Draft Solid Waste Management Plan
& Generic Environmental Impact Statement

for the
Capital Region Solid Waste Management Partnership Planning Unit

Lead Agency
City of Albany Common Council
24 Eagle Street
Albany, NY

Project Sponsor
City of Albany Department of General Services
1 Connors Boulevard
Albany, NY

Contact Person:
John C. Marsolais, City Clerk
City Hall, Room 202
24 Eagle Street
Albany, NY 12207
(518) 434-5090

DGEIS Accepted as Complete:
October 4, 2010

Public Comment Period Ends:
November 19, 2010

CHA Project #: 19283

Prepared by:
CHA
III Winners Circle
Albany, NY 12205
# TABLE OF CONTENTS

**VOLUME 1**

## ACRONYMS & ABBREVIATION

## EXECUTIVE SUMMARY

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>ES-1</td>
</tr>
<tr>
<td>Existing Conditions and Future Needs</td>
<td>ES-2</td>
</tr>
<tr>
<td>Goals and Objectives</td>
<td>ES-4</td>
</tr>
<tr>
<td>Elements of the SWMP</td>
<td>ES-6</td>
</tr>
<tr>
<td>Waste Minimization</td>
<td>ES-7</td>
</tr>
<tr>
<td>Product Stewardship</td>
<td>ES-8</td>
</tr>
<tr>
<td>Continue to Promote and Expand Local Recycling Infrastructure</td>
<td>ES-8</td>
</tr>
<tr>
<td>SSOW Collection and Processing</td>
<td>ES-9</td>
</tr>
<tr>
<td>Additional Mandatory Recyclables</td>
<td>ES-10</td>
</tr>
<tr>
<td>Solid Waste Treatment Facility</td>
<td>ES-11</td>
</tr>
<tr>
<td>Land Disposal</td>
<td>ES-11</td>
</tr>
<tr>
<td>Interim Measures</td>
<td>ES-12</td>
</tr>
<tr>
<td>Potential Environmental Impacts</td>
<td>ES-13</td>
</tr>
<tr>
<td>Alternatives</td>
<td>ES-13</td>
</tr>
</tbody>
</table>

## SECTION 1.0 INTRODUCTION AND BACKGROUND

1.1 Planning Unit Description ........................................................................ 1-2
1.1.1 Member Municipalities ........................................................................ 1-2
1.1.2 Population Trends and Projections ..................................................... 1-2
1.1.3 Significant Features Affecting Solid Waste Management ...................... 1-5
1.1.4 Background And Previous Solid Waste Planning Efforts ........................ 1-6
1.2 SWMP Steering Committee ........................................................................ 1-9
1.3 Goals and Objectives .............................................................................. 1-11
1.4 Public Review and Comment ..................................................................... 1-11
1.5 SEQR Compliance                                                          .................................................................. 1-11

## SECTION 2.0 SOLID WASTE QUANTITIES AND CHARACTERISTICS

2.1 Current Estimates of Solid Waste Generation ........................................ 2-1
  2.1.1 Municipal Solid Waste Generation ..................................................... 2-2
    2.1.1.1 Residential MSW ........................................................................... 2-2
    2.1.1.2 Non Residential MSW .................................................................... 2-3
    2.1.1.3 Total MSW Generation .................................................................... 2-4
  2.1.2 Construction and Demolition Debris ................................................ 2-4
  2.1.3 Non-Hazardous Industrial Waste ....................................................... 2-7
  2.1.4 Total Existing Solid Waste Generation .............................................. 2-8
2.2 Characterization of Solid Waste ............................................................ 2-9
  2.2.1 Field Study Of Solid Waste Characterization ..................................... 2-9
  2.2.2 Construction & Demolition Debris ..................................................... 2-9
  2.2.3 Non-Hazardous Industrial Waste ....................................................... 2-15
  2.2.4 Total Hazardous Industrial Waste .................................................... 2-15
2.3 Future Solid Waste Quantity and Characteristics ................................... 2-18
  2.3.1 Projected Solid Waste Quantities ..................................................... 2-18
  2.3.2 Future Solid Waste Composition ...................................................... 2-19

## SECTION 3.0 EXISTING SOLID WASTE MANAGEMENT PRACTICES

3.1 MSW Collection Practices ......................................................................... 3-1
  3.1.1 Residential MSW collection including MSW recycling .......................... 3-1
  3.1.2 Commercial, Industrial And Institutional (CII) MSW ......................... 3-8
3.2 C&D Collection and Management Practices .............................................. 3-9
3.3 Non-Hazardous Waste Industrial Collection And Management Practices ...... 3-10
3.4 Solid Waste Management Facility Inventory .............................................. 3-10

## SECTION 4.0 MATERIALS RECOVERY ANALYSIS

4.1 MSW Recovery ........................................................................................... 4-1
  4.1.1 Residential MSW Recycling ................................................................. 4-2
  4.1.2 Commercial, Industrial and Institutional MSW Recycling ..................... 4-5
SECTION 5.0 ALTERNATIVES ANALYSIS 5-1

5.1 Introduction .................................................................................................................. 5-1

5.2 No Action Alternative .................................................................................................. 5-1

5.3 Alternative Solid Waste Management Methods .......................................................... 5-2

5.3.1 Proven Technologies and Practices ........................................................................... 5-2

5.3.1.1 Volume Based User Fees .................................................................................. 5-2

5.3.1.2 Product Stewardship ....................................................................................... 5-4

5.3.1.3 Dual Stream Recyclables Collection and MRF ................................................ 5-5

5.3.1.4 Single Stream Recyclables Collection and MRF ............................................. 5-6

5.3.1.5 Yard Waste Composting .................................................................................. 5-8

5.3.1.6 Mixed MSW Composting .............................................................................. 5-9

5.3.1.7 SSOW Composting ....................................................................................... 5-10

5.3.1.8 Conventional Waste-to-Energy ....................................................................... 5-12

5.3.1.9 Transfer Station ............................................................................................. 5-15

5.3.1.10 Landfill .......................................................................................................... 5-17

5.3.2 Emerging Solid Waste Management Technologies ................................................. 5-20

5.3.2.1 Thermal Processes .......................................................................................... 5-21

5.3.2.2 Biological and Chemical Processes ................................................................. 5-24

5.3.2.3 Comparison of Emerging Technologies ......................................................... 5-27

5.4 Institutional Alternatives ............................................................................................... 5-30

5.4.1 Expansion of the Planning Unit ............................................................................... 5-30

5.4.2 Implementing Agency Alternatives ......................................................................... 5-31

5.4.3 Flow Control .......................................................................................................... 5-35

5.5 Alternative Implementation Scenarios ......................................................................... 5-37

5.5.1 Alternative Implementation Scenario #1 ................................................................. 5-38

5.5.2 Alternative Implementation Scenario #2 ................................................................. 5-40

5.5.3 Alternative Implementation Scenario #3 ................................................................. 5-41

5.6 Comparison of Implementation Scenarios ................................................................. 5-43

5.6.1 Cost Analysis ........................................................................................................... 5-44

5.6.1.1 Local Solid Waste Management Authority ..................................................... 5-44

5.6.1.2 Regional Solid Waste Management Authority ................................................ 5-45

5.6.1.3 SSOW Collection and Processing ................................................................. 5-48

5.6.1.4 Regional Solid waste Treatment Facility ....................................................... 5-50

5.6.1.5 Land Disposal Of Residue And Post-Recyclable Waste ................................ 5-53

5.6.1.6 Cost Analysis Summary of Alternative Implementation Scenarios ............... 5-56

5.6.2 Facility Sizing Analysis ............................................................................................. 5-58

5.6.3 Financial Risk ........................................................................................................... 5-59

5.6.3.1 Local Or Regional Solid Waste Management Authority ................................ 5-59

5.6.3.2 SSOW Facility ............................................................................................... 5-60

5.6.3.3 Regional Solid Waste Treatment Facility ....................................................... 5-60

5.6.3.4 Land Disposal Of Residue And Post-Recyclable Waste ................................ 5-62

5.6.4 Time to Implement .................................................................................................. 5-63

5.6.4.1 Local or Regional Solid Waste Management Authority ................................ 5-63

5.6.4.2 SSOW Facility ............................................................................................... 5-64

5.6.4.3 Regional Solid Waste Treatment Facility ....................................................... 5-65

5.6.4.4 Land Disposal Of Residue And Post-Recyclable Waste ................................ 5-65

5.6.5 Effectiveness ............................................................................................................ 5-66

5.6.5.1 Local Solid Waste Management Authority ..................................................... 5-67

5.6.5.2 Regional Solid Waste Management Authority ................................................ 5-67

5.6.5.3 SSOW Facility ............................................................................................... 5-68

5.6.5.4 Regional Solid Waste Treatment Facility ....................................................... 5-68

5.6.5.5 Land Disposal of Residue and Post-Recyclable Waste .................................. 5-68

5.6.6 Environmental Impacts ............................................................................................. 5-69

5.6.6.1 Water Quality ................................................................................................ 5-69

5.6.6.2 Land Use ...................................................................................................... 5-69

5.6.6.3 Air Quality .................................................................................................... 5-69

5.6.6.4 Energy Use ................................................................................................... 5-69

5.6.6.5 Resource Conservation ................................................................................ 5-69
SECTION 6.0 SOLID WASTE MANAGEMENT PLAN

6.1 Elements of the Preferred Solid Waste Management Plan

6.1.1 Reduction and Recovery of Materials

6.1.2 Solid Waste Treatment Facility

6.1.3 Land Disposal

6.1.4 Interim Measures

6.2 Administrative and Legal Structure

6.2.1 Implementation Model

6.2.2 New Laws and Regulations

6.3 Implementation schedule

6.4 Potential Impacts of the Preferred Solid Waste Management Plan

6.4.1 Impacts Related to the Reduction and Recovery of Materials

6.4.2 Impacts Related to the Solid Waste Treatment Facility

6.4.3 Impacts Related to Land Disposal

6.4.4 Impacts Related to the Administrative Legal Structure

6.4.5 Impacts Related to the Use and Conservation of Energy Resource and Climate Change

SECTION 7.0 REFERENCES

List of Tables

1-1 Member Communities
1-2 Population and Projections by Municipality
1-3 Housing Data
1-4 Steering Committee Members
2-1 Total MSW Generation
2-2 C&D Recycling Tonnage
2-3 Total Existing Solid Waste Generation
2-4 Field Study of Municipal Solid Waste Composition
2-5 Comparison of DGS and Commercial Waste Composition
2-6 Comparison of MSW Composition with Other Studies
2-7 C&D Waste Composition
2-8 Estimated Future Waste Generation
2-9 Estimated Composition of As-Generated MSW
3-1 Residential SW Collection Practices
3-2 Waste Accepted For Disposal at Rapp Road Landfill
3-3 Existing Solid Waste Management Facilities in the Planning Unit
3-4 Other Solid Waste Management Facilities used by Planning Unit
3-5 Estimated Waste Disposal from the Planning Unit
4-1 Estimated Total Material Recovery and Recycling in 2008
4-2 Residential MSW Recycling Collection Practices
4-3 Municipal Recycling Program Tonnage 2005-2008
4-4 Residential Recyclable Materials Composition Summary
4-5 CII MSW Recycling 2008
4-6 Other Estimated MSW Recycling in 2008
4-7 C&D Recycling in 2008
4-8 Non-Hazardous Industrial Waste Recycling 2008
4-9 Designated Recyclables in MSW Delivered for Disposal
4-10 Estimated Recovery Rate for Designated Recyclables in MSW
4-11 Additional Recovery of Designated Recyclables
4-12 Major Recycling Processors Used by the Planning Unit
5-1 Permitted Waste to Energy Facilities in New York
5-2 Permitted MSW Landfills in New York
5-3 Permitted C&D Landfills in New York
5-4 Alternative Solid Waste Management Technologies
5-5 Local Solid Waste Management Authority Annual Operating Cost
5-6 Regional Solid Waste Management Authority Annual Operating Cost
5-7 SSOW Facility Cost
5-8 Solid Waste Treatment Facility Cost
5-9 Sensitivity Analysis Results
5-10 Transfer Transport and Disposal Cost – Alternative Scenario #1
5-11 Transfer Transport and Disposal Cost – Alternative Scenario #2
5-12 Cost Analysis Summary
5-13 Timeframes to Implement
5-14 Land Resource Impacts
5-15 Greenhouse Gas Emissions
6-1 Waste Diversion and Recycling Goals

List of Figures

1-1 Regional Location
1-2 Planning Unit Communities
1-3 Adjacent Planning Units
3-1 Existing Solid Waste Management Facilities in the Planning Unit
3-2 Other Solid Waste Management facilities used by Planning Unit
6-1 Detailed Implementation Schedule
List of Appendices

Appendix A – Steering Committee Comments on the Preliminary Draft SWMP
Appendix B - SEQRA Documentation
Appendix C – Industrial Waste Survey Results
Appendix D – Waste Characterization Field Study
Appendix E – Assessment of Emerging Solid Waste Management Technologies
Appendix F – Cost Estimates of Alternatives
Appendix A

Steering Committee Comments on the Preliminary Draft SWMP
The Preliminary Draft Solid Waste Management Plan (SWMP) was distributed to members of the Steering Committee on December 15, 2009 for their review and comment before the Draft SWMP is finalized for public review and comment. Committee members were requested to provide their comments in writing by no later than January 29, 2010.

These comments have been summarized by subject area. When multiple comments were made on a single topic, the substance of the comment has been summarized. In these cases, the individual member comment (with name in parentheses) is presented in the bullets following the comment summary. The summarized and individual comments are presented in italic type.

A response to each comment is presented after each comment. The response includes a note regarding whether a change was made to the Draft SWMP as a result of the comment. Discussion of the comments and responses took place at the Steering Committee meeting held on February 9, 2010. Some of those discussions have resulted in amendments to the response to comments section and in the manner in which revisions to the Preliminary Draft SWMP will be made.

**Distribution and Review**

**Comment D1:** Several commentators thought that the Appendices to the Preliminary Draft SWMP should be provided to the entire Steering Committee. Other commentators thought this was unnecessary, but that copies could be supplied to those who request them or direct specific questions to CHA.

- The Appendices are an integral part of the Preliminary Report and contain information that should be accessible to the Steering Committee. Each member of the Steering Committee should immediately be provided with the Appendices in order to make a proper study of the preliminary report (Kernan).
- I feel that it is important that all members of the SWMP Steering Committee receive copies of the appendices, in order to make informed comments. These were omitted from the preliminary draft for Steering Committee review and were not sent to the members unless they requested them (Cummings).
- Please send an electronic copy of the appendices to Cashawana Parker at the Albany Common Council so they are available to all council members and to the City Clerk. Also please send her three paper copies (O’Brien).
- Any Committee member that wanted the appendices got a copy. The detailed information in these is summarized in the preliminary draft SWMP the Committee members received. The appendices contain valuable back up and technical information, but the Committee should really focus on the draft SWMP, the
diversion rates, alternative scenarios, policy and program recommendations (Bruce).

- I'm sure if a few individuals have specific questions that could be answered by material in the appendices, it would be a time and paper savings to have these individuals address those specific question directly to you (Reynolds).

**Response D1:** There are presently four appendices to the Preliminary Draft SWMP which contain voluminous detailed supporting information on topics that are fully presented and discussed in the full body of the preliminary draft SWMP. As such, they were not distributed to the Steering Committee as part of the Preliminary Draft. Our intent was to request feedback from the Steering Committee on the substantive issues presented in the Preliminary Draft, particularly if there were any omissions or misrepresentations with respect to issues that were discussed by the Steering Committee.

Members of the Steering Committee who requested an electronic or paper copy of the appendices were provided with them.

It is not anticipated that a change will be made to the Draft SWMP as a result of this comment.

**Comment D2: The timeframe for review of the Preliminary Draft should be extended.**

- Since the Appendices are very large and the Preliminary Draft was very large, I feel that CHA should extend the comment deadline until March 15th (Cummings).

- Since the requested review is to get "preliminary" feedback prior to full release and not what would be considered a full technical review, your timetable seems appropriate. Not looking for a perfect document at this point, better to get it out to a wider audience for review as soon as possible. From what I've read so far, the information in the body of the SWMP seems adequate to perform the level of review requested (Reynolds).

- I feel that it is premature to extend the comment deadline until March 15th. Let's have the meeting in early February and see what the consensus is. I know that although the appendices were missing from the electronic copies, they were available from CHA when asked for (O'Brien).

- I am not in favor of an extension of time for submission of Committee member comments. We discussed the process and timetable at the last Committee meeting, and there was agreement on proceeding along these lines (Bruce).

- I must also agree with Bill & Ken, the time frame was clearly defined in the last few meetings. We need to keep to the schedule and submit this to the Common Council as stated. It is important for Sally to remember that this is a preliminary draft. After committee members submit their comments a final draft will be
submitted to the Council where it will then be subject to public comment and SECOR review. This is not the final draft that some people seem to think it is (Zeoli).

Response D2: Only one committee member requested an extension in the timeframe for the review of the Preliminary Draft SWMP. Four other committee members who expressed an opinion on this issue thought that it was unnecessary to extend the timeframe. Because there appears to be no compelling reason to extend the timeframe and because extending the timeframe would delay the formal issuance of a Draft SWMP for review and comment by the general public, the comment period for the Preliminary Draft SWMP has not been extended.

It is not anticipated that a change will be made to the Draft SWMP as a result of this comment.

Comment D3: A Steering Committee meeting should be scheduled in February to discuss committee member comments.

- It is also important to schedule a meeting in February at which Steering Committee members may discuss the draft plan and also get questions answered. How can the committee have a consensus opinion when members do not know the opinions of other members? (Cummings)
- I think the request for a meeting to discuss comments is a good idea (Dimino).
- I agree with Sally that we should have a meeting in February (preferably early in February) to discuss the draft... It would also be helpful if you would share members' comments with other members although I am choosing to send this comment directly to all the members. (O'Brien)
- We were planning to have a summary of the comments for the final meeting for discussion in late February, so Committee members would know about any changes made to the draft based on comments received. If there are any major issues were there is a significant split of opinion on a draft plan policy or program element, that will be noted in a transmittal letter to the Common Council. We are trying to stick to a reasonable time schedule and get the Draft Plan to the Common Council at which time the formal, and more important, public review, comment and evaluation process will begin (Bruce).
- I would be happy to schedule a second February meeting early in February, if Committee members want to hear about the comments that have been submitted, and discuss them. (Bruce)

Response D3: A Steering Committee Meeting has been scheduled for February 9, 2010 to present and discuss comments from the committee members that have been submitted.

As a result of the discussions that took lace at this meeting, changes were made to the Draft SWMP, as noted under individual comment responses listed in this summary.
Comment D4: The Preliminary Draft SWMP should be distributed to the citizens who have attended the Steering Committee meetings.

- While the 12/15/09 email from CHA advises that “this Preliminary Draft is for review by the Steering Committee only,” CHA sent it to select others. At each meeting of the Steering Committee, there were citizens sitting in the gallery who attended many of the meetings, some who were quite knowledgeable on the topic, some who asked very pertinent questions or who provided information to the group. Prior to issuance of a SWMP for formal review, these members of the public should be provided the Preliminary Report in full. (Kernan)

Response D4: The citizens who have attended SWMP committee meetings will be able to review the Draft SWMP when it is issued for public comment.

During discussions at the Steering Committee meeting on February 9th it was determined that the Preliminary Draft SWMP should be posted on the Committee’s internet site, so that interested parties could view it there.

It is not anticipated that a change will be made to the Draft SWMP as a result of this comment.

Comment D5: One Committee member (Cummings) requested that all comments from steering committee members on the preliminary draft be included in an appendix to the final draft that is to be forwarded to the Albany Common Council.

Response D5: Comment noted. Prior to the submission of this comment, the Chairman of the Steering Committee had determined that the committee member comments and the responses presented in this summary will be included as an Appendix in the Draft SWMP to be submitted to the Common Council.

Comment D6: One Committee member (Larson) informed that our comments on the Preliminary Draft of the Capital District Solid Waste Management Plan are being reviewed by our executive staff. Therefore, they will not be received by you as requested by your date of January 29, 2010, but we will send them as soon as possible.

Response D6: Comment noted. Any comments that are received can be addressed along with any public comment received during the formal public comment period.

Comments from this member were subsequently received on February 3, 2010 and indicated concurrence with the following components of the Preliminary Draft SWMP.

1) Expand the planning unit by implementation of a regional solid waste management authority, and the use of flow control
2) Waste Minimization – emphasis on consumer education on waste reduction, promote PAYT (Pay as you throw) implementation, and back yard composting for yard and food waste.

3) Promote Product Stewardship – working to reduce the amount and toxicity of packaging and materials that are left for disposal at the end of their useful lives.

4) Continue to promote and expand recycling infrastructure. Looking to mandate such items as electronics and HHW.

5) Developing a Source Separated Organic Waste (SSOW) facility.

The commentator express concern with the use of waste to energy as part of the regional solid waste treatment facility, and that comment is now noted and addressed as part of Comment A1.

**Editorial/Additions**

**Comment E1: The SWMP Needs an Index of Acronyms (O’Brien)**

Response E1: Comment noted. An Index of Acronyms will be prepared for Draft SWMP that will be issued for Public Review.

**Comment E2: Sally Cummings does not officially represent Save the Pine Bush.**

- When I was first asked to be on the SWMP Steering Committee I signed in as a citizen and thereafter signed in differently each time, i.e. once as an environmentalist (any gardener is an environmentalist) and also as a resident of Westmere. I believe I did once sign in as STPB but when I asked Lynne Jackson about this she told me not to sign in this way. I asked her if I should write and tell you, she said "not to bother". I did not know that you would put my title as this on the SWMP Preliminary document. Please change my name to "citizen" or Westmere resident, or some such.(Cummings)

Response E2: Comment noted. Sally Cumming’s affiliation will be changed to “citizen ” in the Draft SWMP that will be submitted to the Common Council and issued for Public Review. It was also noted at the Steering Committee meeting of February 9, 2010 that Michael Franchini from Albany County was not included in the Committee member listing in Table 1-4. His name will be added to this Table for the final Draft.

**Regional Solid Waste Management Authority**

**Comment R1: Two Committee members disagreed with the recommendation to form a Regional Solid Waste Management Authority.**

- I disagree with the assumption (p20) that a “Regional Solid Waste Management Authority (RSWMA)...is critical to successful implementation of the SWMP.”
There is no need for a “public authority” to gather the resources of the fourteen municipalities in the Planning Unit. This area has had a consortium for several years and the 14 municipalities have recently entered into a more formalized “Inter-municipal Agreement” (IMA) to hire and fund a Planning Unit Recycling Coordinator (p27). This is a formal consortium supported by a written document binding, according to its terms, on the various municipalities. It should not be difficult, with the proper initiative, to expand the IMA to include other aspects of finding a solution to the solid waste problem. And there would be bureaucratic savings. The court cases presented to us do not require a public authority and do not bar the use of a consortium to achieve the goals (Kernan).

- There are many disadvantages to another public authority. It will take years and expense to get legislative approval; it will be opposed by the citizens/taxpayers. Generally, public authorities have their directors appointed by the municipalities, no matter the lack of experience in matters of solid waste. In appointments, the public is generally ignored or allotted a minimum number; these also are appointed by the politicians. Rates are determined by a group which has no responsibility to its citizens. [We have seen that with the water authority here in Albany, whose minimum charge does not encourage water conservation; in fact the declining rates encourage excessive water use.] To create a new organization means an additional bureaucratic structure with departments in personnel, human resources, finance, budgeting, etc. NYS and this region have too many authorities and the NYS Comptroller periodically issues reports critical of the abuses inherent (Kernan).

- While CHA and, apparently. DEC seem to favor an Authority approach I strongly oppose creation of an Authority. Authorities tend to be huge, and governed by people who do not know anything about the technology being undertaken. They are great at administration and making more work for more administrators. Authorities remove the power from local government to control what the taxpayers are paying for and allow one or more municipalities to shift their own debt to that of the authority, thus making every taxpayer in the authority’s region liable for debt they did not create. In addition, authorities can prohibit local municipalities from enacting and implementing solid waste negotiations which are more stringent than those of the authority. Also, Authorities often have, or can be granted, power of eminent domain over local municipalities and private landowners. I feel that the solid waste management plan should be kept small, taking care of Albany and the townships, so there is more control for Albany and less expense for its tax payers. I also feel that the general public are more likely to comply if their waste is being handled by a local consortium than with a gigantic Authority (Cummings).

- During Steering Committee meetings Willard Bruce... said that we examined the best institutional structures nationwide that achieve the highest diversion rates. They were all authorities. Where is the data to support this? (Cummings)

Response R1: While one commentator notes that “There is no need for a “public authority” to gather the resources of the fourteen municipalities in the Planning Unit”,
the service area of the recommended Regional Solid Waste Management Authority (RSWMA) would be considerably larger than the 14 municipalities of the existing Planning Unit. As shown on the detailed analysis of Alternative Implementation Scenario # 3, there are significant economy of scale and other benefits that can be achieved for a larger regional planning unit, when compared to the existing planning unit comprised of 14 municipalities.

Besides the economic benefits, as noted in Section 5.5.2, one of the more significant advantages of the authority structure is the ability to provide reliable solid waste management facilities and programs, including robust waste reduction and recycling efforts, and to ensure adequate staffing and funding for these efforts. A solid waste authority could also be empowered with waste flow control, which could assure the necessary volume of waste to generate revenue for funding of the reduction, reuse and recycling programs that are necessary in a fully integrate solid waste management program. Flow control might not be possible with a consortium of municipalities as suggested by the commentator. It should be noted that under the current Planning Unit structure, less than 30% of the waste stream is controlled by municipal government. In addition, a regional solid waste authority would be a single purpose entity with all revenue generated being dedicated to the implementation of solid waste management programs.

Many of the commentator’s observations about the potential disadvantages of the forming a solid waste management authority (SWMA) are pointed out in Section 5.5.2 of the SWMP.

Regarding the commentator’s contention that the terms of the existing IMA could be extended to include other mechanisms for finding solution to the solid waste problem, it should be noted that this alternative implementation mechanism was analyzed in the SWMP as a part of Alternative Implementation Scenario #1. (See page 5-28) The terms of the existing IMA allow participating municipalities to terminate their participation upon the 30 days written notice to the other parties to the IMA. Even assuming that this provision could be amended to provide for more definitive long term commitment, the use of the IMA structure would still require that one of the participating municipalities take the lead role in developing the new facilities and programs envisioned by the SWMP. After the City of Albany Landfill reaches capacity, we know of no individual municipality that is willing to assume this obligation for either the existing Planning Unit or a larger regional Planning Unit.

Finally, it is worth noting that, excluding New York City and Long Island (which are dominated by municipally managed solid waste management programs), the most successful publicly owned integrated solid waste management systems in New York State are operated by County-wide or regional solid waste management authorities. These include the Onondaga Resources Recovery Authority (OCRRA), and the Oneida-Herkimer Solid Waste management Authority. Similarly successful authorities (or authority-like organizations) have been identified in other states. For example, during a Steering Committee Meeting in May 2009, Albany Common Council President Shawn
Morris, made a presentation about the Chittenden County Solid Waste District (CSWD) in Vermont, based on a recent visit she made there with Councilmember Cathy Fahey and several environmental advocates from the Capital Region, including Tom Ellis and Tim Truscott. Ms Morris reported very favorably on the waste reduction and recycling programs undertaken by this agency, which is structured similar to a public authority in New York, and is able to subsidize much of its waste reduction and recycling with a tipping fee surcharge on all solid waste for disposal which originates in the District.

Albany County was recently awarded a grant from the New York State Department of State to conduct a detailed study on the feasibility of a regional solid waste management authority, as noted in Section 6.2 of the Preliminary Draft SWMP. It is expected that this study will include an examination of the factors that have resulted in success and/or failure for the regional solid waste authorities. The results of the study will help identify the future actions necessary to advance the formation of a regional SWMA to successfully implement the programs, policies and facilities envisioned by the SWMP.

