

Iowa Air Quality Program Overview

Air Quality Objectives
Environmental Services
Funding and Activities
Air Quality in Iowa
New Federal Ambient Air Quality Standards
Challenges

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Air Quality Protections

National Ambient Air Quality Standards – set limits on the amount of pollution that can be in the outdoor air. Standards are set to protect the public health with an adequate margin of safety.

- Particle matter (PM₁₀ & PM_{2.5}), Ozone, Nitrogen Dioxide, Sulfur Dioxide, Carbon Monoxide, Lead
- Attainment = the area meets all National Ambient Air Quality Standards
- Nonattainment = the area is failing to meet all National Ambient Air Quality Standards

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Nonattainment with National Ambient Air Quality Standards

- Economic Consequences of Nonattainment:
 - Strict permitting: Lowest Achievable Emission Rate (LAER)
 - Emissions offsets for increases in emissions
 - Transportation planning emissions budget
 - Costly emissions reduction plans
 - Increased public health & government costs
- Health Consequences
 - Higher rates of respiratory illness
 - Higher hospitalization rates for asthma, heart attacks
 - Targets certain human organ systems dependent on pollutant

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Environmental Services

- Pre-Construction Permitting & Modeling Impact,
- Prevention of Significant Deterioration Permitting,
- Operating Permit Issuance,
- Stack Testing Observation & Regulatory Assistance,
- Emissions Inventory,
- Ambient Monitoring,
- Compliance Assistance & Enforcement, and
- Core Program Activities - Planning, Small Business Assistance, Public and Regulated Industry Education and Training, Regional Pollution Assessment, Attainment and Nonattainment Plan development & Greenhouse Gas Activities

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By the Numbers

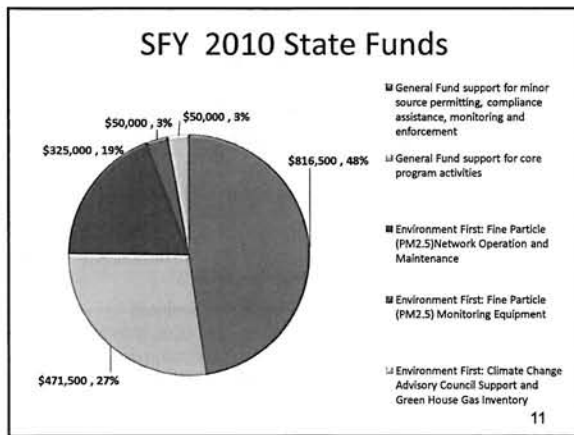
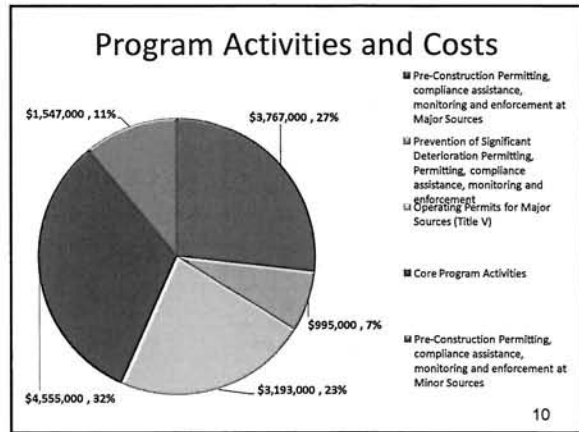
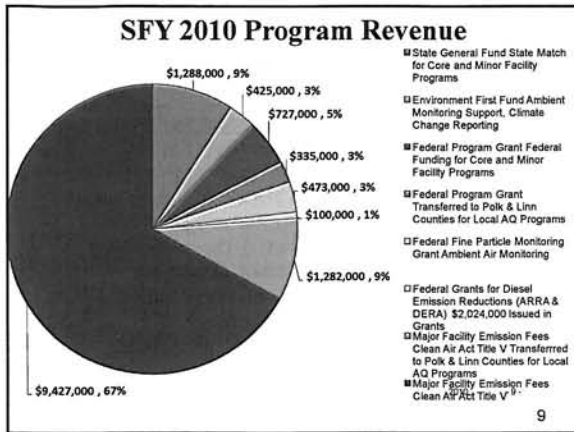
- Issue ~ 1,800 standard permits are issued per year.
 - ✓ Most standard permits are issued in less than 30 days.
- Issue ~ 300 complex permits are issued per year.
 - ✓ Most complex permits are issued in less than 7 months.
- Review or conduct dispersion modeling on ~170 projects.
- Issue ~ 50 Title V Operating permits per year, and 30 major modifications.
- Review ~2500 renovation or demolition project notices involving asbestos.
- Conduct ~150 asbestos project inspections per year.
- Inspect ~150 Major Stationary Sources per year.
- Inspect ~ 100 Minor Stationary Sources per year and/or investigate +200 open burning complaints per year.
- Observe and provide regulatory support for ~ 300 emission tests per year.
- Monitor air pollutants at 36 sites across the state.

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Major and Minor Sources of Air Pollution

- **Major Stationary Source of Air Pollution** –
 - Emits more than 100 tons of any of the following pollutants: Particulate Matter, Ozone, Nitrogen Dioxide, Sulfur Dioxide, Carbon Monoxide, or Lead, or
 - Emits more than 10 tons of a single Hazardous Air Pollutant or 25 tons of any combination of Hazardous Air Pollutants.
- **Minor Stationary Source of Air Pollution** –
 - Emits less than Major Stationary Source criteria.
- **Mobile Source** –
 - On-road and off-road vehicle emissions that are generated by the engine (or ratio) used to propel the vehicle.
- **Area Source** –
 - Sources that emit less than 10 tons annually of a single hazardous air pollutant or less than 25 tons annually of a combination of Hazardous Air Pollutants.
- **Fugitive Source** –
 - Sources of emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

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EPA's Schedule for Changes to the Ambient Air Quality Standards

Pollutant	Standard Final	Designations Effective	State Rules Due	Attainment Plan Due	Attainment Date
Fine Particles	Sep 2006	Oct 2009	May 2011	Oct 2010	Oct 2014
Lead	Oct 2008	Nov 2010	Oct 2011	May 2012	Nov 2015
Sulfur Dioxide	Jun 2010	Jun 2012	Jun 2013	Jan 2014	Jul 2017
Ozone	Aug 2010	Aug 2011	Aug 2013	Dec 2013	Aug 2016
Nitrogen Dioxide	Jan 2010	Feb 2011	Jan 2013	Aug 2015	Feb 2017
Fine Particles-New	Oct 2011	Nov 2013	Nov 2014	Nov 2016	Nov 2018

New Ozone (Smog) Standard (cont)

- Ozone is formed when Nitrogen Oxides and Volatile Organic Compounds combine in the presence of UV radiation and heat.
- Primary Ozone Standard: Proposed 8-hour value in range from 0.060-0.070 ppm
 - Average of fourth highest values over 3-yr period
- Secondary Ozone Standard: Proposed cumulative, seasonal value within range of 7-15 ppm-hours.
 - Designed to protect sensitive vegetation and ecosystems

