

THE INSIDE SCOOP ON THE AIR QUALITY BUDGET

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Iowa Department of Natural Resources
– Air Quality Bureau

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A decorative graphic at the bottom of the slide consisting of two horizontal bars. The left bar is olive green and the right bar is teal, both extending across the width of the slide.

What we will cover



- Overview of services we provide
- Paying for the services
- Where does the money come from?
- Budgetary challenges
- Frequently Asked Questions
- Planning for upcoming Title V fees and State funds
- Future trends

Mission

- **Environmental Services Division Mission:**
 - To protect:
 - Iowa's environment, and
 - human health and public welfare,
 - In cooperation with:
 - individuals, communities, and organizations,
 - By regulating:
 - environmental contaminant releases,
 - managing risk, and
 - promoting sustainable practices.

Air Quality Goal

- **Air Quality Goal:**
 - To assure lowans have clean air to breathe.
- **Action steps:**
 - Planning
 - Predicting
 - Permitting
 - Measuring
 - Enforcing
 - Monitoring
- **Metric:**
 - No source of air emissions causes or contributes to a violation of standards established under state or federal law.

Basic Services



- Construction Permitting & Modeling
- Operating Permit Program
- Stack Testing Observation
- Emissions Inventory
- Ambient Monitoring
- Compliance Assistance & Enforcement
- Planning, Small Business Assistance, & Greenhouse Gas Activities

Construction Permitting

- Purpose: Review designs and performance objectives for sources of air contaminants **prior to construction** to determine their likely compliance with state and federal requirements.
 - Ensure the source will not cause or contribute to violations of air quality standards if operated under permit limits.
- SERVICES:
 - Determine permitting requirements and review applications for construction permits.
 - 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.

Dispersion Modeling

- Purpose: Predict ambient air concentrations of pollutants from new or modified emission sources. Modeling utilizes a wide range of recent meteorological conditions to predict potential violations.
- SERVICES:
 - Conduct modeling for minor sources and review modeling submitted by major sources for ~ 28% of construction permit projects are modeled.
 - Provide alternative ways of constructing facility to show compliance.
 - Provide 10 meteorological data sets for industry & consultants

Construction Permitting & Modeling cont.

- SERVICES:
 - Provide permitting information to new facilities locating to IA.
 - Sponsor a toll free helpline for permitting.
 - 1-877-AIR IOWA
 - Meet on-site to understand permit needs.
 - Provide outreach to general public and communities.
 - Ensure public access to construction permits on the DNR's website.

Operating Permit Program

- Purpose: Ensure compliance with the Clean Air Act, DNR administrative rules, and to enhance enforcement.
 - Combines all applicable air quality requirements into one document.
 - Specifies periodic monitoring, testing and reporting.
 - Funded through fee for tons emitted.

Operating Permits Program cont.

- SERVICES:
 - Issue permit renewals and modifications.
 - 40 renewal permits are issued on average per year
 - 75 permits are modified on average per year
 - Provide application and emission inventory assistance.
 - Meet on-site to understand permit needs.
 - Ensure public access to operating permits on the DNR's website.

Stack Testing Observation

- Purpose: Emissions testing measures the amount of a specific pollutant being emitted.
 - Accurate test data for:
 - Permitting
 - NAAQS impacts
 - Assess health risks from toxic air pollutants
 - Estimate annual emissions

Stack Testing Observation cont.

- SERVICES:
 - Provide on-site assistance for facility and contractor.
 - Ensure the tests will be acceptable for regulatory purposes
 - Confirm that the test is conducted properly
 - Ensure the process is running correctly
 - Approve on-site modifications to the testing procedures, if necessary
 - Answer questions from both the facility and the testing firm
 - Document the general quality of the test
- Observed 317 tests of 684 conducted in SFY 2009 (46%).

Emission Inventory

- Purpose: Tabulation of all of the sources of air pollutant emissions in a given area.
 - Used to:
 - Develop air quality control strategies on a local, regional, and national level.
 - Identify sectors of non-compliance.
 - Evaluate trends for various source sectors and pollutants.

Emission Inventory

- SERVICES:
 - Provide minor source inventory.
 - Inventory one-third of the state each year
 - 1,400 facilities over three years
 - Assist small businesses in completing inventories.
 - Coordinated with the Iowa Air Emissions Assistance Program at the Iowa Waste Reduction Center
- Conduct annual training workshops.

Emission Inventory cont.

- SERVICES:
 - Provide inventory assistance via phone.
 - Clarify information provided
 - Request additional information
 - Address emerging public health concerns.
 - Review facilities and communities identified in the USA Today article on air toxic emissions near schools

Ambient Monitoring

- Purpose: Verify that ambient air quality standards are met.
 - Encompasses the monitoring network, analysis, and quality assurance activities to ensure the quality of the data collected.
 - Utilizes the University of Iowa's Hygienic Laboratory
 - Includes monitoring data from Linn & Polk Counties

Ambient Monitoring cont.

- SERVICES:
 - Disseminate information to the public.
 - Analyze and publish data in quarterly and annual reports.
 - Provide real-time data on the Internet
 - Issue air pollution alerts
 - Provide monitoring background levels for modeling and PSD preconstruction needs.
 - Measure pollution transported into the State.
 - Respond to general inquiries, explaining federal ambient standards, and data requests.

