

Integrated Solid Waste Management in Iowa 1987-2009

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Overview

- Enabling Legislation
- Funding
- Integrated Solid Waste Management Infrastructure & Programs
- State Waste Reduction and Recycling Goals
 - Status
 - Metrics
 - Issues
- Emerging Issues and Current Challenges
- Current Statewide Initiatives

1987 Groundwater Protection Act

- State Policy
 - Reduced reliance on land disposal
 - Waste management hierarchy established
- Landfill requirements
 - Closure/post-closure requirements
 - Leachate collection systems required
 - Financial assurance
- State solid waste tonnage fee revised from \$.50/ton to \$4.25/ton
 - Used to establish Solid Waste Account & related programs
- Household Hazardous Materials program created

1989 Waste Reduction & Recycling Act

- Established state waste reduction & recycling goals
- Local governments responsible for establishing comprehensive waste reduction programs
- Landfills must file solid waste comprehensive plans in conjunction with local governments using facility
 - established planning area boundary concept
- Plans detail programs designed to meet goals
- Established landfill bans (yard waste, waste oil, lead-acid batteries, whole waste tires, deposit beverage containers)

State Reduction Goals

- Solid waste landfilled in 1988 used as baseline
- Reduce
 - 25% by July 1, 1994
 - 50% by July 1, 2000
- Through source reduction and recycling practices
- Solid waste includes residential, commercial, industrial, construction/demolition
- Materials being diverted from landfilling prior to 1988 not counted
 - i.e., container deposit material, scrap metal/vehicles

1994 Senate File 2300

- Consequences for attaining / failing to attain 25% goal
- Incentive for attaining 50% goal
- Tonnage fee is the incentive/disincentive tool

Tonnage Fee Distribution

Fees remitted to DNR are placed in the solid waste account of the Groundwater Protection Fund

- 74¢ DNR Operations, including
 - \$8,000 - Dept. of Health Transfer
 - Solid Waste Permitting
 - Legal Services
 - Solid Waste Comprehensive Planning
 - Solid waste activities at Field Offices
- 25¢ Iowa Waste Reduction Center (IWRC)
- 10¢ Iowa Waste Exchange; includes \$30,000 to IWRC for technical support
- 5¢ Regional Collection Centers (RCC) - establishment
- 15¢ RCC Operation Support - reimbursement for disposal costs
- 13¢ Toxic Clean-up Days & Geographic Information Systems (GIS)
- 5¢ Dept. of Economic Development Transfer (Recycle Iowa Office)
- 8¢ Waste Reduction and Assistance Program
- TOTAL \$1.55 / ton

Tonnage Fee Distribution

- **Remainder of the remitted fee is used for:**
 - \$50,000 for Special Waste Authorization Program
 - \$165,000 Iowa Waste Exchange
 - Solid Waste Alternatives Program (SWAP)
 - Originally \$1.75 / Ton
 - Currently Averages \$.80 / Ton
- **Other Funding Sources**
 - Household Hazardous Waste Retailer Permit Fees
 - Penalties collected from subset of AG referrals
 - US EPA grants
 - NO GENERAL FUNDS

FY 2008 Tonnage Fee Totals

- Base tonnage fee = \$4.25/ton
- Total collected at landfills = \$9,873,245
 - Average \$3.86/ton
- Total remitted to DNR = \$6,027,640
 - Average \$2.35/ton
 - \$.74/ton for solid waste administration = \$1,894,626
- Total retained by local solid waste agencies = \$3,845,605
 - Average \$1.51/ton

