u>
Ram Farms	all customers	pri	o	—	—	5	5	5	5
Tecni Comp Environmental	all customers	pri	o	Sp,Su,Fa	G,L,W	5	5	5	5
Indian Summer Recycling	all customers	pri	o	Sp,Su,Fa	G,L,W	5	5	5	5
Marcotte	all customers	pri	arrange	arrange	G,L,W	5	5	5	5
Clay Twp. Yard Waste Disposal	Clay Twp.	pub	o	Su,Fa	G,L	3	3	3	3
MSU Extension Compost Bin Sales	County wide	pub	N/A	N/A	G,L,F,W	MSU Ext.	MSU Ext.	MSU Ext.	MSU Ext.
Residential Backyard Composting	County wide	pri	o	d	GLFWPAM	N/A	N/A	N/A	N/A
Waste Management	Algonac	pri	c	Su,Fa	G,L	5	5	5	5
Waste Management	Marysville	pri	c	Su,Fa	G,L	5	5	5	5

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. G = Grass Clippings; L = Leaves; F = Food; W = Wood; P = Paper;

S = Municipal Sewage Sludge; A = Animal Waste/Bedding; M = Municipal Solid Waste; L1, L2 etc. = as identified on page 32.

COMPOSTING: cont.

<u>Program Name</u>	<u>Service Area<sup>1</sup></u>	<u>Public or Private</u>	<u>Collection Point<sup>2</sup></u>	<u>Collection Frequency<sup>4</sup></u>	<u>Materials Collected<sup>5</sup></u>	<u>Program Management Development</u>	<u>Responsibilities<sup>2</sup> Operation</u>	<u>Evaluation</u>
Waste Management	Marysville	<u>pri</u>	<u>c</u>	<u>Wi</u>	<u>Xmas Trees</u>	<u>5</u>		<u>5</u>
Waste Management	Memphis	<u>pri</u>	<u>c</u>	<u>arrange</u>	<u>Arrange</u>	<u>5</u>		<u>5</u>
Waste Management	Port Huron	<u>pri</u>	<u>c</u>	<u>Su, Fa</u>	<u>G, L</u>	<u>5</u>		<u>5</u>
Waste Management	St. Clair	<u>pri</u>	<u>c</u>	<u>arrange</u>	<u>Arrange</u>	<u>5</u>		<u>5</u>
Waste Management	Yale	<u>pri</u>	<u>c</u>	<u>arrange</u>	<u>Arrange</u>	<u>5</u>		<u>5</u>
Waste Management	China Twp.	<u>pri</u>	<u>c</u>	<u>Su, Fa</u>	<u>G, L</u>	<u>5</u>		<u>5</u>
Waste Management	East China Twp.	<u>pri</u>	<u>c</u>	<u>Su, FA</u>	<u>G, L</u>	<u>5</u>		<u>5</u>

☐ Additional programs and the above information for those programs are listed on an attached page.

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. G = Grass Clippings; L = Leaves; F = Food; W = Wood; P = Paper;

S = Municipal Sewage Sludge; A = Animal Waste/Bedding; M = Municipal Solid Waste; L1, L2 etc. = as identified on page 32.

TABLE III-3

SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

Since improper disposal of nonregulated hazardous materials has the potential to create risks to the environment and human health, the following programs have been implemented to remove these materials from the County's solid waste stream.

<u>Program Name</u>	<u>Service Area<sup>1</sup></u>	<u>Public or Private</u>	<u>Collection Point<sup>3</sup></u>	<u>Collection Frequency<sup>4</sup></u>	<u>Materials Collected<sup>5</sup></u>	<u>Program Management Development</u>	<u>Responsibilities<sup>2</sup> Operation</u>	<u>Evaluation</u>
St. Clair County Household Hazardous Materials Collection Program/Clay Twp. Fire Dept.	County Wide	pub	d	arrange	All	2	6	6
St. Clair County Household Hazardous Materials Collection Program/Smiths Creek Landfill	County Wide	pub	d	arrange	All	2	6	6
B&D Shell	All Customers	pri	o	d	U	5	5	5
Bud's Garage & Auto Mortuary	All Customers	pri	o	d	U	5	5	5
Cawood Buick/Honda	All Customers	pri	o	d	U	5	5	5
Clate's Performance	All Customers	pri	o	d	U	5	5	5

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. AR = Aerosol Cans; A = Automotive Products except Used Oil, Oil Filters & Antifreeze; AN = Antifreeze; B1 = Lead Acid Batteries; B2 = Household Batteries; C = Cleaners and Polishers; H = Hobby and Art Supplies; OF = Used Oil Filters; P = Paints and Solvents; PS = Pesticides and Herbicides; PH = Personal and Health Care Products; U = Used Oil; OT = Other Materials and identified.

SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS: Cont.

<u>Program Name</u>	<u>Service Area<sup>1</sup></u>	<u>Public or Private</u>	<u>Collection Point<sup>2</sup></u>	<u>Collection Frequency<sup>4</sup></u>	<u>Materials Collected<sup>5</sup></u>	<u>Program Management Development</u>	<u>Operation</u>	<u>Evaluation</u>
Don's Service	All Customers	pri	o	d	U	5	5	5
Doug's Performance Center	All Customers	pri	o	d	U	5	5	5
Herber's Collision and Service	All Customers	pri	o	d	U	5	5	5
Hill's Garage	All Customers	pri	o	d	U	5	5	5
Lee's Auto & Truck Repair	All Customers	pri	o	d	U	5	5	5
Lincoln Auto Service	All Customers	pri	o	d	U	5	5	5
Marysville Goodyear Tire	All Customers	pri	o	d	U	5	5	5
McKinch's Garage	All Customers	pri	o	d	U	5	5	5
Oil Change Express	All Customers	pri	o	d	U	5	5	5
St. Clair Engine Rebuilders	All Customers	pri	o	d	U	5	5	5

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. AR = Aerosol Cans; A = Automotive Products except Used Oil, Oil Filters & Antifreeze; AN = Antifreeze; B1 = Lead Acid Batteries; B2 = Household Batteries; C = Cleaners and Polishers; H = Hobby and Art Supplies; OF = Used Oil Filters; P = Paints and Solvents; PS = Pesticides and Herbicides; PH = Personal and Health Care Products; U = Used Oil; OT = Other Materials and identified.

# SELECTED SYSTEM

## SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS: Cont.

<u>Program Name</u>	<u>Service Area<sup>1</sup></u>	<u>Public or Private</u>	<u>Collection Point<sup>2</sup></u>	<u>Collection Frequency<sup>4</sup></u>	<u>Materials Collected<sup>5</sup></u>	<u>Program Management Development</u>	<u>Operation</u>	<u>Evaluation</u>
Tractor Supply Co.	All Customers	pri	o	d	U	5	5	5
Zimmer's Sales & Service	All Customers	pri	o	d	U	5	5	5

☐ Additional programs and the above information for those programs are listed on an attached page.

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. AR = Aerosol Cans; A = Automotive Products except Used Oil, Oil Filters & Antifreeze; AN = Antifreeze; B1 = Lead Acid Batteries; B2 = Household Batteries; C = Cleaners and Polishers; H = Hobby and Art Supplies; OF = Used Oil Filters; P = Paints and Solvents; PS = Pesticides and Herbicides; PH = Personal and Health Care Products; U = Used Oil; OT = Other Materials and identified.

TABLE III-4

**PROPOSED RECYCLING:**

[illegible]

☐ Additional programs and the above information for those programs are listed on an attached page.

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. A = Plastics; B = Newspaper; C = Corrugated Containers; D = Other Paper; <sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. A = Plastics; B = Newspaper; C = Corrugated Containers; D = Other Paper;

E = Glass; F = Metals; P = Pallets; J = Construction/Demolition; K = Tires; L1, L2 etc. = as identified on page 32.

TABLE III-5

PROPOSED COMPOSTING:

<u>Program Name,</u> (if known)	<u>Service Area<sup>1</sup></u>	<u>Public or</u> <u>Private</u>	<u>Collection</u> <u>Point<sup>2</sup></u>	<u>Collection</u> <u>Frequency<sup>4</sup></u>	<u>Materials</u> <u>Collected<sup>5</sup></u>	<u>Program Management</u> <u>Development</u>	<u>Operation</u>	<u>Responsibilities<sup>2</sup></u> <u>Evaluation</u>
Howards Solid Waste Transfer & Reclamation Facility	All Customers	<u>pri</u>	<u>o</u>	<u>N.A.</u>	<u>N/A.</u>	<u>5</u>	<u>5</u>	<u>5</u>
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. G = Grass Clippings; L = Leaves; F = Food; W = Wood; P = Paper; S = Municipal Sewage Sludge; A = Animal Waste/Bedding; M = Municipal Solid Waste; L1, L2 etc. = as identified on page 32.