Monitoring Locations

| City | Site | County | PM2.5 | PM10 | Ozone | CO | SO2/ SO4 | Toxics | NH3 | NO2/ NO3 | IMPROVE |
|----------------|------------------------------|--------------|-------|------|-------|----|-------------|--------|-----|-------------|---------|
| Buffalo | Linwood Mining | Scott | | X | | | | | | | |
| Cedar Rapids | Kirkwood College | Linn | | | X | | | | | | |
| | Scottish Rite Temple | Linn | | | | | X | | | | |
| | Army Reserve Center | Linn | X | X | | | | | | | |
| | Public Health | Linn | X | | X | X | X | X | | | |
| Clarion | Jannsen Farm | Wright | X | | | | | | | | |
| Clinton | Chancy Park | Clinton | X | | | | X | | | | |
| | Rainbow Park | Clinton | X | | X | | | | | | |
| Clive | Indian Hills Jr. High School | Polk | X | X | | | | | | | |
| Coggon | Coggon Elementary School | Linn | | | X | | | | | | |
| Council Bluffs | Franklin School | Pottowatamie | X | X | | | | | | | |
| Davenport | Jefferson School | Scott | X | X | X | X | X | X | X | X | |
| | Adams School | Scott | X | X | | | | | | | |
| | Black Hawk Foundry | Scott | X | X | | | | | | | |
| Des Moines | Polk County Health Dept | Polk | X | X | X | X | X | X | | X | |
| Emmetsburg | Iowa Lakes College | Palo Alto | X | X | X | | | | | | |
| Indianola | Lake Ahquabi | Warren | | | X | | | | | | |

Monitoring Locations

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|------------|-------------------------|-------------|-------|------|-------|----|-------------|--------|-----|-------------|---------|
| Iowa City | Hoover School | Johnson | X | X | | | | | | | |
| Keokuk | Fire Station | Lee | X | | | | | | | | |
| Mason City | Holcim | Cerro Gordo | | X | | | | | | | |
| | Washington School | Cerro Gordo | | X | | | | | | | |
| Muscatine | Garfield School | Muscatine | X | X | | | | | | | |
| | Greenwood Cemetery | Muscatine | X | | | | | | | | |
| | Franklin School | Muscatine | X | | | | | | | | |
| | Musser Park | Muscatine | | | | | X | | | | |
| Pisgah | Forestry Office | Harrison | | | X | | | | | | |
| | Highway Maintenance | Harrison | | | X | | | | | | |
| Sioux City | Bryant School | Woodbury | X | X | | | | | | | |
| Slater | City Hall | Story | | | X | | | | | | |
| Waterloo | Grout Museum | Black Hawk | X | X | | | | | | | |
| | Water Tower | Black Hawk | X | | | | | | | | |
| Waverly | Airport | Bremer | | X | | | | | | | |
| - | Backbone State Park | Delaware | | X | | | | | | | |
| - | Viking Lake State Park | Montgomery | X | X | X | | | | | | X |
| - | Scott County State Park | Scott | | | X | | | | | | |
| - | Lake Sugema State Park | Van Buren | X | X | X | | X | | | | X |

Compliance Assistance & Enforcement

- Purpose: Ensure compliance with permits and administrative rules through cooperative and voluntary means
 - Includes coordination with:
 - DNR Field Offices
 - Linn & Polk County Local Programs
 - US EPA

Compliance cont.

- SERVICES:
 - Inspect facilities, explain applicable requirements.
 - Assist with completion of compliance reports.
 - Title V, NESHAP, NSPS, etc.
 - Review and issue variance requests.
 - Provide outreach on new federal standards.
 - Area source NESHAPs
 - Visit facilities to develop compliance plans.
 - Respond to open burning, training fires, and fugitive dust complaints and questions.

Compliance cont: Asbestos

- Purpose: Prevent improper handling of asbestos in demolition & renovation projects.
- SERVICES:
 - Provide information via phone calls, on-site visits, or educational presentations.
 - Approve notifications for demolitions and asbestos removal
 - Conduct routine inspections
 - Investigate complaints
 - Statistics (Annual Averages)
 - Approve 2450 notifications (~10 each work day)
 - Conduct 145 inspections

Information at Your Request

- Technical data
- Copies of records
- Support for web-based permitting system
 - SPARS (State Permitting and Air Reporting System)
 - Industry and public use
 - Completion and submittal of construction and operating permit applications
 - Submit Title V and minor source emission inventories
 - Maintain a current list of equipment and site information
 - Track permit application status

Planning Activities

- SERVICES:
 - Implement federal regulations and state statutes.
 - Gather stakeholder input in advance of and during rulemaking process.
 - Establish workgroups to facilitate the most flexible implementation of rules.
 - Ex: NSR Reform Rules

Small Business Assistance

- Purpose: Provides free and confidential construction permits applications and emission inventory assistance, and on-site reviews.
 - Funded by Title V fees.
- SERVICES:
 - Provide an ombudsman, technical assistance and a compliance advisory panel.
 - Ombudsman housed at IDED
 - Technical assistance through the Iowa Waste Reduction Center – Iowa Air Emissions Assistance Program
 - Compliance advisory panel has not been fully appointed

Greenhouse Gas Activities

- Purpose: Implementation of federal and state requirements for greenhouse gases.
- SERVICES:
 - Quantify annual emissions in a report to Governor due each September.
 - Staff Iowa Climate Change Advisory Council (ICCAC) meetings.
 - Develop state climate change mitigation and adaptation policies.

Greenhouse Gas Activities cont.

- SERVICES:
 - Track and analyze federal climate change legislation.
 - Review proposed EPA rulemakings and determine how rulemakings will affect existing rules and programs:
 - Mandatory Reporting of Greenhouse gases (GHGs) final in September 2009
 - Endangerment Finding (proposed April 09)
 - Renewable Fuel Standard (proposed May 09)

Our Website: www.iowacleanair.com



Search

Tips

About the DNR

DNR News

Contact Us

Site Map

Common Links

- DNR Home
- Air Quality Home
- Air Quality News
- Animal Feeding Operations
- Current Air Quality
- Fine Particle Reduction
- Lead NAAQS
- Local Air Quality Programs
- Meetings and Workgroups
- Public Input
- Staff Directory
- Guidance/Forms/Links

Professional Site

- Air Quality Monitoring
- Area Source Toxics Standards
- Asbestos
- Compliance
- Construction Permits
- Greenhouse Gas Emissions
- Emissions Inventory
- Modeling
- Operating Permits
- PM2.5 Nonattainment
- Rules and Planning
- Small Business Assistance
- SPARS



Air Quality News

(Archive)

Emissions Increase in 2008 Greenhouse Gas Inventory

The Iowa Department of Natural Resources (DNR) has released its second annual greenhouse gas inventory to the Governor and General Assembly. Overall, greenhouse gas emissions increased from those emitted in 2007...

