EMS Program
Crash Course
February 19, 2020
Agenda

- Introductions
- Background of EMS
- Basics of EMS
- EMS Program Details
- The 10 Elements of the Solid Waste EMS
- Success Stories and Challenges
- Conclusion
The Background of EMS

- **Purpose** -- provide alternative to Comp Planning, way to improve environmental performance not measured by diversion rate
- **Forward-thinking approach** to reducing environmental impacts across Iowa
- **Based on collaborative development**
- **Modified from ISO 14001 standard**
The Background of EMS

- Legislation passed into law in 2008 – a voluntary alternative to Comprehensive Planning (Iowa Law 455J)
- Rule implementation in 2011 after Pilot Program (Iowa Rule IAC 567)
- 14 Participating Agencies to Date

Stakeholders, legislators and Department staff crafted the Iowa Solid Waste Environmental Management System legislation and rule
The Basics of EMS

- Systematic Process for *Managing Environmental Risks* and *Continually Improving Environmental Performance*
What is an EMS?

- A Business System Applied to the Environmental Impacts of the Organization
- Includes Policies, Management Processes, Training and Procedures
- Not Exclusively Focused on Compliance Requirements
- Strives for Reviewing, Analyzing, Controlling and Reducing Impacts
- Requires Ongoing Implementation and Continuous Improvement
What is an EMS?

**Identify Risks**
- Identify and rank environmental risks

**Develop Controls**
- Implement methods to minimize and control risks

**Establish systems**
- Policy, training, communication, documentation

**Assess and update**
- Review data, audits, change, continuous improvement
EMS Benefits for Your Organization

- Improved Environmental Compliance
- Reduced Environmental Impacts
- Clarity of Responsibilities and Expectations
- Fewer “Fire Drills”
- Cost Avoidance and Increased Efficiency
- Increased Understanding and Awareness of Environmental Requirements and Impacts by Staff
- Positive Recognition
EMS 10 Elements

➢ Environmental Policy Statement
➢ Environmental Aspects and Impacts
➢ Legal and Other Requirements
➢ Objectives and Targets
➢ Action Plan
➢ Identify Roles and Responsibilities
➢ Communication/Training/Awareness
➢ Monitoring and Measurement
➢ Audit/Assessment
➢ Reevaluation and Modification
Iowa Solid Waste EMS Framework

PLANNING

6 Plan Components
- Organics Management
- Hazardous Household Materials Collection
  - Water Quality Improvement
  - Greenhouse Gas Reduction
  - Recycling Services
  - Environmental Education

IMPLEMENTATION AND OPERATION

CHECKING

- Environmental Policy Statement
- Environmental Impacts
- Objectives & Targets
- Legal & Other Requirements

Action Plan
- Identify Roles & Responsibilities
- Communication, Training & Awareness
- Monitoring & Measurement

Assessment
- Reevaluation and Modification
Solid Waste EMS Program Details
EMS Participants 2019-2020
Solid Waste EMS Tiered Structure

- **Tier 1 EMS**
  - For new participants
  - Training and EMS development phase
  - EMS designation, with some modification

- **Tier 2 EMS**
  - Participants after 2\textsuperscript{nd} year (typically)
  - EMS implementation phase
  - Full EMS designation
EMS Program Overview of Roles

- Guidelines from rule 567-IAC 111, and 10 EMS Elements

- **Role of DNR & EPC**
  - Oversight of Program Implementation
  - Provides Assistance and Program Oversight
  - Evaluates Overall EMS Implementation

- **Role of Participants**
  - Successfully Complete EMS Implementation
  - Share Ideas, Networking, Success Stories

- **Role of Gresham Smith**
  - Assistance, Coaching, Example Documents
  - Troubleshooting and Guidance
EMS Program Annual Milestones

- Annual Report (due Sept. 1st)
- Grant Applications
  - Round 1 (Fall)
  - Round 2 (Spring)
- Events
  - Fall EMS Conference (November)
  - Summer EMS Workshop (July)
Continuous Improvement for EMS Program

- Periodic updates to EMS training and tools
- Updated rule in 2016
- Hosted EMS Program Improvement in 2019
- Streamlined Annual Report submittal process
- Improved Objectives and Targets guidelines
- Revised Grant Application process
Goal

Successfully Implement an Environmental Management System (EMS)
“Successful Implementation”

- 10 Elements of the EMS are in Place and Functioning
  - Perfection is Not Expected!
  - Process of Continual Improvement is Implemented