A change has been made to the discussion of institutional alternatives in Section 5.4 of the Draft SWMP as a result of this comment.

Based upon discussions at the Steering Committee meeting on February 9, 2010, it was reiterated that a stronger case needs to be made about why the authority structure is expected to benefit efforts of reduction and recycling. During that discussion a Committee member also suggested that the Draft SWMP should address the concerns about accountability and management of public authorities in New York that have been raised by some citizen groups and elected officials. These discussions are now included in the revised Section 5.4.2. In response to further discussions at the Steering Committee meeting on February 9, 2010, Section 5.6.5.1, which addresses the effectiveness of a local solid waste management authority, has been now been revised to include a discussion of how Alternative Scenario #2 could be implemented with a continuation of the Planning Unit consortium instead of with an Authority.

Comment R2: One Committee member asked if solid wastes will be prohibited from coming into the capital region solid waste district from outside the district? This needs to be clarified before the organization is formed. (Cummings)

Response R2: The recommended formation of a regional solid waste management authority is intended to provide sufficient economy of scale to service an expanded planning unit. However, because the boundaries of that expanded unit have not yet been established it would be premature at this time establish a prohibition on the importation of waste from outside the planning unit.

It is not anticipated that a change will be made to the Draft SWMP as a result of this comment.

Alternative Solid Waste Management Technologies
Comment A1: One Committee member noted his opinion that it is the duty of the Steering Committee to weigh the merits of each technology, and consider whether each technology would be appropriate in our situation. Several other committee members expressed concern about a specifically endorsing a particular solid waste treatment technology.

- CHA is due credit for bringing before the Steering Committee presentations by companies from North America and Europe who are involved with alternative technologies such as pyrolysis, gasification, biological/mechanical, anaerobic digestion and WTE. The Steering Committee had the opportunity to question the presenters. But the Steering Committee has not held discussion on the merits of each technology. CHA has shown its decisions in the Preliminary Report and CHA’s analyses are contained in that elusive Appendix E. It is not sufficient to deny a technology on the basis that there are no American factories, while a technology has been proven in Europe for more than a decade. It is the duty of the Steering Committee to weigh the merits of each technology, with technical assistance from CHA and other experts, and consider whether each technology would be appropriate in our situation (Kernan).

- The concept of “waste to energy” has been, and continues to be, a controversial topic that raises issues of environmental justice as well as health and environmental concerns. OGS is supportive of a plan that includes the investigation of all strategies and technologies to reduce waste. Therefore, instead of stating to “Develop a regional facility utilizing a mixed solid waste treatment technology. Such a facility would recovery additional materials, energy, bio-fuels and other byproducts from the post-recyclable solid waste stream using either the conventional waste-to-energy technologies or one of the emerging technologies, which develops a successful commercial facility somewhere in the United States in the near future”, we believe the plan should focus on continuing to investigate and evaluate emerging technologies, including “waste to energy” initiatives. It is our understanding that there have been a number of advances in “waste to energy” technology to reduce toxins in the air and in the residue. However, none of the groups that made presentations to the Committee on “waste to energy” proposals adequately addressed the issues of environmental and health concerns or provided statistics to back their claims. Therefore, there is not enough information at this point in time for OGS to endorse the recommendation to develop a regional solid waste treatment facility to further minimize landfill disposal requirements. (Larson)

Response A1: Presentations and discussions about the merits of various alternative solid waste management technologies were held at almost every steering committee meetings fro February through October of 2009. Over the course of the year committee members were also invited to participate in visits to solid waste management facility sites around New York State which including one or more of the alternative technologies. Summaries of the visits were prepared and were discussed at the meetings of the Steering Committee,
for the benefit of those who were unable to participate in the visits. These discussions included the merits of the technologies observed at the respective sites.

As part of the evaluation of alternative technologies conducted as part of the SWMP, a request for information (RFI) was prepared and distributed to solicit preliminary statement of interest and background information from parties wishing to participate in the process. The Steering Committee participated in the formulation of the RFI. Fifteen companies provided submittals in response to the RFI. The Steering Committee participated in the review of documents, prepared by CHA, which summarized these submittals in response to the RFI. At the request of the Steering Committee, CHA invited company representatives from respondents from the following technologies to make presentations to the Steering Committee:

- Norterra Organics – SSOW Composting technology – June 23, 2009
- EcoDeco – Mechanical and Biological Treatment – July 21, 2009
- Nature’s Fuel – Pyrolytic Gasification – August 18, 2009

In addition, a presentation was made by EnerKem (not an RFI respondent, but a company with a technology to turn waste biomass into ethanol) at the September 22, 2009 meeting. Information from these presentations, along with all meeting minutes, agenda and presentations has been posted on the SWMP website.

Among other measures, the preliminary Draft SWMP includes the development of a SSOW Composting facility. It also calls for the development of regional solid waste treatment facility to further minimize landfill disposal requirements for post-recyclable solid waste. As noted in Section 6.1.2 of the Preliminary Draft WMP, such a facility would use either conventional waste-to-energy technology or one of the emerging technologies which develops a successful commercial facility somewhere in the United States. It may be in this context that the commentator notes. “It is not sufficient to deny a technology on the basis that there are no American factories, while a technology has been proven in Europe for more than a decade.” In response to this comment, it should be noted that the recommended requirement for a successful commercial facility in the U.S. is based upon an anticipated desire of the implementing communities to minimize financial and performance risk associated with the development of a waste treatment facility. It is further noted that regional SWMA (or other implementing agency) which ultimately pursues the development of this regional solid waste treatment facility will be free to develop appropriate financial and performance criteria at that time.

At the Steering Committee meeting on February 9th, 2010, several members asked about the definition of waste to energy (WTE) and whether it should be clarified to include other technologies beside conventional mass burn incineration. This is now clarified in Section 5.3.1.8 where the conventional WTE facility is more clearly defined.

Several committee members also thought the Preliminary Draft SWMP needed to better articulate that the recommendation to pursue the development of a regional solid waste treatment facility was not an endorsement of conventional mass burn WTE technology.
As a result of these comments, the language of Section 6.1.2 of the Draft SWMP has been changed to clarify that the SWMP does not endorse conventional WTE over any of the other emerging technologies.

During discussions at the Steering Committee meeting on February 9, 2010, it was requested that a distinction be drawn between emerging technologies that have been well established in other countries (Mechanical/Biological Processing in Europe was cited as an example) and those emerging technologies that are not well established. As a result of this discussion, the Section 5.3.2 on emerging technologies and (some of the text of Appendix E) has been now supplemented to make this distinction.

At the February 9th meeting, another Steering Committee member asked if a table could be prepared to compare the various “solid waste treatment” technologies with landfilling based on a number of environmental and health criteria. This table is now presented as a new Table 5-4, as part of the expanded discussion and comparison of emerging solid waste management technologies that is now presented in Section 5.3.

Comment A2: One Committee member (Cummings) strongly opposes construction of a trash incinerator. She notes that existing waste-to-energy facilities are a magnet for items best reduced, reused or, recycled, ruining incentives to maximize reduction, reuse, and recycling. The incentive for the 3 R’s would be drastically cut because amounts for such a facility must be guaranteed or paid for anyway.

Response A2: The Preliminary Draft SWMP calls for the development of a regional solid waste treatment facility to further minimize landfill disposal requirements for post recyclable solid waste beyond what would be achievable with the implementation of the waste reduction and recycling programs elements. Such a facility could use either the conventional waste-to-energy technology (of which there are currently ten operating in the State of New York) or one of the emerging technologies to recover energy, biofuels, or other recyclable materials.

The development of such a facility would not be a disincentive to reduction, reuse and recycling efforts because the facility would be sized to process only the materials that will remain after maximizing the 3Rs. In fact, it is the planning units that operate as public authorities that generally have the highest waste reduction and recycling achievement as well as their solid waste treatment facilities. This is already noted in Section 6.1.2, so no revisions to the Preliminary Draft SWMP will be made as a result of this comment.

Alternative Scenario

Comment Alt1: One committee member (Kernan) proposed a Scenario #4 for the Steering Committee’s consideration, which may include the following:
- regional formal consortium;
- strict enforcement of existing recycling laws, with penalties;
- innovative approaches to recycling as shown in other regions;
- PAYT if a small first bag weekly is provided free by the municipality;
- product stewardship;
- consider a SSOW facility since food waste is 19% of MSW (didn’t the City of Albany collect food waste from residents as part of regular trash pickup in the 1960-70s);
- further evaluation of emerging technologies, as opposed to a WTE plant.

**Response Alt1:** All of the elements of this alternative are also included as elements of the Preliminary Draft SWMP, with two important variations.

A Regional Solid Waste Management Authority (RSWMA) is included as the preferred implementation mechanism in the Preliminary Draft SWMP because it is a more effective administrative structure than a regional consortium established by inter-municipal agreement (IMA). For reasons noted previously in response to comment R1, the regional consortium would not be as effective, these reasons include that a municipality would be required to take the lead role in developing new facilities and programs in the proposed SWMP, and after the City of Albany Landfill reaches capacity, we know of no individual municipality that is willing to assume this obligation for either the existing Planning Unit or a larger regional planning unit. Without the benefit of a guaranteed waste stream from the entire Planning Unit, which would be easier to obtain via flow control under an Authority, it is doubtful that an individual municipality would be able to finance all the required components of a complete solid waste management system.

The Preliminary Draft SWMP also includes provisions for the implementation of a SSOW facility, not just consideration of a facility, as noted in the commentator’s alternative. The Preliminary Draft SWMP also calls for the development of a regional solid waste treatment facility to further minimize the landfill disposal requirements for waste that cannot be reduced, reused or recycled, and will include the future evaluation of emerging technologies as well as conventional waste-to-energy (WTE) technology. The Preliminary Draft SWMP does not endorse WTE or any of the emerging technologies which could potentially meet the objective of minimizing future landfill disposal requirements.

Incorporating this fourth Alternative Implementation Scenario into the detailed analysis of alternatives presented in Section 5 appears to overlap existing scenarios and would significantly delay the issuance of the Draft SWMP to the Common Council and for public comment.

A change has been made to section 6 the Draft SWMP to make it more clear that the SWMP does not endorse WTE or any of the emerging technologies which could potentially meet the objective of minimizing future landfill disposal requirements, and that a formal selection of a waste treatment technology would be made at a later date by the regional SWMA (or other implementing agency).
**Single Stream Recycling**

**Comment SS1:** One committee member (Cummings) noted that single stream should be abandoned by the steering committee because it is a less effective method than dual stream and it creates more waste than does the dual stream method. A recent study by the Container Recycling Institute was forwarded in support of this position. The committee should recommend the practice of source separated dual stream collection methods be adopted regionally.

**Response SS1:** Consideration of Single Stream Recycling (along with other methods of material re-use waste reduction and recycling) is one element of the Goals and Objectives of the SWMP.

The advantages and disadvantages of dual stream and single stream recycling were presented at a Steering Committee meeting and a discussion of these is included in Section 5.3.1.3 and Section 5.3.1.4 of the Preliminary Draft SWMP, respectively. The discussion includes the disadvantages mentioned in the study cited by the commentator including:

- processing costs may increase compared to multiple stream systems
- possible reduced commodity prices due to contamination of paper;
- increased “downcycling” of paper, i.e., use of high quality fibers for low-end uses like boxboard due to presence of contaminants;
- possible increase in residual rates after processing (due chiefly to increased breakage of glass

Among the advantages of Single Stream recycling noted in Section 5.3.1.4 are the following:

- more resident participation;
- increased efficiency and reduced cost of recyclable collection;
- worker injuries may decrease because the switch to single stream is often accompanied by a switch from bins to cart-based collection.

While the development of a single stream recycling facility is not an explicit element of the SWMP, as set forth in Section 6, it is an implicit component. All of the Alternative Implementation Scenarios presented in Section 5 include the maximization of currently designated recyclables. In Section 5.6.1, describing Alternative Scenario #1, it is noted that “maximizing the recovery of currently designated recyclables will also include the implementation of single stream recyclables collection along with a local MRF which can accommodate and process the single stream recyclables. This alternative scenario assumes that the single stream MRF would be developed by the private sector as a commercial venture.” While a single stream MRF would be available under the SWMP, communities would be free to continue their use dual stream recycling if they believe that method is maximizing material recovery and recycling.
It is also worth noting that since the distribution of the Preliminary Draft SWMP, County Waste has announced its intention to develop a single stream MRF at its existing dual stream MRF on South Pearl Street in Albany (Sierra Fibers) and also intends to provide single stream recyclables collection to all of its residential customers in the Capital District.

A change has been made to the Draft SWMP as a result of this comment. Language will be added to Section 5.3.1.4 to include the recently announced Single stream facility and programs being implemented by County Waste. Section 5.7.1 has also been amended to clarify that communities would be free to continue their use dual stream recycling if they believe that method is maximizing material recovery and recycling.

Zero Waste

Comment Z1: One Committee member (Cummings) noted that the Capital District Solid Waste Management Plan should begin with a statement that the goal of the new plan is zero waste. Zero waste is defined as "If it can’t be reduced, reused, repaired, rebuilt, refurbished, refinshed, resold, recycled, or composted, then it should be restricted, redesigned, or removed from production. The goal is to combine aggressive resource recovery and industrial redesign to eliminate the very concept of waste. Eventually, the community’s resource-use system will emulate natural cyclical processes, where no waste exists. [This definition is from the Berkeley City Council's resolution]"

Response Z1: The concept of a zero waste, as defined by the commentator, is not an appropriate goal for this SWMP because many of the restrictions and limitations on commercial products could not be realistically achieved on a local or regional level; they will require state or national policies to implement them. However, key components of zero waste include reduction, reuse, recycling and composting, and the preliminary Draft SWMP already include these components to meet the goal of minimizing the amount of waste requiring land disposal in the future by:

- Maintaining and expanding waste reduction, reuse and recycling efforts, as set forth in the SWMP Modification;
- Increasing the effectiveness of public education and enforcement of existing recycling requirements;
- Considering more emphasis on material re-use and alternatives such as PAYT, single stream recycling, and foodwaste composting as mechanisms to achieve future reductions in waste requiring disposal;
- Considering alternatives which recover energy from waste, including proven technologies as well as new and emerging technologies.

These goals and objectives are not significantly different from the zero waste goals noted in the comment, and are consistent with current New York State DEC solid waste management policy as well as the policies that are expected to be espoused in the NYSDEC’s forthcoming Beyond Waste Plan.
Based on discussion of this comment at the Steering Committee meeting on February 9, 2010, Section 6.0 and Section 6.1.1. have been revised to incorporate a discussion of the concept of zero waste as an aspirational goal, and the continuous improvement in waste reduction and recycling (beyond the 65% achievement already noted for the year 2020).

Sean Ward and Dick Forgea both noted concern that these waste reduction and recycling goals should not be construed as enforceable permit conditions. Because there is already language in the approved SWMP Mod which addresses this concern, it is clear that NYSDEC does not intend to use these goals as enforceable permit conditions, it is not necessary to include that limiting language in the new SWMP at this time.

**Contingency Plan**

**Comment C1:** One Committee member (Griffin) had a comment that relates to the reliance on the formation of an authority for the plan to come to fruition. Time passes rapidly and the need for a long-term solution for the region’s future solid waste issues will reach a critical point soon. Should the formation of a regional authority be delayed or the authority not be conceived then the Capital Region could be without sufficient local disposal capacity for a longer period of time than anticipated. I believe that the Plan, when finalized, should contain parallel time lines for development of permanent as well as temporary means for handling the area’s waste post-Rapp Rd. The Plan should also contain a contingency for a solid waste management structure along the lines of the scenarios described in prior meetings, i.e. maintaining the current consortium, a smaller consortium or the City of Albany alone. The way the current Draft Plan is structured the failure of one point, the formation of the Authority, means the Plan itself will fail.

**Response C1:**

Section 6.1.4 of the Preliminary Draft Plan discusses interim measures that will be undertaken to implement certain provisions of the SWMP until the Regional Solid Waste Management Authority (RSWMA) that is recommended is developed. Section 6.1.4 also recognizes that local landfill capacity may be depleted before a regional solid waste treatment facility can be developed by the RSWMA, and that it may be necessary to be temporarily more reliant on commercial landfill capacity located a long distance from the planning unit. As such, the Preliminary Draft SWMP acknowledges that the City of Albany would develop a transfer station in the future, if one is needed, at the Rapp Road Landfill site.

The Implementation Schedule shown in Section 6.3 of the Preliminary Draft SWMP, notes that if enabling legislation for the RSWMA is not enacted by the end of calendar year 2011 due to lack of regional consensus, then a modification to the SWMP will need to be developed to account for that change in circumstances. The details of those modifications, if they are required, as well as alternative contingency measures, will be evaluated at that time in the future.
Reduction Reuse and Recycling

Comment RRR1: One Committee member (Cummings) commented that during the steering committee meetings, Bill Bruce and CHA representatives often said that the new plan will have strict enforcement and a good education component to stimulate high compliance rates. Few details are provided in the preliminary draft about how these transformations will be implemented.

Although a schedule for reducing the amount requiring disposal at a facility (which has yet to be determined), there was no indication as to how this reduction is to be accomplished. Without knowing how it is going to be done, how can you make a schedule? No ideas were put forth.

Response RRR1: Section 6.1.1 of the Preliminary Draft SWMP discussed the program elements related to reduction and recovery of materials. Increased enforcement and education is specifically discussed in Section 6.1.1.3, which includes a re-statement of many of the provisions set forth in the May 2009 SWMP Modification, which will be carried forward as part of the new SWMP.

Steering Committee

Two Committee members made comments about the make-up of the Steering Committee and how the meetings were conducted. These comments are not substantive regarding the content of the Preliminary Draft SWMP, and as a result, responses are not provided.

In the interest of full disclosure, however, the comments are enumerated here.

- At the first meeting of the Steering Committee on November 24, 2008, 18 members were announced. In the Preliminary Report there are 23 members listed (p32). I do not recall any meeting in which new members were announced. I attended most of the meetings (Kernan).
- Attendance by actual Steering Committee members diminished as the year progressed (Kernan).
- There was very little participation from most of the other municipalities in the consortium (Cummings).
- At the first few monthly meetings, CHA prepared only enough copies of documents for members of Steering Committee and others who sat at the table in the front of the room. At the April 23, 2009 Meeting there was a motion to provide enough copies so that the public, who sat in seats to the rear of the room and who were there although not being paid by their employers, would have sufficient...
copies in order to follow complex discussions. [Only three Steering Committee members are not employed by municipalities, the industry or consultants.] This was the only formal motion in the year of the Steering Committee and it passed unanimously, 14-0. It included a provision that the Steering Committee (not CHA) would decide what material would be distributed. This formal motion was not included in the Minutes following the meeting. At the May meeting, again there was discussion and the Minutes were corrected. However there were many meetings in which a sufficient number of copies was not provided to the public. (Kernan)

- This problem of incomplete Minutes occurred again when a discussion on the creation of a “consortium” instead of a public authority was not transcribed. Until the October Meeting, a “consortium” was not discussed in detail. CHA promised to have the attorneys research the issue. Now, in the Preliminary Report, there are several references to an “informal consortium” or a “loose consortium” already existing. It may be appropriate to make it a “formal written consortium”, using the IMA as a basis.

- Mike Kernan’s vigorous comments of October 20th, 2009 in opposition to an authority, and in favor of a consortium, were not included in the minutes of that meeting distributed at the next meeting, on December 8. There was considerable discussion at that October meeting about the need for and desirability of an authority. This was an important discussion and why was this not included in the minutes? (Cummnings)

- The 12/15/09 email also states that the Preliminary Report “has been compiled based on the many months of input and guidance that you have provided as part of the committee.” Let’s be frank: CHA prepared the Preliminary Report, as much as CHA led and controlled the discussion throughout the year. The Steering Committee should discuss the Preliminary Report among its members, having access to the viewpoints of other members of the Steering Committee. (Kernan)

- The stipulation in the December 15th 2009 letter from Ken Gallagher that accompanied the preliminary draft plan, and asserted that the report represented the “consensus view of the committee regarding the future of solid waste management”, is not correct. Mike Kernan and I dispute that there is a consensus. There was never a steering committee vote as to who favored an authority. To me, this is a very important concern. (Cummnings)

- Willard Bruce said that the Steering Committee is creating the plan but it appeared that CHA is creating the plan. The preliminary draft closely resembles the modification of an earlier plan that DEC approved in September, 2008, before the Steering Committee was created. (Cummnings)

- Clough Harbor never brought in experts on how to maximize reduction, reuse, or recycling. Why? There are so many examples today of municipalities that are striving towards zero waste or high recycling rates. (Cummnings)
• During meetings, committee members witnessed presentations from industry representatives about their various technologies, but no opposing expert opinions were sought out on any of these controversial technologies. Though Albany is home to several state wide and national environmental organizations, no expert opinion from any of these organizations was sought (Cummings)

• One committee member asked for clarification on why we were shown different “emerging technologies” when we have not been charged with choosing the kind of technology. What was the point? In fact, what was the point of the whole Steering Committee when it appears that the steering committee was “steered” from the start. Will we really have any input into what choices will be made? (Cummings)
Draft SWMP
Appendix A
Part 2
Steering Committee Comments of the Preliminary Draft SWMP

Presented below are the verbatim transcriptions of the e-mail correspondence from Steering Committee members conveying comments on the Preliminary Draft SWMP. The transcriptions were copied directly from the e-mails sent, but e-mail addresses were deleted if they appeared and were replaced with the person’s name only.

The e-mail transmitting the Preliminary Draft SWMP is presented first, followed by the responses received on or before January 29, 2010 and then the responses received after January 29, 2010.

Transmittal of the Preliminary Draft SWMP

From: Christopher, Suzanne
Sent: Tuesday, December 15, 2009 2:05 PM
To: Bob Griffin; David Phaff; Dick Forgea; Doug Melnick; Frank Zeoli; Gregg Sagendorph; Jack Cunningham; James Gaughan; Jim Sano; Joe Giebelhaus; Kevin G. Crosier; Kurt Larson; Mark Gleason; Mary Ellen Mallia; Meghan Ruby; Michael Franchini; Michael Kernan; Mike O'Brien; Resa Dimino; Robert Conway; Ruth Leistensnider; Sally Cummings; Sean Ward; Tom Reynolds; Willard (Bill) Bruce; William Hill
Cc: LaVardera, Frank; Gallagher, Ken
Subject: FW: Preliminary Draft SWMP

Dear Committee Members

On behalf of Committee Chairman Bill Bruce, I am please to transmit for your review and comment a copy of the Preliminary Draft of the SWMP. It has been compiled based on the many months of input and guidance that you have provided as part of the committee. While we believe that the elements of the SWMP presented herein represent the consensus view of the Committee regarding the future of solid waste management in the Planning Unit, we want to get your comments before the Draft SWMP is finalized for public review and comment. This Preliminary Draft is for review by the Steering Committee only. Based on your comments, a final Draft SWMP will be prepared for discussion at a late February meeting, and then forwarded to the Common Council as a final draft to start the public review and SEQR process

The SWMP presents a significant amount of information and analysis, but we have sought to make sure that the presentation is concise and readable. Nevertheless, it is still over 180 pages long. Most of the information in the Preliminary Draft SWMP has already been presented to and discussed by the Steering Committee at one or more of its meetings. The Preliminary Draft also contains additional discussion and more nuanced presentation that has not been presented previously. While you should feel free to comment on any typos or grammatical errors, we are not expecting that you catch any of those mistakes as those will be corrected during final editing. More important to us are your comments on substantive issues, particularly if you believe there are any omissions or misrepresentations with respect to issues that were discussed by the Steering Committee.
We are requesting that you review the enclosed document and provide any comments you have in writing by no later than January 29, 2010. Any method of written commentary is acceptable, including a mark-up of printed pages, a separate document enumerating your comments, or a simple e-mail. Comments should be directed to my attention, preferable via e-mail, with attachments if necessary.

We sincerely appreciate your ongoing participation in this process and look forward to receiving your comments. In the meantime do not hesitate to contact me if any questions or concerns.

Extending my best wishes for the Holiday Season!

Ken

Kenneth G. Gallagher, P.P., AICP
Principal Planner

<<Draft Letter of Transmittal for Preliminary Draft SWMP.doc>>

***********************************************************
Comments provided on or before January 29, 2010

From: MICHAEL KERNAN
Sent: Saturday, January 09, 2010 12:09 PM
To: Gallagher, Ken
Subject: draft

Ken,

Thank you for sending me Appendices C-F of the Preliminary Report to the SWMP. It is unfortunate that CHA did not respond or acknowledge my three emails (six days) until I sent an email to Bill Bruce. I find that the Appendices are an integral part of the Preliminary Report and contain information that should be accessible to the Steering Committee.

I note that today CHA emailed a reminder copy of the Preliminary Report to members of the Steering Committee and select others, but the Appendices are not included. In my opinion, each member of the Steering Committee should be immediately provided with the Appendices in order to make a proper study of the Preliminary Report.

Mike

-------------------------------------------------------------------------------------------

From: Michael O'Brien
Sent: Saturday, January 16, 2010 7:17 PM
To: Christopher, Suzanne
Subject: Re: Preliminary Draft SWMP

My principle comment is that the report needs an index of all acronyms. Otherwise I think the report is good.

Mike O'Brien
Page 2 of 19
From: Sally Cummings  
Sent: Thursday, January 21, 2010 8:26 PM  
To: Bob Griffin; David Phaff; Dick Forgea; Doug Melnick; Frank Zeoli; Gregg Sagendorph; James Gaughan; Jim Sano; Joe Giebelhaus; Kevin G. Crosier; Kurt Larson; Mark Gleason; Mary Ellen Mallia; Meghan Ruby; Michael Franchini; Michael Kernan; Mike O'Brien; Resa Dimino; Robert Conway; Ruth Leistensnider; Sally Cummings; Sam Messina; Sean Ward; Tom Reynolds; Willard (Bill) Bruce; William Hill; LaVardera, Frank; Gallagher, Ken  
Subject: SWMP Preliminary comments

To the SWMP Steering Committee members:

I feel that it is important that all members of the SWMP Steering Committee receive copies of the appendices, in order to make informed comments. These were omitted from the preliminary draft for Steering Committee review and were not sent to the members unless they requested them.

Since they are very large and the preliminary draft was very large, I feel that CHA should extend the comment deadline until March 15th.

It is also important to schedule a meeting in February at which Steering Committee members may discuss the draft plan and also get questions answered. How can the committee have a consensus opinion when members do not know the opinions of other members?

Thank you.

Sally Cummings  
Steering Committee Member.  
Citizen of Westmere

**********************************************************

From: Ken Gallagher  
To: 'Sally Cummings'; Bob Griffin; David Phaff; Dick Forgea; Doug Melnick; Frank Zeoli; Gregg Sagendorph; James Gaughan; Jim Sano; Joe Giebelhaus; Kevin G. Crosier; Kurt Larson; Mark Gleason; Mary Ellen Mallia; Meghan Ruby; Michael Franchini; Michael Kernan; Mike O'Brien; Resa Dimino; Robert Conway; Ruth Leistensnider; Sam Messina; Sean Ward; Tom Reynolds; Willard (Bill) Bruce; William Hill; LaVardera, Frank  
Sent: 1/22/2010 11:10:46 AM  
Subject: RE: SWMP Preliminary comments

All,
There are presently four appendices to the Preliminary Draft SWMP which contain voluminous detailed supporting information on topics that are fully presented and discussed in the full body of the preliminary draft SWMP. As such, they were not distributed to the steering committee as part of the Preliminary Draft. Our intent was to request feedback from the Steering Committee on the substantive issues presented in the Preliminary Draft, particularly if you believe there were any omissions or misrepresentations with respect to issues that were discussed by the Steering Committee. That said, if any other member of the Steering Committee would like an electronic or paper copy of the appendices please let me know; two members have already requested and been supplied with a copy.