[READ ABOUT IT](#)

- Posted 9/17/09

REDUCE IOWA'S
DIESEL EXHAUST



NESHAP
New Air Toxic Standards

What's New?

Last Modified: 9-17-09

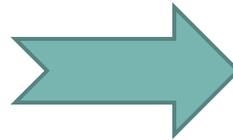
9/17/09

[A presentation on the air quality regulations and permitting requirements for generators has been posted](#)

Services vs. Expenses

Services

- Construction Permits
- Dispersion Modeling
- Operating Permits
- Stack Test Observations
- Emission Inventory
- Ambient Monitoring
- Compliance & Enforcement
- Planning
- Small Business Assistance
- Greenhouse Gas Activities



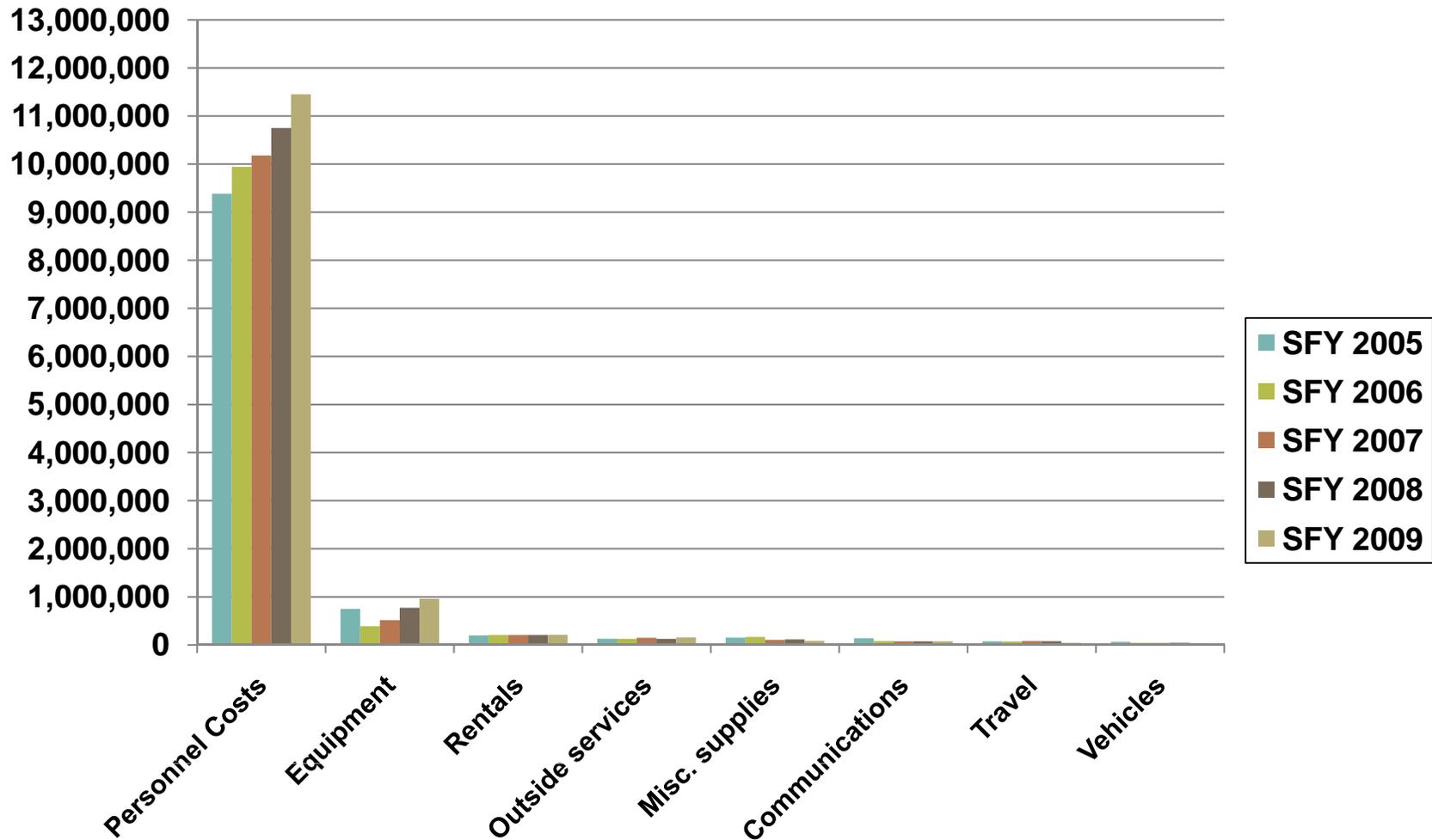
Expenses

- Personnel
- Equipment
- Rent
- Outside services
- Misc. supplies
- Communication
- Travel
- Vehicles

State Fiscal Year (SFY)

- State fiscal year = July 1 - June 30.
- Current state fiscal year is 2010
 - Expressed as SFY 2010
 - Started on July 1, 2009
 - Will end on June 30, 2010.

Five Years of Expenses: SFY 2005 - 2009



Paying for the Services

- It takes staff to provide air quality services.
- Personnel costs (salary + benefits) comprise 87 - 88% of the budget.
 - DNR staff
 - Permitting, compliance, monitoring, stack tests, emission inventory, planning, field services, legal activities, IT support
 - Contractual staff
 - University of Iowa Hygienic Lab, Linn & Polk Counties, Small Business Assistance
- Total for SFY 2010 = 128.35 FTE

Paying for the Services(Cont.)