- EMS is Providing Real and Measurable Environmental Improvements
  - With a Focus on the Six Plan Components

- Organics Management
- Hazardous Household Materials Collection
- Water Quality Improvement
- Greenhouse Gas Reduction
- Recycling Services
- Environmental Education
New EMS Participants Plan

- DNR and Gresham Smith Will Coach Participants to Implement the 10 Elements of an EMS
  - Balance On-site and Web-based Training
- Components of the Plan
  - Kickoff Meeting
  - Webinar Trainings
  - On-Site Meetings
  - Annual Conferences (November)
  - Auditor Training
  - Monthly Conference Calls
  - Many Examples and Templates
  - Mentoring from Other Participant
Iowa EMS Elements In Detail
What is an EMS?

**Identify Risks**
- Identify and rank environmental risks

**Develop Controls**
- Implement methods to minimize and control risks

**Establish systems**
- Policy, training, communication, documentation

**Assess and update**
- Review data, audits, change, continuous improvement
Environmental Policy

- Statement of organization’s commitment to the environment
- Based on mission/vision
- Provides a framework for action
- Documented and approved by management
- Used to educate staff and the public
IOWA CITY LANDFILL AND RECYCLING CENTER
ENVIRONMENTAL POLICY STATEMENT

The Iowa City Landfill and Recycling Center is committed to providing the essential services necessary for the health, safety, and welfare of our employees, customers, and community in a manner that respects the environment and promotes sustainable measures.

Our objectives include:

- **Regulatory Compliance**: We will continually strive to meet all relevant environmental laws and regulations.

- **Education**: We will continue to build on and expand our educational opportunities in the community.

- **Sustainability**: We will take measures to reduce the environmental impact of our operational activities; maintaining responsible environmental, economic and social practices through environmental management and education.

- **Pollution Control**: We will minimize the effect our operations have on pollution of the environment.

- **Evaluation**: We will establish, measure and report objectives and targets annually.

- **Commitment**: We will remain committed to establishing environmentally friendly practices and to enhancing our existing facilities and operations in a sustainable manner.

- **Training**: We will train employees on environmental policies, rules and goals set forth in the EMS. We will communicate with and listen to the ideas and input of our staff to create an environment where respect and open dialogue between staff members is promoted and appreciated.
Regional Environmental Improvement Commission (REIC) of Iowa County Environmental Policy

The Regional Environmental Improvement Commission (REIC) of Iowa County is committed to improving solid waste management and environmental stewardship in the REIC service area. Our commitment will be demonstrated through regulatory compliance and continual improvement that is guided by an Environmental Management System (EMS). REIC’s EMS provides a framework for pursuing environmental objectives and targets for its operations, services, and programs. REIC’s EMS will be maintained by the Core Team, and progress will be measured and reported annually.

This environmental policy is approved by the Regional Environmental Improvement Commission (REIC) of Iowa County. All future edits to this policy must be reviewed and approved by the Commission.

John Gahrng, REIC Chairperson

Date: 7-16-2018
Environmental Aspects and Impacts

- Identifies activities and services (i.e., aspects) that have an impact on the environment
- Evaluates causes (aspects) and effects (impacts)
- Helps an organization prioritize causes and effects
- Highest priorities are “significant”
- Goals are set around significant aspects and impacts
- Intended to improve environmental outcomes
Environmental Aspects and Impacts Exercise

- Scenario 1—Add RCC for HHM collection
- Scenario 2—Stop accepting brush and limbs at landfill because City opened a composting facility
- Scenario 3—Begin a shingle recycling program
- Scenario 4—Construct a leachate recycling system

How do these changes affect your aspects and impacts? Do you need to add a new aspect? Does your scoring change?
Environmental Aspects and Impacts Exercise

Debrief
Legal and Other Requirements

- Identification of regulatory (EHS) requirements
- Identification of voluntary requirements
- Process for tracking, reviewing, and updating requirements
- Provides clarity and responsibility
- Assists with transitions

Note: DNR has an example list as a starting point
Objectives and Targets and Action Plans

- Established goals to reduce/increase environmental outcomes
- Relevant to the policy and significant aspects and impacts
- All six plan components must be addressed
- Need to be “S.M.A.R.T.”
- Action plans serve as the roadmaps
Definitions

- Objective = overall goal, environmental change
- Target = measurable performance (amount, deadline, etc.)
- Metric = unit of measure

Note: Refer to Objectives/Targets/Metrics Checklist
Objectives—Best Practices

- Tied to 6 Plan Component Areas
- Intended environmental change, desired future state
- Includes action verbs
- Does not include target or metric
Objectives and Targets - Examples