Regarding Sally's comment that CHA should extend the comment period on the Preliminary Draft, I would note that her requested extension would result in additional delay in the submission of a draft document to the Common Council and would further delay the public's opportunity to begin review and comment on the Draft SWMP. Such a delay would also have a negative impact on our anticipated completion schedule for the SWMP, which is memorialized with the NYSDEC as a permit condition for the approved landfill expansion. I also recall that the duration of this Steering Committee's review of the Preliminary Draft was discussed at several of the Steering Committee's most recent meetings.

Thank you for your ongoing participation and feedback on this important project. And once again, if any member of the Steering Committee would like an electronic or paper copy of the appendices (or any individual appendix) please let me know.

Sincerely,

Kenneth G. Gallagher, P.P., AICP
Principal Planner
CHA ~ Imagine What We Can Do For You!
973.267.9029 Ext. 252
kgallagher@chacompanies.com
www.chacompanies.com

From: Resa Dimino
Sent: Friday, January 22, 2010 11:46 AM
To: Gallagher, Ken; Bill Bruce
Subject: Re: SWMP Preliminary comments

Hi Ken-
You didn't respond to her request for a meeting to discuss comments. For what it's worth, I think that's a good idea.
Resa
From: Thomas Reynolds  
Sent: Friday, January 22, 2010 12:18 PM  
To: Gallagher, Ken; Richard Forgea  
Subject: RE: SWMP Preliminary comments

Since the requested review is to get "preliminary" feedback prior to full release and not what would be considered a full technical review, your timetable seems appropriate. Not looking for a perfect document at this point, better to get it out to a wider audience for review as soon as possible. From what I've read so far, the information in the body of the SWMP seems adequate to perform the level of review requested. I'm sure if a few individuals have specific questions that could be answered by material in the appendices, it would be a time and paper savings to have these individuals address those specific questions directly to you.

**********************************************************************

From: Sally Cummings  
Sent: Friday, January 22, 2010 1:33 PM  
To: Gallagher, Ken  
Cc: Bob Griffin; David Phaff; Dick Forgea; Doug Melnick; Frank Zeoli; Gregg Sagendorph; James Gaughan; Jim Sano; Joe Giebelhaus; Kevin G. Crosier; Kurt Larson; Mark Gleason; Mary Ellen Mallia; Meghan Ruby; Michael Franchini; Michael Kernan; Mike O'Brien; Resa Dimino; Robert Conway; Ruth Leistensnider; Sam Messina; Sean Ward; Tom Reynolds; Willard (Bill) Bruce; William Hill; LaVardera, Frank  
Subject: Re: SWMP Preliminary comments

Hi Ken,

You did not comment on the request for a meeting of the SWMP Steering Committee members to discuss the Preliminary Draft with each other and to ask questions.

From: Michael O'Brien  
Sent: Friday, January 22, 2010 11:08 PM  
To: Gallagher, Ken; 'Sally Cummings'; Bob Griffin; David Phaff; Dick Forgea; Doug Melnick; Frank Zeoli; Gregg Sagendorph; James Gaughan; Jim Sano; Joe Giebelhaus; Kevin G. Crosier; Kurt Larson; Mark Gleason; Mary Ellen Mallia; Meghan Ruby; Michael Franchini; Michael Kernan; Mike O'Brien; Resa Dimino; Robert Conway; Ruth Leistensnider; Sam Messina; Sean Ward; Tom Reynolds; Willard (Bill) Bruce; William Hill; LaVardera, Frank  
Cc: Cashawana Parker  
Subject: Re: SWMP Preliminary comments

Ken,  
Please send an electronic copy of the appendices to Cashawana Parker (parkerc@ci.albany.ny.us) at the Albany Common Council so they
are available to all council members and to the City Clerk. Also please send her three paper copies.

    I agree with Sally that we should have a meeting in February (preferably early in February) to discuss the draft. It would also be helpful if you would create a glossary of acronyms. It would also be helpful if you would share members' comments with other members although I am choosing to send this comment directly to all the members.

    I feel that it is premature to extend the comment deadline until March 15th. Let's have the meeting in early February and see what the consensus is. I know that although the appendices were missing from the electronic copies, they were available from CHA when asked for.

Mike O'Brien

From: Willard Bruce
Sent: Sunday, January 24, 2010 12:39 PM
To: Sally Cummings
Cc: Bob Griffin; David Phaff; Dick Forgea; Doug Melnick; Frank Zeoli; Gregg Sagendorph; James Gaughan; Jim Sano; Joe Giebelhaus; Kevin G. Crosier; Kurt Larson; Mark Gleason; Mary Ellen Mallia; Meghan Ruby; Michael Franchini; Michael Kernan; Mike O'Brien; Resa Dimino; Robert Conway; Ruth Leistensnider; Sam Messina; Sean Ward; Tom Reynolds; William Hill; LaVardera, Frank; Gallagher, Ken
Subject: Re: SWMP Preliminary comments

Sally,
As per the comments from Ken and Mike, any Committee member that wanted the appendices got a copy. The detailed information in these is summarized in the preliminary draft SWMP the Committee members received. The appendices contain valuable back up and technical information, but the Committee should really focus on the draft SWMP, the diversion rates, alternative scenarios, policy and program recommendations. We were planning to have a summary of the comments for the final meeting for discussion in late February, so Committee members would know about any changes made to the draft based on comments received. If there are any major issues were there is a significant split of opinion on a draft plan policy or program element, that will be noted in a transmittal letter to the Common Council. We are trying to stick to a reasonable time schedule and get the Draft Plan to the Common Council at which time the formal, and more important, public review, comment and evaluation process will begin.

I would be happy to schedule a second February meeting early in February, if Committee members want to hear about the comments that have been submitted, and discuss them. I am, however, not in favor of an extension of time for submission of Committee member comments. We discussed the process and timetable at the last Committee meeting, (you were absent), and there was agreement on proceeding along these lines.........Bill
January 24, 2010
Bill Bruce, Chair
SWMP Steering Committee

Re: My response to SWMP Preliminary Report

While I was nominated for appointment to the SWMP Steering Committee by CANA, the views I express herein are mine and do not necessarily represent those of CANA. CANA has not yet formally discussed the document. I have dutifully read the Preliminary Report and the Appendices C-F. The Preliminary Report is full of data and I do not have the resources to check all the data. I do not agree with all of the conclusions reached by CHA.

PRELIMINARY REPORT CONCLUSIONS
1. Public authority vs formal consortium
I disagree with the assumption (p20) that a “Regional Solid Waste Management Authority (RSWMA)...is critical to successful implementation of the SWMP.” There is no need for a “public authority” to gather the resources of the fourteen municipalities in the Planning Unit. This area has had a consortium for several years and the 14 municipalities have recently entered into a more formalized “Inter-municipal Agreement” (IMA) to hire and fund a Planning Unit Recycling Coordinator (p27). This is a formal consortium supported by a written document binding, according to its terms, on the various municipalities. It should not be difficult, with the proper initiative, to expand the IMA to include other aspects of finding a solution to the solid waste problem. And there would be bureaucratic savings. The court cases presented to us do not require a public authority and do not bar the use of a consortium to achieve the goals.

There are many disadvantages to another public authority. It will take years and expense to get legislative approval; it will be opposed by the citizens/taxpayers. Generally, public authorities have their directors appointed by the municipalities, no matter the lack of experience in matters of solid waste. In appointments, the public is generally ignored or allotted a minimum number; these also are appointed by the politicians. Rates are determined by a group which has no responsibility to its citizens. [We have seen that with the water authority here in Albany, whose minimum charge does not encourage water conservation; in fact the declining rates encourage excessive water use.] To create a new organization means an additional bureaucratic structure with departments in personnel, human resources, finance, budgeting, etc. NYS and this region have too many authorities and the NYS Comptroller periodically issues reports critical of the abuses inherent.

Page 7 of 19
2. Alternative Emerging Technologies
CHA is due credit for bringing before the Steering Committee presentations by companies from North America and Europe who are involved with alternative technologies such as pyrolysis, gasification, biological/mechanical, anaerobic digestion and WTE. The Steering Committee had the opportunity to question the presenters. But the Steering Committee has not held discussion on the merits of each technology. CHA has shown its decisions in the Preliminary Report and CHA’s analyses are contained in that elusive Appendix E. It is not sufficient to deny a technology on the basis that there are no American factories, while a technology has been proven in Europe for more than a decade. It is the duty of the Steering Committee to weigh the merits of each technology, with technical assistance from CHA and other experts, and consider whether each technology would be appropriate in our situation.

THE PROCESS OF THE STEERING COMMITTEE
1. Composition of the Steering Committee
At the first meeting of the Steering Committee on November 24, 2008, 18 members were announced. In the Preliminary Report there are 23 members listed (p32). I do not recall any meeting in which new members were announced. I attended most of the meetings. Attendance by actual Steering Committee members diminished as the year progressed.

2. Resource Materials
At the first few monthly meetings, CHA prepared only enough copies of documents for members of Steering Committee and others who sat at the table in the front of the room. At the April 23, 2009 Meeting there was a motion to provide enough copies so that the public, who sat in seats to the rear of the room and who were there although not being paid by their employers, would have sufficient copies in order to follow complex discussions. [Only three Steering Committee members are not employed by municipalities, the industry or consultants.] This was the only formal motion in the year of the Steering Committee and it passed unanimously, 14-0. It included a provison that the Steering Committee (not CHA) would decide what material would be distributed. This formal motion was not included in the Minutes following the meeting. At the May meeting, again there was discussion and the Minutes were corrected. However there were many meetings in which a sufficient number of copies was not provided to the public.

3. Incomplete Minutes
This problem of incomplete Minutes occurred again when a discussion on the creation of a “consortium” instead of a public authority was not transcribed. Until the October Meeting, a “consortium” was not discussed in detail. CHA promised to have the attorneys research the issue. Now, in the Preliminary Report, there are several references to an “informal consortium” or a “loose consortium” already existing. It may be appropriate to make it a “formal written consortium”, using the IMA as a basis.

4. Appendices C-F
Appendices C-F are mentioned in the Table of Contents but not included. Over 6 days I sent 3 emails to CHA; I received no response. Finally I emailed Bill Bruce and then CHA sent me the Appendices the next day. To my knowledge no other Steering Committee
members have received the Appendices. As the Appendices are part of the Preliminary Report, they should be distributed to all Steering Committee members before Steering Committee members are asked their opinion. [This paragraph was written before the recent emails by others seeking the Appendices].

_5. Distribution of Preliminary Report_
While the 12/15/09 email from CHA advises that “this Preliminary Draft is for review by the Steering Committee only,” CHA sent it to select others. At each meeting of the Steering Committee, there were citizens sitting in the gallery who attended many of the meetings, some who were quite knowledgeable on the topic, some who asked very pertinent questions or who provided information to the group. Prior to issuance of a SWMP for formal review, these members of the public should be provided the Preliminary Report in full.

_6. Discussion of the Preliminary Report_
The 12/15/09 email also states that the Preliminary Report “has been compiled based on the many months of input and guidance that you have provided as part of the committee.” Let’s be frank: CHA prepared the Preliminary Report, as much as CHA led and controlled the discussion throughout the year. The Steering Committee should discuss the Preliminary Report among its members, having access to the viewpoints of other members of the Steering Committee.

RECOMMENDATION
I propose a Scenario #4 for the Steering Committee’s consideration, which may include the following:
- regional formal consortium;
- strict enforcement of existing recycling laws, with penalties;
- innovative approaches to recycling as shown in other regions;
- PAYT if a small first bag weekly is provided free by the municipality;
- product stewardship;
- consider a SSOW facility since food waste is 19% of MSW (didn’t the City of Albany collect food waste from residents as part of regular trash pickup in the 1960-70s);
- further evaluation of emerging technologies, as opposed to a WTE plant.

I make these initial comments, understanding that discussion is needed, and request that they be forwarded directly to Steering Committee members.

Michael J Kernan

From: Frank Zeoli
Sent: Monday, January 25, 2010 9:36 AM
To: 'Willard Bruce'; 'Sally Cummings'
Cc: Bob Griffin; 'David Phaff'; 'Dick Forgea'; 'Doug Melnick'; 'Gregg Sagendorph'; 'James Gaughan'; 'Jim Sano'; 'Joe Giebelhaus'; 'Kevin G. Crosier'; 'Kurt Larson'; 'Mark Gleason'; 'Mary Ellen Mallia'; 'Meghan Ruby'; 'Michael Franchini'; 'Michael Kernan'; 'Mike O'Brien'; 'Resa Dimino';

Page 9 of 19
I must also agree with Bill & Ken, the time frame was clearly defined in the last few meetings. We need to keep to the schedule and submit this to the Common Council as stated. It is important for Sally to remember that this is a preliminary draft. After committee members submit their comments a final draft will be submitted to the Council where it will then be subject to public comment and SECOR review. **This is not the final draft that some people seem to think it is.**

Thanks
Frank

--- Forwarded message ---

From: **James Travers**  
Date: Mon, Jan 25, 2010 at 5:34 AM  
Subject: Why Single Stream Recycling Systems are Inefficient and More Wasteful than Dual Stream Systems

I've pasted below an article from the waste trade magazine Solid Waste & Recycling and attached a report on single stream recycling systems published in December by the Container Recycling Institute that is referred to in the article. The report lays out all of the pros and cons of Single Stream and finds Dual Stream Systems are less costly to operate, are more profitable because they suffer from less contamination of secondary market goods due to co-mingling. It is entitled "Understanding economic and environmental impacts of single-stream collection systems"

Because Dual Stream separation and collection conserves more of our resources and creates less thoroughly unusable waste, costs less to set up and operate and is profitable, at least by enough to recover its operational overhead and sustain its ongoing operation, it should be our goal to see this wise policy instituted regionally.
The State’s mandate to localities is to reduce waste.

Choosing costly single stream over another system proven to create less waste than it does is in fact completely contrary to DEC’s directive to find the least wasteful alternative method of managing their waste.

Single Stream should be abandoned by the steering committee because it is a less effective method than Dual Stream and it creates more waste than does the DS method; the committee should recommend the practice of source separated Dual Stream collection methods be adopted regionally.

I recommend that Sally send these documents to Mike Kienan and that she ask him to circulate them to every member of the SWMP steering committee.

(Article follows my signature)

