Solid Waste EMS Information Workshop
Des Moines Botanical Center
June 15, 2011

Solid Waste Environmental Management System Timelines & Process

– Brian Tormey

SW EMS Advisory Council

- 9 members representing the following entities
  - IRA (Jen Jordan)
  - Iowa Waste Exchange (Shelly Codner)
  - DED Recycle Iowa Office (Jan Loyson)
  - ISOSWO (Mary Wittry)
  - 3 Planning Areas of various sizes (Scott Smith, Tom Hadden, Sara Bixby)
  - Iowa Chapter of NSWMA (Tony Colosimo)
  - DNR (Brian Tormey)
- 3-year staggered terms; 3 expire 9/1/11

SW EMS Pilot Program

- 10/09 - Pilot participants selected by Council approved by EPC
  - Cass Co. Environmental Control Agency
  - Cedar Rapids/Linn Co. Solid Waste Agency
  - Dubuque Metropolitan Area Solid Waste Agency
  - Metro Waste Authority
  - Rathbun Area Solid Waste Commission
  - Waste Commission of Scott Co.
- 1/11 - Annual reports accepted by the Council
  - Pilots become Tier 2 participants

Why Be a Participant?

- Incentives in law
  - Exemption from landfill diversion goals
  - Tonnage fee set at $3.65/ton; $2.10 remitted to DNR
  - Financial assistance
- Consultant assistance
  - developing & implementing EMS
  - Face-to-face meetings
  - Internal Audit Training
- Access to tools
  - Greenhouse gas model
  - Intelex tracking tool
- Intangibles – will hear from current participants

SW EMS Grants

- Criteria for awarding grants approved by Council 12/15/10 and by EPC 3/15/11
- Tier 1 Quick Start Grants
  - Up to $20,000
  - Match not required but will be considered in review
  - Council may award less or nothing
- Competitive Grants
  - Tier 1 & Tier 2 pools with applications due 3/1
  - Up to $50,000 or as set by budget
  - 50% match with half being cash

Grant Application Scoring

- Project Description (15 points)
- EMS Implementation (20 points)
- Environmental Impact (10 points)
- Detailed Budget (20 points)
- Matching Contributions (15 points)
- Development & Implementation Plan (5 points)
- Sustainability (15 points)
- Joint Submittals (5-10 bonus points)

What's Next?

- 6/15/11 – Commence rulemaking discussion
  - Criteria for determining whether a system is in "compliance" with 455J.3
- 8/1/11 - Applications for Tier 1 participants due
  - Includes application for Quick Start Grant
  - Council will accept up to 6 new participants
- 9/20/11 - Council's recommendation(s) to EPC for approval
- 10/1/11 – Quick Start Grants awarded
- 10/18/11 – EPC meeting – NOIA rulemaking decision
- 3/1/12 – Tier 1 & Tier 2 Grant applications due
- 3/28/12 – Rule becomes effective
- 9/1/12 – Annual reports submittal deadline

Questions For You

- What questions do you want answered today?
- What specific information would you like to take away from this workshop?

EMS Pilot Program Report

- Laura Fiffick, GS&P

Pilot Participants Roundtable

– Laura Fiffick, GS&P: Moderator

TOOLS & RESOURCES

- EPA LMOP

GREENHOUSE GAS MODEL

- WENDY WITTROCK
- JENNIFER FRAMPTON

Introduction

- The Solid Waste GHG Model was developed for the Iowa DNR/ Solid Waste Alternatives Program (SWAP) as part of the Environmental Management System (EMS) Pilot program.
- The model is designed to be flexible enough to be used by solid waste organizations of all sizes and complexities.

Model Overview

- The purpose of the Excel Model is to allow Solid Waste Organizations to inventory the greenhouse gas emissions associated with their facilities and operations.
- The model focuses primarily on Scope 1 and Scope 2 emissions, but does allow for certain Scope 3 emissions, including hauling and third party facility operations where data is available from the third party.

SCOPES

- Scope 1 – emissions occurring directly onsite from the source
- Scope 2 – electric – the indirect discharges that occur as part of the production process
- Scope 3 – other (including hauling & third party) – indirect emissions that occur as a result of facility activities

Greenhouse Gas Model

- Greenhouse gases included in the model are carbon dioxide, methane and nitrous oxide.
- The model allows organizations to include all Scope 1 and Scope 2 emissions, along with select Scope 3 emissions that might be of interest.

Model Structure

- The model consists of a summary worksheet and worksheets for each facility, which are defined by the user.
- In addition, there is a reference tab with GHG emissions factors and unit conversion factors.

Summary Page

- Each summary page summarizes and totals organizational GHG emissions by facility, by Scope (1,2,3) and by year. The summary page is read only.

Example of Summary Page

Organization Name
Greenhouse Gas Emissions Tracking Spreadsheet
Summary
Facilities: 2

Solid Waste Management Organization Summary

All values are in metric tons of CO2-e

Year	Scope 1			Scope 2			Scope 3		
	Cass County Landfill	Cass County Recycling	Total	Cass County Landfill	Cass County Recycling	Total	Cass County Landfill	Cass County Recycling	Total
2009	271	48	318	99	0	99	0	0	0
2010	263	53	316	96	0	96	0	0	0

Facility Page

- Each facility page has detailed emissions broken down by emission sources and by Scope. The facility page is locked with the exception of specific cells intended for data entry. These cells are highlighted to indicate that data can be entered in them.