TABLE III-6

PROPOSED SOURCE SEPARATION OF POTENTIALLY HAZARDOUS MATERIALS:

<u>Program Name,</u> (if known)	<u>Service Area<sup>1</sup></u>	<u>Public or</u> <u>Private</u>	<u>Collection</u> <u>Point<sup>2</sup></u>	<u>Collection</u> <u>Frequency<sup>4</sup></u>	<u>Materials</u> <u>Collected<sup>5</sup></u>	<u>Program Management Responsibilities<sup>2</sup></u>	
						<u>Development</u>	<u>Operation</u> <u>Evaluation</u>
---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---
---	---	---	---	---	---	---	---

☐ Additional programs and the above information for those programs are listed on an attached page.

<sup>1</sup> Identified by where the program will be offered. If throughout the planning area, then listed by planning area; if only in specific counties, then listed by county; if only in specific municipalities, then listed by its name and respective county.

<sup>2</sup> Identified by 1 = Designated Planning Agency; 2 = County Board of Commissioners; 3 = Department of Public Works; 4 = Environmental Group (Identified on page 30); 5 = Private Owner/Operator; 6 = Other (Identified on page 30).

<sup>3</sup> Identified by c = curbside; d = drop-off; o = onsite; and if other, explained.

<sup>4</sup> Identified by d = daily; w = weekly; b = biweekly; m = monthly; and if seasonal service also indicated by Sp = Spring; Su = Summer; Fa = Fall; Wi = Winter.

<sup>5</sup> Identified by the materials collected by listing of the letter located by that material type. AR = Aerosol Cans; A = Automotive Products except Used Oil, Oil Filters & Antifreeze; AN = Antifreeze; B1 = Lead Acid Batteries; B2 = Household Batteries; C = Cleaners and Polishers; H = Hobby and Art Supplies; OF = Used Oil Filters; P = Paints and Solvents; PS = Pesticides and Herbicides; PH = Personal and Health Care Products; U = Used Oil; OT = Other Materials and identified.



### IDENTIFICATION OF RESOURCE RECOVERY MANAGEMENT ENTITIES:

The following identifies those public and private parties, and the resource recovery or recycling programs for which they have management responsibilities.

#### Environmental Groups:

There are no Environmental groups with resource recovery or recycling program management responsibilities.

#### Other:

- St. Clair County Board of Commissioners – Resource Recovery Office/Recycling Drop-Off Sites
- MSU Extension Office/Master Gardener Program – Backyard Composting/Composting Bin Sales
- Waste Management – Residential Curbside Recyclables/Compost Collection
- BFI – Residential Curbside Recyclables/Compost Collection
- World Waste – Residential Recyclables Collection
- Howard Solid Waste Transfer and Reclamation Facility – Private, residential, commercial and industrial resource recovery.
- Anchor Recycling – Private, commercial and industrial resource recovery
- Anchor Recycling – Recycling Drop-Off Site
- All other private companies that offer onsite, drop-off recycling sites

## PROJECTED DIVERSION RATES:

The following estimates the annual amount of solid waste which is expected to be diverted from landfills and incinerators as a result of the current resource recovery programs and in five and ten years.

<u>Collected Material:</u>			<u>Projected Annual Tons Diverted:</u>			<u>Collected Material:</u>			<u>Projected Annual Tons Diverted:</u>		
	Current	5th Yr	10th Yr				Current	5th Yr	10th Yr		
A. TOTAL PLASTICS:	<u>305</u>	<u>320</u>	<u>333</u>	G. GRASS AND LEAVES:	<u>59,206yd<sup>s</sup></u>		<u>61,870</u>		<u>64,534</u>		
B. NEWSPAPER:	<u>See D</u>	—	—	H. TOTAL WOOD WASTE:	<u>420</u>		<u>439</u>		<u>458</u>		
C. CORRUGATED CONTAINERS:	<u>10,456</u>	<u>10,926</u>	<u>11,400</u>	I. CONSTRUCTION AND DEMOLITION:	<u>N/A.</u>		—		—		
D. TOTAL OTHER PAPER:	<u>1212</u>	<u>1267</u>	<u>1321</u>	J. FOOD AND FOOD PROCESSING:	<u>N/A.</u>		—		—		
E. TOTAL GLASS:	<u>1161</u>	<u>1213</u>	<u>1266</u>	K. TIRES <sup>1</sup> :	<u>12.8</u>		<u>13</u>		<u>13.2</u>		
F. OTHER MATERIALS:				L. TOTAL METALS <sup>2</sup> :	<u>233</u>		<u>243</u>		<u>254</u>		
F1. FLY ASH	<u>150,000</u>	<u>175,000</u>	<u>200,000</u>								

## MARKET AVAILABILITY FOR COLLECTED MATERIALS:

The following identifies how much volume that existing markets are able to utilize of the recovered materials which were diverted from the County's solid waste stream.

