

Comprehensive  
Solid Waste Management Plan  
For  
Cedar County Solid Waste Commission  
Clinton County Area Solid Waste Agency  
Waste Authority of Jackson County  
Muscatine County Solid Waste Management Agency  
Waste Commission of Scott County  
2016



Prepared in cooperation with



Draft January 2016



Comprehensive  
Solid Waste Management Plan  
For  
Cedar County Solid Waste Commission  
Clinton County Area Solid Waste Agency  
Waste Authority of Jackson County  
Muscatine County Solid Waste Management Agency  
Waste Commission of Scott County  
2016

Prepared in cooperation with



1504 Third Avenue, P.O. Box 3368  
Rock Island, IL 61204-3368  
Phone: (309) 793-6300 • Fax: (309) 793-6305  
Website: <http://www.bistateonline.org>

Draft January 2016



## TABLE OF CONTENTS

	<u>Page</u>
Preface .....	1
Vision, Mission, and Goals .....	2
I. Planning Area Changes .....	3
II. Evidence of Cooperation .....	4
III. Public Participation .....	4
IV. Baseline Waste Stream Report .....	5
V. Changes in Area Demographics .....	5
VI. Waste Composition & Generation .....	5
VII. Existing Integrated Solid Waste Management System Description .....	6
VIII. Evaluation of Progress Toward Goals .....	18
IX. Analysis of Solid Waste Alternatives .....	28
X. Implementation Timeline .....	29
Appendix A: Electronic On-Line Submittal Forms/Reports	
Appendix B: Evidence of Cooperation	
Appendix C: Public Input Documentation	
Appendix D: Other Documentation	



## PREFACE

The *Comprehensive Solid Waste Management Plan 2016 for Cedar County Solid Waste Commission, Clinton County Area Solid Waste Agency, Waste Authority of Jackson County, Muscatine County Solid Waste Management Agency, and Waste Commission of Scott County*, hereafter referred to as “Comprehensive Plan 2016,” is organized in an outline format to coincide with the “Comprehensive Solid Waste Management Plan: Update (Sample Outline)” dated March 2015. The format is anticipated to allow the reader quick reference to existing data, public participation and involvement, progress toward meeting goals, and the ten-year implementation timeline. Using the format, the reader will find some information is submitted to a secure on-line website where the information has been reproduced to provide public review of its content. The printed version of the electronic information is found in Appendix A. The remaining parts of this plan are provided in printed format as part of this document. The plan is a coordinated effort and authored cooperatively by the five planning area 28E agencies/commissions and Bi-State Regional Commission.

The planning area includes five 28E agencies/commissions established for managing waste for their members= cities and counties in Cedar, Clinton, Jackson, Muscatine, and Scott Counties, Iowa, including Cedar County Solid Waste Commission, Clinton County Area Solid Waste Agency, Waste Authority of Jackson County, Muscatine County Solid Waste Management Agency, and Waste Commission of Scott County. While the Waste Commission of Scott County is part of the planning area, it is no longer required to be included in the Solid Waste Comprehensive Plan update because it participates in the Iowa Department of Natural Resources Environmental Management System (EMS). Since the Waste Commission of Scott County works so closely with the four other waste agencies, they have decided to participate in the planning process. Only counties or city governments participating in any one of these 28E agencies/commissions will be included in this subsequent plan. Amendments to the service area will be considered only if these criteria are met. Private agencies are not part of any of the 28E agencies/commissions that participate in the Comprehensive Plan 2016.

The Comprehensive Plan 2016 for the planning area is the sixth update since the original plan of 1990. The planning area includes the Iowa Counties mentioned above. This Comprehensive Plan 2016 for the planning area is being conducted in accordance with the Iowa Code, 567, Environmental Protection, Chapter 101, General Requirements Relating to Solid Waste Management and Disposal, Section 5(7), Subsequent Plans.

The planning area to date has surpassed the 25 percent recycling and reduction goal of 1994 and continues its effort to achieve the 50 percent recycling and reduction goal of 2000. These goals are being achieved in the planning area through proactive development of an integrated solid waste management system. The planning area also achieved the July 1, 1997 deadline for minimum collection provisions for glass, plastic, paper, and metals. According to the Iowa Department of Natural Resources letter dated September 13, 2011, the planning area’s FY2010 goal progress was calculated as 40.36% using the baseline tonnage data. It is important to note that solid waste generated in the planning area but direct-hauled out of state for disposal has not been included in the calculation. This is consistent with previous plan update submittals. In the future, every effort will continue to be made toward achieving the 50 percent goal in a fiscally-responsible manner.

## VISION, MISSION, AND GOALS

Planning evaluates existing accomplishments, current needs, and future strategies to serve needs based on a vision, mission, and framework of goals determined by the planning area. The planning area has steadily worked toward a vision of an integrated solid waste management system. The planning areas' mission is to meet the State of Iowa waste reduction goals, the state's hierarchy of waste management priorities, and the regional planning goals.

The planning area goals call for the following:

- 1) A combination of planning area and county-by-county source reduction and public education programs
- 2) Regional collection centers for household hazardous material
- 3) County-by-county composting (yard waste, in combination with bio-solids, and/or mixed municipal waste where economically feasible)
- 4) County-by-county transfer stations where economically feasible;
- 5) County-by-county material recovery facilities for commingled recyclables, if feasible
- 6) County-by-county landfills, if economically and politically beneficial
- 7) Planning area waste-to-energy (WTE) facility if feasible

The State of Iowa's goal to achieve 25 percent recycling and reduction by 1994 has been achieved in the planning area, and continued efforts to maintain or exceed this level remains a priority. In the planning area, at minimum, provisions for the collection of glass, plastic, paper, and metal obligated by the State of Iowa by July 1, 1997 has already been achieved. Every effort will be made toward the 50 percent goal within fiscally-constrained parameters.

**I. Planning Area Changes: 101.12(2)"a"**

**1.1. Permanent Changes in the Planning Area**

There have been no permanent changes in the planning area since the last plan update that have resulted in measurable changes in the waste stream.

**1.2. Planning Area Description**

The Planning Area Description is submitted electronically on-line. The information is contained in the Planning Area Description Form (582-8149). It is included in Appendix A of the printed document for public reference.

The Comprehensive Plan 2016 includes the five 28E agencies/commissions established for waste management and their members cities and counties in Cedar, Clinton, Jackson, Muscatine, and Scott Counties, Iowa including Cedar County Solid Waste Commission, Clinton County Area Solid Waste Agency, Waste Authority of Jackson County, Muscatine County Solid Waste Management Agency, and Waste Commission of Scott County. Only counties or city governments participating in any one of these 28E agencies/commissions will be included in the Comprehensive Plan 2016. Amendments to the service area will be considered only if these criteria are met. Private agencies are not part of any of the 28E agencies/commissions that participate in the Comprehensive Plan 2016.

**1.3. Planning Area Contacts**

The Planning Area Contacts are submitted electronically on-line. The information is contained in the Planning Area Contacts Form (542-8148). It is included in Appendix A of the printed document for public reference.

**1.4. Permitted Facilities in Planning Area**

The Permitted Facilities in the planning area are submitted electronically on-line. The information is contained in the Permitted Facilities Form (542-8147). It is included in Appendix A of the printed document for public reference.

In addition to permitted facilities, there are other facilities serving the planning area's integrated solid waste management system. DAC, Inc., a disabled sheltered workshop, operates a 23,500 square-foot recycling center at 1710 East Maple in Maquoketa. It serves Waste Authority of Jackson County members. The Waste Commission of Scott County operates a material recovery facility (MRF) where recyclable material is collected and processed. The facility, called the Scott Area Recycling Center, is located at 5640 Carey Avenue in Davenport. The service area for the Scott Area Recycling Center includes Bettendorf, Blue Grass, Buffalo, Davenport, Dixon, Donahue, Eldridge, LeClaire, Long Grove, Maysville, McCausland, New Liberty, Panorama Park, Princeton, Riverdale, Walcott, and Scott County. Material is accepted on a contract basis by request from outside of the service area.

**1.5. Planning Area Boards**

The Planning Area Boards in the planning area are submitted electronically on-line in the Boards Form (542-8146). The information is contained in the Partners Form. It is included in Appendix A of the printed document for public reference. The information pertains to public and private agencies that play an active, on-going role in the planning area's integrated solid waste management system.

**1.6. Planning Area Board Members**

The Planning Area Board Members in the planning area are submitted electronically on-line in the Board Members Form (542-8145). It is included in Appendix A of the printed document for public reference.

**II. Evidence of Cooperation: 101.12(2)"b"**

**2.1. Resolutions from Participating 28E Agencies/Commissions**

Resolutions from the participating 28E agencies/commissions are contained in Appendix B of the printed document for public reference.

**2.2. Letters of Cooperation from Participating Private Agencies**

The information is contained in Appendix B of the printed document for public reference.

**2.3. Copies of Contracts and 28E Agreements That Have Changed**

No 28E Agreements have changed since the 2011 update.

**III. Public Participation 101.12(2)"c"**

**3.1. On-Going Participation Strategies**

In the planning area, the 28E agencies/commissions continue to maintain a commitment to public participation in their respective counties. All the meetings are open to the public, and minutes from these meetings are available for review on request. Public comment is a portion of every meeting that provides a forum for ongoing comments to the Comprehensive Plan 2016 and the integrated solid waste management system. Public input is also encouraged at presentations, tours, open house events, and environmental fairs.

Additionally, the planning area holds regular meetings of the solid waste coordinators, inviting participation from the City of Dubuque/Dubuque Metropolitan Area Solid Waste Agency, East Central Intergovernmental Association (ECIA), Bi-State Regional Commission, and the Iowa Waste Exchange. These staff level meetings allow the planning area to network and coordinate activities and education/input strategies when beneficial to improve service delivery throughout the planning area.

**3.2. Public Meetings Held for Plan Development**

A minimum of two public meetings must be held during the development of the plan update. To maximize input, each of the four counties addressed the planning process and plan update development at their respective Board meetings (Refer to Boards Form and the meeting information in Appendix A). Boards' meetings in the planning area are publicized in a variety of ways including posting agendas in a designated location, public meeting notices in print media, board and 28E member mailings, and website calendar postings.