Sally Cummings

~~~~~~~~~~~~~~~~


Solid Waste & Recycling, 12/21/2009

Two-stream recycling best, study says
The Container Recycling Institute has undertaken a study of the impacts of single-stream collection of residential recyclables, with a particular focus on the economic and environmental impacts of this collection method on the final material sent to end-markets for remanufacturing.

To date, the impacts on various collection methods—source-separated curbside, commingled curbside, deposit/return—on the quality of materials destined for recycling have not been formally researched and documented. In fact, rarely is “material quality” or the “end-destination” of the material considered by government decision-makers when choosing an appropriate recycling system.

CRI selected Clarissa Morawski, principal of CM Consulting, to research the issue. Ms. Morawski is a leading expert on Extended Producer Responsibility (EPR), and has authored numerous reports on beverage container recovery systems. For this study, Ms. Morawski reviewed 60 previously-published studies, reports and articles in trade magazines. Ms. Morawski was interested to find that, as a result of the struggling economy and plunging market prices for recyclables, she is seeing increased market sensitivity to quality issues. “End markets are
really starting to quantify their economic losses from poor quality of material, and from a qualitative perspective, they feel this problem is very serious indeed and could have an impact on any future investments of capital to increase capacity of secondary feedstock."

The report finds that there are many negative downstream impacts of contaminated feedstock due to the mixing of materials through single-stream curbside collection. "Basically, the report confirms that you can't unscramble an egg," explains CRI Executive Director Susan Collins. "Once the materials are mixed together in a single-stream recycling system, there will be cross-contamination of materials and significant glass breakage. Those cross-contamination and breakage issues then result in increased costs for the secondary processors." This report attempts to quantify those costs, but the study acknowledges that there is a need for more comprehensive data.

"Nor are costs calculated on an apples-to-apples basis, because the tons that are handled through various recycling systems are not necessarily the same as the tons recycled" Collins observed. "If you take the contaminants out of the equation, the cost per ton recycled increases. With such high contaminant levels, some of these recycling systems are merely shifting costs to the paper mills, aluminum manufacturers, glass beneficiation facilities and glass manufacturers, and plastics recyclers."

The report is available for download on the CRI web site:

www.container-recycling.org

Contacts:

Clarissa Morawski, Report Author: (416) 682-8984
Susan V. Collins, CRI Executive Director: (310) 559-7451

....................Wind Energy Association..............

From: Sally Cummings
Sent: Monday, January 25, 2010 1:20 PM
To: Gallagher, Ken; Willard Bruce
Subject: Please change the way my name is listed on the SWMP document

When I was first asked to be on the SWMP Steering Committee I signed in as a citizen and thereafter signed in differently each time, i.e. once as an environmentalist (any gardener is an environmentalist) and also as a resident of Westmere. I believe I did once sign in as STPB but when I asked Lynne Jackson about this she told me not to sign in this way. I asked her if I should write and tell you, she said "not to bother". I did not know that you would put my title as this on the SWMP Preliminary document. Please change my name to "citizen" or Westmere resident, or some such.

Many thanks!
Sally
From: Sally Cummings
Sent: Thursday, January 28, 2010 10:29 AM
To: Gallagher, Ken; Willard Bruce
Subject: My comments on the Capital Region Solid Waste Management Plan

The Capital District Solid Waste Management Plan should begin with a statement that the goal of the new plan is zero waste. Zero waste is defined as "If it can’t be reduced, reused, repaired, rebuilt, refurbished, refinished, resold, recycled, or composted, then it should be restricted, redesigned, or removed from production. The goal is to combine aggressive resource recovery and industrial redesign to eliminate the very concept of waste. Eventually, the community’s resource-use system will emulate natural cyclical processes, where no waste exists. [This definition is from the Berkeley City Council's resolution]"

Comments with the way the SWMP Steering Committee was established and operated:

1. There was very little participation from most of the other municipalities in the consortium.

2. Willard Bruce said that the Steering Committee is creating the plan but it appeared that CHA is creating the plan. The preliminary draft closely resembles the modification of an earlier plan that DEC approved in September, 2008, before the Steering Committee was created.

3. During Steering Committee meetings Willard Bruce and Ken Gallagher often used the pronoun “we” without saying who “we” is. For example, Mr. Bruce said that “we” examined the best institutional structures nationwide that achieve the highest diversion rates. They were all authorities. Where is the data to support this?

4. Mike Kernan’s vigorous comments of October 20th, 2009 in opposition to an authority, and in favor of a consortium, were not included in the minutes of that meeting distributed at the next meeting, on December 8. There was considerable discussion at that October meeting about the need for and desirability of an authority. This was an important discussion and why was this not included in the minutes?

6. The stipulation in the December 15th 2009 letter from Ken Gallagher that accompanied the preliminary draft plan, and asserted that the report represented the “consensus view of the committee regarding the future of solid waste management”, is not correct. Mike Kernan and I dispute that there is a consensus. There was never a steering committee vote as to who favored an authority. To me, this is a very important concern.
7. Clough Harbor never brought in experts on how to maximize reduction, reuse, or recycling. Why? There are so many examples today of municipalities that are striving towards zero waste or high recycling rates.

8. I request that all comments from steering committee members on the preliminary draft be included in an appendix to the final draft that is to be forwarded to the Albany Common Council.

9. During our meetings, committee members witnessed presentations from industry representatives about their various technologies, but no opposing expert opinions were sought out on any of these controversial technologies. Though Albany is home to several state wide and national environmental organizations, no expert opinion from any of these organizations was sought.

10. I strongly oppose construction of a trash incinerator. Existing waste-to-energy facilities are a magnet for items best reduced, reused or, recycled, ruining incentives to maximize reduction, reuse, and recycling. The incentive for the 3 R’s would be drastically cut because amounts for such a facility must be guaranteed or paid for anyway.

11. Will solid wastes be prohibited from coming into the capital region solid waste district from outside the district? This needs to be clarified before the organization is formed.

12. During the steering committee meetings, Bill Bruce and CHA representatives often said that the new plan will have strict enforcement and a good education component to stimulate high compliance rates. Few details are provided in the preliminary draft about how these transformations will be implemented.

13. Although a schedule for reducing the amount requiring disposal at a facility (which has yet to be determined), there was no indication as to how this reduction is to be accomplished. Without knowing how it is going to be done, how can you make a schedule? No ideas were put forth.

14. I need clarification on why we were shown different “emerging technologies” when we have not been charged with choosing the kind of technology. What was the point? In fact, what was the point of the whole Steering Committee when it appears that the steering committee was “steered” from the start. Will we really have any input into what choices will be made?

15. While CHA and, apparently. DEC seem to favor an Authority approach I strongly oppose creation of an Authority. Authorities tend to be huge, and governed by people who do not know anything about the technology being undertaken. They are great at administration and making more work for more administrators. Authorities remove the power from local government to control what the taxpayers are paying for and allow one or more municipalities to shift their own debt to that of the authority, thus making every
taxpayer in the authority’s region liable for debt they did not create. In addition, authorities can prohibit local municipalities from enacting and implementing solid waste negotiations which are more stringent than those of the authority. Also, Authorities often have, or can be granted, power of eminent domain over local municipalities and private landowners. I feel that the solid waste management plan should be kept small, taking care of Albany and the townships, so there is more control for Albany and less expense for its tax payers. I also feel that the general public are more likely to comply if their waste is being handled by a local consortium than with a gigantic Authority.

Sally Cummings
Resident of Westmere

---

**From:** Larson, Kurt  
**Sent:** Thursday, January 28, 2010 1:21 PM  
**To:** Christopher, Suzanne; Bob Griffin; David Phaff; Dick Forgea; Doug Melnick; Frank Zeoli; George Gebe Jr; Gregg Sagendorph; James Gaughan; Jim Sano; Joe Giebelhaus; Mary Ellen Mallia; Meghan Ruby; Michael Franchini; Michael Kernan; Mike Hammond; Mike Manning; Mike O'Brien; Resa Dimino; Richard Rapp; Robert Conway; Ruth Leistensnider; Sally Cummings; Sam Messina; Sean Ward; Thomas Dolin; Tom Reynolds; Willard (Bill) Bruce; Hill, William  
**Cc:** LaVardera, Frank; Gallagher, Ken; Daley, Richard; Gilroy, Martin  
**Subject:** RE: Notice for next SWMP Steering Committee Meeting

Ken,

I have been asked to inform you that our comments on the Preliminary Draft of the Capital District Solid Waste Management Plan are being reviewed by our executive staff. Therefore, they will not be received by you as requested by your date of January 29, 2010, but we will send them as soon as possible.

Thank you, Kurt

---

**From:** Griffin, Bob  
**Sent:** Friday, January 29, 2010 8:42 AM  
**To:** Christopher, Suzanne  
**Subject:** RE: Notice for next SWMP Steering Committee Meeting

Suzanne, my only comment relates to the reliance on the formation of an authority for the plan to come to fruition. Time passes rapidly and the need for a long-term solution for the region’s future solid waste issues will reach a critical point soon. Should the formation of a regional authority be delayed or the authority not be conceived then the Capital Region could be without sufficient local disposal capacity for a longer period of time than anticipated. I believe that the Plan, when finalized, should contain parallel time lines for development of permanent as well as
temporary means for handling the area’s waste post-Rapp Rd. The Plan should also contain a contingency for a solid waste management structure along the lines of the scenarios described in prior meetings, i.e. maintaining the current consortium, a smaller consortium or the City of Albany alone. The way the current Draft Plan is structured the failure of one point, the formation of the Authority, means the Plan itself will fail.

Comments provided after January 29, 2010

From: Larson, Kurt  
Sent: Wednesday, February 03, 2010 4:08 PM  
To: Willard (Bill) Bruce; LaVardera, Frank; Gallagher, Ken; Bob Griffin; David Phaff; DickForgea; Doug Melnick; Frank Zeoli; George Gebe Jr; Gregg Sagendorph; James Gaughan; Jim Sano; Joe Giebelhaus; Larson, Kurt; Mary Ellen Mallia; Meghan Ruby; Michael Franchini; Michael Kernan; Mike Hammond; Mike Manning; Mike O’Brien; Richard Rapp; Robert Conway; Ruth Leistensnider; Sally Cummings; Sam Messina; Sean Ward; Thomas Dolin; Tom Reynolds; Hill, William  
Cc: Gilroy, Martin; Daley, Richard  
Subject: Comments on Preliminary draft SWMP

Please see our comments on the Preliminary Draft Capital Region Solid Waste Management Plan (SWMP).

Thank you, Kurt

Comments from the New York State Office of General Service (OGS) on the Preliminary Draft Capital Region Solid Waste Management Plan (SWMP)

Some of the elements of a SWMP identified in the Executive Summary are:

1) Expand the planning unit by implementation of a regional solid waste management authority, and the use of flow control – This would require enabling legislation.
2) Waste Minimization – emphasis on consumer education on waste reduction, promote PAYT (Pay as you throw) implementation, and back yard composting for yard and food waste.
3) Promote Product Stewardship – working to reduce the amount and toxicity of packaging and materials that are left for disposal at the end of their useful lives.
4) Continue to promote and expand recycling infrastructure. Looking to mandate such items as electronics and HHW.
5) Developing a Source Separated Organic Waste (SSOW) facility - discusses a “unique opportunity to forge a partnership with NYSDEC, and other agencies like NYSOGS and SUNY Albany who are working to comply with the Governor’s Executive Order 4 to increase their recycling and reduce their carbon footprint. These agencies are already participating with the City of Albany, the Planning
Unit, and others in an Organics Waste Task Force. In addition, the NYSOGS is already implementing a food waste composting program for its facilities at the Empire State Plaza. Materials collected for composting by OGS are currently delivered to the Agri-Cycle Compost Facility in Washington County”.

6) Develop a regional solid waste treatment facility to further minimize landfill disposal requirements. “Such a facility would recovery additional materials, energy, bio-fuels and other byproducts from the post-recyclable solid waste stream using either the conventional waste-to-energy technologies or one of the emerging technologies, which develops a successful commercial facility somewhere in the United States in the near future”.

Our department is supportive of items 1-5 above. However, we have the following concern with item 6.

- The concept of “waste to energy” has been, and continues to be, a controversial topic that raises issues of environmental justice as well as health and environmental concerns. OGS is supportive of a plan that includes the investigation of all strategies and technologies to reduce waste. Therefore, instead of stating to “Develop a regional facility utilizing a mixed solid waste treatment technology”. Such a facility would recovery additional materials, energy, bio-fuels and other byproducts from the post-recyclable solid waste stream using either the conventional waste-to-energy technologies or one of the emerging technologies, which develops a successful commercial facility somewhere in the United States in the near future”, we believe the plan should focus on continuing to investigate and evaluate emerging technologies, including “waste to energy” initiatives. It is our understanding that there have been a number of advances in “waste to energy” technology to reduce toxins in the air and in the residue. However, none of the groups that made presentations to the Committee on “waste to energy” proposals adequately addressed the issues of environmental and health concerns or provided statistics to back their claims. Therefore, there is not enough information at this point in time for OGS to endorse item 6 above.

*********************************************************************************
From: Jim Sano  
Sent: Wednesday, February 03, 2010 4:59 PM  
To: Kurt Larson; Bill Bruce; LaVardera, Frank; Gallagher, Ken; Bob Griffin; David Phaff; Richard Forgea; Doug Melnick; Frank Zeoli; Kevin Crozier; Gregg Sagendorph; James Gaughan; Joe Giebelhaus; Mary Ellen Mallia; Megan Ruby; Mike Franchini; Mike Kernan; Mike Hammond; Mike Manning; Mike O’Brien; Resa Dimino; Richard Rapp; Robert Conway; Ruth Leistensnider; Sally Cummings; Sam Messina; Sean Ward; Thomas Dolin; Tom Reynolds; Hill, William;  
Cc: Martin Gilroy; Richard Daley  
Subject: Re: Comments on Preliminary draft SWMP

Page 17 of 19
I am unable to make next weeks meeting but after reading the volumes of appendices in addition to the SWMP I would agree with this summary statement from OGS and believe the report is complete.

We did not advocate any one technology over another, in reality we advocated none, we left it as a task for the hopefully soon to be created Solid Waste Management Authority. I see no reason to delay moving forward.

Jim Sano
Albany Common Council
9th Ward

****************************************************************************************************

From: Willard Bruce
Sent: Thursday, February 04, 2010 3:28 PM
To: Larson, Kurt; Gallagher, Ken
Cc: LaVardera, Frank; Bob Griffin; David Phaff; Dick Forgea; Doug Melnick; Frank Zeoli; George Gebe Jr; Gregg Sagendorph; James Gaughan; Jim Sano; Joe Giebelhaus; Mary Ellen Mallia; Meghan Ruby; Michael Franchini; Michael Kernan; Mike Hammond; Mike Manning; Mike O'Brien; Resa Dimino; Richard Rapp; Robert Conway; Ruth Leistensnider; Sally Cummings; Sam Messina; Sean Ward; Thomas Dolin; Tom Reynolds; Hill, William; Gilroy, Martin; Daley, Richard
Subject: Re: Comments on Preliminary draft SWMP

Ken,
I keep reading/ hearing (perhaps you also), that folks are reading into the text and document, here or there, that something in the document is preferential to WTE, when you get past the waste reduction reuse/recycling and begin to talk about "treatment" to further reduce landfill reliance. Mike O'Brien is (I believe) getting the same feedback. First, Waste To Energy (WTE) is an acronym that most people associate with mass burn incineration, from the days when it was the only game in town. Most of the numerous treatment technologies out there include some form of waste to energy, resource recovery. Secondly, if there are any phrases in the document that say something like "WTE and other emerging technologies", perhaps this is being interpreted as preferential to WTE (mass burn incineration). For the meeting next Tuesday, if you could flag any text/language along these lines, and we can make sure the text/language is completely neutral on treatment technologies; that some future entity will have to evaluate them all based on economic and technical feasibility. We can discuss at the meeting next Tuesday. Thanks...........Bill

****************************************************************************************************

From: Michael O'Brien
Sent: Thursday, February 04, 2010 7:41 PM
To: Bill Bruce; Kurt Larson; Gallagher, Ken
Cc: LaVardera, Frank; Bob Griffin; David Phaff; Richard Forgea; Doug Melnick; Frank Zeoli; Kevin Crozier; Gregg Sagendorph; James Gaughan; Jim Sano; Joe Giebelhaus; Mary Ellen Mallia; Meghan Ruby; Michael Franchini; Michael Kernan; Mike Hammond; Mike Manning; Mike O'Brien; Resa Dimino; Richard Rapp; Robert Conway; Ruth Leistensnider; Sally Cummings; Sam Messina; Sean Ward; Thomas Dolin; Tom Reynolds; Hill, William; Gilroy, Martin; Daley, Richard
Page 18 of 19
Ken,

I agree with Bill Bruce. Let's be neutral on treatment technologies. That decision will be made by what ever entity is created to regionally deal with solid waste.

However, for the near future, I do agree with the draft report that as the consortium and its members currently exist we can push for increased recycling and expanded composting.

Mike O'Brien

******************************************************************************

From: Jim Sano
Sent: Friday, February 05, 2010 4:26 AM
To: Mike O'Brien; Bill Bruce; Kurt Larson; Gallagher, Ken
Cc: LaVardera, Frank; Bob Griffin; David Phaff; Richard Forgea; Doug Melnick; Frank Zeoli; Kevin Crozier; Gregg Sagendorph; James Gaughan; Jim Sano; Joe Giebelhaus; Mary Ellen Mallia; Megan Ruby; Mike Franchini; Mike Kernan; Mike Hammond; Mike Manning; Mike O'Brien; Resa Dimino; Richard Rapp; Robert Conway; Ruth Leistensnider; Sally Cummings; Sam Messina; Sean Ward; Thomas Dolin; Tom Reynolds; Hill, William; Martin Gilroy; Richard Daley

Subject: Re: Comments on Preliminary draft SWMP

I agree as well, Mike.

Jim Sano
Appendix B

SEQRA Documentation
**PURPOSE:** The full EAF is designed to help applicants and agencies determine, in an orderly manner, whether a project or action may be significant. The question of whether an action may be significant is not always easy to answer. Frequently, there are aspects of a project that are subjective or unmeasurable. It is also understood that those who determine significance may have little or no formal knowledge of the environment or may not be technically expert in environmental analysis. In addition, many who have knowledge in one particular area may not be aware of the broader concerns affecting the question of significance. The full EAF is intended to provide a method whereby applicants and agencies can be assured that the determination process has been orderly, comprehensive in nature, yet flexible enough to allow introduction of information to fit a project or action.

**FULL EAF COMPONENTS:** The full EAF is comprised of three parts:

**Part 1:** Provides objective data and information about a given project and its site. By identifying basic project data, it assists a reviewer in the analysis that takes place in Part 2 and 3.

**Part 2:** Focuses on identifying the range of possible impacts that may occur from a project or action. It provides guidance as to whether an impact is likely to be considered small to moderate or whether it is a potentially-large impact. The form also identified whether an impact can be mitigated or reduced.

**Part 3:** If any impact in Part 2 is identified as potentially-large, than Part 3 is used to evaluate whether or not the impact is actually important.

---

**DETERMINATION OF SIGNIFICANCE – Type 1 and Unlisted Actions**

Identify the Portions of EAF completed for this project:  
- **Part 1**  
- **Part 2**  
- **Part 3**

Upon review of the information recorded on this EAF (Parts 1, 2 and 3 if appropriate), and any other supporting information, and considering both the magnitude and importance of each impact, it is reasonably determined by the lead agency that:

- **A.** The project will not result in any large and important impact(s) and, therefore, is one which **will not** have a significant impact on the environment, therefore, a **negative declaration will be prepared**.

- **B.** Although the project could have a significant effect on the environment, there will not be a significant effect for this Unlisted Action because the mitigation measures described in PART 3 have been required, therefore, a **CONDITIONED negative declaration will be prepared.**

- **C.** The project may result in one or more large and important impacts that may have a significant impact on the environment, therefore, a **positive declaration will be prepared.**

*A Conditioned Negative Declaration is only valid for Unlisted actions.*

---

**Solid Waste Management Plan**

<table>
<thead>
<tr>
<th>NAME OF ACTION</th>
<th>City of Albany Common Council</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NAME OF LEAD AGENCY</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>PRINT OR TYPE NAME OF RESPONSIBLE OFFICER IN LEAD AGENCY</th>
<th>TITLE OF RESPONSIBLE OFFICER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SIGNATURE OF RESPONSIBLE OFFICER IN LEAD AGENCY</th>
<th>SIGNATURE OF PREPARED (IF DIFFERENT FROM RESPONSIBLE OFFICER)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Date
PART 1 – PROJECT INFORMATION
PREPARED BY PROJECT SPONSOR

Notice: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3. It is expected that completion of the full EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

| NAME OF ACTION: | Solid Waste Management Plan |
| LOCATION OF ACTION: | Multiple municipalities in Albany and Rensselaer counties (include street address, municipality and County) |
| NAME OF APPLICANT/Sponsor: | City of Albany, Department of General Services on behalf of the Capital Region Solid Waste Management Partnership Planning Unit |
| BUSINESS TELEPHONE | (518) 427-7480 |
| One Connors Blvd. | Albany NY 12204 |
| STREET ADDRESS | CITY/PO |
| | STATE | ZIP |

NAME OF OWNER (IF DIFFERENT):

| STREET ADDRESS | BUSINESS TELEPHONE |
| | |

DESCRIPTION OF ACTION: A new Solid Waste Management Plan (SWMP) for the Capital Region Solid Waste Management Partnership Planning Unit defines the key elements of the future solid waste management program for the region, through the year 2030. See Attachment 1.

Please complete each question — Indicate N.A. if not applicable.

A. SITE DESCRIPTION - NOT APPLICABLE (SEE ATTACHMENT 2)

Physical setting of overall project, both developed and undeveloped areas.

1. Present land use: [ ] Urban [ ] Industrial [ ] Commercial [ ] Residential (suburban) [ ] Rural (non-farm) [ ] Forest [ ] Agriculture [ ] Other N.A. Not Applicable (see attachment 2)

2. Total acreage of project area: N.A. acres.

<table>
<thead>
<tr>
<th>APPROXIMATE ACREAGE</th>
<th>PRESENTLY</th>
<th>AFTER COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meadow or Brushland (Non-agricultural)</td>
<td>____ acres</td>
<td>____ acres</td>
</tr>
<tr>
<td>Forested</td>
<td>____ acres</td>
<td>____ acres</td>
</tr>
<tr>
<td>Agricultural (includes orchards, cropland, pasture, etc.)</td>
<td>____ acres</td>
<td>____ acres</td>
</tr>
<tr>
<td>Wetland (Freshwater or tidal as per Articles 24, 25 of ECL)</td>
<td>____ acres</td>
<td>____ acres</td>
</tr>
<tr>
<td>Water Surface Area</td>
<td>____ acres</td>
<td>____ acres</td>
</tr>
<tr>
<td>Unvegetated (Rock, earth or fill)</td>
<td>____ acres</td>
<td>____ acres</td>
</tr>
<tr>
<td>Roads, buildings and other paved surfaces</td>
<td>____ acres</td>
<td>____ acres</td>
</tr>
<tr>
<td>Other (Indicate type)</td>
<td>____ acres</td>
<td>____ acres</td>
</tr>
</tbody>
</table>

3. What is predominant soil type(s) on project site? N.A.
   a. Soil drainage:
      [ ] well drained ____% of site
      [ ] Moderately well drained ____% of site
      [ ] Poorly drained ____% of site
   b. If any agricultural land is involved, how many acres of soil are classified within soil group 1 through 4 of the NYS Land Classification System? ____ Acres (See 1 NYCRR 370): |

4. Are there bedrock outcroppings on project site? [ ] Yes [ ] No.
   a. What is depth to bedrock? ____ (in feet):
5. Approximate percentage of proposed project site with slopes?
   - 0-10% ____ %
   - 10-15% ____ %
   - 15% or greater ____ %.

6. Is project substantially contiguous to, or contain a building, site, or district, listed on the State or the National Registers of Historic Places?  □ Yes  □ No

7. Is project substantially contiguous to, to a site listed on the Register of National Natural Landmarks?  □ Yes  □ No

8. What is the depth of the water table: _____ (in feet)

9. Is the site located over a primary, principal, or sole source aquifer?  □ Yes  □ No.

10. Do hunting, fishing or shall fishing opportunities presently exist in the project area?  □ Yes  □ No.

11. Does project site contain any species of plant or animal life that is identified as threatened or endangered?  □ Yes  □ No. According to: _____

12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes, other geological formations)?  □ Yes  □ No.

13. Is the project site presently used by the community or neighborhood as an open space or recreation area?  □ Yes  □ No.

14. Does the present site include scenic views known to be important to the community?  □ Yes  □ No.

15. Streams within or contiguous to project area? _____.

16. Lakes, ponds, wetland areas within or contiguous to project area?

<table>
<thead>
<tr>
<th>Name:</th>
<th>Size (in acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Size (in acres)</td>
</tr>
<tr>
<td>Name:</td>
<td>Size (in acres)</td>
</tr>
</tbody>
</table>

17. Is the site served by existing public utilities?  □ Yes  □ No.
   a. If yes, does sufficient capacity exist to allow connection:  □ Yes  □ No.
   b. If yes, will improvements be necessary to allow connection:  □ Yes  □ No.

18. Is the site located in an agricultural district certified pursuant to Agriculture and Markets Law, Article 25- AA, Section 303 and 304?  □ Yes  □ No.

19. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617?  □ Yes  □ No.

20. Has the site ever been used for the disposal of solid or hazardous wastes?  □ Yes  □ No.

B. PROJECT DESCRIPTION

1. Physical dimensions and scale of project (fill in dimensions as appropriate).  □ Not Applicable
   a. Total contiguous acreage owned or controlled by project sponsor _____ acres.
   b. Project acreage to be developed: _____ acres initially; _____ acres ultimately.
   c. Project acreage to remain undeveloped _____ acres.
   d. Length of project, in miles: _____ (if appropriate).
   e. If the project is an expansion, indicate percent of expansion proposed _____ %
   f. Number of off-street parking spaces existing _____: proposed _____.
   g. Maximum vehicular trips generated per hour _____ (upon completion of project).
   h. If residential, number and type of housing units:

<table>
<thead>
<tr>
<th>Initially</th>
<th>One family</th>
<th>Two family</th>
<th>Multiple family</th>
<th>Condominium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultimately</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
i. Dimensions (in feet) of largest proposed structure _____ height; _____ width; _____ length.

j. Linear feet of frontage along a public thoroughfare project will occupy is? _____ Ft.

2. How much natural material (i.e., rock, earth, etc.) will be removed from the site? N.A. Tons/cubic yards.

3. Will disturbed areas be reclaimed: ☐ Yes ☐ No ☒N/A
   a. If yes, for what intended purpose is the site being reclaimed? ______
   b. Will topsoil be stockpiled for reclamation? ☐ Yes ☐ No
   c. Will upper subsoil be stockpiled for reclamation? ☐ Yes ☐ No

4. How many acres of vegetation (trees, shrubs, ground covers) will be removed from site? N.A. acres.

5. Will any mature forest (over 100 years old) or other locally-important vegetation be removed by this project? ☐ Yes ☐ No ☒Not Applicable

6. If single phase project: Anticipated period of construction N.A. months, (including demolition).

7. If multi-phased:
   a. Total number of phases anticipated N.A (number).
   b. Anticipated date of commencement phase 1 _____ month _____ year, (including demolition).
   c. Approximate completion date of final phase _____ month _____ year.
   d. Is phase 1 functionally dependent on subsequent phases? ☐ Yes ☐ No

8. Will blasting occur during construction? ☐ Yes ☐ No ☒Not Applicable

9. Number of jobs generated: during construction? N.A.; after project is complete? N.A.

10. Number of job eliminated by this project? N.A.

11. Will project require relocation of any projects or facilities: ☐ Yes ☐ No ☒Not Applicable
    If yes, explain _____

12. Is surface liquid waste disposal involved? ☐ Yes ☐ No ☒Not Applicable
    a. If yes, indicate type of waste (sewage, industrial, etc.) and amount ______
    b. Name of water body into which effluent will be discharged ______

13. Is subsurface liquid waste disposal involved? ☐ Yes ☐ No Type: ______ ☒Not Applicable

14. Will surface area of an existing water body increase or decrease by proposal? ☐ Yes ☐ No ☒Not Applicable
    Explain: _____

15. Is project, or any portion of project, located in a 100 year flood plain? ☐ Yes ☐ No ☒Not Applicable

16. Will the project generate solid waste? ☐ Yes ☐ No ☒Not Applicable
    a. If yes, what is the amount per month? _____ Tons.
    b. If yes, will an existing solid waste facility be used: ☐ Yes ☐ No
    c. If yes, give name _____; location _____
    d. Will any wastes not go into a sewage disposal system or into a sanitary landfill? ☐ Yes ☐ No
    e. If yes, explain: _____

17. Will the project involve the disposal of solid waste: ☒ Yes ☐ No.
    a. If yes, what is the anticipated rate of disposal: N.A. See Attachment 3.
    b. If yes, what is the anticipated site life: N.A. years.

18. Will project use herbicides or pesticides? ☐ Yes ☐ No. ☒Not Applicable

19. Will project routinely produce odors (more than one hour per day)? ☐ Yes ☐ No ☒Not Applicable

20. Will project produce operating noise exceeding the local ambient noise levels? ☐ Yes ☐ No ☒Not Applicable

21. Will project result in an increase in energy use? ☐ Yes ☐ No ☒Not Applicable
    If yes, indicate type(s) __________

22. If water supply is from wells, indicate pumping capacity _____ gallons/minute ☒Not Applicable

23. Total anticipated water usage per day _____ gallons/day. ☒Not Applicable

24. Does project involve Local, State or Federal funding? ☐ Yes ☐ No
    If yes, explain Implementation of the SWMP will require both state and local funding.
25. Approvals Required:

<table>
<thead>
<tr>
<th>Type</th>
<th>Submittal Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>City, Town, Village Board</td>
<td>Yes Yes No</td>
</tr>
<tr>
<td>City, Town, Village Plng. Board</td>
<td>Yes No</td>
</tr>
<tr>
<td>City, Town, Zoning Board</td>
<td>Yes No</td>
</tr>
<tr>
<td>City, County Health Department</td>
<td>Yes No</td>
</tr>
<tr>
<td>Other Local Agencies</td>
<td>Yes No</td>
</tr>
<tr>
<td>Other Regional Agencies</td>
<td>Yes No</td>
</tr>
<tr>
<td>State Agencies</td>
<td>Yes No</td>
</tr>
<tr>
<td>Federal Agencies</td>
<td>Yes No</td>
</tr>
</tbody>
</table>

C. ZONING and PLANNING INFORMATION

1. Does proposed action involve a planning or zoning decision? Yes No 

If yes, indicate decision required:
- zoning amendment
- zoning variance
- special use permit
- subdivision
- site plan
- new/revision of master plan
- resource management plan
- Other: Solid Waste Management Plan

2. What is the zoning classification(s) of the site? N.A.

3. What is the maximum potential development of the site if developed as permitted by the present zoning? N.A.

4. What is the proposed zoning of the site? N.A.

5. Is the proposed action consistent with the recommended uses in adopted local land use plans? Yes No Not Applicable

6. What are the predominant land use(s) and zoning classifications within a ¼ mile radius of proposed action? N.A.