<u>Collected Material:</u>	<u>In-State Markets</u>	<u>Out-of-State Markets</u>	<u>Collected Material</u>	<u>In-State Markets</u>	<u>Out-of-State Markets</u>
A. TOTAL PLASTICS:	<u>50%</u>	—	G. GRASS AND LEAVES:	<u>100%</u>	—
B. NEWSPAPER:	<u>100%</u>	—	H. TOTAL WOOD WASTE:	<u>100%</u>	—
C. CORRUGATED CONTAINERS:	<u>100%</u>	—	I. CONSTRUCTION AND DEMOLITION:	<u>N/A.</u>	—
D. TOTAL OTHER PAPER:	<u>100%</u>	—	J. FOOD AND FOOD PROCESSING	<u>N/A.</u>	—
E. TOTAL GLASS:	<u>50%</u>	—	K. TIRES:	<u>100%</u>	—
F. OTHER MATERIALS:	—	—	L. TOTAL METALS:	<u>100%</u>	—
F1. —	—	—			

<sup>1</sup> This only represents tires recovered at Smiths Creek Landfill

<sup>2</sup> Tin, Metal and aluminum containers from curbside recyclable collection and County Drop-Off Sites

## EDUCATIONAL AND INFORMATIONAL PROGRAMS:

It is often necessary to provide educational and informational programs regarding the various components of a solid waste management system before and during its implementation. These programs are offered to avoid miscommunication which results in improper handling of solid waste and to provide assistance to the various entities who participate in such programs as waste reduction and waste recovery. Following is a listing of the programs offered or proposed to be offered in this County.

<u>Program Topic</u> <sup>1</sup>	<u>Delivery Medium</u> <sup>2</sup>	<u>Targeted Audience</u> <sup>3</sup>	<u>Program Provider</u> <sup>4</sup>
<u>1,3,4,5</u>	<u>f,e</u>	<u>p,b,i,s</u>	<u>Resource Recovery Office</u>
<u>1,3,4,5</u>	<u>w,o,f,e</u>	<u>p,b,i,s</u>	<u>Ex</u>
<u>2</u>	<u>w,n,o,f</u>	<u>p,s</u>	<u>Ex, Office/Master Gardener</u>
<u>1,3</u>	<u>f</u>	<u>p,b,i,s</u>	<u>County Health Department</u>
<u>1,2,3,4,5</u>	<u>f</u>	<u>p,b,i,s</u>	<u>Waste Management</u>
<u>1,2,3,4,5</u>	<u>f</u>	<u>p,b,i,s</u>	<u>BFI</u>
<u>1,2,3</u>	<u>f,o</u>	<u>p,b,i,s</u>	<u>Most Communities</u>

<sup>1</sup> Identified by 1 = recycling; 2 = composting; 3 = household hazardous waste; 4 = resource conservation; 5 = volume reduction; 6 = other which is explained.

<sup>2</sup> Identified by w = workshop; r = radio; t = television; n = newspaper; o = organizational newsletters; f = flyers; e = exhibits and locations listed; and ot = other which is explained.

<sup>3</sup> Identified by p = general public; b = business; i = industry; s = students with grade levels listed. In addition if the program is limited to a geographic area, then that county, city, village, etc. is listed.

<sup>4</sup> Identified by EX = MSU Extension; EG = Environmental Group (Identify name); OO = Private Owner/Operator (Identify name); HD = Health Department (Identify name); DPA = Designated Planning Agency; CU = College/University (Identify name); LS = Local School (Identify name); ISD = Intermediate School District (Identify name); O = Other which is explained.

☐ Additional efforts and the above information for those efforts are listed in Appendix E.

## TIMETABLE FOR SELECTED SYSTEM IMPLEMENTATION

This timetable is a guideline to implement components of the Selected System. The Timeline gives a range of time in which the component will be implemented such as "1995-1999" or "On-going." Timelines may be adjusted later, if necessary.