**3.3. Copy of Public Information Regarding Online Updates**

Printed copies of the data submitted in the on-line forms were distributed to each of the planning area cities and counties for review and comment during the plan development process. Information distributed to planning area members is attached in Appendix A and was revised based on comments and corrections received during the plan development process.

### 3.4. Public Review Meetings

A regional public meeting for the Comprehensive Plan 2016, using an open-house format, was held at the Eastern Branch of the Davenport Public Library in Davenport, Iowa on Friday, January 29, 2016 from 1:00 to 2:00 p.m. Written public comments were accepted at the meeting. **No public comments were received at the open house.** The plan update was available for review, and solid waste coordinators were available for questions during the open house. In addition to the regional opportunity for comments, each 28E agency/commission also accepted comments at their respective board meetings; **however no public comments were made.** Meeting minutes from the respective 28E agency/commission where resolutions of support were adopted are also included in the final plan to document opportunities for public review and input. Documentation of these opportunities is provided as well. Refer to Appendix B for Evidence of Cooperation where the resolutions adopting the plan are located.

## IV. Baseline Waste Stream Report 101-12(2)"d"

According to the Iowa Department of Natural Resources letter dated September 13, 2011, the planning area's FY 2010 goal progress was calculated as 40.36% using the baseline tonnage data. It is important to note that solid waste generated in the planning area but direct-hauled out of state for disposal has not been included in the calculation. This is consistent with previous plan update submittals. The department will complete goal progress calculations for the most current fiscal year data set upon submittal of Comprehensive Plan 2016.

## V. Changes in Area Demographics: 101.12(2)"e"

The 2014 American Community Survey population estimates for the planning area totaled 300,234. Scott County has the highest population per county at 171,387, while Cedar County has the lowest population per county at 18,411. Between 2010 and 2014, Cedar, Clinton, and Jackson Counties lost population while Muscatine and Scott Counties gained population. The total increase in population between 2010 and 2014 was 4,802. The growth rate between 2010 and 2014 was a 1.6% increase.

The 2014 American Community Survey 2014 5-year Estimates of employment for the planning area totaled 146,582, compared to 149,231 in 2000. In the planning area, top employers include community school districts, medical-related facilities, manufacturers, processors, distributors, large retailers, and utilities. Scott and Muscatine Counties have employers with more than 1,000 employees, and Clinton County has employers with more than 500 employees.

According to the 2014 U.S. Census, annual new, privately-owned residential building permits increased from 405 in 2009 to 503 in 2014. The increase in new construction and remodeling were observed to have a general impact on waste generated in the planning area and the resulting landfilling of waste.

## VI. Waste Composition & Generation: 101.12(2)"f"

### 6.1. Changes in Waste Stream Generation since the Last Approved Plan

Composition by waste generator examines the producer of the waste whether it is residential, commercial, and/or industrial. Using FY 2015 data, waste disposal in the planning area has somewhat increased since FY 2010. The increase is approximately 4.45% or roughly 10,539 tons from FY 2010 waste total for the planning area. The estimated percentages of tonnage (FY 2015) for residential, commercial and industrial sectors waste is as follows:

<u>Waste Sector</u>	<u>Percentage</u>	<u>Approximate Tonnage</u>
---------------------	-------------------	----------------------------

Residential	46 percent	113,067 tons
Commercial	30 percent	74,555 tons
Industrial	<u>24 percent</u>	<u>59,813 tons</u>
Totals	100 percent	247,435 tons

### **6.2. Changes in Waste Composition since the Last Approved Plan**

The Waste Commission of Scott County participated in the 2011 Waste Characterization Study conducted by the Iowa DNR. Results of the study can be found on the Iowa DNR's website: <http://www.iowadnr.gov/Environmental-Protection/Land-Quality/Waste-Management/Recyclables> continue to diminish in the disposed waste stream. Compostable organics and C&D Debris were identified as the largest divertible categories of waste that could be targeted for separation and diversion.

### **6.3. Effects of Anticipated Planning Area Modifications**

The planning area does not predict significant revisions to its waste stream composition in the next five years based on population and employment trends. Although population growth has been realized in the past decade, the trends indicate relatively flat population growth in the next five years. The Quad Cities Chamber of Commerce released results of a targeted industries analysis in June 2015. The chamber is expected to focus future development strategies on the following industries: Advanced Metals and Materials, Agricultural Innovation, Corporate Operations and Support Services, Defense, and Logistics. This is a change from the Quad City Region Cluster Development Strategy (2003) that focused on future development strategies in logistics, warehousing, and distribution; advanced manufacturing; bio-based materials; financial services and information technology; food processing and packaging technology; and health services. Based on these industries, there may be an ability to target specific waste stream components in the future. Further study would be needed, and efforts to partner with the local Iowa Waste Exchange would be pursued.

There are no revisions to the service area anticipated. On review of prior plan data, there are no significant changes seen in the waste composition by generator. As the planning area anticipates few demographic and employment changes in the next five years, no significant changes are projected in the waste composition by generator. No significant changes in composition by material were seen since the last plan update. No significant overall changes are projected in the next five years related to waste composition by material, except for televisions. In 2009, the planning area experienced an increased volume of discarded televisions due to a change in technology. The planning area will monitor the technology transition to high definition television and its effects on the solid waste management system.

## **VII. Existing Integrated Solid Waste Management System Description**

### **7.1. Select a City**

This is submitted on-line in the Choose a City Form (542-8137).

### **7.2. Recycling and Waste Collection Systems**

The Recycling and Waste Collection Systems information in the planning area is submitted electronically on-line. It contains data on municipal garbage collection, including program funding and hauling issues. Programs for funding municipal waste collection may include unit-based pricing as one method of paying for collection service. The database also includes related

municipal recycling and waste collection information on licensing, franchises, ordinances, subsidies, contracts, etc. The on-line form includes a notation of whether a municipality participates in a 28E agreement with a solid waste agency. The summary information for the planning area is contained in the Recycling and Waste Collection Form (582-8138). They are included in Appendix A of the printed document for public reference.

**7.3. Recycling and Waste Haulers**

This is submitted on-line in the Recycling and Waste Haulers Form (542-8138).

**7.4. Residential Recycling**

The Residential Recycling information in the planning area is submitted electronically on-line. The information is contained in the Residential Recycling Form (542-8138) where data is provided on municipal recycling opportunities, either through curbside or drop-off programs. It is included in Appendix A of the printed document for public reference.

**7.5. Commercial Recycling**

The Commercial Recycling information in the planning area is submitted electronically on-line. The information is contained in the Commercial Recycling Form (542-8141) where data is provided on recycling availability to businesses. It is included in Appendix A of the printed document for public reference.

**7.6. Drop-off Recycling Sites**

This is submitted on-line in the Drop-off Recycling Sites Form (542-8141).

**7.7. Diverted Materials Collection**

This is submitted on-line in the Diverted Materials Collection Form (542-8139).

**7.8. Yard Waste Management Programs**

This is submitted on-line in the Yard Waste Management Programs Form (542-8142).

**7.9. Yard Waste Management Sites**

The Composting Facilities information in the planning area is submitted electronically on-line. The information is contained in the Yard Waste Management Sites Form (542-8144). It is included in Appendix A of the printed document for public reference.

City yard waste management sites are registered with the DNR. Private yard waste management sites must meet all requirements under Iowa Administrative Code Chapter 105. Burning is not supported in the planning area as a yard waste management method. There are a number of communities within the planning area that have implemented burn bans to improve local air quality. Yard waste processing varies in the planning area from low-technology static piles to high-technology composting facility that includes yard waste and biosolids.

**7.10. Material Specific Initiatives**

Banned material information or materials requiring special processing, such as household hazardous materials and household appliances, in the planning area are submitted electronically on-line under existing programs. Detailed information is contained in the Existing Programs Form. It is included in Appendix A of the printed document for public reference. The following describes strategies used to promote recycling of banned materials in the planning area.

#### **7.10.1. Waste Motor Oil**

Waste or used motor oil is accepted free from residents through the Regional Collection Centers programs and/or transfer stations or landfills in the planning area. Charges may apply to some businesses and vary by county in the planning area. A multi-media approach for educating residents about proper disposal options is used, such as websites, resource guides, newsletters, facility tours, public service announcements, and/or paid advertisements and media releases. Drop-off locations are also listed in an Iowa DNR statewide publication that is promoted in the planning area as a resource. The planning area collected over 199,200 pounds of bulk used motor oil and over 10,028 pounds of used oil filters in FY 2015.

#### **7.10.2. Lead-Acid Batteries**

Lead-acid batteries are accepted through the Regional Collection Centers programs and/or transfer stations or landfills in the planning area. They are accepted for drop-off when new lead-acid batteries are purchased at some local service stations and specialty battery stores in the planning area. A multi-media approach for educating residents about proper disposal options is used, such as websites, resource guides, newsletters, facility tours, public service announcements, and/or paid advertisements and media releases. In FY 2015, the planning area collected nearly 56,023 pounds of lead-acid batteries.

#### **7.10.3. Waste Tires**

A multi-media approach for educating residents about proper disposal options for waste tires was used, such as websites, resource guides, newsletters, facility tours, public service announcements, and/or paid advertisements and media releases. Educational materials and messages are continuing to be utilized. Waste tires are collected at the landfill locations in Clinton and Scott Counties and at the transfer stations in Cedar, Jackson, and Muscatine Counties. The planning area collected 783.91 tons of waste tires in FY 2015.

#### **7.10.4. Household appliances**

Household appliances or used appliances are accepted at the publicly-operated transfer stations and landfills in the planning area. The planning area has complied fully with the new appliance de-manufacturing rules. The Waste Commission of Scott County and the Clinton County Area Solid Waste Agency have received appliance de-manufacturing permits that allow for on-site removal of Freon, PCB-containing capacitors, mercury switches, and other hazardous components. Clinton County also now processes all appliances delivered to the Jackson County Transfer Station. The remaining planning area members collect appliances and contract with contractors that are properly approved for processing of appliances. Freon, mercury, and metal are recycled. The remaining hazardous components are shipped to a hazardous waste contractor. In FY2015, 4,222 appliances were accepted and properly managed by the planning area. A multi-media approach for educating residents about proper disposal options is used, such as websites, resource guides, newsletters, facility tours, public service announcements, and/or paid advertisements and media releases.