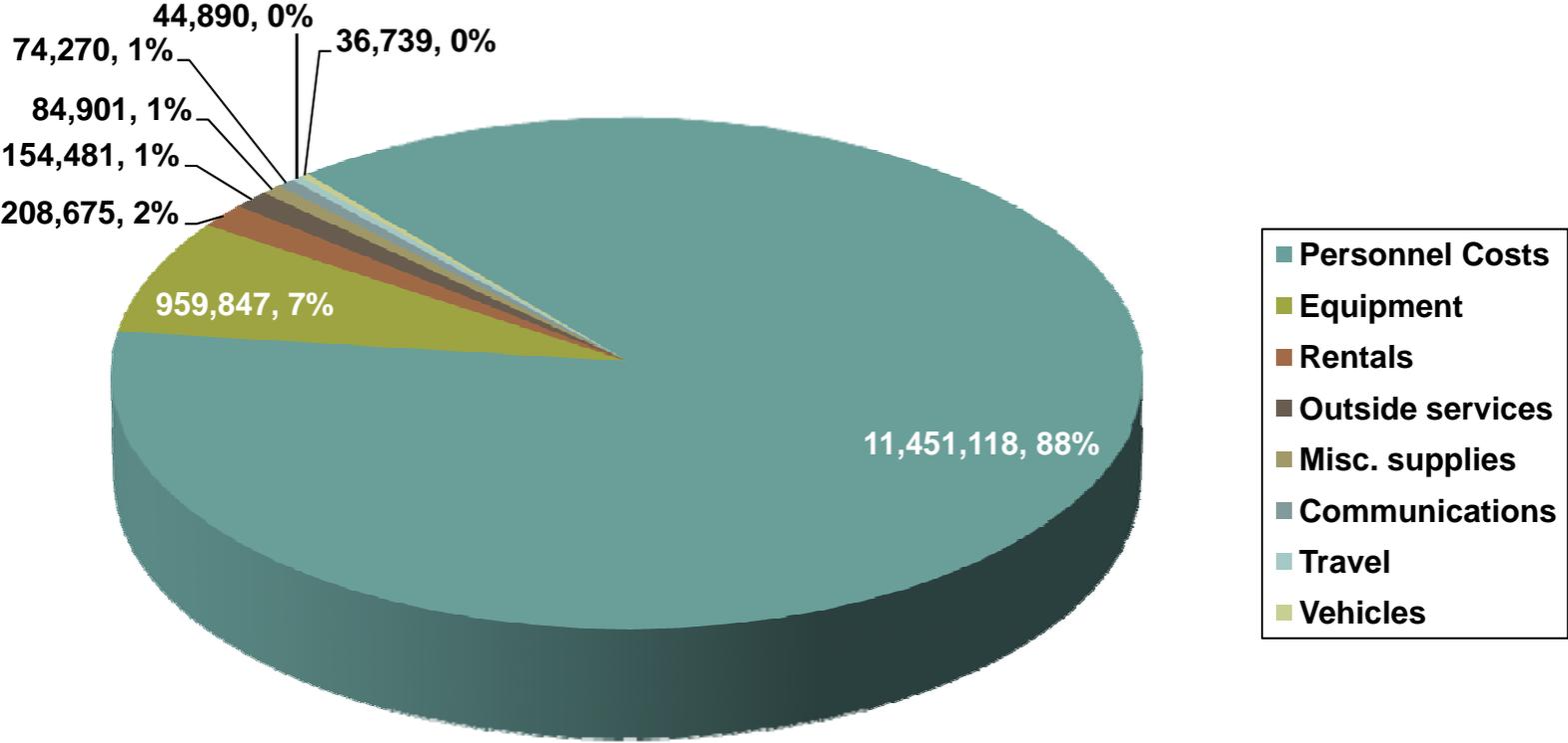
- Equipment (~7-8%)
 - Monitoring equipment, computers, printers, etc.
- Rentals (~1.7%)
 - Lease & utilities for 7900 Hickman, monitoring sites
- Miscellaneous Supplies(~1.5%)
 - Office supplies, uniforms, printing, training
- Outside services (~1.3%)
 - Monitoring filter samplers, electronic records
 - Interagency delivery

Paying for the Services(Cont.)

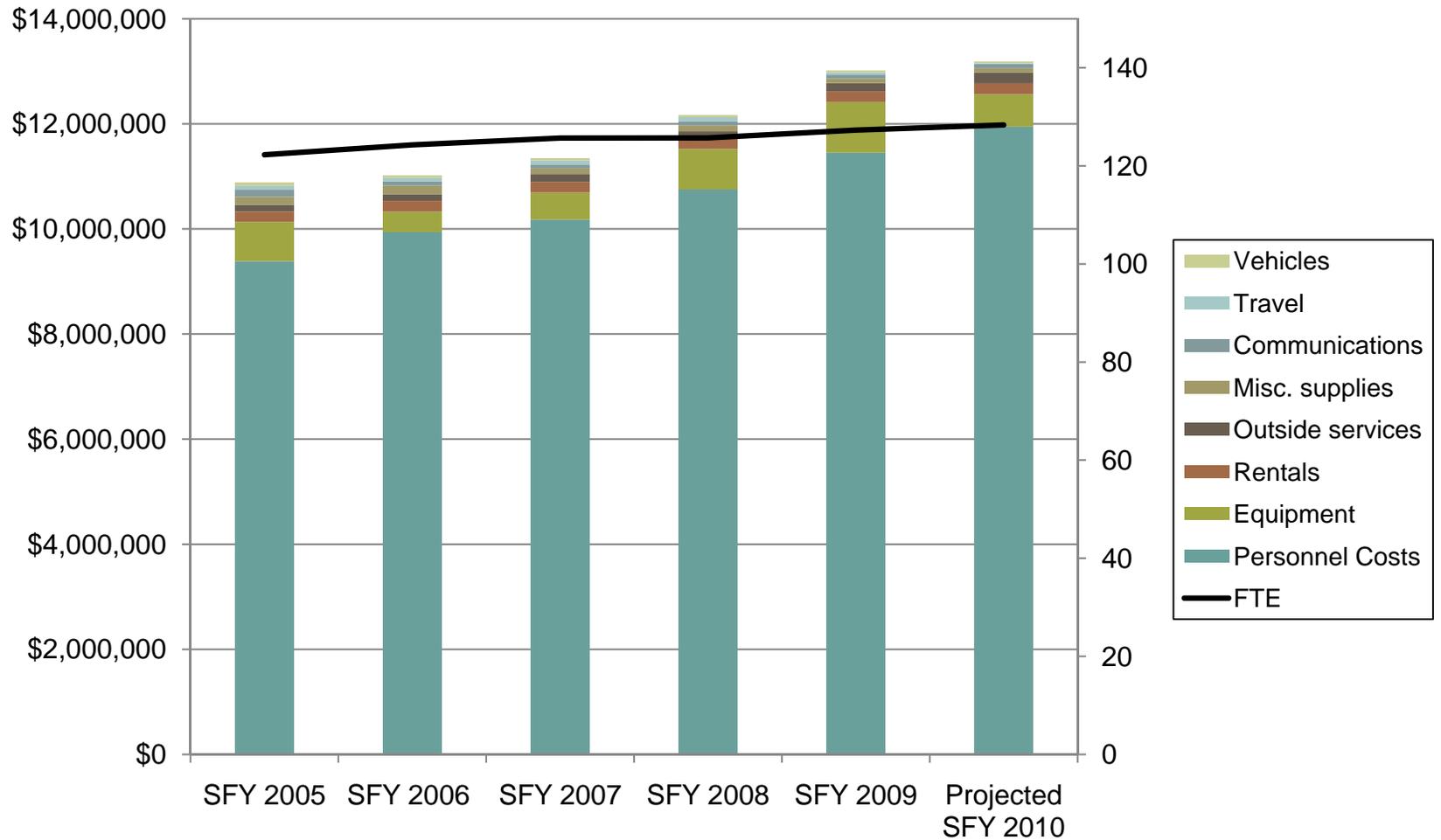
- Last and least (less than 1% of budget):
 - Communications (~0.8%)
 - ICN charges
 - Travel (~0.8%)
 - Both in and out of state travel
 - Vehicles (~0.4 %)
 - Depreciation, maintenance, fuel