- **Objective => Improved disposal of HHM in the service area**
  - Target => Increase HHM collection by 5% in CY2020 compared to CY2019
  - Metric => Tons of HHM

- **Objective => Decrease environmental impacts from landfill GHG emissions**
  - Target => Reduce GHG emissions by 7% in FY19-20 compared to FY18-19
  - Metric => Tons of CO2e
Objectives and Targets and Action Plans Exercise

- Scenario 1—Add RCC for HHM collection
- Scenario 2—Stop accepting brush and limbs at landfill because City opened a composting facility
- Scenario 3—Begin a shingle recycling program
- Scenario 4—Construct a leachate recycling system

Develop an objective and target for the scenario. What is your target quantity and deadline? How will you measure success?
Objectives and Targets and Action Plans Exercise

Debrief
Monitoring and Measurement

- Identifies key metrics
- Evaluates progress on goals
- Helps demonstrate success of the EMS
- Helps identify struggles/challenges
- Must be tracked and documented

“You can't manage what you can't measure.”
-Peter Drucker
Roles and Responsibilities

- Identifies individuals responsible for developing, implementing, and managing the EMS
- Must be documented and communicated
- Provides clarity
- Assists with transitions
Communication/Training/Awareness

- Helps create buy-in
- All methods (e.g., face-to-face meetings, emails, newsletters, phone calls, posters, etc.) are welcome and, typically, necessary
- Covers both internal and external communication
Printed Media

SCISWA’s Environmental Management System

I — Involving everybody in setting, understanding and achieving EMS goals
C — Committing ourselves to environmental protection and workplace safety
A — Acknowledging successes and ongoing challenges
N — Non stop, all day, every day

I CAN Make a Difference!

REGULATORY COMPLIANCE
EDUCATION
SUSTAINABILITY
POLLUTION CONTROL
EVALUATION
COMMITMENT
TRAINING
Continuous Improvement

Through the use of our EMS, we will seek out ways to continually improve our environmental performance.

Learn more about our Environmental Health & Safety Policy and Environmental Management System at www.wastecom.com/ems
Elements of DMASWA’S

Environmental Management System

P  Pollution Prevention: Policy/Impacts

R  Regulation Compliance: Legal/Resources/Needs

I  Improvement: Action Plan/Training/Objectives & Targets

D  Developing: Communication/Awareness

E  Evaluation: Assessments/Reevaluate/Modify/Monitor & Measure
Internal Newsletter

Waste Words

Building Industry Pride Through Understanding

This issue
- New Transfer Trailer Wraps P.2
- MPE Gets a Leachate Evaporator P.2
- EMS Internal Audit P.2
- New Employee Highlights P.2
- EMS Continuous Employee Rewards P.3
- Public Landfill Tours P.3
- Celebrations, Calendar, Tonnage P.4

ELC Expands Summer Learning Camps -- by Carla Rivas

Metro Waste Authority hosted two week-long summer camps at the Environmental Learning Center (ELC) where students and teachers traded their classrooms for the outdoors to study field ecology. Drake University’s Dr. Keith Summerville led participants through a series of lessons from testing Camp Creek’s water quality to identifying native plant and animal species indigenous to the Learning Center.

This year (the fourth summer for students), participation expanded beyond Southeast Polk and Prairie City-Monroe school districts to include students from the “I Have a Dream” Foundation. The foundation works with local organizations to provide opportunities for students to excel both academically and socially. Students can look forward to four more weeks of nature-inspired learning experiences.
Bulletin Boards
Environmental Policy

The Department of Sanitary Sewer Services’ mission is to protect public health, contribute to a high standard of living, and provide a high level of consumer confidence. The Department is committed to quality service and fiscal responsibility. DSSS is committed to protecting the environment, and provisioning the collection, conveyance, and treatment of wastewater on behalf of customers in the sewer district. This environmental policy forms the foundation of the Department’s environmental stewardship commitment.

To minimize environmental impacts DSSS shall:

- Comply with laws, regulations, and other requirements to which DSSS subscribes, which relate to its environmental aspects;
- Prevent pollution through the identification and implementation of best management practices;
- Continuously work to conserve resources through waste prevention, reduction, reuse, and recycling;
- Provide employees the resources required to practice environmental stewardship in their daily roles, and heighten their awareness of environmental issues through the communication of this policy, training and written guidance on management and work practices;
- Continuously improve environmental performance through proactive environmental management and routine assessment of our performance; and
- Provide a framework to utilize an environmental management system for operations.
Websites

https://www.ottumwarecycles.com

We want to hear from you

ASK JANICE

Do you have a question?
We are here to help you!