TABLE III-7

Management Components	Timeline
Collection and Transportation of Solid Waste	Ongoing
Disposal of Solid Waste <ul style="list-style-type: none"> <li>Implementation of Scales at Smiths Creek Landfill</li> </ul>	Ongoing <ul style="list-style-type: none"> <li>2000</li> </ul>
Resource Recovery <ul style="list-style-type: none"> <li>County Recycling Drop-Off Sites (add one additional site)</li> <li>Expand Recycling Program to Collect Additional Materials, as Feasible</li> <li>Expand the efforts and responsibilities of the Health Department in the areas of Resource Recovery and Pollution Prevention</li> </ul>	Ongoing <ul style="list-style-type: none"> <li>2000</li> <li>Ongoing</li> <li>Ongoing</li> </ul>
Household Hazardous Materials Collection	Ongoing
Composting <ul style="list-style-type: none"> <li>Promote Home and Municipal Composting</li> </ul>	Ongoing <ul style="list-style-type: none"> <li>Ongoing</li> </ul>
Resource Conservation and Waste Reduction	Ongoing
Public Information and Education	Ongoing

## **SITING REVIEW PROCEDURES**

### **AUTHORIZED DISPOSAL AREA TYPES**

The following solid waste disposal area types may not be sited by this Plan. Any proposal to construct a facility listed herein shall be deemed inconsistent with this Plan.

- Type II: Sanitary Landfill
- Type III Landfill
- Waste-to-Energy Facility
- Transfer Facility
- Processing Plant
- Materials Recovery Facility

St. Clair County has enlisted the services of EMCON/OWT Solid Waste Services to perform volume calculations in order to identify possible future expansions at the Smiths Creek Landfill. Two areas of potential expansion were identified in the calculations:

- Vertical Expansion over the unclosed and unconstructed area
- Lateral Expansion adjacent to the current permitted solid waste boundary.

It should be noted that any expansion, vertical or horizontal, would require a new construction permit. A construction permit application would involve extensive engineering and preparation, such as an environmental assessment, a hydrogeologic monitoring plan, engineering plans and supporting calculations, operations plans, and evidence of consistency with the county solid waste management plan. This plan recognizes and includes the above future expansions of Smiths Creek Landfill that shall be deemed to be consistent with the Plan.

This Plan designates Howard's Solid Waste Transfer and Reclamation Center as a licensable transfer facility and processing plant. A proposed expansion approved by the Solid Waste Management Planning Committee (2/27/89) includes: a 55' x 100' addition to the first transfer/processing building, a compost area, and a recycling drop-off center. This plan recognizes and includes these proposed expansions of Howard's Solid Waste Transfer and Reclamation Center which shall be deemed to be consistent with the Plan.

## SITING CRITERIA AND PROCESS

The following process describes the criteria and procedures to be used to site solid waste disposal facilities and determine consistency with this Plan. (attach additional pages if necessary)

St. Clair County has sufficient landfill capacity, utilizing Smiths Creek Landfill and Range Road Property (Type III) Detroit Edison, for the five and ten year planning periods. Therefore, a siting criteria and process are not required. The siting of any future additional solid waste disposal areas may be accomplished only by amendment of the St. Clair County Solid Waste Management Plan.

## **SOLID WASTE MANAGEMENT COMPONENTS<sup>1</sup>**

The following identifies the management responsibilities and institutional arrangements necessary for the implementation of the Selected Waste Management System. Also included is a description of the technical, administrative, financial and legal capabilities of each identified existing structure of persons, municipalities, counties and state and federal agencies responsible for solid waste management including planning, implementation, and enforcement.

### **Introduction:**

It is the intent of this Plan to acknowledge the management system that is in place, to reflect on current roles and to recommend policies or tasks under the plan that ensure compliance with the plan, NREPA Part 115, and state laws, in order to improve effectiveness of the general system.

This Solid Waste Management Plan will be coordinated with any subsequent county land use plans, or other elements of the St. Clair County Master Plan.