Paying for Services Cont.

Another view – SFY 2009

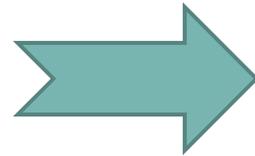


Bureau Expenses vs. FTEs



Expenses vs. Revenue

| Expenses |
|------------------|
| Personnel |
| Equipment |
| Rent |
| Outside services |
| Misc. supplies |
| Communication |
| Travel |
| Vehicles |



| Revenue |
|--------------------------|
| State General Fund |
| Federal Base Grant |
| Federal Monitoring Grant |
| Title V Fees |
| Environment First Funds |
| Pass-through Funds |

Where Does the Money Come From?

- State and Federal Funds
 - EPA provides funding for minor source work
 - State General Fund provide the 40% grant match
- Federal Monitoring Funds
 - Funding provided to implement new monitoring requirements for NAAQS or air toxics
 - No matching funds required
 - Funding levels variable year to year

Money cont.: Title V Fees

- Fee mandated in Title V of the 1990 Clean Air Act Amendments.
- The Title V fee is based on the program costs and the tons emitted.
- In Iowa the Title V fee is calculated based on the first 4,000 tons of each regulated air pollutant.
 - PM10, NO_x, SO_x, Pb, VOCs and HAPs

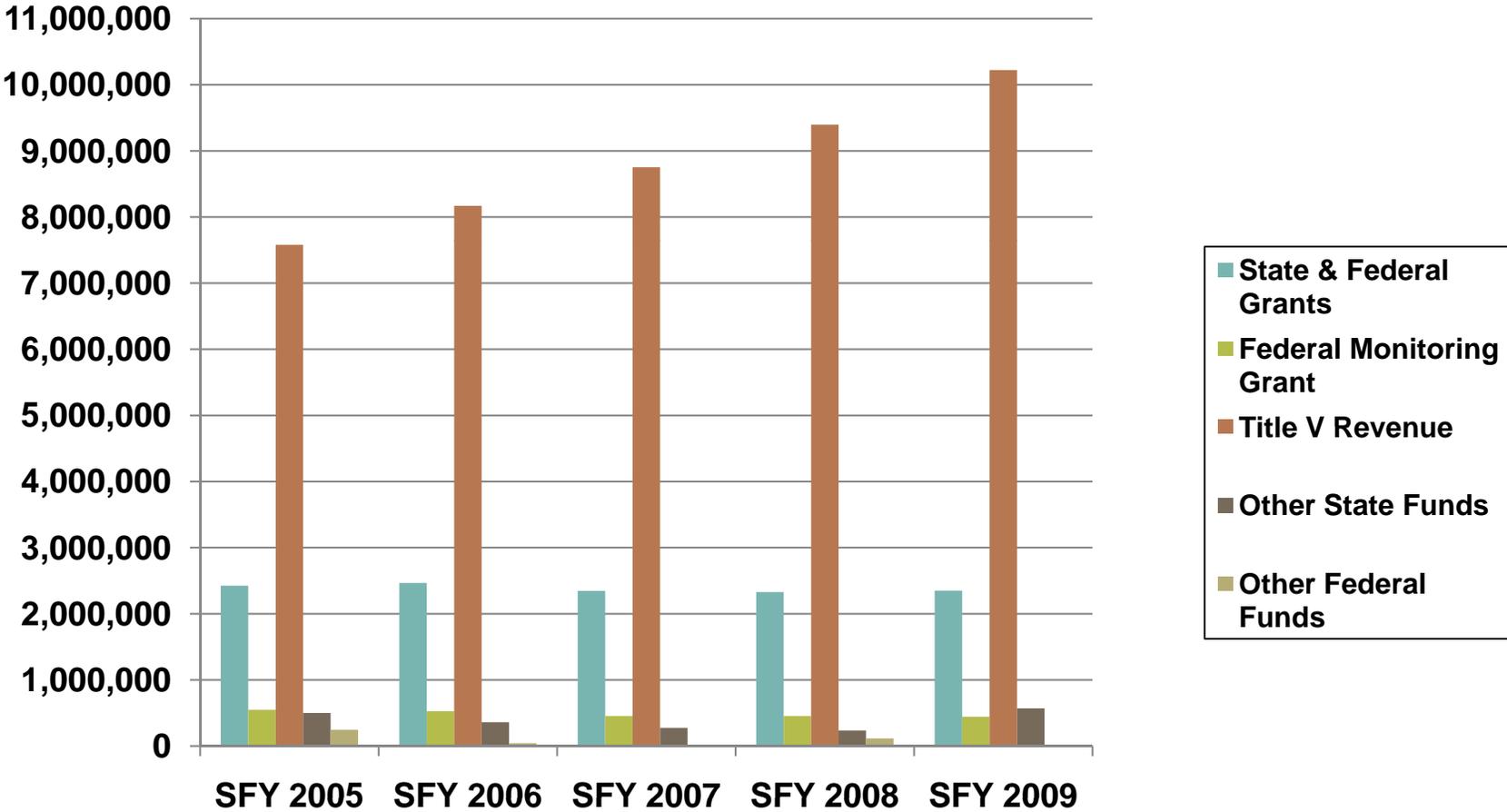
What activities do the Title V fees fund?