Integrated Solid Waste Management Infrastructure

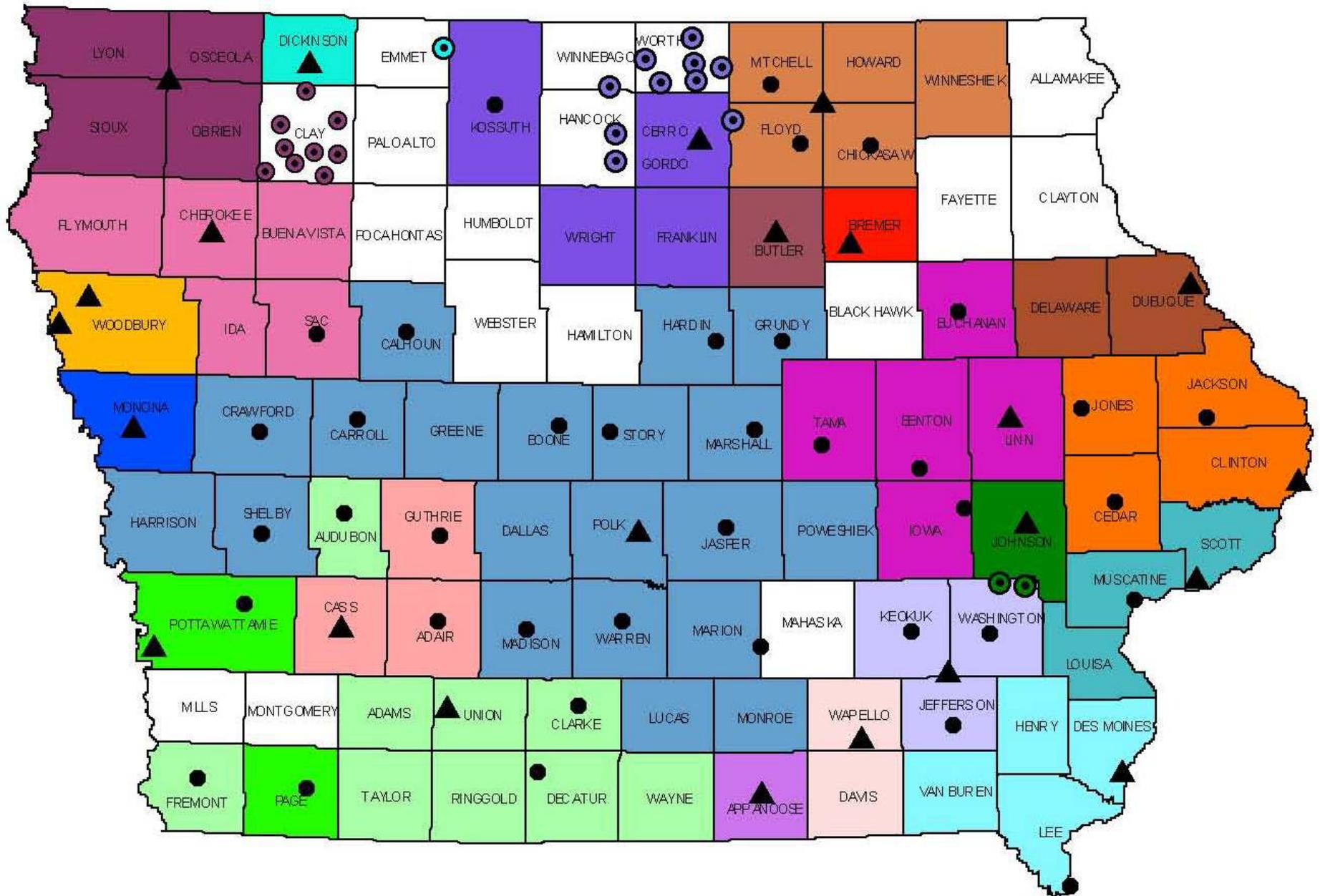
- Currently about 435 permitted solid waste facilities & operations
- 70 permitted operating sanitary landfills
 - 45 MSW (41 PUBLIC, 4 PRIVATE)
 - 20 mono-fills (13 CCR, 4 C&D, 3 foundry sand)
 - 5 industrial (single generators)
- 78 closed landfills
- 37 solid waste transfer stations
- 19 Citizen Convenience Centers
- 23 Regional Collection Centers for HHMs

Integrated Solid Waste Management Infrastructure

- 65 Appliance Demanufacturing Sites
- 60 Cathode Ray Tubes (CRT) Collection Sites & 4 Recycling Facilities
- 6 Composting operations
- 3 Material Recovery Facilities
- 5 Waste Tire Processing and Storage Sites
- 38 Land Application Permits (cover 700 sites)
- Non-permitted but regulated activities
 - Yard waste and animal mortality compost sites
 - Beneficial Use Determinations

Success in Residential Sector

- Residential recycling efforts
 - Goal Progress increased 28% to 36% from '94 to '00
 - Number of municipal curbside recycling programs increased from 240 to 608 during same time
 - Currently 636 municipalities with curbside and additional 793 drop-off recycling sites
- Regional Collection Center (RCC) Network
 - 23 Household Hazardous Materials RCCs Established
 - Mobile capabilities and satellite locations
 - Serve 89 of state's 99 counties
 - CESQG Businesses can also use



State's Landfill Diversion Progress

- 45 SW Comprehensive Planning Areas
 - 23 planning areas met or exceeded 25% goal
 - 1 has exceeded 50% goal
 - 22 have not attained 25% goal
- State currently at 28.7% (compilation of planning areas' FY 2007 data)
- Status at 25% and 50% Goal Dates
 - 7/1/94 = 28%
 - 7/1/2000 = 36%

What Do the Numbers Mean?