#### **7.10.5. Yard Waste**

The planning area has provided for the proper management of yard waste through collection, drop-off, and backyard composting programs. To reiterate, city yard waste management sites are registered with the DNR. Private yard waste management sites must

meet all requirements under Iowa Administrative Code Chapter 105. Burning is not supported in the planning area as a yard waste management method. There are a number of communities area-wide that have implemented burn bans to improve local air quality, and this trend is likely to continue in the future as air quality continues to be a focal point within the planning area. Yard waste processing varies in the planning area from low-technology static piles to a high-technology composting facility that includes yard waste and biosolids. A multi-media approach for educating residents about proper disposal options is used, such as websites, resource guides, newsletters, facility tours, public service announcements, and/or paid advertisements and media releases.

#### **7.10.6. Household Hazardous Materials (HHM)**

Over 725,744 pounds of HHM has been collected from 9,707 customers. Exchange programs that allow residents to take HHM that is still useable diverted 46,166 pounds in FY 2015. The Waste Commission of Scott County processes HHM collected in Scott County and Rock Island County, Illinois. The material collected in Muscatine and Louisa counties is also processed at the Household Hazardous Material Facility in Scott County. The Clinton County Area Solid Waste Agency processes HHM collected in Clinton, Cedar, and Jackson Counties.

### **7.11. New Waste Reduction and Recycling Programs**

The purpose of this section is to address programs implemented since the previous plan update of 2011 and discuss potential effects these programs may have on waste diversion within the planning area. They are identified below.

#### **7.11.1. Single Sort Recycling**

The City of Muscatine implemented single sort curbside recycling in April 2011. The contract was with Republic Services, which was renewed for another five years from April 1, 2016 through March 31, 2021. Residents have embraced this program, which has a steady participation rate of 95% of residents recycling. Over the past five years, over 6,000 tons of recycling has been recycled from this program alone for the City of Muscatine. Residents have the options of a 35, 65, and 95-gallon container for the program. All material collected is sent to a recycling facility that is affiliated with Republic Services. Materials accepted include plastic #1-7, tin/metal cans, glass, newspaper, office paper, and cardboard. All recycling is collected on a every other week schedule.

#### **7.11.2. Product Stewardship Institute**

The Product Stewardship Institute, Inc. (PSI) was founded in 2000 to provide a unified voice and fiscal relief for state and local government on waste management issues. Local governments are the primary beneficiaries of the extended producer responsibility (EPR) efforts promoted by PSI. In addition, local governments play a critical role in the passage of state product stewardship legislation, galvanizing grassroots support and offering first-hand perspectives on product stewardship challenges and opportunities.

The Waste Commission of Scott County is a member of PSI and monitors initiatives. Member benefits include:

- Participation in all PSI National Dialogues
- Participation in Networking Conference Calls (12/year)

- Bi-Weekly Product Stewardship Updates (26/year)
- Quarterly PSI Newsletter
- Participation in government product-specific strategy calls
- Member discount at the PSI annual Forum
- Full use of the PSI website, including product information
- Full use of PSI's 12 product list serves
- Priority selection to participate in broad-range PSI pilot projects
- Access to PSI government strategic conference calls
- Voting capabilities and the ability to serve on the PSI Board of Directors
- Input into PSI's Strategic Plan, which sets PSI's goals and priorities initiatives

### **7.11.3. Environmental Management System**

The Waste Commission of Scott County (Commission) is one of the flagship members of the Iowa DNR's Environmental Management System (EMS). The Commission also holds ISO 14001:2004, OHSAS 18001:2007 and R2:2013 certifications. The EMS program and additional certifications are structured so that members must show continuous improvement in six areas of focus: Environmental Education, Greenhouse Gas Reduction, Household Hazardous Materials Collection, Recycling Services, Water Quality Improvement, and Yard Waste Management. In addition to these six component areas the Commission has voluntarily created two additional areas of focus: Data Security and Health and Safety. Over the last five years, the Commission has embarked on a total of 81 different projects related to these eight component areas. The following is a brief set of highlights from the Commission's work in each of these areas. A cumulative list of all EMS projects is also attached.

#### Data Security

In 2014, the Commission used grant funds available through the Iowa DNR's EMS program to purchase equipment to wipe all data from computer hard drives. This equipment has been instrumental in the creation of the Commission's electronics reuse program. In the first year of the reuse program, the Commission diverted more than 27,977 pounds of electronics from being scrapped and in the process captured an additional \$121,954 in revenue due to the hard drives, monitors, and computers being reused rather than recycled.

#### Environmental Education

In 2012 and 2013, the Commission conducted an extensive survey of Scott County residents to better understand their knowledge of solid waste programs in our area. The study incorporated a phone survey, online surveys, and focus groups to develop a set of data points that accurately reflect the views of Scott County residents. Detailed analysis of the information has led to the creation of several new public education campaigns and a revamping of external communication efforts.

The Commission places special emphasis on educating area youth about proper handling of solid waste. Part of that focus has included a partnership to create an electronics recycling exhibit at the Putnam Museum. The exhibit has had more than 120,000 visitors and been used in 15 youth engineering camps.

#### Greenhouse Gas Reduction

In order to show continuous improvement in the area of Greenhouse Gas Reduction, the Commission had to first establish an emissions baseline. The WENCK model and a detailed analysis of Commission operations revealed that total CO<sub>2</sub> emissions were 354,771 tons per year. Since the completion of this study, the Commission has used this data to implement a No Idling policy, increase efficiency in hauling e-waste and compacting garbage, as well as reduce the amount of special waste vehicles driving to and from the Scott Area Landfill.

#### Household Hazardous Materials Collection

The Commission's Household Hazardous Materials (HHM) Collection program has grown by leaps and bounds in the last five years. In 2010, the Commission had 5,476 HHM appointments. In 2015, there were 6,791 appointments, a 20 percent increase in appointments. This jump can be attributed to a number of items: continuous HHM education efforts, new partnerships with area businesses to collect mercury-containing items, and the purchase of a new box truck that's used to collect HHM from local businesses.

This increase in appointments and material has brought about several upgrades to our HHM operations. A supplied air system has replaced respirators for staff that routinely work with materials that create hazardous fumes. A new scale has increased efficiency and lowered the risk of back injuries while measuring the volume of our HHM material on site, and the purchase of a new box truck for collection are three of the most noteworthy HHM improvements made in the last five years.

#### Health and Safety

The health and safety of Commission staff and clients are a top priority. Various safety training topics are covered at least twice a month with all Commission staff. The Commission's EMS program has also helped facilitate the creation of a Safety Committee. The Safety Committee is made up of staff from each facility meeting monthly to discuss safety issues, investigate incidents that have taken place in the last month, and routinely inspect Commission facilities to help ensure all safety regulations are being met. Safety Committee members serve six-month terms and are comprised of staff from all levels of the Commission.

#### Recycling Services

One of the Commission's first projects after joining the Iowa DNR's EMS program was to get its Electronics Demanufacturing Facility R2 Certified. This certification is handed out only to recyclers who've passed a rigorous third-party audit. The Commission's e-waste facility was the first publicly-owned facility in the world to receive R2 certification. This accomplishment has served as a catalyst for the creation of the Commission's electronic reuse program, and has helped facilitate numerous electronics recycling partnerships with area businesses.

### Water Quality Improvement

The Commission has worked on numerous water quality projects, focused both internally and externally, as well as educating the people of Scott County. One of the biggest internal water quality projects was the installation of GPS equipment on our landfill compactor and bulldozer. This allows us to shape our landfill with extreme precision and better control storm water runoff. External efforts have included the creation of a recycling program for two major bike paths in Scott County that run along a pair of area waterways. In addition to the creation of a bike path recycling program, the Commission has also partnered with several other agencies to coordinate the annual Xstream Cleanup, which has removed nearly a million pounds of debris from area waterways.

### Yard Waste Management

The Commission does not operate a compost facility, and until 2015 it was illegal to put yard waste into a landfill. Despite this fact the Commission has worked hard to promote the responsible disposal of yard waste. Numerous promotions have been run over the years to remind Scott County residents about how to properly manage their yard waste. To encourage backyard composting, the Commission sold 198 compost bins and 112 compost turners to Scott County residents.

The following list contains EMS projects from 2011 through 2015. Many of these projects span multiple years, therefore, some years will show more projects than others:

#### 2011

- Develop 3 new internal communications tools
- Develop 3 new external communications tools
- Mail Waste Commission educational items to Scott County residents
- Provide environmental education tools to 65 area teachers
- Award 15 community grants
- Develop an integrated waste management orientation package
- Hold 1 business recycling workshop
- Create a green purchasing policy
- Establish Waste Commission emissions benchmark using WENCK model
- Install 5 solar panels
- Evaluate recommendations from recent energy audit
- Increase methane production by 100 scfm
- Hold 1 agriculture hazmat event
- Increase HHM appointments by 10%
- Establish baseline particulate levels at all Commission facilities
- Receive R2 certification for e-waste facility
- Increase e-waste business customers by 10%
- Increase shingle recycling by 10%
- Make determination on single stream recycling
- Increase litter cleanup volunteers by 10%

- Sponsor 4 water quality-related events
- Seed landfill's south slope
- Implement 2 new landfill litter control strategies
- Reduce number of disturbed acres at landfill by 8
- Add 5 new yard waste resources to [www.wastecom.com](http://www.wastecom.com) website
- Partner on 2 invasive species control events
- Sell a combination of 250 compost bins and rain barrels

### **2012**

- Complete a county-wide solid waste survey
- Implement a "Littering is Wrong Too" campaign & increase Facebook likes by 100%
- Create a list of minimum criteria for outreach efforts
- Hold at least 1 business HHM event
- Implement 4 new clean air practices
- Add 5 new HHM collection sites
- Increase satisfaction on employee surveys
- Establish baseline for business recycling and improve perception of convenience
- Increase business recycling customers by 5% and establish 1 e-waste business partnership
- Complete a comprehensive master plan for solid waste services in the region

### **2013**

- Run commercials water quality message
- Increase social media presence
- Establish Mississippi Valley Fair recycling program
- Establish e-waste exhibit with Putnam Museum
- Relabel roll-off boxes
- Partner with Habitat ReStore on TV advertisements
- Institute No Idling policy
- Install GPS equipment in landfill dozer and compactor
- Purchase and label semi-trailers for e-waste collection
- Install forced air and new scale in HHM facility
- Cross-train staff at different facilities
- Hold customer appreciation days at landfill and recycling center
- Create a wood diversion program at the landfill
- Partner with Dynamic Recycling on e-waste reuse program
- Revamp in house e-waste tracking system
- Purchase rear-discharge mower for landfill
- Pre-select valuable hardwoods before clearing new area for next landfill cell

## **2014**

- Purchase data wiping & auditing equipment for e-waste re-use program
- Create & establish 3 priority advertising messages
- Increase cleanup supply requests by 10%
- Increase event recycling requests by 10%
- Use hydro-seeder to cut special waste traffic by 40%
- Increase heavy metal testing at e-waste facility
- Create a safety committee
- Research additional landfill diversion markets
- Increase e-waste re-use material by 100%
- Create an ongoing e-waste “maintenance message” & increase customers by 2.5%
- Create an ongoing recycling “maintenance message” & market to all Scott County residents
- Establish a new drop-off recycling location in downtown Davenport

### **7.11.4. Construction and Demolition Debris**

Activities related to the processing of construction and demolition debris have been initiated in the planning area. In FY 2010, the planning area collected over 106,640 tons of construction and demolition debris. As a sizable component of the waste stream, there is interest in targeting it for future waste reduction efforts. In FY 2010, the Commission recycled over 2,303 tons of shingles.