- The fees must be sufficient to cover all reasonable (direct and indirect) costs required to develop and administer the Title V operating permit program. (Section 502 of the CAA, 42 USC 7661a).
- Eligible activities
 - Dispersion Modeling
 - Operating Permits
 - Stack Test Observations
 - Emission Inventory
 - Ambient Monitoring
 - Compliance & Enforcement
 - Planning
 - Small Business Assistance
- EPA guidance on activities funded by Title V fees
 - <http://www.epa.gov/Region7/programs/artd/air/title5/t5memos/matrix.pdf>

Money continued...

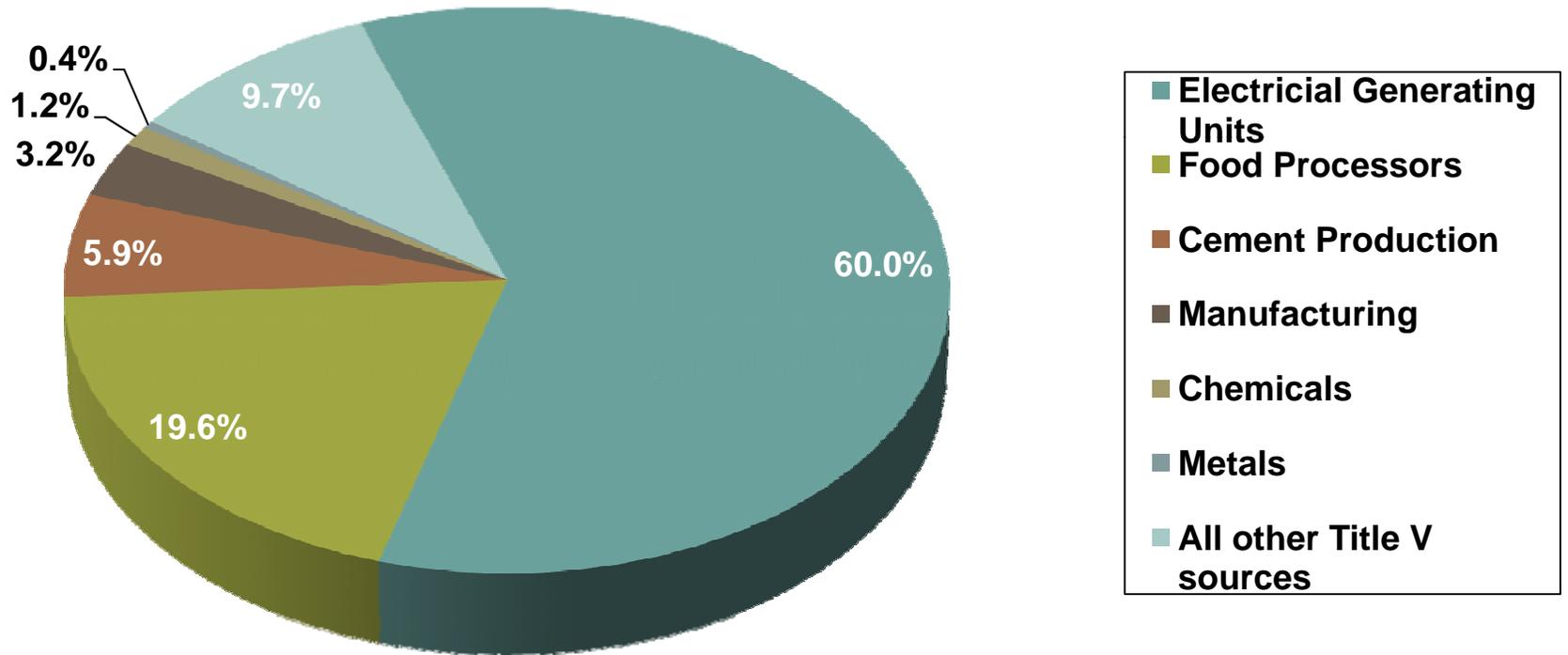
- Other state funds or misc. federal grants.
 - Environment First
 - Federal grants that are passed through the agency to program partners
 - Diesel emission reduction grants, etc.
- **Air Quality does not receive funds from DNR enforcement actions.**