Following is a list of parties responsible for solid waste management planning, implementation and enforcement and a brief account of some existing duties and proposed:

### **County Board of Commissioners and Administrator Controller:**

Provides overall direction to county government; financial support and oversight to county solid waste management programs. One County Commissioner sits on the Solid Waste Management Planning Committee affording direct involvement in planning. An Environmental and Public Works subcommittee reports to full board re: air and water pollution, landfills, solid waste management planning, etc. County-owned landfill management decisions rest with this board, and administrator. The County Board hires the Administrator/Controller and Resource Recovery Coordinator for the county. The County Administrator /Controller is also responsible for receiving and maintaining copies of bi-annual reports, closure records and other records required to be filed with the county by solid waste disposal area owners and operators.

Under the plan, the County Board and County Administrator/Controller will enact ordinances and policies complementing state policy on waste reduction, source separation, resource recovery, composting, education and household hazardous materials collection (as recommended in this plan); and will continue to consider support of county waste management programs such as: financial commitment; labor; and control of county owned disposal facilities. Applications for solid waste hauler permits as specified under the Monitoring and Enforcement Mechanism issued by and filed with the St. Clair County Administrator/Controller.

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<sup>1</sup> Components or subcomponents may be added to this table.

St. Clair County Metropolitan Planning Commission:

Pursuant to NREPA Part 115, Section 11533 and Rule 702(1), the County Board of Commissioners shall appoint the Designated Planning Agency (DPA) who is responsible for the plan preparation. The duties of the DPA are specified in both sections of the laws and the rules of the NREPA Part 115 (Section 11535 and Rules 706, 707, 711[g]). These duties include:

- arrange and hold meetings of the Solid Waste Management Planning Committee (COMMITTEE)
- hold public hearings on the draft of the plan
- publish public notices
- do research and gather information and public comments necessary to prepare the plan
- draft plan materials and documents
- mail notices and plan materials as necessary
- maintain a central repository for public review of plan materials
- maintain mailing lists
- conduct public participation activities.

In carrying out these duties, the DPA provides staff support to the COMMITTEE. The St. Clair County Metropolitan Planning Commission (SCCMPC) operates under the State Enabling Legislation and is charged with the responsibility of comprehensive planning for the county. The County Board of Commissioners appropriates funds to staff the SCCMPC's annual work program which consists of seven full-time employees. Inasmuch as staff is responsible for duties comparable to what has and continues to be required for the drafting of the solid waste management plan, it is appropriate that the staff which serves the St. Clair County Metropolitan Planning Commission can serve the DPA.

There is no role of approval by the SCCMPC in this process. The COMMITTEE serves that function and will continue to do so.<sup>1</sup>

Therefore, the COMMITTEE, not the SCCMPC serves as the policy body in the preparation and drafting of the solid waste plan. By designating the SCCMPC as the DPA, it is implicit that the staff of the SCCMPC will function as staff to the COMMITTEE and there will be no approval authority on behalf of the SCCMPC.

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<sup>1</sup> See Memorandum of Understanding in Appendix A, under Coordination Efforts.

#### Solid Waste Management Planning Committee:

Responsible for the Plan Update, administers applications for amendments to the plan, reviews proposed projects for conformity with plan, actively pursues new resource recovery techniques, and maintains inventory of existing operations between Updates. Future endeavors may include establishing a means to review landfill closing and land reuse.

#### Cooperative Extension Service:

Provides technical and educational assistance to Planning Commission in management areas of agricultural and natural resources, including resource recovery and backyard composting; responsible for public education in same areas.

The Cooperative Extension Service is expected to play a large role in education, and will assist in countywide composting efforts. The Cooperative Extension Service office also serves as the agent to monitor the Clean Sweep program that aids in the collection of banned and unlicensed pesticides and herbicides from farms, to ensure the proper disposal of such wastes.

#### Health Department:

Acts as a liaison to the Department of Environmental Quality and: is responsible for an advisory analysis of feasibility for proposed new Solid Waste disposal facilities; comments on applications for licenses or permits for Solid Waste Disposal facilities; routinely inspects licensed Solid Waste disposal areas; investigates complaints against licensed facilities and against allegations of unlawful dumping; responsible for adoption of regulations necessary to supplement and enforce St. Clair County's Solid Waste Management Plan, and has enforcement responsibilities under the Monitoring and Enforcement Mechanism attached as Appendix E. Provides advice and consultation during the preparation of an update to a plan upon request of the planning committee and/or designated planning agency, the County, the private sector, municipalities, and other appropriate organizations.

#### Corporation Counsel:

Assists during preparation of Plan's Monitoring and Enforcement Mechanism; prosecutes those who do not observe state statutes, county ordinances or policies, set forth by the Plan or under Act 451. Legal authority under which the plan will be implemented and enforced rests primarily with NREPA Part 115, the Monitoring and Enforcement Mechanism and the Michigan Public Health Code.