Public education is provided on the website and through press releases and presentations. The Commission continues partnering with Julie Plummer, Iowa Waste Exchange, to assist in educating contractors.

### **7.11.5. Double-Sided Printing**

Many computers and printers have the necessary hardware and software to allow for double-sided printing by default. Printing on both sides saves paper, postage, money, and space. This serves as an easy and cost-effective model for other businesses to implement waste reduction practices into their daily routine. With changes in technology, the 28E agencies/commissions routinely utilize and promote double-sided printing. In addition, joint purchasing of recycled content paper is used in a portion of the planning area to reduce costs and promote the use of products made with recycled material.

Another method of reducing printing and paper costs is through e-mail. The Muscatine County Solid Waste Management Agency utilized the e-newsletter from 2009 through 2015. The City of Muscatine has a new Communications Manager who will be producing a City of Muscatine area publication that is an e-newsletter. Solid waste management information will be shared in this publication. Each waste management agency within the planning area have implemented the e-mailing of board meeting agendas and minutes for those board members interested. Additionally, this comprehensive plan was made available to all communities in the planning area through a link on the solid waste agencies' and Bi-State Regional Commission's respective websites. One camera-ready copy was also provided.

The entire region includes information on the benefit of double-sided copying, use of disks, and purchasing recycled content paper during all public education presentations, given to many sectors including businesses, civic groups, students, etc.

#### **7.11.6. Electronic Waste**

The planning continues to provide permanent programs for the collection and processing of electronic waste (e-waste). This ensures data integrity and keeps dangerous chemicals and metals out of our environment. Through a partnership with the Rock Island County Waste Management Agency, Rock Island County residents may deliver electronic waste to the Electronic De-manufacturing Facility in Scott County at no charge to the customer. In FY 2015, the Waste Commission recycled 2,821,442 lbs. (1,411 tons) of electronic material at their de-manufacturing facility. All e-waste delivered to the Jackson County Transfer Station is transferred to the Scott County De-manufacturing Facility for processing.

Clinton County has been offering electronic recycling programs since 2000. In September 2006, Clinton County banned electronics from the landfill. By banning the items, Clinton County is keeping more hazardous materials out of the landfill and recycling good resources that have value, such as precious metals. Starting in 2012, all e-waste delivered to Clinton County Area Solid Waste Agency was transferred via The Retrofit Companies of Owatonna, MN and processed by Vintage Tech, LLC of Illinois. In FY 2015, 64,608 lbs. (32.3 tons) were collected for recycling.

Muscatine began recycling electronic waste in September 2007. All items that are collected at the Muscatine Recycling Center and Transfer Station are sent to Waste Commission of Scott County's E-Waste De-manufacturing Facility.

#### **7.11.7. Habitat for Humanity ReStore**

The ReStore is a building materials reuse center operated in Davenport by Habitat for Humanity-Quad Cities. It accepts donations such as doors, windows, flooring, plumbing, electrical fixtures, cabinets, and furniture. This process reduces waste from remodeling jobs, reuses good quality building materials, saves on renovation expenses, and reduces disposal costs and landfill tipping fees. The ReStore accepts donations and customers from the Quad Cities Area and surrounding counties.

The ReStore celebrated its 10th anniversary in 2013. At that time, 80 million pounds of material had been diverted from the landfill, and \$652,000 was raised from sales that have gone to Habitat for Humanity-Quad-Cities, enough to build nine decent homes for needy people. In 2012, the ReStore added a Health & Home area that takes in new and gently-used home health care and medical equipment. This addition has experienced considerable growth since it's opening.

Education is provided through an e-newsletter sent by the ReStore and through commercials that were a joint partnership between ReStore and the Waste Commission of Scott County. Press releases and PSAs are also being developed. The targeted audiences include potential donators and potential buyers of the material.

#### **7.11.8. Pharmaceuticals and Sharps**

In Clinton County, residents may drop off unused or unwanted pharmaceuticals at Medication Drop-Off Boxes at the Camanche, Clinton, and DeWitt Police Departments and Clinton County Sheriff's Office. Gateway ImpACT Coalition, Iowa American Water, and

each of the hosting law enforcement agencies sponsor the boxes.

The planning area encourages use of the *TakeAway* program. The program was developed to provide safe and easy medication disposal practices for Iowa residents. Unused and expired drugs pile up in home medicine cabinets, which increases the likelihood for teenagers, elderly, pets, or others to misuse or abuse them. Flushing them down the drain compromises the integrity of water supplies. *TakeAway* uses community pharmacies across the state as the take-back sites.

Residents may bring unwanted and expired medicines into a participating *TakeAway* pharmacy. The pharmacist will dispose of the returned medications into a *TakeAway* system, a waste bin specially designed to safely store discarded pharmaceutical products along with their packaging. Once filled, the *TakeAway* system is sealed and shipped to a medication disposal facility where the entire *TakeAway* system and its contents are incinerated. This ensures unused and expired pharmaceuticals do not enter water supplies. In addition, the incineration facility used by the *TakeAway* program employs a waste-to-energy incineration process – meaning the energy produced by incineration is harnessed into electricity.

There are several pharmacies that participate in the *TakeAway* program in the planning area. Education regarding the program is provided by all of the respective agencies in the planning area.

Residents that have controlled substances to dispose of are provided United States Environmental Protection Agency's recommended disposal methods. Sharps disposal is available in the planning area. Over 8,345 pounds of sharps were disposed of in FY2015.

#### **7.11.9. Enviro Kids**

Clinton County Enviro Kids is a joint effort from the Clinton County Area Solid Waste Agency, Clinton County Conservation Board, Rock Creek Marina, Mississippi River Eco Tourism Center, Clinton LumberKings, Bickelhaupt Arboretum, Izaak Walton League, the Felix Adler Children's Discovery Center, the Clinton Sawmill Museum, and LyondellBasell. This program has been held during the summer since 2005. All of the events in the program intermingled different environmental messages. In the summer of 2015, Enviro Kids continued its goal of environmental education with activities from mid-June through mid-August. Programs included an Eco-Cruise of the backwaters of the Mississippi River, canoeing, showing how plastic materials are made at Lyondell Co, a nature and prairie walk, a pond study, and a session on butterflies. Various environmental lessons and messages were shared during these events. The solid waste portion of Enviro Kids 2010 included a tour of the Clinton County Area Solid Waste Agency (CCASWA). This tour included continued training on the importance of the "Three Rs" – Reduction, Reuse, and Recycling. The tour also showed how recycled materials, yard waste, household items, electronics, and numerous other items are handled and processed at CCASWA. This helped to show participants what happens to waste materials, but also stressed the importance of keeping what they can out of landfills.

#### **7.11.10. Community Outreach and Education**

Clinton County Area Solid Waste Agency, in conjunction with volunteers, community groups, and local businesses, conducted the Stream Stomp River Clean Up in Clinton County in 2010, 2011, and 2012. With the three events, over 200 volunteers removed more than 30,000 lbs. of litter and debris from Silver Creek in DeWitt, Car Barn Creek in

Clinton, and the Mississippi River shoreline near Clinton.

The Waste Authority of Jackson County partners with the Jackson County Conservation Board through the Hurstville Interpretive Center and provides funding to DAC, Inc., a sheltered workshop. They encourage ongoing promotion of recycling and other environmental education efforts. DAC routinely runs public service announcements promoting their confidential shredding service. They also sponsor a parade float for the Jackson County Fair each year with a recycling theme. Earth Day promotions include an informational booth outside Wal-Mart, and free car battery recycling was added in 2015, along with guided tours through the recycling facility. DAC sponsors a recycling themed booth at the KMAQ Radio Farm and Home show each February.

Also, in Jackson County, the Hurstville Interpretive Center continues to welcome an average of over 10,000 visitors per year who have had the opportunity to learn from the Recycling Kiosk located near the main door. They continue to offer workshops to the public encouraging the use of recycled materials through their “Green Celebrations” program for the holidays. The Recycling Relay and Lunch Box programs are still in place and remain popular recycling-themed activities for students. The Bag It film has been shown several times educating students on the misuse of plastic shopping bags. Some programs are geared to younger school-aged children, and others are of more interest to the general public, including senior citizens.

The Clinton County Area Solid Waste Agency, City of Clinton, and a team of students at Clinton High School, known as the Environmental Heroes, created a program that has a goal of going throughout the Clinton Community Schools. The goal of the group is to reduce the amount of plastic and metal finding its way to school dumpsters and inevitably the landfill.

Clinton County Area Solid Waste Agency has updated its website to better serve its users and communities. Working with Hibu of Cedar Rapids, the agency was able to create a new site using a cleaner layout, a user-friendly interface, updated information, and more video content. This was part of stepped-up marketing campaign by CCASWA in 2015, which utilized cable TV, radio, and social media to further appeal to today’s young adults and children.