7. Is the proposed action compatible with adjoining/surrounding land uses within a ¼ mile? Yes No Not Applicable

9. If the proposed action is the subdivision of land, how many lots are proposed? N.A.

a. What is the minimum lot size proposed? N.A.

10. Will proposed action require any authorization(s) for the formation of sewer or water districts? Yes No

11. Will the proposed action create a demand for any community provided serviced (recreation, education, police, fire protection)? Yes No

a. If yes, is existing capacity sufficient to handle projected demand? Yes No

12. Will the proposed action result in the generation of traffic significantly above present levels? Yes No

a. If yes, is the existing road network adequate to handle the additional traffic? Yes No

D. INFORMATIONAL DETAILS

Attach any additional information as may be needed to clarify your project. If there are, or may be, any adverse impacts associated with your proposal, please discuss such impacts and measures which you propose to mitigate or avoid them.

E. VERIFICATION

I certify that the information provided above is true to the best of my knowledge.

Applicant/Sponsor Name: City of Albany Department of General Services Date: 

Signature: Commissioner

If the action is in the Coastal Area, and you are a state agency, complete the Coastal Assessment Form before proceeding with this assessment.
PART 2 – PROJECT IMPACTS AND THEIR MAGNITUDE
RESPONSIBILITY OF LEAD AGENCY

GENERAL INFORMATION (Read Carefully)

- In completing the form, the reviewer should be guided by the question: Have my responses and determinations been reasonable? The reviewer is not expected to be an expert environmental analyst.

- The examples provided are to assist the reviewer by showing types of impacts and, wherever possible, the threshold of magnitude that would trigger a response in column 2. The examples are generally applicable throughout the State and for most situations. But, for any specific project or site other examples and/or lower thresholds may be appropriate for a Potential large Impact response, thus requiring evaluation in Part 3.

- The impacts of each project, on each site, in each locality, will vary. Therefore, the examples are illustrative and have been offered as guidance. They do not constitute an exhaustive list of impacts and thresholds to answer each question.

- The number of examples per question does not indicate the importance of each question.

- In identifying impacts, consider long term, short term and cumulative effects.

INSTRUCTIONS (Read Carefully)

a. Answer each of the 20 questions in PART 2. Answer Yes if there will be any impact.

b. Maybe answers should be considered as Yes answers.

c. If answering Yes to a question, check the appropriate box (column 1 or 2) to indicate the potential size of the impact. If impact threshold equals or exceeds any example provided, check column 2. If impact will occur, but threshold is lower than example, check column 1.

d. Identifying that an impact will be potentially large (column 2) does not mean that it is also necessarily significant. Any large impact must be evaluated in PART 3 to determine significance. Identifying an impact in column 2 simply asks that it be looked at further.

e. If reviewer has doubt about size of the impact, then consider the impact as potentially large and proceed to PART 3.

f. If a potentially large impact checked in column 2 can be mitigated by change(s) in the project to a small to moderate impact, also check the Yes box in column 3. A No response indicates that such a reduction is not possible. This must be explained in Part 3.

### IMPACT ON LAND

<table>
<thead>
<tr>
<th>Question</th>
<th>Small to Moderate Impact</th>
<th>Potential Large Impact</th>
<th>Can Impact be Mitigated by Project Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Any construction on slopes of 15% or greater, (15 foot rise per 100 foot of length), or where the general slopes in the project area exceed 10%.</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>2. Construction of paved parking area for 1,000 or more vehicles.</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>3. Construction of land where the depth to the water table is less than 3 feet.</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>4. Construction on land where bedrock is exposed or generally within 3 feet of existing ground surface.</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>5. Construction that will continue for more than 1 year or involve more than one phase or stage.</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>6. Excavation for mining purposes that would remove more than 1,000 tons of natural material (i.e., rock or soil) per year.</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>7. Construction or expansion of a sanitary landfill.</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>8. Construction in a designated floodway.</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
</tr>
<tr>
<td>9. Other impacts:</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
<td>![Yes] ![No]</td>
</tr>
</tbody>
</table>

2. Will there be an effect to any unique or unusual land forms found on the site? *(i.e., cliffs, dunes, geological formations, etc.)*

- Yes
- No

Specific land forms:
3. Will proposed action affect any water body designated as protected? (Under articles 15, 24, 25 of the Environmental Conservation Law, ECL)
   - Yes ☑ No
   - Examples that would apply to column 2:
     - Developable area of site contains a protected water body.
     - Dredging more than 100 cubic yards of material from channel of a protected stream.
     - Extension of utility distribution facilities through a protected water body.
     - Construction in a designated freshwater or tidal wetland.
     - Other impacts:

4. Will proposed action affect any non-protected existing or new body of water?
   - Yes ☑ No
   - Examples that would apply to column 2:
     - A 10% increase or decrease in the surface area of any body of water or more than a 10 acre increase or decrease.
     - Construction of a body of water that exceeds 10 acres of surface area.
     - Other impacts:

5. Will Proposed Action affect surface surface or groundwater quality or quantity?
   - Yes ☑ No
   - Examples that would apply to column 2:
     - Proposed action will require a discharge permit.
     - Proposed action requires use of a source of water that does not have approval to serve proposed (project) action.
     - Proposed action requires water supply from wells with greater than 45 gallons per minute pumping capacity.
     - Construction or operation causing contamination of a water supply system.
     - Proposed action will adversely affect groundwater.
     - Liquid affluent will be conveyed off the site to facilities which presently do not exist or have inadequate capacity.
     - Proposed action would use water in excess of 20,000 gallons per day.
     - Proposed action would likely cause siltration or other discharge into an existing body of water to the extent that there will be an obvious visual contrast to natural conditions.
     - Proposed action will require the storage of petroleum or chemical products greater than 1,100 gallons.
     - Proposed action will allow residential uses in areas without water and/or sewer services.
     - Proposed action locates commercial and/or industrial uses which may require new or expansion of existing waste treatment and/or storage facilities.
     - Other impacts:

6. Will proposed action alter drainage flow or patterns, or surface water runoff?
   - Yes ☑ No
   - Examples that would apply to column 2:
     - Proposed action would change flood water flows.
     - Proposed action may cause substantial erosion.
     - Proposed action is incompatible with existing drainage patterns.
     - Proposed action will allow development in a designated floodway.
     - Other impacts:

IMPACT ON AIR

7. Will proposed action affect air quality?
   - Yes ☑ No
   - Examples that would apply to column 2:
     - Proposed action will induce 1,000 or more vehicle trips in any given hour.
     - Proposed action will result in the incineration of more than 1 ton of refuse per hour.
     - Emission rate of total contaminants will exceed 5 lbs. per hour or a heat source producing more than 10 million BTU's per hour.
     - Proposed action will allow an increase in the amount of land committed to industrial use.
     - Proposed action will allow an increase in the density of industrial development within existing industrial areas.
     - Other impacts:
### IMPACT ON PLANTS AND ANIMALS

8. Proposed action affect any threatened or endangered species?  
   Yes  ✔ No  
   Examples that would apply to column 2:  
   - Reduction of one or more species listed on the New York or Federal list, using the site, over or near site, or found on the site.  
   - Removal of any portion of a critical or significant wildlife habitat.  
   - Application of pesticide or herbicide more than twice a year, other than for agricultural purposes.  
   - Other impacts:  

9. Will Proposed action substantially affect non-threatened or non-endangered species?  
   Yes  ✔ No  
   Examples that would apply to column 2:  
   - Proposed action would substantially interfere with any resident or migratory fish, shellfish or wildlife species.  
   - Proposed action requires the removal of more than 10 acres of mature forest (over 100 years of age) or other locally important vegetation.

### IMPACT ON AGRICULTURAL LAND RESOURCES

10. Will the Proposed action affect agricultural land resources?  
    Yes  ✔ No  
    Examples that would apply to column 2:  
    - Proposed action would sever, cross or limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc.).  
    - Construction activity would excavate or compact the soil profile of agricultural land.  
    - Proposed action would irreversibly convert more than 10 acres of agricultural land or if located in an Agricultural District, more than 2.5 acres of agricultural land.  
    - Proposed action would disrupt or prevent installation of agricultural land management systems (e.g., subsurface drain lines, outlet ditches, strip cropping); or create a need for such measures (e.g., cause a farm field to drain poorly due to increased runoff.  
    - Other impacts:

### IMPACT ON AESTHETIC RESOURCES

11. Will proposed action affect aesthetic resources?  
    Yes  ✔ No  
    (if necessary, use the Visual EAF Addendum in Section 617.20, Appendix B.)  
    Examples that would apply to column 2:  
    - Proposed land uses, or project components obviously different from, or in sharp contrast to current surrounding land use patterns, whether man-made or natural.  
    - Proposed land uses or project components visible to users of aesthetic resources which will eliminate, or significantly reduce, their enjoyment of the aesthetic qualities of that resource.  
    - Proposed components that will result in the elimination, or significant screening, of scenic views known to be important to the area.  
    - Other impacts:

### IMPACT ON HISTORIC AND ARCHAEOLOGICAL RESOURCES

12. Will proposed action impact any site or structure of historic, pre-historic or paleontological importance?  
    Yes  ✔ No  
    Examples that would apply to column 2:  
    - Proposed action occurring wholly or partially within or substantially contiguous to any facility or site listed on the State or national Register of historic places.  
    - Any impact to an archaeological site or fossil bed located within the project site.  
    - Proposed action will occur in an area designated as sensitive for archaeological sites on the NYS Site Inventory.  
    - Other impacts:
<table>
<thead>
<tr>
<th>IMPACT ON OPEN SPACE AND RECREATION</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Will proposed action affect the quantity of quality of existing or future open spaces or recreational opportunities?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Examples</strong> that would apply to column 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- The permanent foreclosure of a future recreational opportunity.</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>- A major reduction of an open space important to the community.</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>- Other impacts:</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMPACT ON CRITICAL ENVIRONMENTAL AREAS</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Will proposed action impact the exceptional or unique characteristics of a critical environmental area (CEA) established pursuant to subdivision 6 NYCRR 617.14(g)?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Examples</strong> that would apply to column 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Proposed action to locate within the CEA.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Proposed action will result in a reduction in the quantity of the resource.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Proposed action will result in a reduction in the quality of the resource.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Proposed action will impact the use, function or enjoyment of the resource.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Other impacts:</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMPACT ON TRANSPORTATION</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Will there be an affect to existing transportation systems?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Examples</strong> that would apply to column 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Alteration of present patterns of movement of people and/or goods.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Proposed action will result in major traffic problems.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Other impacts:</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMPACT ON ENERGY</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. Will proposed action affect the community's sources of fuel or energy supply?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Examples</strong> that would apply to column 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Proposed action will cause a greater than 5% increase in the use of any form of energy in the municipality.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two family residences or to serve a major commercial or industrial use.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Other impacts:</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NOISE AND ODOR IMPACTS</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Will there be objectionable odors, noise, or vibrations as a result of the Proposed Action?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Examples</strong> that would apply to column 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Blasting within 1,500 feet of a hospital, school or other sensitive facility.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Odors will occur routinely (more than one hour per day).</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Proposed action will produce operating noise exceeding the local ambient noise levels for noise outside of structures..</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Proposed action will remove natural barriers that would act as a noise screen</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Other impacts:</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMPACT ON PUBLIC HEALTH</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>18. Will proposed action affect public health and safety?</td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Examples</strong> that would apply to column 2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Proposed action may cause a risk of explosion or release of hazardous substances (i.e., oil, pesticides, chemicals, radiation, etc.) in the event of accident or upset conditions, or there may be a chronic low level discharge or emission.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Proposed action may result in the burial of &quot;hazardous wastes&quot; in any form (i.e. toxic, poisonous, highly reactive, radioactive, irritating, infectious, etc.)</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Storage facilities for one million or more gallons of liquefied natural gas or other flammable liquids.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Proposed action may result in the excavation or other disturbance within 2,000 feet of a site used for the disposal of solid or hazardous waste.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>- Other impacts:</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
</tbody>
</table>
### IMPACT ON GROWTH AND CHARACTER OF COMMUNITY OR NEIGHBORHOOD

<table>
<thead>
<tr>
<th>19. Will Proposed action affect the character of the existing community?</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Yes ☐ No. <strong>Examples</strong> that would apply to column 2:</td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>▪ The permanent population of the city, town or village in which the project is located is likely to grow by more than 5%.</td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>▪ The municipal budget for capital expenditures or operating services will increase by more than 5% per year as a result of this project.</td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>▪ The Proposed action will conflict with officially adopted plans or goals.</td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>▪ The Proposed action will cause a change in the density of land use.</td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>▪ The Proposed action will replace or eliminate existing facilities, structures or areas of historic importance to the community.</td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>▪ Development will create a demand for additional community services (e.g., schools, police, fire, etc.).</td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>▪ Proposed action will set an important precedent for future projects.</td>
<td>✓</td>
<td>Yes No</td>
</tr>
<tr>
<td>▪ Proposed action will create or eliminate employment.</td>
<td>✓</td>
<td>Yes No</td>
</tr>
<tr>
<td>▪ Other impacts:</td>
<td></td>
<td>Yes No</td>
</tr>
</tbody>
</table>

20. Is there, or is there likely to be, public controversy related to potential adverse environmental impacts? ✓ Yes ☐ No

**If any action in Part 2 is identified as a potential large impact, or if you cannot determine the magnitude of impact, proceed to Part 3.**
Part 3 must be prepared if one or more impact(s) is considered to be potentially large, even if the impact(s) may be mitigated.

Instructions:

Discuss the following for each impact identified in column 2 of Part 2:

1. Briefly describe the impact.
2. Describe (if applicable) how the impact could be mitigated or reduced to a small to moderate impact by project change(s).
3. Based on the information available, decide if it is reasonable to conclude that this impact is important.

To answer the question of importance, consider:

• The probability of the impact occurring
• The duration of the impact
• Its irreversibility, including permanently lost resources of value
• Whether the impact can or will be controlled
• The regional consequence of the impact
• Its potential divergence from local needs and goals
• Whether known objections to the project relate to this impact

19. Community Character

The new SWMP for the Planning Unit defines the key elements for the future solid waste management program for the region. These elements are likely to result in future changes in local solid waste management programs and may dictate the development of future solid waste management support facilities. The major elements of the SWMP include:

- the continued utilization of existing solid waste management facilities and programs in the Planning Unit;
- the expansion of existing waste reduction and recycling programs throughout the Planning Unit;
- the development of new capacity for both recycling and for the treatment of post-recyclable solid waste on a regional basis to provide the necessary economies of scale to support a more fully integrated solid waste management program.
Attachments to Long EAF

Solid Waste Management Plan

Capital Region Solid Waste Management Partnership

Attachment 1 – Project Description

A new Solid Waste Management Plan (SWMP) for the Capital Region Solid Waste Management Partnership Planning Unit defines the key elements of the future solid waste management program for the region, through the year 2030.

The major elements of the new SWMP are:

- the continued utilization of existing solid waste management facilities and programs in the Planning Unit;
- the expansion of existing waste reduction and recycling programs throughout the Planning Unit;
- the development of new capacity for both recycling and for the treatment of post-recyclable solid waste on a regional basis to provide the necessary economies of scale to support a more fully integrated solid waste management program.

This SWMP also recommends the implementation of a regional solid waste management authority (RSWMA) which would operate an expanded planning unit. The RSWMA would expand and strengthen the membership of the planning unit and build on existing public sector and private sector solid waste management resources. It would be able to provide for new infrastructure and programs such as expanded mandatory recycling and an SSOW composting facility. The RSWMA would also provide a more effective administrative structure than currently exists to facilitate the implementation of new facilities and programs.

All of these measures are intended to meet the future solid waste management needs of the Planning Unit, the goals and objectives articulated in the SWMP, and will help achieve the goals of New York State’s solid waste management hierarchy.

Attachment 2 – Site Description and Project Description

This new SWMP provides the analysis and policy framework to support its key elements, but it does not propose any specific sites for the new solid waste management facilities that are recommended. Therefore the entire Site Description section and most of the items in the Project Description section of this EAF are not applicable.
Attachment 3 – Solid Waste Disposal

This SWMP calls for maximization of waste reduction and recycling prior to the use of disposal facilities. For waste that cannot be reduced or recycled, the SWMP calls for the continued utilization of existing solid waste disposal facilities and the development of new capacity for the treatment of post-recyclable waste.
ALBANY COMMON COUNCIL
MINUTES OF A REGULAR MEETING

Monday, April 19, 2010

The Common Council was convened at 7:00 p.m. and was called to order by Council President McLaughlin.

The roll being called, the following answered to their names: Council Members Bailey, Calsoaro, Comisso, Conti, Fahey, Freeman, Golby, Herring, Igoe, Jenkins-Cox, Konev, O’Brien, Rosenzweig, Sano, and Smith.

Also present was the following staff: John Marsolais, Barbara Samel, Patrick Jordan, and Cashawna Parker.

Council Member Rosenzweig led the Pledge of Allegiance.

PUBLIC COMMENT PERIOD

1. Jose Lopez, Jr., 40B View Ave., Albany, NY 12209 (Resolution 56.42.10)
2. Beth Geragosian, Colonie, NY (Ordinance 59.42.10)
4. Yvette Alfonso, 409 Hamilton St., Albany, NY 12210 (Police Chief)
5. Andy Bechard, 27 Forest Ave., Albany, NY 12208 (Police Chief)
7. Joel Tirato, 1400 Washington Ave., Albany, NY 12222 (Police Chief)
9. Ariel Fitterman, 1400 Washington Ave., Albany, NY 12222 (Police Chief)

Council Member Conti made a motion to extend Public Comment Period until 9:00pm, which was approved by unanimous voice vote.

10. Sam Frumkin, 1400 Washington Ave., Albany, NY 12222 (Police Chief)
11. Roger Markovics, 38 Myrtle Ave., Albany, NY 12202 (Community Policing)
12. Judith Mazza, 3 Sand St., Albany, NY 12209 (Police Chief)
13. Kori Robinson, 203 Second St., Albany, NY 12206 (Community Policing)
15. Shirley Bradley, 48 Jennings Dr., Albany, NY 12204 (Police Chief)
16. Mardi Crawford, 28 Elm St., Albany, NY 12202 (Community Policing)
17. Karen Johnson Williams, 33 Elberon Pl., Albany, NY 12203 (Community Policing)
18. Lonnie Ford, 545 Morris St., Albany, NY 12208 (Police Relations in the Community)
19. Vincent Riguso, 13 Beach Ave., Albany, NY 12203 (Various Issues)
20. John Donnelly, 423 Hudson Ave., Albany, NY 12203 (Police Chief)
21. William Payne, 45 Central Ave., Albany, NY 12210 (Police Chief)

There being no further speakers, the President declared the Public Comment Period closed.

APPROVAL OF MINUTES FROM PREVIOUS MEETING

Deferred

CONSIDERATION OF LOCAL LAWS

Council Member Konev introduced the following, which was referred to the Finance, Taxation and Assessment Committee:
*Note: Council Members Calsolaro and Igoe spoke on this resolution prior to passage.

Resolution Number 44.42.10R was Co-Sponsored by Council Members Comisso, Conti, Freeman, Golby, Herring, Igoe, Jenkins-Cox, Konev, O’Brien, Rosenzweig, Sano and Smith.

Passed by the following vote of all the Council Members elected voting in favor thereof:

Affirmative – Bailey, Calsolaro, Comisso, Conti, Fahey, Freeman, Golby, Herring, Igoe, Jenkins-Cox, Konev, O’Brien, Rosenzweig, Sano, and Smith

Affirmative 15 Negative 0 Abstain 0

Council Member O’Brien offered the following, asked for passage and a roll call vote thereon:

Resolution Number 45.42.10R

RESOLUTION OF THE COMMON COUNCIL GIVING NOTICE OF INTENT TO ACT AS LEAD AGENCY FOR PURPOSES OF DETERMINING ENVIRONMENTAL SIGNIFICANCE PURSUANT TO ARTICLE 8 OF THE ENVIRONMENTAL CONSERVATION LAW OF THE STATE OF NEW YORK (ECL) AND THE REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) PROMULGATED THEREUNDER (SEQRA) FOR THE PURPOSE OF REVIEWING THE DRAFT SOLID WASTE MANAGEMENT PLAN FOR THE CAPITAL REGION SOLID WASTE MANAGEMENT PARTNERSHIP PLANNING UNIT

WHEREAS, on June 25, 2009, the New York State Department of Environmental Conservation (DEC) issued to the City of Albany, permit # 4-0101-00171/00011 for the purpose of operating and expanding the landfill beyond its current capacity; and

WHEREAS, Special Condition 26(b) of the Permit calls for the Capital Region Solid Waste Management Partnership Planning Unit to have a new long term Solid Waste Management Plan (SWMP) in effect by January 1, 2011; and

WHEREAS, the Common Council has received a long form Environmental Assessment Form (EAF), as well as a Draft Solid Waste Management Plan for the Capital Region Solid Waste Management Partnership Planning Unit; and

WHEREAS, the Council has reviewed the EAF and Draft Solid Waste Management Plan and determined to conduct a coordinated review among all involved agencies; and

WHEREAS, the Common Council is the most involved agency and, as such, is the most appropriate Lead Agency to conduct a review of the plan in accord with SEQRA regulations.

NOW, THEREFORE, BE IT RESOLVED, that the Common Council of the City of Albany shall coordinate review of the plan by issuing a Notice of Intent to act as lead agency to all involved agencies pursuant to and under SEQRA;

BE IT FURTHER RESOLVED, that the Common Council hereby authorizes the City Clerk to distribute copies of the Draft Solid Waste Management Plan to all members of the Solid Waste Management Partnership Planning Unit; and

RESOLVED, that this resolution shall take effect immediately.
*Note: Council Members O’Brien, Calsolaro and Konev spoke on this resolution prior to passage.

Resolution Number 45.42.10R was Co-Sponsored by council Member Sano.

Passed by the following vote of all the Council Members elected voting in favor thereof:

Affirmative – Bailey, Calsolaro, Commissio, Conti, Fahey, Freeman, Golby, Herring, Igoe, Jenkins-Cox, Konev, O’Brien, Rosenzweig, Sano, and Smith

Affirmative 15 Negative 0 Abstain 0

Council Member Conti withdrew Resolution Number 46.42.10R.

Council Member Smith offered the following, which was referred to the Public Safety Committee:

Resolution Number 47.42.10R

RESOLUTION OF THE COMMON COUNCIL APPROVING NEW INVESTIGATORS FOR THE CITIZENS’ POLICE REVIEW BOARD

RESOLVED, that in accordance with Section 42-343 of the Code of the City of Albany the following candidates are approved as investigators for the Citizen’s Police Review Board: Jennifer C. Merritt, Salvatore F. Munafo, Thomas R. Neilen, Frank White and William Van Valkenburg.

Council Members Fahey and Calsolaro offered the following, asked passage and a roll call thereon:

Resolution Number 48.42.10R

AUTHORIZING THE IMPLEMENTATION, AND FUNDING IN THE FIRST INSTANCE 100% OF THE FEDERAL-AID AND STATE “MARCHISELLI” PROGRAM-AID ELIGIBLE COSTS, OF A TRANSPORTATION FEDERAL-AID PROJECT, AND APPROPRIATING FUNDS THEREFOR (DELAWARE AVENUE ROAD RECONSTRUCTION PROJECT [P.I.N. 1756.61])

WHEREAS, a Project for the Delaware Avenue Road Reconstruction, P.I.N. 1756.61 (the Project”) is eligible for funding under Title 23 U.S. Code, as amended, that calls for the apportionment of the costs of such program to be borne at the ratio of 80% Federal funds and 20% non-federal funds; and

WHEREAS, the City of Albany desires to advance the Project by making a commitment of 100% of the non-federal share of the cost of Construction.

NOW, THEREFORE, the Common Council, duly convened does hereby

RESOLVE, that the Common Council hereby approves the above-subject project; and it is hereby further

RESOLVED, that the Common Council hereby authorizes the City of Albany to pay in the first instance 100% of the federal and non-federal share of the cost of Construction work for the Project or portions thereof; and it is further

RESOLVED, that the sum of $841,425.00 (Eight hundred forty one thousand four hundred twenty five dollars and no cents ($819,725.00 for Preliminary Engineering and $21,700.00 for Right of Way) has already
ALBANY COMMON COUNCIL
MINUTES OF A REGULAR MEETING

Monday, July 19, 2010

The Common Council was convened at 7:00 p.m. and was called to order by Council President McLaughlin.

The roll being called, the following answered to their names: Council Members Bailey, Calsolaro, Comisso, Conti, Fahey, Freeman, Golby, Herring, Igoe, Jenkins-Cox, Konev, O'Brien, Rosenzweig, Sano and Smith.

Also present was the following staff: John Marsolais, Barbara Samel, and Patrick Jordan.

Council Member Igoe led the Pledge of Allegiance.

PUBLIC COMMENT PERIOD

1. Alice Green, 509 W. Lawrence St., Albany, NY 12208 (Police Chief Confirmation)
2. Marlon Anderson, 491 Livingston Ave., Albany, NY 12206 (Police Chief)
3. Timothy Carney, 266 Delaware Ave., Albany, NY 12209 (Police Chief)
4. Leonard Morgenbesser, 219 Tampa Ave., Albany, NY 12208 (Police Chief/Poverty)
5. Andrew Harvey, 271 Myrtle Ave., Albany, NY 12208 (Albany Medical Center expansion)
6. Charles Touhey, 509 W. Lawrence St., Albany, NY 12208 (Police Chief)

There being no further speakers, the President declared the Public Comment Period closed.

APPROVAL OF MINUTES FROM PREVIOUS MEETING

DEFERRED

CONSIDERATION OF LOCAL LAWS

The Local Laws on the pending agenda were held at the request of Council Member Conti.

REPORTS OF STANDING COMMITTEES

Public Safety – Council Member Smith stated the Committee met on July 12, 2010 to interview Mr. Steven Kroff as Police Chief. The questioning lasted for three and one-half hours and Resolution 69.62.10R appointing Mr. Steven Kroff was unanimously favorably recommended out of committee.

Planning, Economic Development and Land Use – Council Member Herring stated the Committee would be meeting on July 28, 2010 immediately following Caucus to discuss Resolution 80.71.10R(MC) confirming the appointment Sandra Fox as a member of the Planning Board.

REPORTS OF AD HOC COMMITTEES

Cable Access – Council Member Rosenzweig stated that the Committee met on Thursday, July 15, 2010 at 5:30pm to discuss the RFP regarding the part-time Public Access Aide and the structure of the PEG Access Television oversight board. The Committee would be sending a response to the Albany Public Library’s requested five points before agreeing to house the public component of PEG Access at the library.

Pesticide Ordinance – Council Member Golby stated that the Committee met on July 14, 2010 immediately following Caucus to discuss the pesticide ordinance, and identified a number of areas where committee members had
The remaining Ordinances on the pending agenda were held at the request of Council Member Conti.

CONSIDERATION OF RESOLUTIONS

Council Member O’Brien offered the following, asked for passage and a roll call vote thereon:

Resolution Number 81.72.10R

RESOLUTION OF THE COMMON COUNCIL DECLARING ITSELF LEAD AGENCY FOR PURPOSES OF DETERMINING ENVIRONMENTAL SIGNIFICANCE AND ISSUING A POSITIVE DECLARATION IN ACCORDANCE WITH ARTICLE 8 OF THE ENVIRONMENTAL CONVERSATION LAW (SEQRA) AND THE REGULATIONS PROMULGATED THEREUNDER AND REQUIRING THE PREPARATION AND SUBMISSION OF AN ENVIRONMENTAL IMPACT STATEMENT IN CONNECTION WITH REVIEWING THE DRAFT SOLID WASTE MANAGEMENT PLAN FOR THE CAPITAL REGION SOLID WASTE MANAGEMENT PARTNERSHIP PLANNING UNIT

WHEREAS, on June 25, 2009, the New York State Department of Environmental Conservation (DEC) issued to the City of Albany, permit # 4-0101-00171/00011 for the purpose of operating and expanding the landfill beyond its current capacity; and

WHEREAS, Special Condition 26(b) of the Permit calls for the Capital Region Solid Waste Management Partnership Planning Unit to have a new long term Solid Waste Management Plan (SWMP) in effect by January 1, 2011; and

WHEREAS, the Common Council has received a long form Environmental Assessment Form (EAF), as well as a Draft Solid Waste Management Plan for the Capital Region Solid Waste Management Partnership Planning Unit; and

WHEREAS, the Council has reviewed the EAF and Draft Solid Waste Management Plan and determined to conduct a coordinated review among all involved agencies; and

WHEREAS, the Common Council is the most involved agency and, as such, is the most appropriate Lead Agency to conduct a review of the plan in accord with SEQRA regulations; and

WHEREAS, more than 30 days have elapsed since the Common Council of the City of Albany issued a Notice of Intent to all members of the Solid Waste Management Partnership Planning Unit and all other involved agencies; and

WHEREAS, no member of the Solid Waste Management Partnership Planning Unit or other involved agency has notified the Common Council of any objection to it taking lead agency status; and