- FY07 = 28.7% diversion rate
 - 2.787 million tons actually landfilled in FY07
 - FY07 solid waste generation estimated @ 3.91 million tons
 - 28.7% or 1.12 million tons estimated diverted from landfilling in FY07 via source reduction, reuse & recycling
- FY94 = 28% diversion rate
 - Actual amount landfilled since 1994 increased 23% (+514,000 tons)
 - Estimated solid waste generation since 1994 increased 24% (+753,000 tons)
 - Estimated tonnage diverted from landfilling since 1994 increased 27% (+236,000 tons)

State's Waste Diversion

Methodology:

Is It Time for a New Metric(s)?

- Challenges with current methodology
 - 1988 baseline
 - Less than 15% of the landfills had scales
 - Compares a current year landfill amount to a baseline (solid waste generation) adjusted for changes in:
 - ① POPULATION
 - ② EMPLOYMENT (place of work)
 - ③ RETAIL SALES TAX
 - “Unaccounted” (direct hauled) waste to out-of-state landfills

State's Waste Diversion Methodology: Is It Time for a New Metric(s)?

- Toxicity Reduction – lack of credit
- Anti-illegal dumping / burning bans “penalize” planning areas
- 50% goal “ceiling”
- Diversion vs. low value uses
 - When is it disposal? When not?
- “No landfill ever closed because it was too heavy!”
- Is landfill diversion **the** proper measure for assessing success of **integrated** waste management systems?

Current Challenges

- 70% from Commercial, Industrial & Institutional Sectors
- 2005 Waste Characterization Study Results
 - 18% of materials being landfilled are:
 - Corrugated Cardboard (6.7%)
 - Mixed paper (6%)
 - Plastic film/wrap/bags (5.2%)
 - Organics comprise 20.3% of landfilled materials
 - Food waste (8.5%)
 - Compostable paper (5.2%)
 - Wood (6.6%)
 - C & D wastes = 515,646 tons or 19% of landfill total



Current Challenges

- Emerging Toxic & “Problem” Product Wastes
 - Mercury containing devices, pharmaceuticals, electronics, etc.
- Managing industrial byproducts
 - Coal combustion waste
 - Foundry sand
 - Construction and demolition waste
- Funding for State and Local Programs
 - Both driven by disposal fees
- No major changes to enabling legislation since 1994
- Is landfill diversion metric still relevant?