Public education and outreach is important to the success of programs in Muscatine County. Muscatine County Solid Waste Management Agency and the City of Muscatine utilize numerous outlets from newspaper, radio, television, and internet to capture our audience. Participating in community events is important to their programs. They currently assist with coordinating and attending the Community Block Party, Living Green in Muscatine, Halloween at the Y, and various community events.

In 2012, Muscatine created a program called “Recycle the Dress.” Recycle the Dress started out with the idea of how a prom dress for young ladies in high school gets worn one time and put into a closet. In this program, donations of dresses and other items worn to prom are available at no charge for young ladies in high school who can attend prom. This is not based on income, but on the ability of interest in this event. The success of the prom program has branched into homecoming also. Since 2012, at least 600 girls have received dresses, shoes, and other items to go to prom. The program has been an alternative way to educate high school girls about reuse and recycling.

#### **7.11.11. Earth Day Celebration**

The City of Muscatine has hosted an Earth Day Celebration, or what is now called Living Green in Muscatine Celebration, since 2008. This program has participation from non-profits, businesses, and others interested in environmental activities. Attendance varies from 300 to 400 people per event.

### **VIII. Evaluation of Progress Toward Goals: 101.12(2)“h”**

Analysis of the existing integrated solid waste management system involves examining the programs implemented to date in the planning area as they relate back to the vision, mission, and goals of the Comprehensive Plan 2016. The planning area vision is for an integrated solid waste management system. The mission is to meet the State of Iowa waste reduction goals, the state’s hierarchy of waste management priorities and the regional planning goals. Using the state’s solid waste hierarchy as the framework, the strengths, weaknesses, opportunities, and challenges were evaluated for the existing integrated solid waste management system in the planning area. Education opportunities are also discussed below.

#### **8.1. Source Reduction**

Source reduction programs alter the design, manufacture, purchase or use of products, and materials to reduce or eliminate pollution at the source. The planning area provides information on source reduction within its multi-media and multiple message framework. Information and referrals are provided to citizens, businesses, and industries on an ongoing basis through the Iowa Waste Exchange, Solid Waste Alternative Program (SWAP), and state pollution prevention programs, such as the P2 Intern Program, that may assist in reducing waste at the source. The Iowa Waste Exchange Area V covers the planning area with the addition of Louisa and Washington Counties.

Green building techniques and materials related to consumer choices is another activity being promoted on an on-going basis through the Davenport Police Station, the new Davenport Public Library Eastern Avenue Branch, Muscatine nature center, Family Museum in Bettendorf, and the Hurstville Interpretive Center in Jackson County. Since 2008, the Hurstville Interpretive Center in Jackson County has welcomed over 10,000 visitors per year that have had the opportunity to learn from the Recycling Kiosk located near the main door. Student programs for this period have been increased to include a Recycling Relay that involves sorting recyclable and non-recyclable material into the correct bins. The “Lunch Box” program involves students in a cost comparison for buying items in bulk rather than wasteful pre-packaged lunch items. The waste from the two methods is then weighed to show individuals the difference. The Smart Lunch program is also still used as a learning tool to educate students in the proper ways to pack a lunch with less waste. In 2015, a total of 1,197 students took part in these activities at the center.

Source reduction is also encouraged through the Regional Collection Center programs where residents and conditionally-exempt small quantity generators (CESQGs) are informed of ways to reduce their use of household hazardous materials.

***Program strategies*** for continued source reduction progress include:

- Utilize and encourage double-sided copying
- Encourage green building techniques continuation, such as its implementation at the Rock Creek Interpretive Center
- Use Earth Week events to highlight source reduction issues

- Work closely with the local Iowa Waste Exchange representative and with the Chambers of Commerce to provide greater education outreach to business and industry
- Find measurable examples to define successes

## **8.2. Recycling, Composting, and Reuse**

Recycling, composting, and reuse programs are detailed in Section 7 of this plan. The existing program information in the planning area is submitted electronically on-line. The information is contained in Appendix A of the printed document for public reference. The data includes details on household hazardous material (HHM) collection through regional collection centers (RCC), waste tire collection, waste oil management, lead-acid batteries program, household appliances collection, and yard waste collection. Except HHMs and household appliances, the other items are banned from landfills, and there must be strategies in place for proper management. RCCs have been developed to reduce the toxicity of leachate from HHMs into the groundwater.

The planning area provides residents with proper management options for recyclable materials, household hazardous materials, household appliances, waste tires, used motor oil, lead-acid batteries, and yard waste. Citizen education of these programs is through a multi-media and multiple message framework. Additionally, there are electronics recycling programs and programs related to handling sharps within the planning area. There are also reuse facilities located in the planning area, typically combined with other collection programs. Reuse buildings offer ways to divert materials from the RCCs and landfills that have the ability to be utilized by someone else, such as unused latex paint or solvents and cleaning products. Over 725,744 pounds of HHM has been collected from 69,707 customers. Exchange programs that allow residents to take HHM that is still useable diverted 46,167 pounds in FY 2015.

The planning areas served 367 CESQGs and diverted 87,115 pounds of CESQG material. Among the permanent facilities, satellite sites, and mobile collection events, the planning area has served 9,707 households through its RCC program in FY 2015. Nearly 984 households have participated in the reuse programs, related to 46,167 pounds of material. Additionally, the planning area has previously supplied cities and counties with a model resolution to support procuring items made with recycled content and recycled materials. It encourages “Buy Recycled” in planning area education efforts. For example, the Bi-State Regional Commission Joint Purchasing Council with members from Scott and Muscatine Counties began soliciting presentations from paper and janitorial supply manufacturers for “green” product options.

The planning area achieved the July 1, 1997 deadline and maintains programs for minimum collection provisions for glass, plastic, paper, and metals. The planning area’s strength is for providing recycling and composting availability for multiple materials. In FY 2015, the planning area processed nearly 16,499 tons of recyclable material. Education is an important component of these programs using a variety of mediums. Event recycling has been targeted in the planning area with some success. This is an area that could be expanded within the planning area. Interest in electronics recycling is continuing to increase with new alternatives to landfilling. There is growing interest in diverting construction/demolition debris as fledgling programs gain public awareness. Private sector education on recycling has remained within the private sector. Challenges facing viable recycling programs in the planning area include the volatility of markets and efficient collection and processing.

### **8.2.1. Event Recycling**

The Waste Commission of Scott County, through the iLivehere program, has worked with local community groups in the Quad Cities Area to provide event recycling containers and

lids to assist with separation of aluminum cans, plastic bottles, and paper at special events. The program is so popular that the Commission added 50 additional containers and another event trailer in FY 2014. The Waste Commission of Scott County provides the funding for event recycling and iLivehere from landfill tipping fees. Public education is provided through labels on the containers that promote recycling and encourage proper disposal of waste items as well as graphics on the event recycling trailer.

In Jackson County, DAC, Inc. has provided an event recycling trailer annually for events such as the Jackson County Fair, Bellevue Rodeo, Bellevue Heritage days, and the Maquoketa Chamber of Commerce Hillbilly Hotfoot Race to name a few. DAC, Inc. also recently purchased 2 new large roll-off containers for additional recycling drop-off space in their parking lot for 24/7 use.

### **8.2.2. Stadium Recycling**

In 2011, Clinton County Area Solid Waste Agency (CCASWA) assisted the Clinton LumberKings in their home ballpark of Ashford University Field implement can, bottle, and cardboard recycling. The plastic and metal beverage container recycling bins, through Dr. Pepper, were placed throughout the ballpark for fan use. CCASWA also worked with team management in establishing year-round office paper, cardboard, and beverage container recycling for employees. It is anticipated that future expansion and upgrades to the recycling program will take place.

In the fall of 2014, Clinton County Area Solid Waste Agency repurposed the tipping floor for its former BioReactor in-vessel composting unit to create a drop-off area for smaller vehicles outside of the immediate landfill working face. The drop-off area offers a safer and cleaner environment for waste disposal under a partially-enclosed Quonset building with a cement floor. CCASWA staff also utilizes this area as an opportunity to reclaim large amounts of cardboard, plastic, and metal. These items are then diverted from the landfill and recycled. In its first year, the PDO saved 25 tons of cardboard, three tons of plastic, and 15 tons of metal from the landfill. Overall, reaction by the public to the PDO has been very positive also.

Clinton County Area Solid Waste Agency has also expanded its recycling efforts by working to accept a wider range of materials. Starting in July 2011, CCASWA began taking plastics #1-#7 instead of just plastics #1-#2. The agency began accepting chipboard or fiber board materials in July 2012. Glass recycling returned to CCASWA in October 2014. In August 2015, CCASWA further enhanced its recycling offering by accepting books, which are handled by DAC, Inc. in DeWitt and Maquoketa. Since the recycling expansion, CCASWA has processed 575 tons of plastic (a monthly average increase of almost 14 tons per month), 165 tons of fiber/chipboard, 93 tons of glass, and seven tons of books.

### **8.2.3. Shingle Recycling**

Shingle recycling has been tried in Clinton and Scott Counties. The Clinton County pilot project for recycled shingles was not successful. CCASWA did educate area roofing contractors via a letter on the special rate for clean shingles for the program. Roofing contractors found it easier to throw all waste away and not source separate the shingles. The Waste Commission of Scott County provides funding for shingle recycling through tipping fees. As previously mentioned, the Commission has expanded their program and seen responsiveness from contractors and success in the program. Public education is

provided on the Commission website, through press releases, and presentations. Targeted audiences include contractors, partner solid waste agencies, and citizens.

#### **8.2.4. Commercial Recycling**

Commercial recycling is provided by private contractors. The planning area encourages businesses to look for a commercial recycler in their area through advertisements in the yellow pages and through business-to-business ads. The planning area tries to provide assistance to the businesses, but has no control over their waste streams.

#### **8.2.5. Medical Sharps**

There are programs in place within the planning area that provide for the collection of household medical sharps. Medical sharps are collected from the Clinton County area residents at Clinton County Area Solid Waste Agency (CCASWA). Residents can bring in their medical sharps at no cost. Businesses that need to dispose of a container of sharps are charged \$3.00 per gallon container. CCASWA pays for residentially-generated medical sharps to be disposed of properly with the Iowa Medical Waste Reduction Center through tipping fee revenue from the landfill. The agency has educated residents, along with sanitary disposal workers on the high risk of sharps being disposed of in the garbage. The target audience has been diabetic residents, and education materials regarding disposal have been given to the local medical clinic and hospitals for display. Articles and columns regarding this information have been in the local media. This program began in 2001.