WHEREAS, the record demonstrates that the project may have a significant adverse environmental impact, and that a Positive Declaration of Environmental Significance should be issued in accordance with 6 NYCRR 617.7 (a).

NOW, THEREFORE, BE IT RESOLVED, that the Common Council be and hereby is designated Lead Agency in accordance with SEQRA regulation 6 NYCRR 617.6 (4).
BE IT FURTHER RESOLVED, the Common Council, serving as Lead Agency, hereby issues the attached Positive Declaration requiring the preparation of a Draft Generic Environmental Impact Statement in accordance with 6 NYCRR 617.7 (a).

Resolution Number 81.72.10R was Co-Sponsored by Council Member Freeman

Passed by the following vote of all the Council Members elected voting in favor thereof:

Affirmative – Bailey, Calsolaro, Commissio, Conti, Fahey, Freeman, Herring, Golby, Igoe, Jenkins-Cox, Konev, O’Brien, Rosenzweig, Sano, and Smith

Affirmative 15 Negative 0 Abstain 0

Council Member Conti asked and received majority consent to add Resolution 82.72.10R to the pending agenda, which was approved by unanimous voice vote.

Council Member Conti offered the following, asked for passage and a roll call vote thereon:

RESOLUTION NUMBER 82.72.10R (MC)

ESOLUTION OF THE COMMON COUNCIL ESTABLISHING STANDARD WORK DAYS FOR ADDITIONAL COMMON COUNCIL MEMBERS AS REQUIRED BY REGULATION 315.4 OF THE NEW YORK STATE COMPTROLLER EFFECTIVE AUGUST 12, 2009 AMENDING THE MAXIMUM DAYS PER MONTH THAT WILL BE REPORTED FOR SUCH OFFICIALS

BE IT RESOLVED, that the Common Council of the City of Albany hereby establishes the following as standard work days for elected and appointed officials and will report the following days worked to the New York State and Local Employees’ Retirement System based on the record of activities maintained and submitted by these officials to the clerk of this body:

<table>
<thead>
<tr>
<th>Title</th>
<th>Name</th>
<th>Standard Work Day (Hrs/day)</th>
<th>Term Begins/Ends</th>
<th>Participates in Employer’s Time Keeping System (Y/N)</th>
<th>Days/Month (Based on Record of Activities)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Council Member</td>
<td>Ronald Bailey</td>
<td>6</td>
<td>1/1/10-12/31/13</td>
<td>N</td>
<td>18.50</td>
</tr>
<tr>
<td>Council Member</td>
<td>Anton Konev</td>
<td>6</td>
<td>1/1/10-12/31/13</td>
<td>N</td>
<td>23.28</td>
</tr>
</tbody>
</table>

BE IT FURTHER RESOLVED, that the Personnel Director submit an adjustment report amending the number of days previously reported to the Retirement System.

Passed by the following vote of all the Council Members elected voting in favor thereof:

Affirmative – Bailey, Calsolaro, Commissio, Conti, Fahey, Freeman, Herring, Golby, Igoe, Jenkins-Cox, Konev, O’Brien, Rosenzweig, Sano, and Smith

Affirmative 15 Negative 0 Abstain 0

Council Member Smith along with Co-Sponsors Council Members Bailey, Calsolaro, Commissio, Conti, Fahey, Freeman, Golby, Herring, Igoe, Jenkins-Cox, Konev, O’Brien, Rosenzweig and Sano asked for passage of Resolution 69.62.10 (RESOLUTION OF THE COMMON COUNCIL CONFIRMING
May 19, 2010

TO: Involved and Interested Agencies on Attached List

Re: Capital Region Solid Waste Management Partnership
Draft Solid Waste Management Plan
City of Albany

Dear Sir or Madam:

The Capital Region Solid Waste Management Partnership Planning Unit has prepared a Draft Solid Waste Management Plan ("SWMP") for the Planning Unit. The City of Albany has prepared a Full Environmental Assessment Form ("EAF"), with Part 1 completed, to assist in evaluating the environmental impacts from the draft SWMP.

The City of Albany Common Council has tentatively determined that the proposed project is an Unlisted action under the State Environmental Quality Review Act ("SEQR"), that it would like to act as Lead Agency for purposes of review of the project, and desires to coordinate review of the project. Your agency has been identified as a potential involved or interested agency for the project. Accordingly, I am enclosing a copy of the EAF for your review.

As noted above, the City of Albany Common Council would like to act as lead agency under SEQR for this project, and coordinate the review with all Involved Agencies and Interested Agencies. Pursuant to the provisions of 6 NYCRR § 617.6(b), involved agencies have 30 days in which to agree to a lead agency. The Common Council would ask that your agency consent to it acting as lead agency for the project as soon as possible. This may be accomplished by signing a copy of this letter where indicated, and returning it to the undersigned. In addition, please provide us with any comments you may have on the EAF at your earliest convenience.

Thank you in advance for your cooperation in this matter.

Very truly yours,

John Matsolais
City Clerk

The undersigned hereby consents to the City of Albany Common Council acting as Lead Agency, and waives the 30 day period for consent under 6 NYCRR § 617.6(b).

[signature of authorized person]
Capital Region Solid Waste Management Partnership

Draft Solid Waste Management Plan

Involved Agencies

Hon. Gerald D. Jennings, Mayor
City of Albany
City Hall, Eagle Street
Albany, New York 12207

Hon. Samuel Messina, Supervisor
Town of Bethlehem
445 Delaware Avenue
Delmar, New York 12054

Hon. Ellen McNulty Ryan, Mayor
Village of Green Island
20 Clinton Street
Green Island, New York 12183

Hon. James M. Gaughan, Mayor
Village of Altamont
Post Office Box 643
115 Main Street
Altamont, New York 12009

Hon. Mark Gleason, General Manager
City of Watervliet
City Hall, Room 3
2-15th Street
Watervliet, New York 12189

Hon. Daniel Dwyer, Mayor
City of Rensselaer
505 Broadway
Rensselaer, New York 12144

Hon. Ken Runion, Supervisor
Town of Guilderland
Guilderland Town Hall, 2d Floor
5209 Western Turnpike
Guilderland, New York 12084
Hon. Thomas Dolin, Supervisor
Town of New Scotland
2029 New Scotland Road
Slingerlands, New York 12159

Hon. Michael Hammond, Supervisor
Town of Knox
Knox Town Hall
Post Office Box 56
Knox, New York 12107

Hon. Richard Rapp, Supervisor
Town of Westerlo
Town Hall
Post Office Box 148
Westerlo, New York 12193

Hon. George J. Gebe, Jr., Supervisor
Town of Berne
Town Hall
Post Office Box 57
Berne, New York 12023

Hon. Jost Nickelsberg, Supervisor
Town of Rensselaerville
78 Barger Road
Medusa, New York 12120

Hon. Robert Conway, Mayor
Village of Voorheesville
Post Office Box 367
Voorheesville, New York 12186

Hon. Richard McCabe, Supervisor
Town of East Greenbush
225 Columbia Turnpike
Rensselaer, New York 12144
New York State Department of Environmental Conservation
Region 4
1130 North Westcott Road
Schenectady, New York 12306

New York State Department of Environmental Conservation
Division of Solid and Hazardous Materials
625 Broadway
Albany, New York 12233-1750

Environmental Notice Bulletin
625 Broadway
Albany, NY 12233-1750

FAX 518-402-9167
enb@gw.dec.state.ny.us
Capital Region Solid Waste Management Partnership

Draft Solid Waste Management Plan

Interested Agencies

Hon. Paula A. Mahan, Supervisor
Town of Colonie
Colonie Town Hall
534 New Loudon Road
Loudonville, New York 12128

Hon. John T. McDonald III, Mayor
City of Cohoes
97 Mohawk Street
Cohoes, New York 12047

Hon. Frank Leak, Mayor
Village of Colonie
2 Thunder Road
Albany, New York 12205

Hon. Thomas Coates, Mayor
Village of Menands
250 Broadway
Menands, New York 12204

Hon. Henry C. Traver, Supervisor
Town of Coeymans
18 Russell Avenue
Ravena, New York 12143

Hon. John T. Bruno, Mayor
Village of Ravena
15 Mountain Road
Ravena, New York 12143

Hon. Michael G. Breslin, County Executive
County of Albany
112 State Street, Room 200
Albany, New York 12207
Hon. Kathy Jimino, County Executive
Rensselaer County Office Building
1600 7th Avenue, 5th Floor
Troy, New York 12180

Hon. Susan Savage, Chair
Schenectady County Legislature
Schenectady County Office Building
620 State Street
Attention: Manager’s Office
Schenectady, New York 12305

Hon. Willard Peck, Chair
Saratoga County Board of Supervisors
40 McMaster Street
Ballston Spa, New York 12020

Mr. Dennis Heaton, Executive Director
Montgomery-Otsego-Schoharie Solid Waste Management Authority
Post Office Box 160
2783 Route 7
Howes Cave, New York 12092

Ms. Joanna Redden, Executive Director
Eastern Rensselaer County Solid Waste Management Authority
21428 NY 22
Hoosick Falls, New York 12090

Mr. William Chaberlain
Solid Waste Management Coordinator
Bureau of Sanitation
Department of Public Works
City of Troy
City Hall
1 Monument Square
Troy, New York 12180

Mr. Bruce Goodall
Town of Schodack
Director of Transfer Station
256 Schuurman Road
Post Office Box 436
East Schodack, New York 12163
TO: Involved & Interested Agencies on Attached List

FROM: John C. Marsolais, Albany City Clerk & Clerk of the Common Council

RE: Capital Region Solid Waste Management Partnership, City of Albany State Environmental Quality Review (SEQR) POSITIVE DECLARATION Notice of Intent to Prepare a Draft EIS - Determination of Significance

DATE: September 23, 2010

PLEASE SEE THE ATTACHED SEQR POSITIVE DECLARATION
State Environmental Quality Review
POSITIVE DECLARATION
Notice of Intent to Prepare a Draft EIS
Determination of Significance

Project Number

Date 09/23/2010

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The City of Albany Common Council as lead agency, has determined that the proposed action described below may have a significant impact on the environment and that a Draft Environmental Impact Statement will be prepared.

Name of Action:
Draft Solid Waste Management Plan for the Capital Region Solid Waste Management Partnership

SEQR Status: Type 1 ☐
Unlisted ☑

Scoping: No ☑ Yes ☐ If yes, indicate how scoping will be conducted:

Description of Action:
A new Solid Waste Management Plan (SWMP) for the Capital Region Solid Waste Management Partnership Planning Unit defines the key elements of the future solid waste management program for the region, through the year 2030.

Location: (Include street address and the name of the municipality/county. A location map of appropriate scale is also recommended.)
Multiple municipalities in Albany and Rensselaer Counties.
Reasons Supporting This Determination:
The proposed action will set important precedent for future solid waste management projects in the region. The new SWMP for the Planning Unit defines key elements for the future solid waste management program for the region. These elements are likely to result in future changes in local solid waste management programs and may dictate the development of future solid waste management support facilities.

Since the SWMP is a broad policy and planning document, rather than a site specific project, a Draft Generic Environmental Impact Statement will be prepared.

For Further Information:
Contact Person: John C. Marsolais, City Clerk
Address: City Hall Room 202, 24 Eagle Street, Albany, NY 12207
Telephone Number: 518.434.5090

A copy of this notice must be sent to:
Department of Environmental Conservation, 625 Broadway, Albany, New York 12233-1750
Chief Executive Officer, Town/City/Village of Planning Unit Member Communities

Any person requesting a copy
All Involved agencies
Applicant (if any)

Environmental Notice Bulletin, 625 Broadway, Albany, NY 12233-1750
Capital Region Solid Waste Management Partnership

Draft Solid Waste Management Plan

Involved Agencies

Hon. Gerald D. Jennings, Mayor
City of Albany
City Hall, Eagle Street
Albany, New York 12207

Hon. Samuel Messina, Supervisor
Town of Bethlehem
445 Delaware Avenue
Delmar, New York 12054

Hon. Ellen McNulty Ryan, Mayor
Village of Green Island
20 Clinton Street
Green Island, New York 12183

Hon. James M. Gaughan, Mayor
Village of Altamont
Post Office Box 643
115 Main Street
Altamont, New York 12009

Hon. Mark Gleason, General Manager
City of Watervliet
City Hall, Room 3
2-15th Street
Watervliet, New York 12189

Hon. Daniel Dwyer, Mayor
City of Rensselaer
505 Broadway
Rensselaer, New York 12144

Hon. Ken Runion, Supervisor
Town of Guilderland
Guilderland Town Hall, 2d Floor
5209 Western Turnpike
Guilderland, New York 12084
Hon. Thomas Dolin, Supervisor
Town of New Scotland
2029 New Scotland Road
Slingerlands, New York 12159

Hon. Michael Hammond, Supervisor
Town of Knox
Knox Town Hall
Post Office Box 56
Knox, New York 12107

Hon. Richard Rapp, Supervisor
Town of Westerlo
Town Hall
Post Office Box 148
Westerlo, New York 12193

Hon. George J. Gebe, Jr., Supervisor
Town of Berne
Town Hall
Post Office Box 57
Berne, New York 12023

Hon. Jost Nickelsberg, Supervisor
Town of Rensselaer
78 Barger Road
Medusa, New York 12120

Hon. Robert Conway, Mayor
Village of Voorheesville
Post Office Box 367
Voorheesville, New York 12186

Hon. Richard McCabe, Supervisor
Town of East Greenbush
225 Columbia Turnpike
Rensselaer, New York 12144
Capital Region Solid Waste Management Partnership

Draft Solid Waste Management Plan

Interested Agencies

Hon. Paula A. Mahan, Supervisor
Town of Colonie
Colonie Town Hall
534 New Loudon Road
Loudonville, New York 12128

Hon. John T. McDonald III, Mayor
City of Cohoes
97 Mohawk Street
Cohoes, New York 12047

Hon. Frank Leak, Mayor
Village of Colonie
2 Thunder Road
Albany, New York 12205

Hon. Thomas Coates, Mayor
Village of Menands
250 Broadway
Menands, New York 12204

Hon. Henry C. Traver, Supervisor
Town of Coeymans
18 Russell Avenue
Ravena, New York 12143

Hon. John T. Bruno, Mayor
Village of Ravena
15 Mountain Road
Ravena, New York 12143

Hon. Michael G. Breslin, County Executive
County of Albany
112 State Street, Room 200
Albany, New York 12207
Hon. Kathy Jimino, County Executive
Rensselaer County Office Building
1600 7th Avenue, 5th Floor
Troy, New York 12180

Hon. Susan Savage, Chair
Schenectady County Legislature
Schenectady County Office Building
620 State Street
Attention: Manager’s Office
Schenectady, New York 12305

Hon. Willard Peck, Chair
Saratoga County Board of Supervisors
40 McMaster Street
Ballston Spa, New York 12020

Mr. Dennis Heaton, Executive Director
Montgomery-Otsego-Schoharie Solid Waste Management Authority
Post Office Box 160
2783 Route 7
Howes Cave, New York 12092

Ms. Joanna Redden, Executive Director
Eastern Rensselaer County Solid Waste Management Authority
21428 NY 22
Hoosick Falls, New York 12090

Mr. William Chaberlain
Solid Waste Management Coordinator
Bureau of Sanitation
Department of Public Works
City of Troy
City Hall
1 Monument Square
Troy, New York 12180

Mr. Bruce Goodall
Town of Schodack
Director of Transfer Station
256 Schuurman Road
Post Office Box 436
East Schodack, New York 12163
State Environmental Quality Review
Notice of Completion of Draft Generic Environmental Impact Statement
And
Notice of SEQR Hearing

Lead Agency: City of Albany Common Council

Address: Albany City Hall, 24 Eagle Street, Albany, New York 12207

Date: October 5, 2010

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

A Draft Generic Environmental Impact Statement (DGEIS) has been completed and accepted for the proposed action described below. Written comments are requested and will be accepted by the contact person until November 19, 2010. A public hearing on the DGEIS will be held on October 25, 2010 at 7:00PM in the Common Council Chambers, City Hall, 2nd Floor for the purpose of accepting public comment on the DGEIS.

Name of Action: Draft Solid Waste Management Plan for the Capital Region Solid Waste Management Partnership

Description of Action: A new Solid Waste Management Plan (SWMP) for the Capital Region Solid Waste Management Partnership Planning Unit defines the key elements of the future solid waste management program for the region, through the year 2030.

Location: Multiple municipalities in Albany and Rensselaer counties.

Potential Environmental Impacts: The elements of the SWMP, along with the preferred administrative structure and implementation schedule are intended to progressively reduce the amount of materials that require disposal through the year 2030. Overall, no significant adverse environmental impacts are anticipated to result from adopting and implementing this SWMP. Beneficial impacts to the community, the environment and the solid waste management system currently in place for the Planning Unit are anticipated.

A copy of the Draft / Final EIS may be obtained from:

Contact Person: John Marsolais, City Clerk

Address: City Hall Room 202,
24 Eagle Street
Albany, New York 12207

Telephone Number: 518.434.5090

The document may be found at the Capital Region Solid Waste Management Partnership web site at www.capitalregionlandfill.com and the Albany City website at www.albanyny.gov
A copy of this notice must be sent to:

A newspaper of general circulation in the area of potential impacts (Albany Times-Union)

Department of Environmental Conservation, 625 Broadway Albany, New York 12233-1750

The Mayor or Supervisor of each Town/ City/Village that is a member of the Capital Region Solid Waste Management Partnership Planning Unit

Any person who has requested a copy of the DGEIS

Any other involved agencies

Environmental Notice Bulletin 625Broadway Albany, NY 12233-1750

Copies of the DGEIS must be distributed according to 6NYCRR 617.12(b).
SWMP Appendix C

Industrial Waste Survey Results
TABLE OF CONTENTS

1.0 Introduction and Summary ........................................... p. 2
2.0 Survey Form and Cover Letter ...................................... p. 3
3.0 Survey Response Summary Tables ................................... p. 9
1.0 INTRODUCTION AND SUMMARY

CHA has been retained by the City of Albany for preparation of a new Solid Waste Management Plan (SWMP) for the Capital Region Solid Waste Management Partnership (the Planning Unit). As part of the SWMP, CHA has studied several types of waste in the total solid waste stream of Planning Unit in order to determine waste generation rates and other data. One of the waste streams studied to obtain such data is non-hazardous industrial solid waste.

According to Census data, there were 260 manufacturing facilities in Albany County in 2002, employing a total of more than 9,000 people. Not all of these facilities or employees are located in the planning unit communities, but a substantial number are believed to be, as well as manufacturing establishments in the City of Rensselaer and the Town of East Greenbush in Rensselaer County.

In order to better understand the waste management practices among these industrial establishments a survey was prepared and distributed to major manufacturing employers in the planning unit. CHA compiled information about these facilities obtained from the 2008 New York Manufacturers Register (Manufacturers’ News, Inc. 2008) and survey forms and cover letters were sent to approximately 135 establishments which had more than 10 employees. Of these, 45 had more than 50 employees and 25 had more than 100 employees. The letters were sent on February 10, 2009.

A copy of the Industrial Waste Survey Form and Cover Letter are presented in Section 2. The survey included questions regarding current solid waste management and recycling practices, as well as any special problems or issues faced with either solid waste management or recycling.

The survey responses were compiled into a summary table, presented in Section 3.
2.0 SURVEY FORM AND COVER LETTER

This Section presents a copy of the Industrial Waste Survey Form and Cover Letter.
February 10, 2009

RE: Industrial Solid Waste Survey  
Capital Region SWMP

Dear Plant Manager:

Our firm is working with the City of Albany to assist with the development of a new Solid Waste Management Plan (SWMP) for the Capital Region for the next 10 to 20 years. Part of the SWMP is focused on solid waste/recycling collection practices of the industrial sector within the Planning Unit. You are being contacted because your business is believed to be among the largest industrial establishments located in the Planning Unit.

The purpose of the attached survey is to identify current solid waste management practices, including recycling, reuse, and other waste reduction programs for the non-hazardous solid wastes generated at your facility. This data will be used to determine waste generation rates as well as to evaluate changes that could be implemented to increase the overall effectiveness of solid waste management programs. Your completion of this information will allow us to more accurately characterize the waste stream and to plan for future needs.

If we have not directed this correspondence to the appropriate person, please forward it to their attention. The survey response should be completed and returned by February 27, 2009 as indicated on the attached survey. Should you have any questions regarding the enclosed survey, or the project in general, please feel free to contact the undersigned at (518) 453-8287.

Very truly yours,

[Signature]
Valerie Spies  
Assistant Project Engineer

[Signature]
Kenneth G. Gallagher, P.P., AICP  
Principal Planner
INDUSTRIAL MANUFACTURERS SOLID WASTE/RECYCLING COLLECTION PRACTICES SURVEY

Part I. General Information

Firm name __________________________ Facility name __________________________

Street address __________________________ Mailing address __________________________

Contact Person/Survey Respondent __________________________

Title __________________________

Contact telephone # __________________________

Principal Product Your Facility Produces __________________________

Number of Employees: Full time ______ Part time ______

Hours of Operation: __________________________

SIC Code(s): __________________________

Part II. Solid Waste/Recyclable Information

1. How is non-hazardous solid waste collected for recycling or disposal (note all that apply)?
   - Self haul to disposal or recycling facilities? (name/contact information of facility)
     __________________________
   - Private hauler contracted by your business? (name/contact information of hauler)
     __________________________

2. Which solid waste management facility(s) are used by your business?
   __________________________


4. What percentage of non-hazardous solid waste was disposed of onsite in 2008? __________________________ %
5. Please describe any unique or problematic elements of your waste:


6. How much do you expect your waste volume to increase or decrease over the next five (5) years? _____% per year
   Reason for increase/decrease:

7. Do you anticipate any significant changes in your waste management practices in the next five (5) years? If so, please describe:


Part III. Reuse and Recycling Program Questions

1. Please describe any material reuse or recycling at your facility:


2. What percentage of non-hazardous solid waste is recycled or reused on-site in 2008? _____%

3. Do you keep records or prepare reports regarding your waste reduction and recycling program? Please describe:


4. Are there barriers that reduce your recycling program’s effectiveness or result in no recycling at your business? Please describe:


5. Suggestions to improve the recycling program:


Part IV. Waste Characterization

1. Waste stream/recyclable composition information
Please estimate the composition of your non-hazardous solid waste stream and the amount you reused, or recycled, and disposed for the following categories, in tons/year if possible. If other units of measurement are used please specify.

<table>
<thead>
<tr>
<th>Material Generated</th>
<th>Material Recycled or Reused</th>
<th>Material Disposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

- Aluminum
- Ferrous Metals
- Other metals (specify)
- Newspaper
- Office paper
- Corrugated Cardboard
- Plate Glass
- Tempered Glass
- Ceramics
- Glass bottles & jars
- Other Glass (specify)
- Plastic (HDPE and PET)
- Plastic (PVC)
- Other Plastic (specify)
- Rubber/Tires
- Dry cell or other batteries
- Lead acid batteries
- Oil/oil filters
- Textiles
- Construction & Demolition Debris
- Yard Waste
- Food Waste
- Wooden Pallets
- Medical Waste
- Electronics (Specify)
- Mixed Refuse (such as cafeteria and office waste)
- Other (specify)
- Other (specify)

**TOTAL**
\[
A = B + C
\]

Note: The total disposed should equal the value entered in Part II, Question 3.
THANK YOU FOR YOUR TIME.

Please FAX or email completed survey form by February 27, 2009 to:
CHA, LLP
Attn: Valerie Spies, Assistant Project Engineer
Fax Number: 973.299.1123
vspies@chacompanies.com
Telephone: (518) 453-8287
3.0 Survey Response Summary

CHA set a survey response deadline of February 27, 2009, approximately three weeks from the time the surveys were sent out. During that time, CHA staff was available to answer any questions regarding the survey. Five surveys were returned to CHA as undeliverable from the Post Office, and 14 survey responses were received before the deadline. In the following weeks, CHA continued to receive several additional survey responses from the industrial firms.

CHA then telephoned the 25 largest firms, those with 100 employees or more, to determine the status of the industrial waste surveys and to inquire whether the firm had any additional questions or comments that would assist them with completion of the survey. Additional surveys were sent via email or fax based upon these telephone discussions and this effort yielded 3 additional survey responses. In total, CHA received 19 industrial waste survey responses.

The survey responses were compiled into a summary table, presented in this Section 3 so the information from each firm could be compared side by side with the other firms. Most firms were able to provide information about their current solid waste management practices on a descriptive level, however, many were not able to provide quantities of solid waste generated, recycled and discarded, and instead provided estimates of percentages of each material component or other means of reporting their solid waste management. Some indicated that the categorization of materials was handled by the solid waste hauler, or that the tonnage generated, recycled and disposed was unknown.

The table summarizing the industrial solid waste survey results is attached below:
<table>
<thead>
<tr>
<th>Company</th>
<th>Company #1</th>
<th>Company #2</th>
<th>Company #3</th>
<th>Company #4</th>
<th>Company #5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>not indicated</td>
<td>metal parts</td>
<td>asphalt concrete</td>
<td>dental manufacturing</td>
<td>installation of sun rooms</td>
</tr>
<tr>
<td>Employees</td>
<td>25</td>
<td>75</td>
<td>4( FT 20 PT)</td>
<td>49</td>
<td>13</td>
</tr>
<tr>
<td>SIC Code</td>
<td>3678 - NAICS 334417</td>
<td>3449 - NAICS 322114</td>
<td>2951 - NAICS 324121</td>
<td>3843 - NAICS 326114</td>
<td>3448 - NAICS 322211</td>
</tr>
<tr>
<td><strong>Solid Waste/Recyclable Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-hazardous solid waste collected</td>
<td>private hauler - through lessor</td>
<td>private hauler</td>
<td>private hauler</td>
<td>private hauler</td>
<td>private hauler</td>
</tr>
<tr>
<td>Waste Management facilities</td>
<td>by Arsenal Waste Management - contracted</td>
<td>Allied Waste Services, Safety Kleen</td>
<td>Allied Waste</td>
<td>County Waste</td>
<td></td>
</tr>
<tr>
<td>Disposed in 2006</td>
<td>155 (approx)</td>
<td>unknown</td>
<td>100</td>
<td>not indicated</td>
<td>112</td>
</tr>
<tr>
<td>Percentage disposed onsite in 2006</td>
<td>not indicated</td>
<td>100%</td>
<td>0</td>
<td>not indicated</td>
<td>0</td>
</tr>
<tr>
<td>Unique or problematic elements</td>
<td>not indicated</td>
<td>none</td>
<td>not indicated</td>
<td>not indicated</td>
<td>none</td>
</tr>
<tr>
<td>Volume increase or decrease in next 5 years</td>
<td>0</td>
<td>0 - should stay same</td>
<td>0</td>
<td>5% - business volume</td>
<td>0</td>
</tr>
<tr>
<td>Significant changes in next 5 years</td>
<td>none</td>
<td>none</td>
<td>no significant changes expected</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Reuse and Recycling Program Questions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material reuse or recycling at facility</td>
<td>cardboard and paper</td>
<td>metal scrap</td>
<td>no recycling of solid waste</td>
<td>cardboard and paper</td>
<td>aluminum cut off extensions</td>
</tr>
<tr>
<td>Percentage reused or recycled onsite in 2006</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>not indicated</td>
<td>10% recycled</td>
</tr>
<tr>
<td>Records or reports for recycling/reduction</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Records regarding aluminum cutoffs that are brought to recycling yard</td>
</tr>
<tr>
<td>Barriers to reduce effectiveness</td>
<td>not indicated</td>
<td>nil</td>
<td>No</td>
<td>No</td>
<td>would like to recycle expanded polyurethane foam</td>
</tr>
<tr>
<td>Suggestions for improvement</td>
<td>not indicated</td>
<td>not indicated</td>
<td>not indicated</td>
<td>not indicated</td>
<td>not indicated</td>
</tr>
<tr>
<td>Waste Characterization (tons)</td>
<td>Information not provided</td>
<td>generated</td>
<td>recycled</td>
<td>disposed</td>
<td>generated</td>
</tr>
<tr>
<td>Aluminum</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Ferrous Metals</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>min</td>
<td>min</td>
</tr>
<tr>
<td>Other Metals (specify)</td>
<td>0.35</td>
<td>0</td>
<td>0.35</td>
<td>min</td>
<td>min</td>
</tr>
<tr>
<td>Newspapers</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Office paper</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Corrugated Cardboard</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Plate Glass</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Tempered Glass</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Glass Bottles &amp; Jars</td>
<td>min</td>
<td>min</td>
<td>min</td>
<td>0.125</td>
<td>0.125</td>
</tr>
<tr>
<td>Other Glass (specify)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Plastic (HDPE and PET)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Plastic (PVC)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other Plastic (specify)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>0.125</td>
<td>0.125</td>
</tr>
<tr>
<td>Rubber/Tires</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Dry cell or other batteries</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lead acid batteries</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Oilfield filters</td>
<td>0</td>
<td>100</td>
<td>0</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Textiles</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Construction &amp; Demolition Debris</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Yard Waste</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Food Waste</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Wooden pallets</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Medical Waste</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Electronics (specify)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mixed Refuse (such as cafeteria and offices)</td>
<td>150</td>
<td>150</td>
<td>75</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>190</td>
<td>10</td>
<td>150</td>
<td>112</td>
<td>14</td>
</tr>
</tbody>
</table>
**Industrial Waste Survey Data**

<table>
<thead>
<tr>
<th>Company</th>
<th>Company #6</th>
<th>Company #7</th>
<th>Company #8</th>
<th>Company #9</th>
<th>Company #10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>pre-built sheds</td>
<td>paint, roof coatings, driveway sealers</td>
<td>wallboard, joint compound</td>
<td>stone</td>
<td>animal feed</td>
</tr>
<tr>
<td>Employees</td>
<td>15</td>
<td>35</td>
<td>9</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>SIC Code</td>
<td>not indicated - NAICS 321992</td>
<td>2861 - NAICS 326991</td>
<td>3270 - NAICS 327420</td>
<td>NAICS 329900</td>
<td>2048 - NAICS 311119</td>
</tr>
<tr>
<td><strong>Solid Waste/Recyclable Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-hazardous solid waste collection</td>
<td>private hauler</td>
<td>private hauler</td>
<td>private hauler</td>
<td>private hauler</td>
<td>private hauler</td>
</tr>
<tr>
<td>Disposed in 2005 (ton)</td>
<td>not indicated</td>
<td>unknown</td>
<td>0.1%</td>
<td>150 (estimate)</td>
<td>0</td>
</tr>
<tr>
<td>Percentage disposed onsite in 2005</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unique or problematic elements</td>
<td>scrap, lumber, vinyl and stingers siding</td>
<td>none</td>
<td>none</td>
<td>not indicated</td>
<td>N/A</td>
</tr>
<tr>
<td>Volume increase or decrease in next 5 years</td>
<td>10% decrease - business down</td>
<td>0</td>
<td>unknown - slowdown due to economy</td>
<td>not indicated</td>
<td>not indicated - trying to decrease waste</td>
</tr>
<tr>
<td>Significant changes in next 5 years</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td><strong>Reuse and Recycling Program Questions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material reuse or recycling at facility</td>
<td>cardboard recycling</td>
<td>some latex paint reprocessed; metal</td>
<td>wallboard ground and reused, joint</td>
<td>not indicated</td>
<td>all paper/plastic sent to recycler</td>
</tr>
</tbody>
</table>
| Percentage reused or recycled onsite in 2005 | 5% recycled | unknown | compound pumped to reclaim tank and | not indicated | 100%
| Records or reports for recycling/reduction | not indicated | no | reused | not indicated | Included in monthly report sent out by |
| Barriers to reduce effectiveness | used to recycle vinyl siding, but no longer | no | track production waste, move plant waste | not indicated | Cargill; all waste is tracked |
| Suggestions for improvement | not indicated | not indicated | tracked through VM records | not indicated | reduce flushing at site; use less packaging |

**Waste Characterization (tons)**

| Aluminum | 1% | 1% | 0% | X | 5 | 5 |
| Ferrous Metals | | | | | | |
| Other Metals (specify) | | | | | | |
| Newspapers | 0 | | | | 0 |
| Office paper | 1 | | | | 1 |
| Corrugated Cardboard | 5% | 5% | 0% | X | 108 | 108 |
| Plate Glass | | | | | | |
| Tempered Glass | | | | | | |
| Ceramic | | | | | | |
| Glass Bottles & Jars | | | | | | |
| Other Glass (specify) | | | | | | |
| Plastic (HDPE and PET, Plastic (PVC)) | X | | | | | |
| Other Plastic (specify) | 15% | 0% | 15% | | | |
| Rubber/Thermoplastic | 45% | 0% | 45% | | | |
| Dry cell or other batteries | 0 | | | 0.01 | | |
| Lead acid batteries | 0 | | | 0.5 | | |
| Oilfield filters | 0 | | | 0.5 | | |
| Textiles | 0 | | | | | |
| Construction & Demolition Debris | 0 | | | | 1 |
| Yard Waste | 0 | | | | 1 |
| Food Waste | 0 | | | | 1 |
| Wooden Pallets | 2% | 0% | 2% | 20 | 20 | 24 |
| Medical Waste | | | | | | |
| Electronics (specify) | 0 | | | 0.5 | 0.5 | 0.5 |
| Mixed Refuse (such as cafeteria and office) | 2% | 0% | 2% | 498 | 498 | X |
| Other (specify) | 0.550 | 0.550 | | | | |
| Other (specify) | 20% | 0% | 20% | 5 | 10 | 148 |