Ask Janice
Social Media

Technology needs recycling too! We're constantly upgrading or replacing to the next best thing, or the newest and latest. But what happens to the old tech? We recycle.

Cost of recycling any size monitors, TVs, or laptop is $10.00 per item from either businesses or residents. Printers, fax machines, stereo equipment, VCR's, hard drives, copiers, keyboards, mouse and the cables are free.

Plastic bags are plastic so they must be recyclable, right? They are, but not at the curb because they'll damage recycling equipment. Return them to retail stores.

South Central Iowa Solid Waste Agency added an event.

Grinnell Household Hazardous Waste Collection

Drop Off Your Household Hazardous Waste!

Anyone else have that Monday feeling? — Jerry Nordstrom

Image: squirrel sprawled out on a tree branch
Her perfect summer job: Keeping tabs on Mount Trashmore

Dick Hakes, Taking Liberties  Published 5:48 p.m. CT June 14, 2019

Friends were shocked when Emma Nelson of Iowa City told them her summer job.

As a student of environment-related projects, Emma Nelson’s summer internship at Mount Trashmore in Cedar Rapids is a good fit. (Photo: Dick Hakes/Special to the Press-Citizen)

She would be processing visitors to Mount Trashmore, the massive 60-acre, 140-foot-tall pile of refuse just south of downtown Cedar Rapids.

“She’s the perfect intern for me,” Nelson told me last Saturday as she checked in a large bag of trash.

Curbside collection of compostable waste in Iowa City may be delayed

POSTED ON MAY 29, 2019 BY PAUL BRENNA

New carts for organic waste in Iowa City — photo courtesy of the City of Iowa City

Curbside collection of compostable waste in Iowa City is running behind schedule this week, due to the Memorial Day holiday and “high usage of yard waste and organic carts by curbside customers,” the Iowa City Division of Resource Management said in a press release on Wednesday. The city is asking customers to leave their yellow-lid organic waste carts at the curb until crews empty it.

Collection may occur one or two days after the normally scheduled day.
Logos
Communication/ Training / Awareness Exercise

Develop a communication initiative for your organization.

What are the important messages / key content?
What media or method(s) would be most effective?
What kind of timeline is needed?
Does this seem reasonable for your organization’s budget?

Note: consider the target audience(s) and their needs.
Communication/ Training / Awareness Exercise

- Identify Audiences
- Identify Tools and Formats by Audience
- Identify Process for Receiving and Responding to Inquiries
- Launch Communication
- Follow-up with Inquiry/Communication
Communication/ Training / Awareness Exercise

Debrief
Audit/Assessment

- This is an “Internal” audit
- Process for proactively identifying strengths and weakness of the entire EMS
- Conducted to determine conformance with the EMS
- Involves interviews, paperwork reviews, and site observations
- Focuses on identifying root causes and corrective actions
- Helps drive continual improvement
Reevaluation and Modification

- Involves examining the entire EMS
- Typically done during a management review
- Includes a discussion of improvements and needs
- Includes changes being made to EMS based on the examination and management feedback
Best Practices

- Management support
- Staff involvement
- Communication
- Setting aside routine time to implement
- Incorporate into regular tasks
- Continual improvement
- Look for DNR and peer support
Annual Programmatic Milestones

- Grant applications
- New participant applications
- Annual report submittal
- Fall Conference
- Auditor Training
- Other periodic Trainings/Workshops
- External audits
Annual Participant Tasks

- Develop objectives and targets
- Monitor and measure progress
- Conduct periodic EMS Core Team meetings
- Review procedures and update
- Perform internal audit
- Review system with management, make modifications
- Host external audit by DNR
- Prepare and submit Annual Report
Challenges faced by participants

- Integration into regular operations
- Individuals have a lot of different responsibilities
- Limited resources (staff and budget)
- Staff buy-in
- Need for documentation
- New terminology
- Change is hard
EMS Success Stories!
Iowa City - Yard Waste/Organics

Exceeded target – 29% increase!
Rathbun Area- Wood Waste Recycling

277 tons diverted in 2 years
South Central Iowa - Greenhouse Gas Emissions

Energy efficient lighting & heating improvements

Cut GHG emissions by 31 tons/year
Great River Regional Waste Authority - Water Quality

77% was recycled!

Over 40 tons of trash were removed