In Jackson County, medical sharps continue to be collected at the Jackson County Transfer Station at no cost. The cost of the program is built into the transfer station tipping fee. The target audience focuses on the residential home health population. Residents are encouraged to use a sturdy plastic container with the contents clearly marked.

In Scott County, sharps containers are provided to residents at no cost. Containers can be picked up at Waste Commission facilities, the Scott County Health Department, or any Iowa Quad Cities Hy-Vee locations. The Waste Commission of Scott County provides funding for the sharps campaign through tipping fee revenue from the landfill. Public education is provided through the biennial Garbage Guide, flyers, labels on the containers, and partnering organizations. Targeted audiences include home medical waste producers. Other planning area participants offer medical sharps collection or work with local health providers on this issue.

#### **8.2.6. Waste Tires**

Waste tires collection has continued since the last plan update. Over the past several years, the planning area has moved away from providing free disposal of tires and moved toward user fees. There are still some options for residents to dispose of small quantities of tires at no charge. These programs are provided through landfill tipping fees. The planning area uses a wide variety of public education options developed during the Iowa Tire Initiative. Targeted audiences include drivers, driver's education students, and the general public.

*Program strategies* for continued progress for recycling, composting and reuse include:

- Continue existing programs for composting, recycling, and reuse
- Continue electronics recycling and monitor changes in technology as many outdated or obsolete items are being discarded.

- Continue construction and demolition debris recycling
- Further reuse opportunities, good donations, and events recycling
- Implement single stream processing and collection
- Evaluate unit-based pricing collection and multi-family collection
- Evaluate curbside collection of e-waste
- Increase business/industry recycling through Iowa Waste Exchange
- Investigate the addition of pharmaceuticals, compact fluorescent lights, other products containing mercury, changes in television technology for HHM, and e-waste collection and processing

### **8.3. Combustion, Landfilling, and Other Techniques**

Incineration for volume reduction is not supported by the planning area at this time. Waste tires collected in the planning area are used for tire-derived fuel or for recycled products. Based on population, the majority of communities within the planning area ban the burning of yard waste for improved air quality and to promote composting. Landfilling remains one aspect of the integrated solid waste management system of the planning area. There are no locally-banned items beyond what items that are banned from landfilling by the state. Cedar County bans cardboard from its transfer station while Jackson County bans electronics from its transfer station to divert for recycling. With regard to other involvements, the planning area has addressed illegal dumping by providing information and signs to cities and counties where problems are recurring.

#### **8.3.1. Transfer Stations**

These facilities will continue to be seen as a county-by-county activity. Muscatine, Cedar, and Jackson Counties have transfer stations. The planning area noted that Jackson County in 2006 has successfully begun trucking its own solid wastes from the transfer station to the contracted landfill. In May 2012, the Jackson County Transfer Station was destroyed by fire. During the time of rebuilding, the majority of waste was direct hauled to the Clinton County Landfill. A temporary citizens' convenience center was permitted by IDNR on-site in an accessory building for small loose loads of MSW. In the spring of 2013, a new, larger transfer station was opened at the same location as the old one. The method of loading trailers was changed from a compactor system to open top loading.

#### **8.3.2. Daily Landfill Cover**

Additionally, the planning area continues to divert waste by beneficially using material for alternative daily cover and other uses. Sources of beneficial use material included processed auto shredder residue, foundry sand, fly ash, sludge, and municipal solid waste compost. Some materials are mixed with dirt as required by Iowa DNR.

#### **8.3.3. Illegal Dumping**

Waste Authority of Jackson County maintains an illegal dumping compliant form that is accessible at the agency website [www.wasteauthority.org](http://www.wasteauthority.org). The form allows for anonymous reporting of problem areas in the county. The website was also upgraded to a mobile device friendly site.

The Waste Commission of Scott County coordinates the Scott County Illegal Dumping Task Force, which has a focus on building partnerships among agencies within the county to provide a mechanism for reporting illegal dumping, abatement of those locations, and the enforcement and prosecution of offenders. The task force includes representatives from the Waste Commission; Scott County Attorney's Office, Conservation, Health, Roads, and Sheriff's Departments; various municipal public works; code enforcement; and law enforcement entities, among others. Efforts included purchase and operation of surveillance equipment and additional signage in problem areas to aid in enforcement and to further deter illegal dumping. Success and expansion of this effort is a high priority. The task force is currently working on legislative changes to increase fines for the worst illegal dumpers.

The Waste Commission of Scott County is funding the illegal dumping campaign through tipping fees at the landfill. Public education will be provided through presentations, PSAs, media releases, and community clean-up efforts. The targeted audience is all encompassing.

#### **8.3.4. Litter Abatement/Keep America Beautiful**

The Waste Commission of Scott County provides iLivehere® programs dedicated to empower individuals, businesses, as well as public and civic groups to take responsibility for protecting the local environment. The Waste Commission supports the efforts of iLivehere® both financially and with in-kind services to build partnerships throughout the community to accomplish this mission. It funds the program through landfill tipping fees, and iLivehere® remains a local affiliate of Keep America Beautiful and Keep Iowa Beautiful. Activities are numerous and include neighborhood clean-ups, event recycling, and watershed protection and restoration projects that utilize thousands of volunteers annually. Public education is provided through a multi-media campaign and targets a wide variety of audiences. This includes groups most likely to litter and those who may want to sponsor a community clean-up event.

Keep Muscatine Beautiful (KMB) was formed on October 1, 2007 to enhance ownership, pride, and beautification of Muscatine County. KMB continues to assist with community clean ups, beautification projects, and numerous other programs that help beautify the Muscatine County Area.

#### **8.3.5. Methane Collection System**

A methane gas collection system was installed at the Scott Area Landfill by the Waste Commission of Scott County and Linwood Mining and Minerals. The system extracts methane from the landfill, and the recovered methane is used as a partial replacement of fuel in the kilns and drying mills in the production of limestone. The benefits of the project include air emission reduction and energy conservation. Public education is provided to groups touring the landfill.

#### **8.3.6. Waste Collection and Processing Analysis**

The Waste Commission of Scott County completed a waste collection and processing analysis conducted in 2010 to evaluate existing waste management systems in an effort to maximize efficiencies, minimize costs, and further reduce landfilled waste. The scope of services for the project included the following:

- Thorough review and analysis of existing collection systems, including but not limited to garbage, recycling, yard waste, bulky waste, and e-waste
- Identification and recommendation of options available for collection
- Evaluation of current processing methodology and available processing options
- Identification and recommendation of options available for processing
- Evaluation of fee structure, including review of user fees
- Evaluation of the impact on waste reduction of recommended options

The results lead to development of a Single Stream Implementation Plan. The Scott Area Recycling Center is currently being expanded and renovated to provide single stream recycling. Single stream recycling carts and automated trucks have been purchased by Davenport and Bettendorf. The new program is anticipated to start on July 11, 2016. Public education efforts included presentations to Davenport, Bettendorf, and Waste Commission of Scott County. An extensive public education program is being planned for the new program.

### 8.3.7. Landfills

The planning area will continue to look at its existing landfill viability and need for expansion. All planning area members are currently evaluating disposal capacity, landfill design and funding mechanisms. This includes evaluation of expansion options, leachate management, alternative landfill best practices, operational issues, and closure/post-closure impacts. One of the items to be evaluated in the future is best practices for landfill methods, particularly bioreactor landfill technology. A bioreactor landfill operates to rapidly transform and degrade organic waste. The increase in waste degradation and stabilization is accomplished through the addition of liquid and air to enhance microbial processes. This bioreactor concept differs from the traditional “dry tomb” municipal landfill approach. Issues of illegal dumping and litter abatement are also of interest. Expanding localized stream clean-up efforts throughout the planning area is envisioned.

*Program strategies* for continued goal progress related to either combustion, landfilling, waste transfer or other techniques to enhance or sustain the solid waste management system are:

- **Monitor Emerging Technologies** as a regional activity. Agencies in the region recognize the necessity of evaluating new, emerging technologies for solid waste processing and disposal. A review of several alternative processing technologies was completed during the last comprehensive plan update. Agencies will continue monitoring emerging technologies and consider a consistent method for evaluating proposed facilities. In response to numerous inquiries regarding emerging technologies, the Waste Commission of Scott County adopted a policy for acceptance and review of unsolicited proposals. The purpose of the policy is to outline the means by which organizations can submit proposals and how the Commission will respond to them.

For an unsolicited proposal to be considered, it must meet the following requirements:

- Be innovative and unique
  - Be originated and developed autonomously by the proposer
  - Be prepared without Commission supervision, endorsement, direction, or direct Commission involvement
  - Include sufficient detail to permit a determination that Commission support would be worthwhile, and the proposed work could benefit the agency in its pursuit of fulfilling its mission
  - Not be an advance proposal for an item, project, or material that the Commission is required to acquire through competitive means
  - Not address a previously published Commission solicitation for proposals
- **Foster Financial Stability.** As stated in the 2011 update, Muscatine Recycling Center and Transfer Station and Muscatine County Landfill had a drop-in tonnage in 2009. From 2009 to 2015, tonnage has stabilized at 35,000-38,000 tons per year. This was created by establishing commercial contracts with large industries in Muscatine. The Muscatine County Solid Waste Management Agency and the City of Muscatine will be reviewing the progress with staff to determine if this is the best way to foster financial stability for the Muscatine Recycling Center and Transfer Station and the Muscatine County Landfill.