**Total**

| Total | 6,171.5 | 5,560 | 8,116 | 275.06 | 127.96 | 148 |
### Industrial Waste Survey Data

<table>
<thead>
<tr>
<th>Company</th>
<th>Company #11</th>
<th>Company #12</th>
<th>Company #13</th>
<th>Company #14</th>
<th>Company #15</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>sodium hypochlorite (bleach)</td>
<td>recycled paper</td>
<td>portland cement concrete</td>
<td>mfg. industrial ceramics, engineering design</td>
<td>printed material</td>
</tr>
<tr>
<td>Employees</td>
<td>56</td>
<td>65-65</td>
<td>56</td>
<td>75</td>
<td>27</td>
</tr>
<tr>
<td>SIC Code</td>
<td>2819, 2842; 5969; NAICS 326998</td>
<td></td>
<td>3256 - NAICS 327214</td>
<td></td>
<td>2769 - NAICS 322117</td>
</tr>
<tr>
<td><strong>Solid Waste/Recyclable Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-hazardous solid waste collection</td>
<td>private hauler</td>
<td></td>
<td>private hauler</td>
<td></td>
<td>private hauler</td>
</tr>
<tr>
<td>Disposed in 2006 (ton)</td>
<td>20</td>
<td>not indicated</td>
<td>10</td>
<td>832 cy (estimate)</td>
<td>20</td>
</tr>
<tr>
<td>Percentage disposed onsite in 2006</td>
<td>not indicated</td>
<td>not indicated</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Volumes increase or decrease in next 5 years</td>
<td>not indicated</td>
<td>-10% due to economy</td>
<td>0</td>
<td>10% - tough to determine, economy</td>
<td>6% - increased business</td>
</tr>
<tr>
<td>Significant changes in next 5 years</td>
<td>would like to recycle cardboard, plastic if no cost</td>
<td>not indicated</td>
<td>no</td>
<td>no</td>
<td>No</td>
</tr>
<tr>
<td><strong>Reuse and Recycling Program Questions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material reused or recycled at facility</td>
<td>plastic containers/drums are reused after cleaning obsolete computers recycled; office paper/periodicals</td>
<td>waste concrete placed in forms and sold to contractors, also used for stackable walls/units; waste oil combusted for heat</td>
<td>separate 6 cy dumpster used for paper &amp; cardboard; any steel is sent to scrap yards</td>
<td>paper &amp; cardboard collected in costs for on-site compactor; aluminum plates collected</td>
<td></td>
</tr>
<tr>
<td>Percentage reused or recycled onsite in 2006</td>
<td>1</td>
<td>not indicated</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Records or reports for recycling/reduction</td>
<td>N/A</td>
<td>not indicated</td>
<td>not directly</td>
<td>SS program at the plant</td>
<td>monthly tonnage tracked through reports when compactor storage container is changed</td>
</tr>
<tr>
<td>Barriers to reducing effectiveness</td>
<td>cost prohibitive to recycle</td>
<td>not indicated</td>
<td>No</td>
<td>discipline of employees; plastic soda disposal</td>
<td>No</td>
</tr>
<tr>
<td>Suggestion for improvement</td>
<td>would separate waste if no cost to company</td>
<td>not indicated</td>
<td>None</td>
<td>incentives</td>
<td>none indicated</td>
</tr>
<tr>
<td><strong>Waste Characterization (tons)</strong></td>
<td>generated</td>
<td>recycled</td>
<td>disposed</td>
<td>generated</td>
<td>recycled</td>
</tr>
<tr>
<td>Aluminum Ferrous Metals</td>
<td>60</td>
<td>100</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Other Metals (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspapers Office paper</td>
<td>400</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Corrugated Cardboard</td>
<td>6000</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>416 cy/yr</td>
</tr>
<tr>
<td>Glass Bottles &amp; Jars</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Glass (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic (HDPE and PET)</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Plastic (specify)</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubber/Tires</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry cell or other batteries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lead acid batteries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oilfield filters</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Textiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction &amp; Demolition Debris</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yard Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wooden Pallets</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Waste</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronics (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed Refuse (such as cafeteria and offices)</td>
<td>0.5</td>
<td>0</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specific)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other(specific)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>20885</td>
<td>118.5</td>
<td>115.5</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
### Industrial Waste Survey Data

<table>
<thead>
<tr>
<th>Company</th>
<th>Company #15</th>
<th>Company #17</th>
<th>Company #18</th>
<th>Company #19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product</td>
<td>fabrics reinforcing steel</td>
<td>ready mix concrete</td>
<td>cannons</td>
<td>do not produce a product</td>
</tr>
<tr>
<td>Employees</td>
<td>40</td>
<td>40</td>
<td>600</td>
<td>809</td>
</tr>
<tr>
<td>SIC Code</td>
<td>NAICS 329200</td>
<td>NAICS 327320</td>
<td>0630-1420 (NAICS 322964)</td>
<td>4225 - NAICS 492110</td>
</tr>
<tr>
<td><strong>Solid Waste/Recyclable Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-hazardous solid waste collected</td>
<td>private hauler</td>
<td>private hauler</td>
<td>private hauler</td>
<td>private hauler</td>
</tr>
<tr>
<td>Solid Waste Management Facility</td>
<td>Heritage Crystal Clear Environmental Services, LLC</td>
<td>Allied Waste Systems</td>
<td>Waste Management - Colonial Landfill</td>
<td>Allied Waste - Rigo Road Landfill</td>
</tr>
<tr>
<td>Disposed in 2008 (tons)</td>
<td>400</td>
<td>20</td>
<td>613</td>
<td>386</td>
</tr>
<tr>
<td>Percentage disposed onsite in 2008</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unique or problematic elements</td>
<td>none</td>
<td>none</td>
<td>none</td>
<td>not indicated</td>
</tr>
<tr>
<td>Volume increase or decrease in next 5 years</td>
<td>0 - expect zero change</td>
<td>10% - growth</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Significant changes in next 5 years</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td><strong>Reuse and Recycling Program Questions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material reuse or recycling at facility</td>
<td>none</td>
<td>crush and reuse concrete for fill</td>
<td>source separate recyclables</td>
<td>recycle cardboard, cans, brittles</td>
</tr>
<tr>
<td>Percentage reused or recycled onsite in 2006</td>
<td>99.8</td>
<td>99</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>Records or reports for recycling/reduction</td>
<td>no sales receipts; crushing reports</td>
<td>Solid Waste Annual Report (SWARs); U.S. Army no separate records of recyclables</td>
<td>vendor for reimbursement</td>
<td></td>
</tr>
<tr>
<td>Barriers to reduce effectiveness</td>
<td>no</td>
<td>not indicated</td>
<td>not indicated</td>
<td>(respondent provided in %)</td>
</tr>
<tr>
<td>Suggestion for improvement</td>
<td>better paper recycling within Co.</td>
<td>stormwater management</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Waste Characterization (tons)</strong></td>
<td>generated</td>
<td>recycled</td>
<td>disposed</td>
<td>generated</td>
</tr>
<tr>
<td>Aluminum</td>
<td>387</td>
<td>387</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ferrous Metals</td>
<td>0.5</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other Metals (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newpaper</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office paper</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrugated Cardboard</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Plate Glass</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tempered Glass</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass Bottles &amp; Jars</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Glass (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic (HDPE and PET)</td>
<td>0.5</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Plastic (PVC)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Plastic (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rubber/Textile</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry cell or other batteries</td>
<td>0.2</td>
<td>0.2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lead acid batteries</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Oil filters</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Textiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction &amp; Demolition Debris</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Yard Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wooden Pallets</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Medical Waste</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronics (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed Refuse (such as cafeteria and office)</td>
<td>13</td>
<td>0</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>463</td>
<td>390</td>
<td>13</td>
<td>7680.2</td>
</tr>
</tbody>
</table>
SWMP APPENDIX D
WASTE CHARACTERIZATION FIELD STUDY
# Table of Contents

1.0 Executive Summary ........................................ p. 3
2.0 Purpose and Scope ........................................ p. 6
3.0 Methodology .............................................. p. 7
   3.1 Sampling Preparation ................................ p. 7
   3.2 Solid Waste Sampling and Sorting at the Rapp Road Landfill .... p. 8
   3.3 Recyclable Materials Sampling and Sorting and the Rapp Road Landfill ... p. 9
4.0 Data Analysis and Results ............................... p. 11
   4.1 Data Processing ...................................... p. 11
   4.2 Solid Waste Characterization Results ........................ p. 13
   4.3 Recyclable Materials Characterization Results ................. p. 16
   4.4 Comparison with Other Studies .......................... p. 17
5.0 Conclusions and Recommendations ..................... p. 19

References ....................................................... p. 20

Appendices ....................................................... p. 21
   Appendix A: Material Category Definitions
   Appendix B: Collection Vehicle Driver Interview
   Appendix C: Collection Vehicle Data Sheets
   Appendix D: Solid Waste Sorting Protocol
LIST OF TABLES

Table 1 – Sampling Distribution
Table 2 – Solid Waste Composition Summary
Table 3 – Largest Single Material Categories in the Solid Waste Stream
Table 4 – DGS and Commercial Collection Vehicles Summary
Table 5 – Designated Recyclable Materials within the Solid Waste Stream
Table 6 – Recyclable Materials Composition Summary
Table 7 – Solid Waste Composition in Other Studies

LIST OF FIGURES

Figure 1 – Total Waste Stream Composition
Figure 2 – DGS Solid Waste Summary
Figure 3 – Commercial Waste Summary
Figure 4 – SUNY Solid Waste Summary
Figure 5 – Recyclables: Paper Stream
Figure 6 – Recyclables: Metals, Glass, and Plastic
1.0 EXECUTIVE SUMMARY

CHA has been retained by the City of Albany for preparation of a new Solid Waste Management Plan (SWMP) for the Capital Region Solid Waste Management Partnership (the Planning Unit). As part of the SWMP, a field study was conducted to characterize the solid waste stream and recyclable stream of the Planning Unit. This study will assist with development of improvements to the current solid waste management and recycling practices. Characterization of the solid waste and recyclables stream will also assist the development of future practices and the consideration of new technologies for use by the Planning Unit. To this end, CHA designed and conducted a field study to determine the percent composition of a variety of material components within the solid waste and recyclables stream within the Planning Unit.

Randomly selected samples were collected from solid waste collection vehicles arriving at the Rapp Road Landfill in Albany over a five-day period at the end of February 2009. Vehicles were selected based upon collection routes within the Planning Unit. Each of the representative solid waste samples was then sorted into 39 material categories, and the weight of each material category was recorded. Samples were collected from City of Albany Department of General Services (DGS) vehicles, commercial waste haulers, and collection vehicles from several other municipalities and organizations.

Representative samples of recyclable materials were obtained from collection vehicles re-routed from the Sierra Fibers recycling facility to the Rapp Road Landfill, where sampling and sorting occurred. All of the recyclable samples collected were from Albany DGS vehicles. These vehicles are compartmentalized into two recyclable streams: one for mixed paper, and another for metals, glass and plastic (MGP). Two samples were collected from each vehicle containing recyclables: one from each category as above, and the paper stream and MGP stream were sorted and analyzed separately. Each sample was sorted using the same material categories used for the solid waste sampling, and the data was also recorded and calculated in a similar manner.

The sampling and sorting program was generally conducted and analyzed according to Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste, ASTM D5231-92 (Reapproved 2003). The mean mass fraction and average composition percentages were calculated for each material component for each sample, and then a mean mass fraction for each material category was calculated across multiple samples. The standard
deviation for each material category was also calculated. Results for the solid waste sampling are presented with the combined total of all samples, as well as separate results for the DGS vehicles only and the commercial vehicles only.

The largest single material component in the solid waste stream as sampled is food waste, at an average of 19% of the total mass sampled. All paper categories combined represent 31% of the waste deliveries, but this includes eight separate categories of paper. The largest single paper category is classified as other paper, at 11% of the total mass sampled. The combined plastics category was the third largest major component of the solid waste stream with approximately 13% of the total mass of the sample. The largest single plastics category was film plastic and plastic bags totaling 4% of the solid waste stream. The proportional share of all of the material components measures are presented in Table 2 – Solid Waste Composition Summary.

The solid waste composition data was also analyzed to compare waste delivered by DGS to waste delivered by commercial haulers. The data for all vehicles, as indicated above, was divided by vehicle operator into subsets to obtain the solid waste composition of the DGS waste stream and commercial hauler stream separately, and determine differences between these two waste streams. For these subsets, the combination of all paper categories is the largest material component category from the commercial waste vehicles at 41% composition by weight, and from the DGS vehicles at 25% by weight. For both the DGS and Commercial waste streams, the largest paper category was other paper, with approximately 7% and 17% of the total mass of the sample, respectively. Food wastes were the largest single material category from both waste streams, with compositions of approximately 23% and 21%, each for DGS and commercial vehicles. As above, film plastic and plastic bags were the largest single plastics category. This material category constituted 6% of the DGS waste stream, and 4.5% of the commercial waste stream. Other significant waste component categories varied between the DGS samples and the commercial samples; these included textiles and leather, disposable diapers, and wood, with the DGS samples, and dirt/fines, and glass, for the commercial samples. Table 4 presents the comparison of the composition of the DGS collected waste with the commercial collection vehicles.

The solid waste stream contained a significant number of designated recyclable materials, as indicated in Table 5 – Designated Recyclable Materials within the Solid Waste Stream. This is particularly true of paper products in the commercial vehicles sampled, where the mixed office paper and corrugated categories each consisted of more than 5% of the total waste stream; the
DGS solid waste stream contained significant amounts of recyclable paper as well, particularly paperboard.

For the recyclable materials, a majority of the paper stream consisted of newspaper, at over 52% of the total sample, followed by books (including telephone directories) and magazines, at 13% and 11%, respectively. Other significant categories included paperboard, mixed office paper, and corrugated (see Table 6 – Recyclable Materials Composition Summary). Only 1.4% of the paper stream consisted of non-paper products. Nearly 60% of the MGP stream consisted of glass. The largest fraction of the glass material category was comprised of clear glass bottles, which accounted for 29% of the total MGP sample. Green glass bottles were also a significant fraction at 17% of the entire MGP sample. Ferrous metals consisted of approximately 12%, and all plastic categories combined included 19% of the MGP stream. Various paper products constituted 7.9% of the MGP stream, which could be viewed as a contaminant in this recyclable material stream.

The data from the waste characterization field study for the Planning Unit were compared to data from a similar 2005 study for the Onondaga County Resource Recovery Agency (OCRRA), as well as from national data collected by the United States Environmental Protection Agency (USEPA) for the year 2007. Table 7 – Solid Waste Composition in Other Studies presents the Capital Region data alongside the OCRRA and USEPA data. The data are consistent across several material categories such as food wastes, and textiles and leather; however, the waste stream composition of other material categories reflects differences between the solid waste stream of the Capital Region, and the OCRRA and USEPA data. These differences include a higher percentage of paper products, and other material categories such as electronics, and dirt/fines, and lower percentages of categories such as yard waste and rubber. Comparison of the Capital Region results with other studies will also assist in the planning and preparation of the future management of solid waste and recyclable materials.

Yard waste only represented 1.2% of the solid waste discarded during this study. While there are numerous yard waste composting programs in place within the planning unit, the waste characterization study was conducted during the low season for yard waste generation. Therefore, an upward adjustment might be needed to reflect an annual average percentage of yard waste that is discarded. This should be examined further in the context of the overall waste stream analysis being conducted for the new SWMP.
2.0 PURPOSE AND SCOPE

The purpose and objective of this field study is to characterize the constituents of the solid waste and recycled materials stream for the Capital Region Solid Waste Planning Unit. Characterizing the local waste stream will provide valuable information for planning future improvements to local recycling efforts as well as for evaluating the feasibility of alternative solid waste management systems. Another purpose of the study is to examine differences in solid waste composition collected by a municipal agency (such as the City of Albany DGS) and commercial haulers servicing commercial, industrial or institutional customers as well as multi-family dwellings.

In order to categorize the solid waste and recyclable materials stream within the Planning Unit, CHA developed a field study involving the sampling of solid waste and recyclables collection vehicles, and sorting the materials contained in each sample to determine the mass percentage composition. The field study was conducted between February 23-27, 2009, for solid waste and from March 2-4, 2009, for recyclable materials. Both solid waste deliveries to the Rapp Road Landfill as well curbside recyclables collected by the City of Albany DGS were sampled and characterized during this time period. Detailed methodology and results for this field study are presented in the following sections.
3.0 METHODOLOGY

3.1 SAMPLING PREPARATION

The solid waste and recyclables sampling and sorting program generally followed procedures established by the American Society of Testing Materials Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste. ASTM D5231-92 (Reapproved 2003). The solid waste sampling and sorting program took place at the Rapp Road Landfill between February 23 and February 27, 2009. The sampling and sorting of recyclables took place also at the Rapp Road Landfill between March 2, and March 4, 2009.

Prior to beginning the waste sorting program, a protocol was developed for the procedure with a total of 39 material sort categories used, based upon knowledge of the potential waste stream at the landfill. Appendix A presents a definition of each material category. Forms and data sheets to assist with the solid waste sampling data collection were also prepared for use in the field. These data sheets included driver interview forms for each of the collection trucks that were sampled, as well as tables containing listings of each material category to facilitate the input of solid waste information during field sampling. The driver interview forms were prepared for both the solid waste sampling and recyclables sampling, while the data tables utilized the same material categories for both solid waste and recyclables. The completed driver interview forms and sampling data sheets are presented in Appendix B and Appendix C, respectively.

Additional preparations prior to the solid waste and recyclables sampling in the field included obtaining appropriate bins for each of the material categories to be sorted. Based upon the proposed sample size, and potential volume of waste for each category from other similar studies, plastic garbage containers were obtained in a sufficient size to be used for the sorting.

A sorting table was also constructed using a wire screen over a box constructed of plywood. The sorting table helped to contain the dirt and fines so that a measurable quantity of this waste category could be determined.
3.2 SOLID WASTE SAMPLING AND SORTING AT THE RAPP ROAD LANDFILL

Solid waste sampling and sorting at the Rapp Road Landfill was conducted by a crew of 7 people, including a Site Manager and a Crew Chief. The Site Manager was responsible for the selection of appropriate collection vehicles from which to sample, and for interviewing the drivers of the vehicles regarding the geographic origin and type of waste contained in the collection vehicle. The Site Manager and Crew Chief communicated via two-way radio, so that once the sorting of one collection vehicle was nearly completed, another vehicle could be selected for sampling. The Crew Chief was responsible for leading the crew during the manual sorting effort pertaining to general sorting operations and any issues regarding material sort categories. Generally, the procedure for sampling and sorting occurred as follows:

Solid waste collection vehicles arriving at the landfill facility were randomly selected by the Site Manager. Selection was based on the communications between the Site Manager and the Crew Chief, who advised if the sort crew was ready to accept another load. Upon selection of the next available vehicle, eligibility for the waste sampling and sorting study was determined through driver interviews, which were conducted by the Site Manager from the scale house. Vehicles were determined to be eligible for sampling based upon collections or a collection route within the Planning Unit. Vehicles that did not have a collection route within the Planning Unit were ineligible for sampling, and were sent to empty their loads in accordance with regular operating procedure. Collection vehicles that were delivering industrial solid wastes or construction and demolition debris were also ineligible for the sampling program. Eligible trucks from within the Planning Unit were then diverted to the processing building where the waste sampling and sorting occurred. The selected eligible collection vehicle load was emptied onto the floor of the processing building. A front-end loader operated by DGS personnel was used to scrape a load of waste from one edge of the discharged waste. This waste was mixed and divided into quarters. The waste sample to be sorted was collected from a randomly selected quarter using the front-end loader. The sample size was approximately 1 cubic yard of waste by volume, with a target sample size of approximately 200-300 pounds by weight. The sample was emptied onto the sorting table, and then the waste was sorted into the bins for each of the 39 material categories. The bins were weighed before and after the sort to determine the net weight composition of the solid waste sample; the weight of material for each waste category was entered into the prepared data sheets for each vehicle. One data sheet was used for each collection vehicle/sample. The data sheets with results for each vehicle are presented in Appendix C.
The landfill facility closed early due to high winds on both Monday and Friday, thereby decreasing the number of samples obtained during the week due to time considerations. During the course of the week, a total of 36 waste samples were collected, as follows:

- 2/23/09 Monday – 5 samples
- 2/24/09 Tuesday – 8 samples
- 2/25/09 Wednesday – 8 samples
- 2/26/09 Thursday – 8 samples
- 2/27/09 Friday – 7 samples

The average sample weight for these 36 waste samples was approximately 215 lbs.

3.3 RECYCLABLE MATERIALS SAMPLING AND SORTING AT THE RAPP ROAD LANDFILL

The original intention of the sampling and sorting program was to characterize both the solid waste and recyclables in the waste stream at separate facilities. The solid waste was sampled at the Rapp Road Landfill, and the recyclables were to be sampled and sorted at the Sierra Fibers facility. However, the Sierra Fibers facility was not able to be used for the sampling and sorting; therefore, sampling and sorting of the recyclable waste stream was also completed at the Rapp Road Landfill. The procedure for the selection of collection vehicles for sampling was different from the procedure used for the solid waste sorting. Instead of the procedure outlined above, DGS recyclable collection vehicles were diverted en route from the Sierra Fibers facility to the Rapp Road Landfill by the City of Albany dispatcher. Collection vehicles were diverted at various points along the collection route to ensure a continuous stream of vehicles arrived at the landfill for sampling and sorting. There were no driver interviews conducted as part of the recyclables sampling program, as all vehicles sampled were DGS vehicles from within the Planning Unit.

The collection vehicles used for the recyclables were internally divided into two compartments: paper, and metals, glass and plastic (MGP). Therefore, two samples were taken from each vehicle: a paper sample, and an MGP sample based upon the contents of each compartment. The samples were then collected with the same procedure as outlined above for the solid waste sampling and sorting, and sorted into the same material categories. Also as above, the material bins were weighed before and after the sorting to obtain the weight of each material component in the sample of recyclables.
A total of 46 recycling samples were collected during the sampling period, as follows:

- 3/2/09 Monday – 7 Paper samples, 7 MGP samples
- 3/3/09 Tuesday – 8 Paper samples, 8 MGP samples
- 3/4/09 Wednesday – 8 Paper samples, 8 MGP samples

The sampling and sorting protocol developed prior to the field study is presented in Appendix D. The average sample weight for these 46 waste samples was 136 lbs.
4.0 DATA ANALYSIS AND RESULTS

4.1 DATA PROCESSING

In order to determine the percentage of each waste or recyclable component in the sample, and in the waste stream or recyclable stream, the mass fraction of each component was calculated for each sample. That is, the net weight of each material component was divided by the total weight of the sample. The mass fraction of each component for the entire waste stream was obtained by taking the mean of each of the mass fractions of each sample for a given material component. The standard deviation for each mass fraction was calculated both on an individual sample level, and on an aggregate waste/recyclable stream level. These calculation methods are outlined in the Standard Test Method for Determination of the Composition of Unprocessed Municipal Solid Waste, ASTM D5231-92.

Solid waste collection vehicles were randomly sampled during the 5-day field operations. Sampled vehicles included City of Albany Department of General Services (DGS), as well as from a variety of commercial and institutional haulers and other municipalities. A total of 36 samples were collected over the course of the week to represent the solid waste stream. Table 1: Sampling Distribution presents the number of samples from each waste hauler, shown below.

<table>
<thead>
<tr>
<th>Vehicle</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albany Department of General Services (DGS)</td>
<td>9</td>
</tr>
<tr>
<td>County Waste</td>
<td>4</td>
</tr>
<tr>
<td>Allied Waste</td>
<td>6</td>
</tr>
<tr>
<td>Waste Management</td>
<td>5</td>
</tr>
<tr>
<td>Accurate Disposal</td>
<td>1</td>
</tr>
<tr>
<td>City of Rensselaer</td>
<td>2</td>
</tr>
<tr>
<td>Village of Green Island</td>
<td>1</td>
</tr>
<tr>
<td>Town of Knox</td>
<td>2</td>
</tr>
<tr>
<td>Town of Guilderland</td>
<td>1</td>
</tr>
<tr>
<td>Town of Rensselaerville</td>
<td>1</td>
</tr>
<tr>
<td>Albany County</td>
<td>1</td>
</tr>
<tr>
<td>Salvation Army</td>
<td>2</td>
</tr>
<tr>
<td>SUNY- University of Albany</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
</tr>
</tbody>
</table>
In addition to the summary of results for the total aggregate waste stream, results were also tabulated separately for both the DGS collection vehicles and the commercial waste haulers. The commercial solid waste haulers included the vehicles from County Waste, Allied Waste, Waste Management, and Accurate Disposal. The vehicles from the municipalities and other organizations were not included in the commercial waste results.

As indicated in the methodology, all of the collection vehicles sampled to characterize the recyclable stream were DGS vehicles. Therefore, the analysis of the recyclable stream presented below represents primarily the residential component of the recyclable stream within the City of Albany. An analysis of the commercial recyclable stream was not studied.

We offer the following about the limitations of the study:

- A total of 36 samples were sorted from collection vehicles within the planning unit for the solid waste portion of the study.
- A total of 46 samples of recyclables were sorted, including 23 samples each of the paper stream and metals, glass and plastic (MGP) stream.
- Vehicles delivering municipal solid waste to the Rapp Road Landfill were randomly selected and were interviewed to determine that the waste originated on a collection route within the planning unit. Industrial solid waste, and construction and demolition debris (C&D), was not included as part of this study.
- Differences in types of commercial solid waste were not studied (ie. waste streams specific to restaurants, the retail sector, offices, etc.)
- As indicated above, solid waste characterization results are from a single week of sampling and sorting, and recyclable characterization results are from a three-day period of sampling and sorting. Therefore, the results presented herein may not be indicative of seasonal, monthly, or other time-dependent variations in the solid waste or recyclable stream.

Notes on the Results

In the analysis of the results for the solid waste stream, some categories may show differing percentages between the DGS component, commercial component, and aggregate total. For example, the fraction of food waste averages 18.7% for all samples, but 23% for DGS, and 21% for the commercial samples. Note that the results for the vehicles from municipalities or other organizations were not included in either the DGS or commercial category. Therefore, the addition of samples from these vehicles adjusts the total average composition for each material component.
As can be seen from the tables of results, the standard deviation of some of the material categories is greater than the mean percent composition. This indicates a high degree of variability and large range in percent composition within the samples for these material categories. This may also be due to the limited number of samples and timeframe of the study: greater numbers of samples may have led to greater precision and a lower standard deviation for some of these material categories. It may also be due to the variety of commercial waste generators, as explained above.

It is important to note that this study analyzed the components of both the solid waste stream and the recyclables stream by weight and not by volume; therefore, items of relatively low weight may not appear significant to the results, but may have been present in large quantity in the waste stream by volume. A typical example of this is seen in the recyclables stream with glass and plastics. Anecdotally, plastic bags and film plastics appeared to be abundant during the waste sorting. However, the total weight of these items was insignificant in comparison to items of greater density, such as glass jars. Incidentally, the glass constituted the greatest fraction of the MGP recyclables stream; however, glass is also significantly denser and heavier than the plastics in the waste stream. This may also occur with the solid waste stream, with differences in densities between food waste, paper products, metals, or other categories.

4.2 SOLID WASTE CHARACTERIZATION RESULTS

Table 2 – Solid Waste Composition Summary provides each material component and the mean composition percentage (mean mass fraction), and the standard deviation for each material category. In order of greatest to least mean composition percentage, the largest individual categories of the solid waste stream are as follows: food waste, other paper, dirt/fines, textiles and leather, corrugated, film plastic and plastic bags, paperboard, mixed office paper, miscellaneous, and wood. Table 3 below presents each of these material categories and the corresponding component fraction in the solid waste stream.