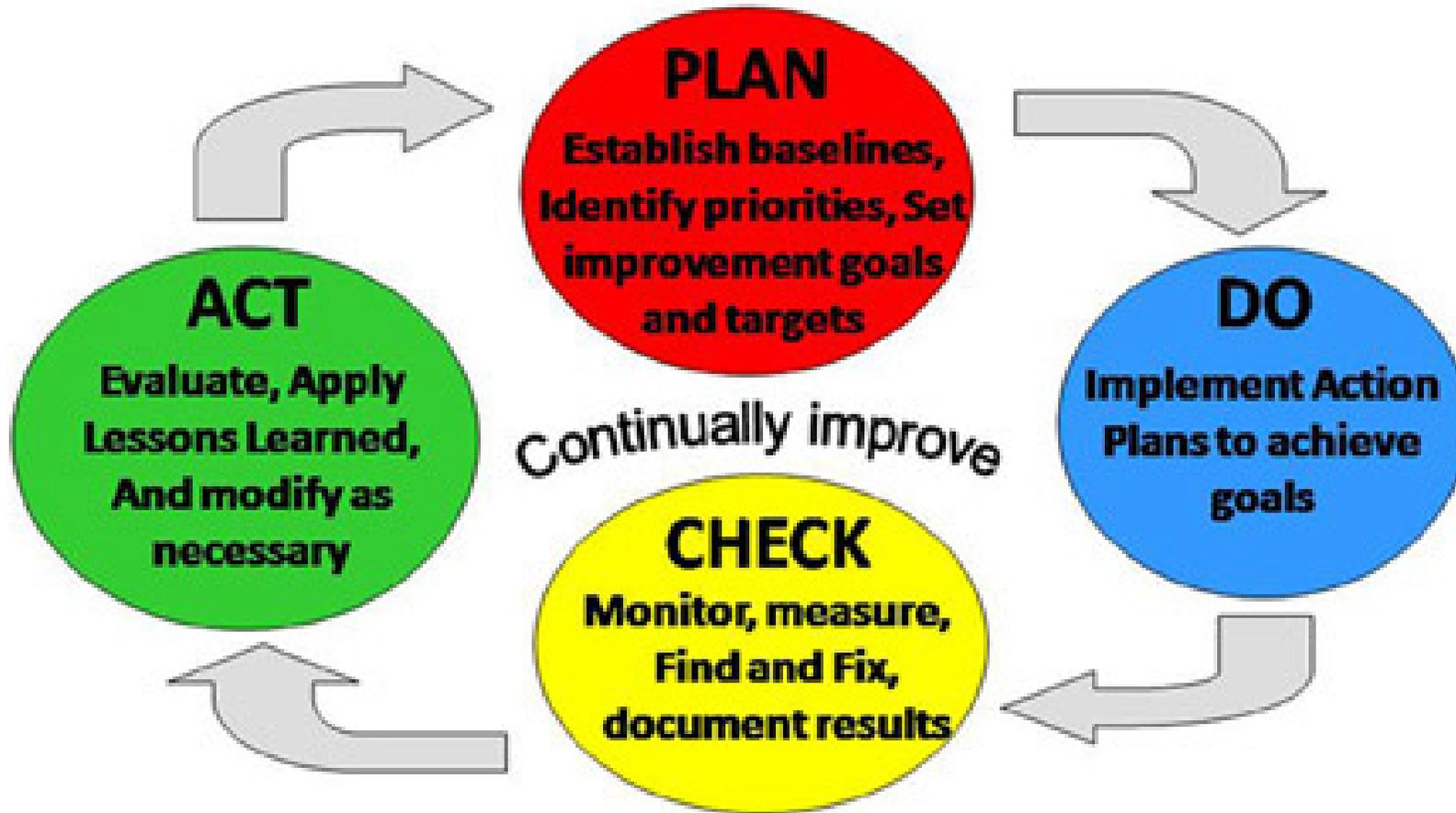
Current Initiatives

- House File 2570, 2008 Session
 - Creates a pilot and ongoing Solid Waste Environmental Management Systems' Program
- House File 826, 2009 Session
 - Establishes Comprehensive Recycling Planning Task Force

What is an Environmental Management System (EMS)?

- An EMS is appropriate for all kinds of organizations of varying sizes in both the public and private sectors
- An EMS consists of
 - Set of management processes and procedures
 - Allows an organization to analyze, control and reduce the environmental impacts
 - Of its manufacturing processes, activities, products and services
- Continuous Improvement Cycle

CONTINUOUS IMPROVEMENT



Solid Waste EMS

- HF 2570, 2008 Session
- 9 member Advisory Council makes recommendations on
 - Selecting up to 6 planning areas to participate in pilot
 - Review participants annual reports for compliance
 - Each year after pilot period recommends EMS designation for additional planning areas
 - Allocation of dedicated Solid Waste Alternatives Program (SWAP) funding
 - Advisory Council recommendations subject to Environmental Protection Commission's approval
 - DNR to develop rules on criteria for determining if a "system" meets provisions of legislation

House File 2570 EMS Elements

- Develop objectives, targets, an action plan and measurements for each of the following “plan components”
 - Yard Waste Management
 - Hazardous Household Materials
 - Water Quality Improvement
 - Greenhouse Gas Reduction
 - Recycling
 - Environmental Education

Comprehensive Recycling Planning Task Force

- 31 voting members appointed by Governor
- 4 non-voting legislative members
 - Sen. Dennis Black
 - Sen. Merlin Bartz
 - Rep. Chris Hagenow
 - Rep. Donovan Olson
- By 1/1/10 submit report to GA with “recommendations for creating and enhancing comprehensive sustainable recycling programs”

QUESTIONS?

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