Example of Facility Page

Greenhouse Gas Emissions Tracking Spreadsheet
Cass County Landfill
FacilityType Landfill

Year	Emission Source	Source Category	Scope	Input Data	Units	Conversion Factor	Activity Data	CO2 Emission Factor	CO2 Emissions (tCO2e)	CH4 Emission Factor	CH4 Emissions (tCO2e)	N2O Emission Factor	N2O Emissions (tCO2e)	Total Emissions (tCO2e)
2009	Submeter 1	Electricity	Scope 2	114,640.00	kWh	0.00	114.64	0.82	94.34	0.00	0.03	0.00	0.47	**94.84**
2009	Submeter 2	Electricity	Scope 2	4,851.00	kWh	0.00	4.85	0.82	3.99	0.00	0.00	0.00	0.02	**4.01**
2009	Propane Source 1	Propane	Scope 1	955.10	gallons	1.00	955.10	0.01	5.48	0.00	0.00	0.00	0.11	**5.59**
2009	Diesel Source 1	Diesel	Scope 1	8,211.00	gallons	1.00	8,211.00	0.01	83.34	0.00	0.00	0.00	0.05	**83.40**
2009	LFG	Landfill Gas	Scope 1		tCO2e	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	**0.00**
2009	Cass County Landfill Pickup	Gasoline	Scope 1	936.53	gallons	1.00	936.53	0.01	8.25	0.00	173.27	0.00	0.09	**181.61**
2009	**Scope 1**								**97.07**		**173.27**		**0.25**	**270.60**
2009	**Scope 2**								**98.34**		**0.03**		**0.49**	**98.86**
2009	**Scope 3**								**0.00**		**0.00**		**0.00**	**0.00**
2010	Submeter 1	Electricity	Scope 2	113,720.00	kWh	0.00	113.72	0.82	93.59	0.00	0.03	0.00	0.46	**94.08**
2010	Submeter 2	Electricity	Scope 2	2,052.00	kWh	0.00	2.05	0.82	1.69	0.00	0.00	0.00	0.01	**1.70**
2010	Propane Source 1	Propane	Scope 1	1,203.80	gallons	1.00	1,203.80	0.01	6.91	0.00	0.00	0.00	0.14	**7.05**
2010	Diesel Source 1	Diesel	Scope 1	6,440.50	gallons	1.00	6,440.50	0.01	65.37	0.00	0.00	0.00	0.04	**65.41**
2010	LFG	Landfill Gas	Scope 1		tCO2e	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	**0.00**
2010	Cass County Landfill Pickup	Gasoline	Scope 1	984.11	gallons	1.00	984.11	0.01	8.67	0.00	182.07	0.00	0.10	**190.84**
2010	**Scope 1**								**80.95**		**182.07**		**0.28**	**263.30**
2010	**Scope 2**								**95.28**		**0.03**		**0.47**	**95.78**
2010	**Scope 3**								**0.00**		**0.00**		**0.00**	**0.00**

Workflow

- The GHG Model is intended to allow users to build an inventory based on their specific operations.
- Users are able to add facilities based on predetermined categories (e.g. landfill, transfer station, recycling center)
- The first stage in using the model is to define your specific facilities and operations.

Establishing a base year

- When first starting an inventory, it is important to choose a base year to start with.
- The key is to make sure there are complete data records available for the chosen year.

Emission Units or Sources

- At each facility, there are potential emission units or sources. Examples of emission units might be a boiler, a vehicle, a generator, a landfill or a composting facility.
- Each emission unit is defined by an emission type. Emission types include: Natural gas, Electric, Gasoline, Diesel, Propane, Landfill Gas, Compost Emissions, Vehicles, misc.
- Once all the emission sources have been added, data can be entered.

Data Entry

- The type of data entered for each emission unit depends on the emission type of that unit.
- As data is entered, GHG emissions will be calculated on the facility page.
- The totals will be tied to the summary page and will automatically appear there.

Landfill Emissions

- Can be calculated in multiple ways.
  - Results from USEPA Greenhouse Gas Mandatory Reporting Rule
  - Gas collection system calculations
  - Methane emissions by FOD model

Other possible input data

- Composting facilities
- Vehicles / Vehicle Fleets
- Scope 3 Emissions

QUESTIONS

INTELEX TRACKING TOOL

- BRIAN SEALS

EMS Application & Plan Components

- Leslie Goldsmith
- Scott Flagg
- Scott Smith

2010 Pilots Environmental Management System – the Next Step

DRAFT EMS COMPLIANCE RULE HEARING

– BRIAN TORMEY

CHAPTER 567-111

- Draft rulemaking schedule
- 111.1 - Purpose: establishes methods & criteria for determining if an EMS is in compliance with 455J.3.
- 111.2 - Role of the department: rulemaking authority 455J.(2)
- 111.3 – Applicability: planning areas that have been designated EMSs and seek to continue to be designated as such.

CHAPTER 567-111

- 111.4 – Definitions
  - Aspect / Impact
  - Objective / Target
  - Audit
  - Fenceline
  - Plan component
  - Tier I / Tier II

CHAPTER 567-111

- 111.5 – Annual reports submitted each 9/1
- 111.6 – Contents of annual reports
  - Environmental policy statement
  - Aspects and Impacts
  - Legal and other requirements
  - Plan components
  - Internal & External Audit findings

Plan Components

- Objectives and Targets
- Action Plan
- Communication and Training
- Monitoring and Measurement
- Assessment
- Reevaluation and Modification

CHAPTER 567-111

- 111.7 - Evaluation Criteria
  - Council must make determination by 10/1
  - Completeness: address all elements in 111.6
  - Progress toward achieving objectives & targets
  - “Clear” demonstration of continuous improvement
- 111.8 – Evaluation Outcomes