### Capital Region Solid Waste Management Plan - Waste Characterization Field Study

#### Table 2 - Solid Waste Composition Summary

<table>
<thead>
<tr>
<th>Material Components</th>
<th>Average Composition (%)</th>
<th>Mass Fraction Standard Deviation (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAPER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspaper</td>
<td>2.0%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Magazines</td>
<td>2.1%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Corrugated</td>
<td>4.5%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Gable Top Cartons &amp; Drink Boxes</td>
<td>0.4%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Paper Board</td>
<td>4.2%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Books (including phone directories)</td>
<td>2.8%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Mixed Office Paper</td>
<td>4.1%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Other Paper</td>
<td>11.1%</td>
<td>13.5%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>31.3%</strong></td>
<td><strong>16.7%</strong></td>
</tr>
<tr>
<td><strong>PLASTICS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic Containers (PET) #1 Non-Bottle Bill</td>
<td>1.7%</td>
<td>3.0%</td>
</tr>
<tr>
<td>Plastic #1 (Bottle Bill Containers)</td>
<td>0.3%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Plastic Containers (HDPE) #2</td>
<td>0.8%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other Plastic Containers</td>
<td>2.5%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Film Plastic &amp; Plastic Bags</td>
<td>4.4%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Other Plastics</td>
<td>2.8%</td>
<td>2.9%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>12.5%</strong></td>
<td><strong>5.1%</strong></td>
</tr>
<tr>
<td><strong>FOOD WASTE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TEXTILES &amp; LEATHER</strong></td>
<td><strong>18.7%</strong></td>
<td><strong>19.9%</strong></td>
</tr>
<tr>
<td><strong>RUBBER</strong></td>
<td><strong>5.7%</strong></td>
<td><strong>7.2%</strong></td>
</tr>
<tr>
<td><strong>DISPOSABLE DIAPERS</strong></td>
<td><strong>0.5%</strong></td>
<td><strong>1.3%</strong></td>
</tr>
<tr>
<td><strong>FERROUS METALS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferrous Metal/Bimetal Cans</td>
<td>0.7%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Aerosol Cans</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Other Ferrous Metal</td>
<td>1.9%</td>
<td>3.2%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>2.8%</strong></td>
<td><strong>3.3%</strong></td>
</tr>
<tr>
<td><strong>NON-FERROUS METALS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum Cans (Non-Bottle Bill)</td>
<td>0.2%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Aluminum Cans (Bottle Bill)</td>
<td>0.2%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Other Non-Ferrous Metal</td>
<td>1.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>1.3%</strong></td>
<td><strong>1.4%</strong></td>
</tr>
<tr>
<td><strong>ELECTRONICS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass Bottles (Bottle Bill)</td>
<td>0.5%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Glass Bottle - Clear</td>
<td>1.8%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Glass Bottle - Amber</td>
<td>0.9%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Glass Bottle - Green</td>
<td>0.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Flat Glass &amp; Other Glass</td>
<td>1.4%</td>
<td>3.4%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>4.7%</strong></td>
<td><strong>9.2%</strong></td>
</tr>
<tr>
<td><strong>WOOD</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RUBBLE</strong></td>
<td><strong>3.6%</strong></td>
<td><strong>6.5%</strong></td>
</tr>
<tr>
<td><strong>YARD WASTE</strong></td>
<td><strong>0.6%</strong></td>
<td><strong>2.7%</strong></td>
</tr>
<tr>
<td><strong>DIRT/FINES</strong></td>
<td><strong>1.2%</strong></td>
<td><strong>4.3%</strong></td>
</tr>
<tr>
<td><strong>HAZARDOUS WASTE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Hazardous Waste (HHW)</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Lead Acid Batteries</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other Batteries</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>0.1%</strong></td>
<td><strong>0.1%</strong></td>
</tr>
<tr>
<td><strong>MEDICAL OR PHARMACEUTICAL WASTE</strong></td>
<td><strong>0.2%</strong></td>
<td><strong>0.8%</strong></td>
</tr>
<tr>
<td><strong>MISCELLANEOUS</strong></td>
<td><strong>3.8%</strong></td>
<td><strong>4.3%</strong></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
<td><strong>0.0%</strong></td>
</tr>
</tbody>
</table>
Table 3: Largest Single Material Categories in the Solid Waste Stream

<table>
<thead>
<tr>
<th>Material</th>
<th>Component Fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Waste</td>
<td>18.7%</td>
</tr>
<tr>
<td>Other Paper</td>
<td>11.1%</td>
</tr>
<tr>
<td>Dirt/Fines</td>
<td>7.9%</td>
</tr>
<tr>
<td>Textiles &amp; Leather</td>
<td>5.7%</td>
</tr>
<tr>
<td>Corrugated</td>
<td>4.5%</td>
</tr>
<tr>
<td>Film Plastic &amp; Plastic Bags</td>
<td>4.4%</td>
</tr>
<tr>
<td>Paper Board</td>
<td>4.2%</td>
</tr>
<tr>
<td>Mixed Office Paper</td>
<td>4.1%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>3.8%</td>
</tr>
<tr>
<td>Wood</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

Food wastes constitute the largest single component percentage for a single material component category, with a fraction of 18.7%. Paper products constitute a significant portion of the solid waste stream sampled in the study, with a component fraction greater than 30%. This fraction is for all paper categories combined, including: newspaper, magazines, corrugated, gable top cartons and drink boxes, paperboard, books (including telephone directories), mixed office paper, and other paper. The largest paper category consisted of other paper, at 11.1% of the total waste stream. This is a non-recyclable paper component containing tissue paper and paper towels. Approximately 20% of the discarded solid waste stream consisted of recyclable paper categories, the largest of which were corrugated, paperboard, and mixed office paper, which constituted 4.6%, 4.2% and 4.1% respectively. Figure 1 – Total Waste Stream Composition presents the total waste stream by major material category or individual material category, as applicable.

Plastics also constitute a significant portion of the waste stream at 12.5% mean composition for all plastic categories, the largest of which is film plastic and plastic bags at 4.4% of the total waste stream.

Recyclable glass, metal, and plastic containers in the solid waste stream include Plastic Containers #1 and #2, ferrous metal cans, aluminum cans, and the various colors of glass bottles. Combined, these categories account for an average of about 7.2% of the discarded solid waste stream.
Figure 1 - Total Waste Stream Composition

- Food Waste: 19%
- Textiles & Leather: 6%
- Rubber: 1%
- Disposabale Diapers: 3%
- Ferrous Metals: 3%
- Non-Ferrous Metals: 1%
- Electronics: 3%
- Glass: 5%
- Wood: 4%
- Rumble: 1%
- Yard Waste: 1%
- Medical or Pharmaceutical Waste: 0%
- Miscellaneous: 4%
- Plastics: 13%
- Paper: 31%
Comparison of DGS and Commercial Samples

The compositions of the DGS and Commercial collection vehicles were evaluated separately to examine any differences from the overall waste stream composition. Table 4 – DGS and Commercial Collection Vehicles Summary presents the composition of each of the 39 material categories in each of these two sample subsets. The DGS is responsible for municipal curbside pick-up of solid waste in residential areas in the City of Albany: single family homes, and dwellings up to four units per building. Therefore, these vehicles largely represent the residential waste stream component. The percentages of paper and food waste in the DGS vehicles are similar, at 25% and 23%, respectively, followed by the plastics category at 15%. Within the paper fraction, the largest category of paper waste was other paper, with a fraction of 7.4% of the total DGS waste stream. The largest single plastics category was film plastic and plastic bags, at 6.4% of the total DGS waste stream. Textiles and leather, disposable diapers, and wood also constitute significant fractions at 6%, 5%, and 5%, respectively. The six categories of paper, food waste, plastics, textiles and leather, disposable diapers, and wood, comprise nearly 80% of the DGS waste stream, with smaller categories filling in the remaining 20% including glass, dirt/fines, miscellaneous, ferrous metals, and electronics as indicated in Figure 2 – DGS Solid Waste Summary.

By contrast, the solid waste sampled from the commercial vehicles contains a greater percentage of paper products, at 41% of the total waste stream composition across all paper categories. Like the DGS vehicles, and the aggregate total of all samples, the largest single paper category is other paper, at 16.6% of the commercial waste stream. This is the largest single paper category by a significant margin, as the next largest category of mixed office paper represents 6.3% of the total commercial waste stream. The composition of food waste and plastics remains relatively consistent with the DGS vehicles at 21% and 12%, respectively. Within the plastics fraction, the largest single category was film plastic and plastic bags, at 4.5% of the total waste stream. This result is also consistent with the composition of plastics in the DGS waste stream and overall for all vehicles sampled. The paper, food waste, and plastics categories comprise nearly 75% of the commercial solid waste stream, with additional categories including dirt/fines (6%), glass (5%), and textiles and leather (3%) as indicated in Figure 3 – Commercial Waste Summary.

There was less designated recyclable paper in the discarded solid waste delivered by the DGS than was present in the commercial solid waste discards. Designated recyclable paper consisted of 17.6% of the DGS waste compared to 24.2% in the commercial waste stream. Both the DGS and commercial waste streams contained similar amounts of recyclable plastic, metal, and glass containers, although these was slightly less metal in the commercial waste samples. Table 5 –
# Capital Region Solid Waste Management Plan - Waste Characterization Field Study

## Table 4 - DGS and Commercial Collection Vehicles Summary

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAPER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspaper</td>
<td>2.7%</td>
<td>2.4%</td>
<td>2.1%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Magazines</td>
<td>1.4%</td>
<td>1.1%</td>
<td>3.5%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Corrugated</td>
<td>3.4%</td>
<td>2.9%</td>
<td>5.6%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Gable Top Cartons &amp; Drink Boxes</td>
<td>0.3%</td>
<td>0.2%</td>
<td>0.5%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Paper Board</td>
<td>5.3%</td>
<td>2.2%</td>
<td>3.9%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Books (including phone directories)</td>
<td>2.5%</td>
<td>3.8%</td>
<td>2.4%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Mixed Office Paper</td>
<td>2.1%</td>
<td>1.5%</td>
<td>6.3%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Other Paper</td>
<td>7.4%</td>
<td>2.8%</td>
<td>16.6%</td>
<td>19.1%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>25.0%</strong></td>
<td><strong>6.4%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PLASTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic Containers (PET) #1 Non-Bottle Bill</td>
<td>2.0%</td>
<td>1.6%</td>
<td>2.2%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Plastic #1 (Bottle Bill Containers)</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Plastic Containers (HDPE) #2</td>
<td>1.0%</td>
<td>1.0%</td>
<td>0.6%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Other Plastic Containers</td>
<td>2.7%</td>
<td>1.2%</td>
<td>2.6%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Film Plastic &amp; Plastic Bags</td>
<td>6.4%</td>
<td>1.9%</td>
<td>4.5%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Other Plastics</td>
<td>2.7%</td>
<td>2.6%</td>
<td>2.0%</td>
<td>2.4%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>15.2%</strong></td>
<td><strong>4.8%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FOOD WASTE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>23.2%</strong></td>
<td><strong>15.0%</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TEXTILES &amp; LEATHER</strong></td>
<td><strong>6.2%</strong></td>
<td><strong>4.9%</strong></td>
<td><strong>20.5%</strong></td>
<td><strong>24.4%</strong></td>
</tr>
<tr>
<td><strong>RUBBER</strong></td>
<td><strong>0.2%</strong></td>
<td><strong>0.4%</strong></td>
<td><strong>3.4%</strong></td>
<td><strong>4.2%</strong></td>
</tr>
<tr>
<td><strong>DISPOSABLE DIAPERS</strong></td>
<td><strong>4.9%</strong></td>
<td><strong>4.2%</strong></td>
<td><strong>0.5%</strong></td>
<td><strong>0.9%</strong></td>
</tr>
<tr>
<td><strong>FERROUS METALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferrous Metal/Bimetal Cans</td>
<td>0.9%</td>
<td>0.5%</td>
<td>0.5%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Aerosol Cans</td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Other Ferrous Metal</td>
<td>2.4%</td>
<td>5.1%</td>
<td>1.9%</td>
<td>2.8%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>3.5%</strong></td>
<td><strong>4.9%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NON-FERROUS METALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum Cans (Non-Bottle Bill)</td>
<td>0.3%</td>
<td>0.4%</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Aluminum Cans (Bottle Bill)</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.3%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Other Non-Ferrous Metal</td>
<td>1.2%</td>
<td>1.3%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>1.8%</strong></td>
<td><strong>1.3%</strong></td>
<td><strong>0.6%</strong></td>
<td><strong>0.7%</strong></td>
</tr>
<tr>
<td><strong>ELECTRONICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass Bottles (Bottle Bill)</td>
<td>1.5%</td>
<td>1.7%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Glass Bottle - Clear</td>
<td>1.8%</td>
<td>2.1%</td>
<td>2.6%</td>
<td>7.6%</td>
</tr>
<tr>
<td>Glass Bottle - Amber</td>
<td>0.4%</td>
<td>0.5%</td>
<td>1.6%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Glass Bottle - Green</td>
<td>0.1%</td>
<td>0.3%</td>
<td>0.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Flat Glass &amp; Other Glass</td>
<td>0.5%</td>
<td>0.4%</td>
<td>0.5%</td>
<td>0.8%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>4.3%</strong></td>
<td><strong>3.8%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WOOD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5.2%</strong></td>
<td><strong>5.4%</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RUBBLE</strong></td>
<td><strong>0.0%</strong></td>
<td><strong>0.0%</strong></td>
<td><strong>0.2%</strong></td>
<td><strong>0.9%</strong></td>
</tr>
<tr>
<td><strong>YARD WASTE</strong></td>
<td><strong>0.7%</strong></td>
<td><strong>1.1%</strong></td>
<td><strong>1.0%</strong></td>
<td><strong>4.0%</strong></td>
</tr>
<tr>
<td><strong>DIRT &amp; DINES</strong></td>
<td><strong>4.1%</strong></td>
<td><strong>4.5%</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>HAZARDOUS WASTE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Hazardous Waste (HHW)</td>
<td>0.0%</td>
<td>0.1%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Lead Acid Batteries</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other Batteries</td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td><strong>0.1%</strong></td>
<td><strong>0.2%</strong></td>
<td><strong>0.0%</strong></td>
<td><strong>0.0%</strong></td>
</tr>
<tr>
<td><strong>MEDICAL OR PHARMACEUTICAL WASTE</strong></td>
<td><strong>0.0%</strong></td>
<td><strong>0.1%</strong></td>
<td><strong>0.5%</strong></td>
<td><strong>1.3%</strong></td>
</tr>
<tr>
<td><strong>MISCELLANEOUS</strong></td>
<td><strong>3.4%</strong></td>
<td><strong>3.1%</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **TOTAL**                             | **100.0%**             | **0.0%**                     |                               | **100.0%**                  | **0.0%**
Figure 2 - DGS Solid Waste Summary

- Food Waste: 23%
- Paper: 25%
- Plastics: 15%
- Textiles & Leather: 6%
- Disposable Diapers: 5%
- Ferrous Metals: 3%
- Non-Ferrous Metals: 2%
- Electronics: 3%
- Glass: 4%
- Wood: 5%
- Dirt/Fines: 4%
- Yard Waste: 1%
- Miscellaneous: 3%
- Hazardous Waste: 0%
Figure 3 - Commercial Waste Summary

- FOOD WASTE: 21%
- PAPER: 41%
- PLASTICS: 12%
- TEXTILES & LEATHER: 3%
- DISPOSABLE DIAPERS: 1%
- FERROUS METALS: 2%
- NON-FERROUS METALS: 1%
- ELECTRONICS: 2%
- WOOD: 0%
- DIRTPINES: 6%
- GLASS: 5%
- DIARIES: 6%
- RUBBLE: 1%
- YARD WASTE: 1%
- MEDICAL OR PHARMACEUTICAL WASTE: 0%
- HAZARDOUS WASTE: 0%
- MISCELLANEOUS: 3%
Designated Recyclable Materials within the Solid Waste Stream presents the percentage of each recyclable material category found in the solid waste stream for the following classifications: all solid waste samples, DGS samples, commercial samples, and the SUNY Albany sample.

For comparison, the solid waste composition of one of the independent vehicles was also examined separately. The waste composition of the commercial collection vehicles contrasts with the waste composition of the vehicle from SUNY Albany. From the SUNY vehicle, the paper composition and plastics composition was similar to the DGS results, at 21% paper composition (12% other paper), and 12% for plastics composition (4% film plastic and plastic bags), as presented in Figure 4 – SUNY Solid Waste Summary. The main difference, however, between the SUNY sample and the DGS and commercial waste streams, is in the quantity of food waste, which represents the single largest material category at 49% of the SUNY waste stream. In addition, multiple material categories had no waste from the SUNY vehicle, including: disposable diapers, non-ferrous metals, electronics, rubble, yard waste, dirt/fines, hazardous waste, medical/pharmaceutical waste, and miscellaneous. The waste stream of the SUNY vehicle contained primarily food waste, paper, and plastics, as indicated, wood at 9% of the waste stream, and ferrous metals at 6% of the waste stream. Ferrous metal/bimetal cans comprised the entire ferrous metals category. Glass, rubber, and textiles and leather were each represented at 1%. It is important to note, however, that only a single SUNY Albany vehicle was sampled. Therefore, this analysis does not provide a waste composition analysis for SUNY Albany; however, it represents contrast in waste composition between different commercial waste generators, and hence accounts for some of the large standard deviations present with some of the material categories.

4.3 RECYCLABLE MATERIALS CHARACTERIZATION RESULTS

The collection vehicles for recyclable materials were divided into two compartments: paper, and metals, glass and plastic (MGP). The composition of each recyclable stream was analyzed in the same manner as described above, including calculating the mass fraction of each component, the mean mass fraction for a particular component in the recyclable stream from an aggregate total of all of the samples, and the standard deviation of each component percentage. In the paper stream, total paper products comprised an average of 98.56% of the paper stream; however, most samples contained trace amounts of plastics (with an average composition of 0.5%), ferrous metals (0.2%) and glass (0.6%), as indicated in Table 6 – Recyclable Materials Composition Summary. Within the paper stream, the largest component of recyclable paper was newspaper at
## Capital Region Solid Waste Management Plan - Waste Characterization Field Study

### Table 5 - Designated Recyclable Materials within the Solid Waste Stream

<table>
<thead>
<tr>
<th>Material Components</th>
<th>Total Mean Mass Fraction for All Samples</th>
<th>DGS Mean Mass Fraction</th>
<th>Commercial Mean Mass Fraction</th>
<th>SUNY Albany Mass Fraction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAPER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspaper</td>
<td>2.0%</td>
<td>2.7%</td>
<td>2.1%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Magazines</td>
<td>2.1%</td>
<td>1.4%</td>
<td>3.5%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Corrugated</td>
<td>4.5%</td>
<td>3.4%</td>
<td>5.6%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Gable Top Cartons &amp; Drink Boxes</td>
<td>0.4%</td>
<td>0.3%</td>
<td>0.5%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Paper Board</td>
<td>4.2%</td>
<td>5.3%</td>
<td>3.9%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Books (including phone directories)</td>
<td>2.8%</td>
<td>2.5%</td>
<td>2.4%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Mixed Office Paper</td>
<td>4.1%</td>
<td>2.1%</td>
<td>6.3%</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>20.2%</strong></td>
<td><strong>17.6%</strong></td>
<td><strong>24.2%</strong></td>
<td><strong>9.0%</strong></td>
</tr>
<tr>
<td><strong>PLASTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic Containers (PET) #1 Non-Bottle Bill</td>
<td>1.7%</td>
<td>2.0%</td>
<td>2.2%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Plastic #1 (Bottle Bill Containers)</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Plastic Containers (HDPE) #2</td>
<td>0.8%</td>
<td>1.0%</td>
<td>0.6%</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>2.8%</strong></td>
<td><strong>3.3%</strong></td>
<td><strong>3.1%</strong></td>
<td><strong>3.9%</strong></td>
</tr>
<tr>
<td><strong>FERROUS METALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferrous Metal/Bimetal Cans</td>
<td>0.7%</td>
<td>0.9%</td>
<td>0.5%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Other Ferrous Metal</td>
<td>1.9%</td>
<td>2.4%</td>
<td>1.9%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>2.7%</strong></td>
<td><strong>3.3%</strong></td>
<td><strong>2.4%</strong></td>
<td><strong>5.8%</strong></td>
</tr>
<tr>
<td><strong>NON-FERROUS METALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum Cans (Non-Bottle Bill)</td>
<td>0.2%</td>
<td>0.3%</td>
<td>0.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Aluminum Cans (Bottle Bill)</td>
<td>0.2%</td>
<td>0.2%</td>
<td>0.3%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Other Non-Ferrous Metal</td>
<td>1.0%</td>
<td>1.2%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>1.3%</strong></td>
<td><strong>1.8%</strong></td>
<td><strong>0.6%</strong></td>
<td><strong>0.4%</strong></td>
</tr>
<tr>
<td><strong>GLASS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass Bottles (Bottle Bill)</td>
<td>0.5%</td>
<td>1.5%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Glass Bottle - Clear</td>
<td>1.8%</td>
<td>1.8%</td>
<td>2.6%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Glass Bottle - Amber</td>
<td>0.9%</td>
<td>0.4%</td>
<td>1.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Glass Bottle - Green</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>SUBTOTAL</strong></td>
<td><strong>3.2%</strong></td>
<td><strong>3.7%</strong></td>
<td><strong>4.4%</strong></td>
<td><strong>0.8%</strong></td>
</tr>
<tr>
<td><strong>YARD WASTE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td><strong>31.4%</strong></td>
<td><strong>30.4%</strong></td>
<td><strong>35.7%</strong></td>
<td><strong>19.9%</strong></td>
</tr>
</tbody>
</table>
Figure 4 - SUNY Solid Waste Summary
53%, followed by books (including phone directories) at 13%, and magazines at 11% (Figure 5 – Recyclables: Paper Stream). Other significant components included paperboard at 8%, mixed office paper at 7%, and corrugated at 6%. The component percentage of gable top cartons and drink boxes was minimal at an average of 0.24%.

The majority of the MGP stream included plastic, ferrous metals, non-ferrous metals, and glass; however, the mean mass fraction of all samples included approximately 8% paper (all paper categories combined). This paper fraction included newspaper, gable top cartons and drink boxes, paperboard, and books. The paper fraction has been included within the analysis of the MGP stream, below.

Greater than half of the MGP stream, at 58.8%, consisted of glass (Figure 6 – Recyclables: Metals, Glass and Plastic). Within this material category, the largest components of glass were clear glass bottles and green glass bottles. These two categories comprised 29% and 17%, respectively, of the total MGP stream. The second largest major material category within the MGP stream was plastics at 18.9%; the largest material categories within the plastics family were PET #1 plastic containers at 8% of the total MGP stream, HDPE #2 plastic containers at 6% of the total MGP stream, and other plastic containers at 3% of the total MGP stream. The remaining plastic categories were present in smaller quantities. The third largest MGP component fraction consisted of ferrous metals (12%), of which nearly all were ferrous metal/bimetal cans (11.52%). The MGP stream also has approximately 2% non-ferrous metals, more than half of which was the material category of other non-ferrous metal.

4.4 COMPARISON WITH OTHER STUDIES

Table 7 – Solid Waste Composition in Other Studies compares the solid waste composition obtained in this study of the Capital Region with data from two other sources: the Onondaga County Resource Recovery Agency (OCRRA), and the United States Environmental Protection Agency (USEPA). OCRRA conducted a similar study in 2005 for the characterization of the solid waste and recyclable stream within the county (OCRRA, 2005). USEPA collects and publishes data on the generation, recovery, and disposal of municipal solid waste (MSW) on an annual basis. This data is collected for the entire United States; therefore, the percentages provided represent a national average across all regions and areas. The USEPA data for the year 2007 were collected from Tables 14, 17, and 23 in Municipal Solid Waste in the United States: 2007 Facts and Figures (USEPA, 2008). It is important to note that some material categories
### Table 6 - Recyclable Materials Composition Summary

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAPER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newspaper</td>
<td>52.7%</td>
<td>13.8%</td>
<td>2.0%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Magazines</td>
<td>10.8%</td>
<td>4.7%</td>
<td>0.5%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Corrugated</td>
<td>6.2%</td>
<td>3.5%</td>
<td>0.2%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Gable Top Cartons &amp; Drink Boxes</td>
<td>0.2%</td>
<td>0.3%</td>
<td>1.3%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Paper Board</td>
<td>7.5%</td>
<td>3.6%</td>
<td>1.6%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Books (including phone directories)</td>
<td>12.8%</td>
<td>7.3%</td>
<td>1.7%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Mixed Office Paper</td>
<td>6.6%</td>
<td>4.8%</td>
<td>0.2%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Other Paper</td>
<td>1.7%</td>
<td>0.8%</td>
<td>0.4%</td>
<td>0.4%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td>98.6%</td>
<td>14.0%</td>
<td>7.9%</td>
<td>5.2%</td>
</tr>
<tr>
<td><strong>PLASTICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plastic Containers (PET) #1 Non-Bottle Bill</td>
<td>0.1%</td>
<td>0.2%</td>
<td>7.9%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Plastic #1 (Bottle Bill Containers)</td>
<td>0.0%</td>
<td>0.1%</td>
<td>0.8%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Plastic Containers (HDPE) #2</td>
<td>0.1%</td>
<td>0.1%</td>
<td>6.1%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Other Plastic Containers</td>
<td>0.1%</td>
<td>0.2%</td>
<td>2.7%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Film Plastic &amp; Plastic Bags</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.4%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Other Plastics</td>
<td>0.1%</td>
<td>0.1%</td>
<td>1.0%</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td>0.5%</td>
<td>0.4%</td>
<td>18.9%</td>
<td>9.1%</td>
</tr>
<tr>
<td><strong>FOOD WASTE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.0%</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>TEXTILES &amp; LEATHER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.2%</td>
</tr>
<tr>
<td><strong>RUBBER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>DISPOSABLE DIAPERS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>0.1%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>FERROUS METALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ferrous Metal/Bimetal Cans</td>
<td>0.2%</td>
<td>0.2%</td>
<td>11.5%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Aerosol Cans</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.3%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Other Ferrous Metal</td>
<td>0.0%</td>
<td>0.1%</td>
<td>0.1%</td>
<td>0.4%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td>0.2%</td>
<td>0.2%</td>
<td>12.0%</td>
<td>4.4%</td>
</tr>
<tr>
<td><strong>NON-FERROUS METALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aluminum Cans (Non-Bottle Bill)</td>
<td>0.0%</td>
<td>0.1%</td>
<td>0.3%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Aluminum Cans (Bottle Bill)</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.6%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Other Non-Ferrous Metal</td>
<td>0.0%</td>
<td>0.1%</td>
<td>1.2%</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td>0.0%</td>
<td>0.1%</td>
<td>2.1%</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>ELECTRONICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>GLASS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glass Bottles (Bottle Bill)</td>
<td>0.1%</td>
<td>0.1%</td>
<td>5.3%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Glass Bottle - Clear</td>
<td>0.4%</td>
<td>0.8%</td>
<td>29.2%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Glass Bottle - Amber</td>
<td>0.0%</td>
<td>0.0%</td>
<td>5.9%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Glass Bottle - Green</td>
<td>0.1%</td>
<td>0.2%</td>
<td>16.9%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Flat Glass &amp; Other Glass</td>
<td>0.0%</td>
<td>0.0%</td>
<td>1.5%</td>
<td>2.1%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td>0.6%</td>
<td>0.9%</td>
<td>58.8%</td>
<td>13.5%</td>
</tr>
<tr>
<td><strong>WOOD</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>0.1%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>RUBBLE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>YARD WASTE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>DIRT/FINES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>HAZARDOUS WASTE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household Hazardous Waste (HHW)</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Lead Acid Batteries</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other Batteries</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>SUBTOTALS</strong></td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>MEDICAL OR PHARMACEUTICAL WASTE</strong></td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.2%</td>
<td>0.8%</td>
</tr>
<tr>
<td><strong>MISCELLANEOUS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>100.0%</td>
<td>0.0%</td>
<td>100.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
Figure 5 - Recyclables: Paper Stream
Figure 6 - Recyclables: Metals, Glass and Plastic

- Glass Bottle - Clear: 29%
- Glass Bottle - Amber: 6%
- Glass Bottle - Green: 17%
- Flat Glass & Other Glass: 2%
- Plastic Containers (PET) #1 Non-Bottle Bill: 8%
- Plastic #1 (Bottle Bill Containers): 1%
- Plastic Containers (HDPE) #2: 6%
- Other Plastic Containers: 3%
- Film Plastic & Plastic Bags: 0%
- Other Plastics: 1%
- Ferrous Metal/Blister Cans: 12%
- non-ferrous metals: 2%
- Glass Bottles (Bottle Bill): 5%
have been combined with other categories, or were not used for the particular study. Therefore, some of the “other” categories have been used to categorize multiple materials not otherwise listed.

Several of the material categories were consistent across the three studies, including food wastes, textiles and leather, disposable diapers, non-ferrous metals, electronics, wood, and rubble. In several more of the material categories, two of the three studies indicate similar fractions of a particular material category, with the third study as the exception with a greater or lesser component fraction. This is true of the ferrous metals category, glass, and yard waste, as indicated in Table 7. The Capital Region and OCRRA studies contained larger fractions of ferrous metals, at 2.8% and 2.5% of the waste stream, than in the USEPA data, at 0.6% of the waste stream. Yard wastes, while not a significant fraction of the Capital Region or OCRRA studies, at 1.2% and 1.1%, respectively, constituted 6.9% of the discarded waste stream based upon USEPA data. The glass fraction was also significantly higher in the Capital Region and USEPA studies than in the OCRRA study, with component percentages of 4.7%, 4.9%, and 1.8%, respectively.

As the table indicates, the total combined paper fraction is higher in the Capital Region than in the OCRRA study and the USEPA data, but only by several percentage points. This increase is due to larger fractions of paperboard, books, and other paper present in the Capital Region waste stream. The OCRRA solid waste stream contained larger fractions of plastic than both the Capital Region and USEPA data. The largest single plastics category in the OCRRA data was other plastic containers, which comprised 11% of the total waste stream.

The comparison with these studies indicates that the data obtained in the Capital Region waste characterization field study is relatively consistent with other studies on a regional and national level, while still retaining some differences specific to the Capital Region. As noted above, knowledge of the area’s waste stream composition and recyclable materials composition will assist the Planning Unit in the further development of solid waste and recyclables management, as well as present and future practices.