With constant threat of lost waste flow, board policies limiting out-of-county waste, new landfill rules, expanding services, etc., the agencies must continue to address the cost of providing services. An evaluation is being considered and the plan would include the following:

- Complete an inventory of all solid waste facilities in the region including information on operational costs, necessary improvements, and capacity
- Identify current and possible areas for regional cooperation and work toward win-win results for all public agencies and their stakeholders and residents
- Consider participation in IA DNR's environmental management system (EMS) program
- Planning for what ifs, explaining the need and purpose of financial assurance funds, explaining what agency fees cover, maintaining control by considering the impact of the Oneida-Herkimer U.S. Supreme Court ruling, and including the financial stability as part of an educational process
- Examining ongoing issues such as landfill market price decreases, competition for waste, some haulers reducing deliveries, and potential for privatization

- Develop Business Implementation Plans to meet the appropriate needs of each agency
- **Public Education Opportunities.** Interspersed in the text above, there are references to public education opportunities within the planning area. To reiterate and emphasize these points, this section will highlight particular education components of the integrated solid waste management system.
- **Board Orientation.** Throughout the planning area, board members as decision-makers come from many backgrounds unrelated to solid waste management. There is consistent turnover in board member representation. The planning area partners expressed interest in developing orientation information to engage board members in strategic issues. This may include information on the planning area, comprehensive planning, the 28E agreement, the benefit of integrated solid waste management systems, staffing directories, open meetings laws, and a glossary of technical terms.

Clinton County Area Solid Waste Agency is in the process of creating a formal Board Orientation Manual for new members of 28E governing board of directors. Items to be included in the process to date are: mandatory new board member tours of agency facilities; explanation of the organizational structure of staff and the 28E agreement; a breakdown and analysis of voting; role of officers, committees, sub-contract operator, consultant, etc.; a list of past, current, and anticipated projects; explanation of how and why cells are built as they are; brief explanation of rules and regulations; discussion on closure and post-closure rules; and site maps. This manual is expected to be partially implemented in early 2016 and fully implemented by 2017.

- **Urban and Rural Residences.** Within the planning area, both rural and urban residences are provided with waste management information through guidebooks; directories; direct mail; website resources; newsletters; and/or paid advertising via newspaper, radio, and/or television. The planning area provides free ongoing tours and presentations covering solid waste and environmental issues to local schools, student organizations, after-school programs, neighborhood committees, and senior citizen groups upon request. Inserts/tabs are run periodically in area newspapers to promote special events, create awareness of new solid waste management programs, and keep residents informed of current solid waste issues. Within the planning area, paid television spots and public service announcements run continually on several different cable channels, targeting different demographics. These spots focus on household hazardous materials, electronic waste, fire dangers, improper disposal, old tires, and litter. The frequency of these spots creates public awareness and “brand” (name) recognition. Periodic radio spots for special events and campaigns have the same effect. Press releases are issued to announce waste management information, upcoming events, holiday hours, etc. Ads and listings in local phone books and yellow pages allow for quick and easy communication with the solid waste agencies. Phone numbers and websites are distributed with all public education information. Booths are setup and staffed at area fairs, celebrations, and festivals. This involves face-to-face interaction with residents, distribution of informational materials and promotional giveaways, and creates general awareness of existence.

- **Farms.** In the planning area, the Regional Collection Centers (RCCs) are working with farms to promote programs and distribute information. Pesticide containers and old tires are accepted for recycling from farmers. The RCCs provide disposal options and assistance for the agricultural community.
- **Businesses.** Flyers focusing on source reduction, reusing, and recycling materials are inserted in area Chamber of Commerce newsletters within the planning area. Flyers also include contact information and examples of easy ways to get started. Referrals are made to state programs for grants and waste reduction assistance.
- **Industries.** General recycling is promoted through public education efforts in the planning area. Information is distributed promoting the Iowa Waste Exchange and referrals are made to the program. Special waste management services are provided to industries upon request.
- **Institutions.** Free tours and presentations are available to all schools (K-12 and colleges) in the area. Assistance is provided on special projects at the request of the school or teacher. The planning area has representatives on various schools' Recycling Teams to serve as a resource and also to ensure that recycling is ongoing in the school district. The planning area makes referrals to goods donations establishments to encourage recycling and reuse of items not typically handled through existing 28E agency/commission programs.
- **Governments.** Assistance is provided to all area communities/governments in waste disposal, recycling, household hazardous material management, composting, public education, and community cleanup events. Special services are provided upon request, such as efficiency studies and recycling information.
- **Backyard Composting.** The planning area works closely with compost facilities and community yard waste disposal programs. An active role is taken in public education of their services. Compost facilities in the planning area are referenced and explained in many print publications, on websites, and mentioned in most tours and presentations. The planning area has conducted training on backyard composting, held compost bin sales, and worked with master gardeners and Iowa State Extension offices on special projects.
- **Classroom Composting.** Following a 2015 tour of the Clinton County Solid Waste Agency (CCASWA), staff members worked with a 3<sup>rd</sup> and 4<sup>th</sup> Grade Talented and Gifted Class/Lego League Group to establish a classroom composting bin at Camanche Elementary School. CCASWA donated compost bins and helped advise the groups on composting techniques.
- **Household Hazardous Materials.** As previously mentioned, proper HHM disposal is referenced in guides/directories, tours and presentations, direct mailings, collection events, and through various media. CESQG's are also provided information and assistance with their hazardous materials.

*Program strategies* tied to the respective waste management system needs and coupled with education needs indicated above will be an important component for both existing programs and future ones.

## **IX. Analysis of Solid Waste Alternatives: 101.12(2) “i”**

An Alternative Technology Review to evaluate newer and/or evolving technologies in the solid waste management industry was also completed for the last comprehensive plan update. The technologies reviewed included gasification, plasma arc, thermal depolymerization, ethanol, and anaerobic digestion. Each technology was reviewed through a process overview; product recovery/uses; environmental concerns; regulatory issues; current interest; previous experience; and sources of information including technology vendors, public agencies, and regulatory agencies. The following is a brief description of each technology that was reviewed:

### **9.1. Gasification**

Gasification converts wastes to gases, liquids, and char. The gasification process is a thermal process that utilizes controlled air to support combustion. Gasification using air results in a nitrogen-rich, low Btu fuel gas. If gasification is conducted using pure oxygen, then higher Btu fuel is produced. If the gasification process uses steam to support combustion, the output is a Syngas. The Syngas has a composition of hydrogen and carbon dioxide.

### **9.2. Plasma Arc**

Plasma arc is a method of waste management that uses high electrical energy and high temperatures created by an electrical arc. The electric arc forms plasma that is used to break down MSW into elemental gas and slag. The process has been intended to be a net generator of electricity (depending upon input wastes) and to reduce the requirements for redirecting waste to landfill sites. This technology is currently used to process small-scale industrial waste, military, and medical/biological wastes. There is some limited use of plasma technology for MSW.

### **9.3. Thermal Depolymerization**

Thermal depolymerization is a process of converting complex organic material into light crude oil. The organic feedstock is usually ground in the first stage to small chunks of material. The material is placed in a vessel where it is subjected for 15 minutes to temperatures of 250°C and pressure of 600 psig. The pressure is then released rapidly, which causes the remaining water to evaporate. The result is a mix of crude hydrocarbons and solid minerals.

### **9.4. Ethanol**

The production of ethanol (grain alcohol) from waste products is known by a variety of process descriptions, including “biomass to ethanol” and “acid hydrolysis.” It refers to the process of using “thermo-chemical and enzymatic processing of cellulosic biomass to produce non-petroleum based fuels, fuel cells, and industrial chemicals.” This means turning organic materials, including components of the municipal solid waste stream, into fuel grade ethanol by passing it through a series of refining processes to release, ferment, and distills available sugars.

Production of ethanol through acid hydrolysis is a technology that has been known and used for over 100 years, with its most extensive use occurring during World War II. Low petroleum prices in comparison to high ethanol production costs kept the process from being adopted for commercial use in the late 1940s. However, ethanol production has received increasing attention in the past 10 to 20 years from agricultural generators seeking additional markets for corn and other farm products or byproducts. Similarly, changes in federal and global environmental policies are driving increased interest in the development of non-petroleum based fuel sources, including ethanol.

The planning area continues to monitor emerging technologies.

**X. Implementation Timeline: 101.12(2)“j”**

It is under the goal framework of the planning area that an implementation timeline can be conceived and then achieved. The strategies for implementation are outlined for two planning cycles, short-term of five years and long-term of 10 years. There are activities that will continue to serve the solid waste management system on an on-going basis, either as mature programs or newly initiated within the last planning period. These on-going programs are:

- Encourage green building techniques continuation
- Use Earth Week events to highlight source reduction issues
- Work closely with the local Iowa Waste Exchange representative and with the Chambers of Commerce to provide greater education outreach to business and industry
- Continue existing programs for composting, recycling and reuse
- Continue electronics recycling and monitor changes in technology as many outdated or obsolete items are being discarded.
- Continue construction and demolition debris recycling
- Further reuse opportunities, good donations and events recycling
- Continue use of multi-media campaigns to target a wide variety of audiences – rural and urban residences, business, industry, governments and institutions, related to source reduction, recycling, backyard composting, household hazardous material and toxicity, landfilling and emerging technologies

These on-going programs are envisioned to address the integrated solid waste management system needs of the planning area. Programs will be evaluated on need, feasibility and funding availability. Efforts to maintain the existing programs and related educational efforts will be the primary focus with new strategies and activities integrated into the system as time and funding allow. The following activities are in addition to existing programs.

**Proposed Activity:** CONSIDER PARTICIPATION IN THE IA DNR ENVIRONMENTAL MANAGEMENT SYSTEM PROGRAM – The Environmental Management System (EMS) program began in 2008 and establishes a program and process that allows solid waste agencies to be designated as an EMS by demonstrating compliance and a commitment to continuous improvement in six areas: yard waste management, household hazardous materials management, water quality improvement, greenhouse gas reduction, recycling services and environmental education. It moves landfills beyond the measurement of diversion goals to a new focus on environmental resource management. The Waste Commission of Scott County participates and will continue to inform and encourage EMA participation by planning area partners.

**Location(s):** Agency by Agency

**Responsible Organization(s):** Solid Waste Agency(ies) in partnership with the IA DNR

**Implementation Milestone(s):** Short Term (0-5 Years); Target Year 1 and 2

**Public Education Strategies:** Utilize planning area’s multi-media approach in coordination with IA DNR’s media campaign

**Anticipated impact on Waste Stream/Diversion:** Not known at this time

**Proposed Activity:** RECYCLING PROGRAM ENHANCEMENTS - Increase business/industry recycling through Iowa Waste Exchange and monitor pharmaceutical law changes that will allow more efficient and convenient drug disposal for residents, including the Takeway Program.