The Corporation Counsel will continue to prosecute those who do not observe statutes, any county ordinances, or enforcement policies of this plan.

#### Sheriff Department:

The Sheriff Department along with several other County agents such as the County Weigh Master, County Administrator and Health Department will police solid waste haulers and solid waste disposal areas as a county designated authority under the Monitoring and Enforcement Mechanism.

#### Office of Emergency Management

The St. Clair County Office of Emergency Management will be responsible for monitoring contingency plans filed by solid waste disposal area owners/operators and will assist the capacity of the Sheriff Department in the event of an emergency at a disposal facility under the Monitoring and Enforcement Mechanism.

#### Collection and Transportation:

Collection and transportation of solid waste in St. Clair County is handled exclusively by private haulers through municipal contracts or contracts with individual businesses or residents. Specific information regarding this system is outlined in the Collection and Transportation Infrastructure section of this Plan.

The Monitoring and Enforcement Mechanism in this Plan requires that haulers be registered with the St. Clair County Administrator/Controller. Likewise, many communities require haulers to be licensed to haul within their jurisdiction. Many require renewal of vehicle licenses and vehicle inspections during December.

#### Resource Recovery Management:

Since Recycling and Composting were especially important to the planned solid waste management system outlined in the 1990 Plan, the County Board of Commissioners hired a Recycling Coordinator on a contractual basis. The responsibilities of this position have now been taken over by the Resource Recovery Office. In addition to promotion, publicity, grant seeking, and education, the duties of this position include bridging the gap between sources of recoverable materials and markets. Programs such as presentation to community leaders, service groups, and industry to solicit support and tracking of current recycling business are likely. With the assistance of this person, the Solid Waste Management Planning Committee can chart the volume of materials recovered each year and measure how well recommendations of this plan are implemented.

**Monitoring and Enforcement Activity:**

Under this plan, Monitoring and enforcement activity will ensure compliance with NREPA Part 115 and plan policies by setting forth specific policies under a Monitoring and Enforcement Mechanism, designed to be enforceable under NREPA Part 115, by county ordinance, and the public health code. The Mechanism designates County authorities under this document to police haulers and solid waste disposal areas for compliance with this mechanism, namely, the County Administrator, Weigh Master, Health and Sheriff Departments. Violators of this ordinance will be subject to the penalties described under the Mechanism.

## **IDENTIFICATION OF RESPONSIBLE PARTIES**

Document which entities within the County will have management responsibilities over the following areas of the Plan.

### **Resource Conservation:**

Source or Waste Reduction – Smiths Creek Landfill; All Citizens, businesses, and industries; Private Waste Companies.

Product Reuse – All citizens, businesses, and industries.

Reduced Material Volume - All citizens, businesses, and industries.

Increased Product Lifetime - All citizens, businesses, and industries.

Decreased Consumption - All citizens, businesses, and industries.

### **Resource Recovery Programs:**

Composting – Resource Recovery Office; St. Clair County Health Department; MSU Cooperative Extension Service; Private Composting Industry; Private Haulers; Residents; Municipalities.

Recycling – Resource Recovery Office; St. Clair County Health Department; Private Solid Waste Industry; Private Haulers; Municipalities; Residents; Businesses; Industries.

Energy Production – Resource Recovery Office

**Volume Reduction Techniques:** Smiths Creek Landfill; Private Haulers; Private Solid Waste Industry; Residents, Business and Industries through voluntary efforts.

**Collection Processes:** Private haulers; Private Solid Waste Industry; Municipalities; Residents.

**Transportation:** Private Haulers; Private Solid Waste Industry; Michigan Department of Transportation (MDOT), County Road Commission.

**Disposal Areas:**

Processing Plants – Private Solid Waste Industry; Solid Waste Management Planning Committee (SWMPC); Metropolitan Planning Commission (DPA); Board of Commissioners (BoC); St. Clair County Health Department; Municipalities; Michigan Department of Environmental Quality (MDEQ).

Incineration – N./A.

Transfer Stations – Private Solid Waste Industry; Solid Waste Management Planning Committee (SWMPC); Metropolitan Planning Commission (DPA); Board of Commissioners (BoC); St. Clair County Health Department; Municipalities; Michigan Department of Environmental Quality (MDEQ).