Five Years of Revenue:2005-2009



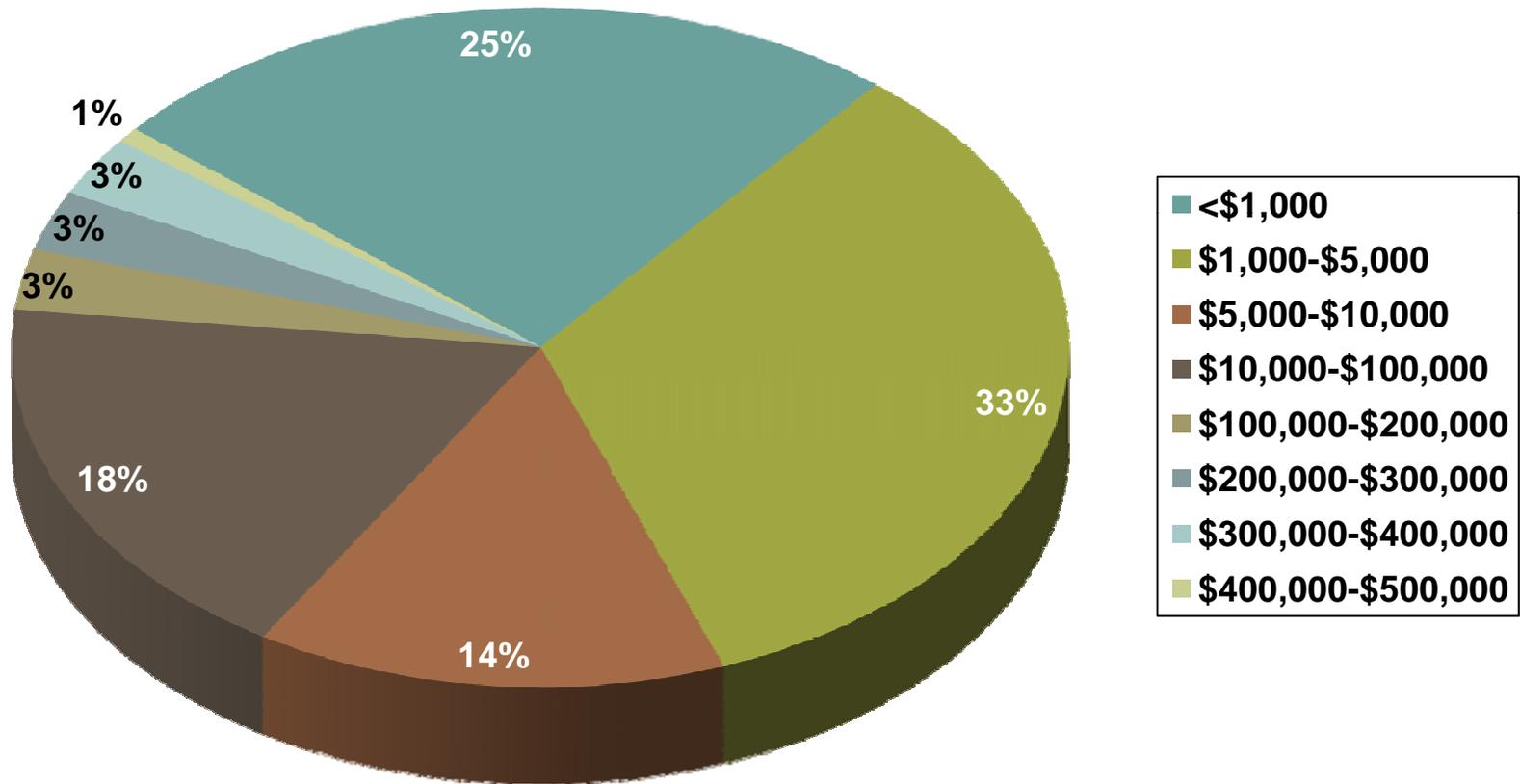
Sectors Paying Title V Fees in 2007

CY 2007 Emissions



32% of facilities paid over 90% of the Title V Fees

Percent of Facilities Paying Fees in 2007



72% of facilities pay less than \$10,000

Budgetary Challenges

- Revenue:
 - Flat or declining state funding
 - Flat federal funding
- Costs:
 - Union negotiated salary increases
 - Likely continued drop in Title V tons
- Services
 - Economy rebound, increased program demands
 - GHG permitting
 - Revised NAAQS, Clean Air Transport Rule (CATR)

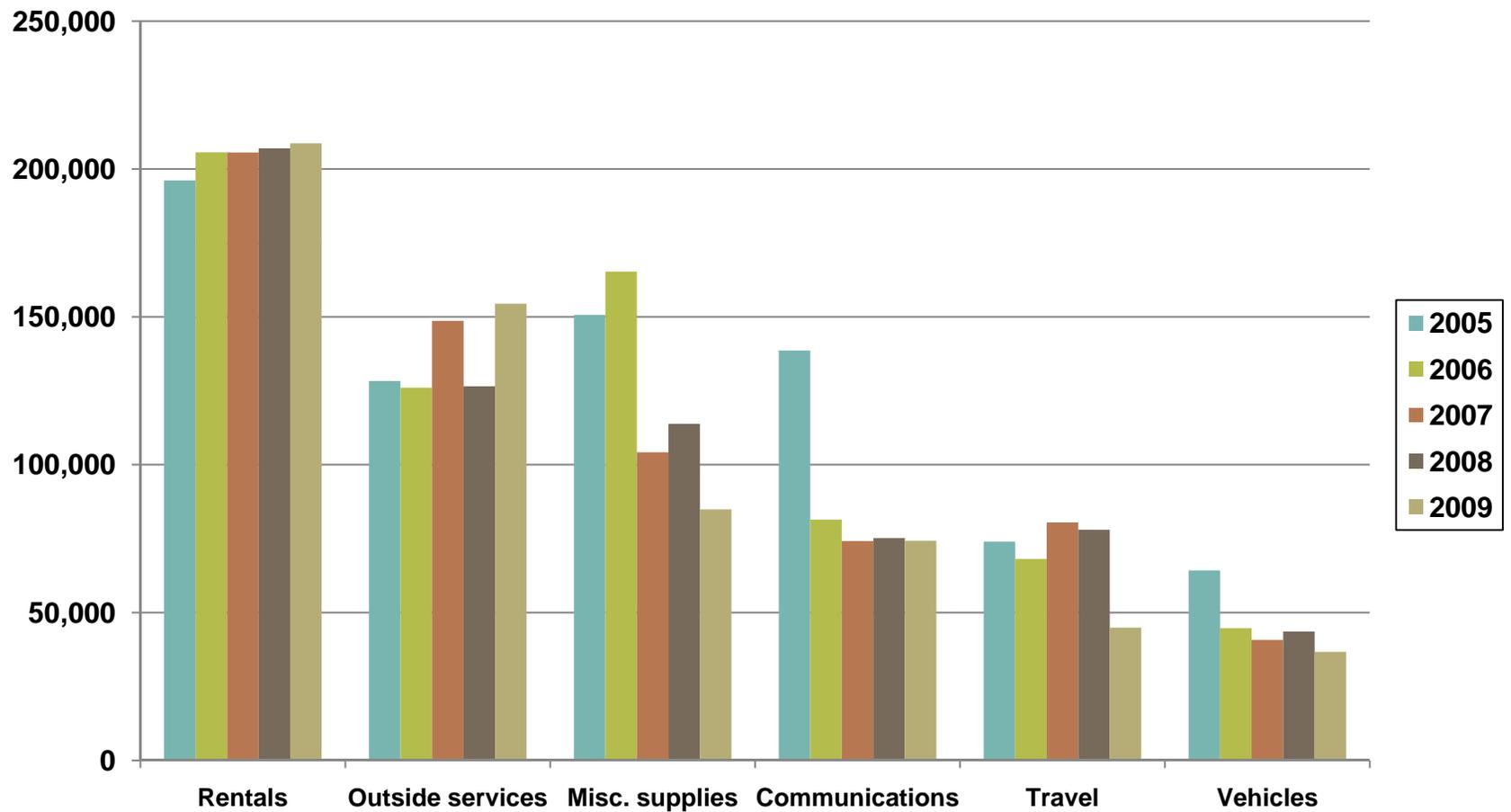
Why does the fee go up even when a facility's emissions have gone down?