**Location(s):** Agency by Agency

**Responsible Organization(s):** Solid Waste Agency in cooperation with local businesses

**Implementation Milestone(s):** Short Term (0-5 Years)

**Public Education Strategies:** Continue use of multi-media campaigns to target a wide variety of audiences – rural and urban residences, business, industry, governments and institutions – related to source reduction, recycling, household hazardous material and toxicity, landfilling and emerging technologies

**Anticipated impact on Waste Stream/Diversion:** Determine with Iowa Waste Exchange on business/industry impacts.

**Proposed Activity:** MONITOR EMERGING TECHNOLOGIES - Agencies in the region recognize the necessity of evaluating new, emerging technologies for solid waste processing and disposal. A review of several alternative processing technologies was discussed as part of the previous comprehensive plan update. Continue monitoring emerging technologies and consider a consistent method for evaluating proposed facilities.

**Location(s):** Planning Area-wide

**Responsible Organization(s):** Solid Waste Agencies in cooperation with Iowa Department of Natural Resources and other solid waste trade organizations

**Implementation Milestone(s):** Short Term (0-5 Years) and Long Term (6-10 years); examine results of technology review in 2008 for potential application within planning area

**Public Education Strategies:** Provide information on emerging technologies to Board's, elected officials and public as they are proposed; incorporate into comprehensive planning process with future updates

**Anticipated impact on Waste Stream/Diversion:** Not known at this time

**Proposed Activity:** FOSTER FINANCIAL STABILITY - Maintaining stable financial conditions is a fundamental responsibility of every public solid waste administrator and board. With constant threats of lost waste flow, board policies limiting out-of-county waste, new landfill rules, expanding services, etc., the agencies must continue to plan and focus on financial issues. Facilities, programs and services are provided in the planning area by the public sector waste agencies. These are important assets for the communities. It will be important to build on these assets and/or protect and improve them as facilities, programs and services mature over time. In the interest of an integrated solid waste management system, it will be critical to assess the status and condition of these assets and how they will serve the planning area in the long term. Consider grant funding to help address the cost of such a planning process. Refer to Section VIII for details.

**Location(s):** Planning Area-wide

**Responsible Organization(s):** Solid Waste Agencies

**Implementation Milestone(s):** Short Term (0-5 years); Target year 4 or 5

**Public Education Strategies:** Communicate to local policy makers via Solid Waste Agencies and utilize local media to explain long term asset evaluation and impacts locally

**Anticipated impact on Waste Stream/Diversion:** Not known at this time

**Proposed Activity:** ESTABLISH GREEN HOUSE GAS EMISSION BASELINE - With growing concern of the role landfills and other solid waste facilities play in the emission of Green House Gases, it becomes more important to establish a baseline of each facilities greenhouse gas (GHG) emissions. Knowing a baseline for GHG will also allow the solid waste agencies to evaluate their emissions and provide data needed to assess if reduction measures need to be taken. Monitoring the level of GHG emissions will continue to provide more data as well as indicate whether reduction measures have been successful.

**Location(s):** Planning Area-wide

**Responsible Organization(s):** Agency by Agency

**Implementation Milestone(s):** Short Term (0-5 Years) and Long Term (6-10 Years)

**Public Education Strategies:** Communicate to local policy makers via Solid Waste Agencies and utilize local media to explain GHG emissions and impacts locally

**Anticipated impact on Waste Stream/Diversion:** Not known at this time

**Proposed Activity:** BOARD ORIENTATION - Board members as decision-makers come from many backgrounds unrelated to solid waste management. There is consistent turnover in board member representation. Agency administrators expressed interest in developing new board member orientation books and processes to engage board members in strategic issues.

**Location(s):** Planning Area-wide

**Responsible Organization(s):** Solid Waste Agencies in cooperation with their member communities

**Implementation Milestone(s):** Short Term (0-5 Years); Target Year 1 and implement as turnover occurs on an on-going basis

**Public Education Strategies:** Communicate and engage to local policy makers via Solid Waste Agencies' representatives to explain integrated solid waste management system assets, financial conditions, waste impacts, emerging technologies, etc.

**Anticipated impact on Waste Stream/Diversion:** Not known

**Proposed Activity:** MARKETING THE WASTE INFRASTRUCTURE - Selling public service and solidifying the value of the waste system was identified. There are important community related benefits stemming from the local public solid waste agency programs and facilities. The regional agency managers will promote, market and educate on the importance of integrated waste management services.

**Location(s):** Planning Area-wide

**Responsible Organization(s):** Solid Waste Agencies in cooperation with their member communities

**Implementation Milestone(s):** Short Term (0-5 Years); Target Year 2 and implement on an on-going basis thereafter

**Public Education Strategies:** Communicate and engage to local policy makers via Solid Waste Agencies' representatives to explain integrated solid waste management system assets, financial conditions, waste impacts, emerging technologies, etc.; use Board orientation to encourage agency representatives to become solid waste management advocates

**Anticipated impact on Waste Stream/Diversion:** Not known

**Proposed Activity:** **ASPHALT SHINGLE RECYCLING** – Share program information and materials in addition to learned experience from program implementation to evaluate possible implementation elsewhere within the planning area.

**Location(s):** Planning area-wide

**Responsible Organization(s):** Solid Waste Agencies

**Implementation Milestone(s):** Short Term (0-5 Years) and Long Term (6-10 Years)

**Public Education Strategies:** Communicate to roofing and construction companies via Solid Waste Agencies and utilize a multimedia approach to explain program and its conditions and impacts locally

**Anticipated impact on Waste Stream/Diversion:** Not known at this time

**Proposed Activity:** **PRODUCT STEWARDSHIP** – Participate in product stewardship activities to reduce unnecessary waste generation and to encourage efficient and economical disposal or recycling solutions.

**Location(s):** Planning area-wide

**Responsible Organization(s):** Solid Waste Agencies in cooperation with IA DNR and the Product Stewardship Institute

**Implementation Milestone(s):** Short Term (0-5 Years) and Long Term (5-10 Years)

**Public Education Strategies:** Communicate and engage with local policy makers and major manufacturers via Solid Waste Agencies' representatives and the Product Stewardship Into explain product stewardship and new initiatives for end-of-life plans for products.

**Anticipated impact on Waste Stream/Diversion:** Not known

**Proposed Activity:** **SINGLE STREAM RECYCLING** – Evaluate option of partnerships with new single-stream recycling processing option at the Scott Area Recycling Center.

**Location(s):** Agency by Agency and/or by municipality

**Responsible Organization(s):** Local Government in Cooperation with Solid Waste Agency(ies)

**Implementation Milestone(s):** Short-Term (0-5 Years) and Long-Term (5-10 Years)

**Public Education Strategies:** To be determined as part of the technical analysis

**Anticipated impact on Waste Stream/Diversion:** Increased diversion rates and collection efficiency.

**Proposed Activity:** **ORGANICS DIVERSION** – Promote, and encourage the diversion of organics from

landfills through food rescue partnerships and other methods such as anaerobic digesters.

**Location(s):** Agency by Agency and/or by municipality

**Responsible Organization(s):** Local Government in Cooperation with Solid Waste Agency(ies), Food Rescue Partnerships, and agricultural industries

**Implementation Milestone(s):** Short-Term (0-5 Years) and Long-Term (5-10 Years)

**Public Education Strategies:** To be determined as part of the technical analysis

**Anticipated impact on Waste Stream/Diversion:** Increased diversion rates.

DRAFT



# **APPENDIX A**

## **Electronic On-Line Submittal Forms/Reports:**

Planning Area Description Form

Planning Area Contacts Form

Permitted Facilities Form

Boards Form

Recycling and Waste Collection Form

Recycling and Waste Haulers Form

Residential Recycling Form

Commercial Recycling Form

Drop-Off Recycling Sites Form

Diverted Materials Collection Form

Yard Waste Management Programs Form

Yard Waste Management Sites Form



## **APPENDIX B**

### **Evidence of Cooperation:**

Resolutions from All Participating Governments and/or 28E Agreements

Agendas from Participating Governments and/or 28E Agreements

Adopting Minutes As Available

Changed Contracts and 28E Agreements (Cedar County Solid Waste Commission)

Sample Memo for Notification of Draft Plan Update



# **APPENDIX C**

## **Public Input Documentation**

Notice of Public Meeting

Affidavit of Publication

Comments Received from Open Forum Public Meeting

Response to Public Comment



## **NOTICE OF PUBLIC HEARING**

### **Comprehensive Solid Waste Management Plan 2016**

**For Cedar County Solid Waste Commission, Clinton County Area Solid Waste Agency, Waste Authority of Jackson County, Muscatine County Solid Waste Management Agency, and Waste Commission of Scott County**

### **PUBLIC HEARING**

Eastern Avenue Branch Meeting Room A

Davenport Public Library

6000 Eastern Avenue, Davenport, IA

January 29, 2016 at 1:00 p.m.

The public is hereby notified that an Open Forum Public Meeting will be held at the Eastern Avenue Branch of the Davenport Public Library on January 29, 2016 from 1:00-2:00 p.m. to take comments on Comprehensive Solid Waste Management Plan 2016 for Cedar County Solid Waste Commission, Clinton County Area Solid Waste Agency, Waste Authority of Jackson County, Muscatine County Solid Waste Management Agency, and Waste Commission of Scott County. A copy of the document is available for review, beginning January 29, 2016 online at [www.bistateonline.org](http://www.bistateonline.org) or by appointment at Bi-State Regional Commission, 1504 Third Avenue, Rock Island, Illinois between 8:00 a.m. and 4:30 p.m. Monday through Friday, or through the following agencies: Cedar County Solid Waste Commission, Clinton County Area Solid Waste Agency, Waste Authority of Jackson County, Muscatine County Solid Waste Management Agency or Waste Commission of Scott County.

The meeting will be conducted in an open forum format. No formal presentation will be made. Solid waste managers from said counties and Bi-State Regional Commission staff will be present with copies of the draft to discuss it individually. Written statements will be accepted at the meeting. Written comments may also be conveyed to Bi-State Regional Commission, P.O. Box 3368, Rock Island, Illinois 61204-3368, (309)793-6300 prior to February 29, 2016. The final plan will be submitted to the Iowa Department of Natural Resources by March 1, 2016.



DRAFT

**APPENDIX D**

**OTHER DOCUMENTATION**