Sanitary Landfills – Private Solid Waste Industry; Solid Waste Management Planning Committee (SWMPC); Metropolitan Planning Commission (DPA); Board of Commissioners (BoC); St. Clair County Health Department; Municipalities; Michigan Department of Environmental Quality (MDEQ).

**Ultimate Disposal Area Uses:** Private Solid Waste Industry; Municipalities; Board of Commissioners; MDEQ.

**Local Responsibility for Plan Update Monitoring & Enforcement:** See pages III-37 through III-41 (Board of Commissioners, Health Department, Sheriff Department, Weigh Master, Administrator/Controller, office of Emergency Management). See Monitoring and Enforcement Mechanism in Appendix E.

**Educational and Informational Programs:** Resource Recovery Office; St. Clair County Health Department; MSU Cooperative Extension Service; Private Haulers; Municipalities; public and private schools.

Documentation of acceptance of responsibilities is contained in Appendix D.

## LOCAL ORDINANCES AND REGULATIONS AFFECTING SOLID WASTE DISPOSAL

This Plan update's relationship to local ordinances and regulations within the County is described in the option(s) marked below:



1. Section 11538.(8) and rule 710 (3) of Part 115 prohibits enforcement of all County and local ordinances and regulations pertaining to solid waste disposal areas unless explicitly included in an approved Solid Waste Management Plan. Local regulations and ordinances intended to be part of this Plan must be specified below and the manner in which they will be applied described.
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2. This Plan recognizes and incorporates as enforceable the following specific provisions based on existing zoning ordinances:

A.

Geographic area/Unit of government: St. Clair County

Type of disposal area affected: All

Ordinance or other legal basis: Monitoring and Enforcement Mechanism

Requirement/restriction: \*See Mechanism in Appendix E.

B.

Geographic area/Unit of government: \_\_\_\_\_

Type of disposal area affected: \_\_\_\_\_

Ordinance or other legal basis: \_\_\_\_\_

Requirement/restriction: \_\_\_\_\_



3. This Plan authorizes adoption and implementation of local regulations governing the following subjects by the indicated units of government without further authorization from or amendment to the Plan.

Regulations meeting these qualifications may be adopted and implemented by the appropriate governmental unit without additional authorization from, or formal amendment to, the Solid Waste Management Plan, within the rules of Act 451. Allowable areas of local regulation include:

1. Certain ancillary construction details, such as landscaping and screening
2. Hours of operation

3. Noise, litter, odor, and dust control
4. Facility security
5. Composting and recycling

☐ Additional listings are on attached pages.

## CAPACITY CERTIFICATIONS

Every County with less than ten years of capacity identified in their Plan is required to annually prepare and submit to the DEQ an analysis and certification of solid waste disposal capacity validly available to the County. This certification is required to be prepared and approved by the County Board of Commissioners.

- ☒ This County has more than ten years capacity identified in this Plan and an annual certification process is not included in this Plan.
- ☐ Ten years of disposal capacity has not been identified in this Plan. The County will annually submit capacity certifications to the DEQ by June 30 of each year on the form provided by DEQ. The County's process for determination of annual capacity and submission of the County's capacity certification is as follows:

Smiths Creek Landfill has a projected remaining capacity of 14,800,000 in-place cubic yards. This is equivalent to 29,600,000 in-gate cubic yards. This projection includes existing and future capacity.

The present permit design for Smiths Creek Landfill provides 5,700,000 cubic yards of total airspace and approximately 15 years of site life. Smiths Creek Landfill has requested the inclusion of two areas of potential expansion in this plan update:

- Vertical Expansion over the unclosed and unconstructed area
- Lateral Expansion adjacent to the current permitted solid waste boundary.

The addition of the added airspace by the three areas of potential expansion increase the projected remaining capacity to 14,800,000 cubic yards and increase the estimated lifetime to 35.9 years. This plan recognizes the potential addition of 9,100,000 cubic yards of airspace provided by the two areas of potential expansion listed above.

A calculation was completed to determine the expected life of the site and assumed that all waste generated in St. Clair County would be disposed in Smiths Creek Landfill. Based on this waste projection, and the existing and future capacity, the expected life of Smiths Creek Landfill is 35.9 years. This exceeds the required capacity of St. Clair County of the next five and ten year planning periods.

As owner of Smiths Creek Landfill, St. Clair County has made its listed capacity available for all the communities in the St. Clair County planning area.

Further capacity information can be found in Appendix D.