- Permitting requirements (construction permits & Title V) remain relatively constant.
- Facilities continue to become subject to new federal regulations.
- More stringent NAAQS requires additional monitoring (ex: Lead monitoring).
- Personnel costs increase each year regardless of the emissions.

What is the Air Quality Bureau doing to control expenses?

- Bureau has reduced expenses within the following areas:
 - Rent for offices and monitoring sites (~1.7% of budget)
 - Outside services: filter collection, electronic records, interagency delivery, temporary services (~1.5% of budget)
 - Miscellaneous supplies: office supplies, uniforms, Dept. Admin. Services support (~1.3% of budget)
 - Communication (~0.8% of budget)
 - Travel including training(~0.8% of budget)
 - Vehicles (~0.4% of budget)

Expenses: 2005-2009



6.5% of the budget as seen in slide 31.

Why did the fee increase so much?

- The Bureau implemented a plan to reduce the amount of funds held from year to year in the Title V fund.
- The fund balance was accumulating between \$750,000 - \$1,000,000 each year.
 - The accumulated funds were primarily from unspent personnel funds due to vacancies.
 - Average vacancy rate in prior years was 5-8%.
- Funds carried forward are budgeted as revenue in the next year.

Why did the fee increase so much? cont.

- The SFY 2009 budget planned to reduce \$460,000, approximately half of the typical annual amount carried forward.
- Few vacancies occurred in SFY 2009.
- Emissions used to calculate the SFY 2010 budget declined dramatically.
 - Over 23,000 tons less than the prior year
 - Resulted in a 12% decrease in chargeable emissions.

Why did the fee increase so much? cont.

- Instead of reducing approximately half the amount carried forward from SFY 2009 to SFY 2010, over 75% of the amount was reduced.
- The combination of reduced funds carried forward, lower emissions, increased personnel costs, and increased monitoring requirements resulted in a 33% increase in the fee.

Why did the fee increase so much? cont.

- The fee increased from \$39 to \$52, an increase of \$13/ton. Estimates for the factors are below:
 - \$5.25 lower emissions
 - \$3.75 reduced funds carried forward
 - \$2.00 increased personnel costs
 - \$2.00 increased monitoring and other programmatic requirements

What might we expect next year?

- Salary increases known; benefits uncertain.
 - IUP and AFSCME contracts provide a 4.5% merit increase for eligible staff and a 2% cost of living increase on 7/1/2010, and a 1% increase on 1/1/2011.
 - DNR Staff of 82 FTEs: IUP (60%), AFSCME (15%), Non-contract (25%)
 - Non-contract increases usually follow AFSCME

What might we expect next year? Cont.

- 54% of staff is at the top of the pay range.
- 46% of staff in the “journeymen” status and are eligible for merit increase.
- Additional considerations:
 - Legislative early retirement incentives?
 - Increased IPERS contributions?
 - Potential move to Capital Complex?
 - Federal monitoring requirements?

What might we expect next year? Cont.

- Assumption: no significant change in staffing levels.
- Preliminary estimate based on 200,000 tons is \$55-\$56. The maximum Title V fee is \$56.
 - 567 Iowa Administrative Code 22.106
 - A rulemaking to increase the fee cap may begin in summer 2010
- The draft fee is estimated in late January – mid February for the March EPC meeting.
- Accurate estimate in mid-April after the Title V inventories are received.

Planning Timeline for the Budget

| Month | Action steps |
|-------------------|---|
| June - August | – Draft legislative proposals for DNR management consideration. |
| September | – Legislative requests are submitted to the Governor's Office. |
| November-December | – Prepare an internal draft budget. – Compare draft Title V fee vs. fee cap. |
| January | – Announcement of the Governor's Budget. – Meet with representative group of Title V fee payers. |

Planning Timeline for the Budget

| Month | Action steps |
|----------|--|
| February | – Consider input/adjust budget as needed. |
| March | – Present draft fee to EPC. |
| April | – Receive final Title V emissions. – Change/confirm Title V fee. – Finalize the emergency rulemaking for an increase in the Title V fee cap, if necessary. – Incorporate any legislative changes. |
| May | – Present final fee to the EPC for approval. – Finalize the budget. |

Future Trends

- Decreasing emissions.
 - CAIR replacement rule/(Clean Air Transport Rule)
 - Potential changes in electricity generation
- GHG legislation.
 - Vehicle and CAFE Standards (proposed Sept 09)
 - GHGs will immediately become regulated under Title V and PSD when these standards are signed
 - Permitting of GHG emissions (proposed Sept 09)
 - Require facilities with a PTE of > 25,000 tons of CO₂e to obtain a Title V permit.
 - Changes PSD significance levels to 10,000 tons CO₂e and/or 25,000 tons CO₂e (comments requested by EPA)

Future Trends (Cont.)

- Antiquated permitting and reporting system (SPARS)
 - Outdated software/technology
 - Cumbersome to use; requires significant support
 - Difficult to extract data
 - Modification or replacement needed to meet federal requirements for electronic records
- More stringent NAAQS
 - Increased monitoring requirements
 - Additional permitting requirements and modification to exemptions.
 - Non-attainment areas are likely

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Conclusion



- Discussion
- Questions?