

ABSTRACT

Idaho DEQ (IDEQ) is using technology to overcome budgetary and personnel shortfalls in emissions inventory projects. High-tech tools and inter-agency cooperation allow IDEQ to complete required work with fewer people and in less time. IDEQ created an in-house software program to gather point source data for annual and periodic emissions inventories, ran Vehicle Identification Number (VIN) decoding software to improve fleet-mix over MOBILE6.2 defaults, and is currently working with the Idaho Transportation Department (ITD) to improve heavy-duty vehicle fleet-mix and vehicle miles traveled (VMT) estimates. The in-house software allows facilities to log into an IDEQ Web server using a unique username and password provided by the agency. The program's layout follows the 44 data elements in the Consolidated Emission Reporting Rule (CERR); therefore, providing the exact data that the Environmental Protection Agency (EPA) is wanting in the National Emissions Inventory (NEI). The program also limits the amount of quality assurance (QA) needed on the data by "controlling" user entry in each submission field. Once the data is submitted by the facility, it is automatically placed into a SQL server database. From there, the data tables can easily be exported into Access, in the NIF eight-table format, in order to run the EPA QC tools. The mixture of these elements allows IDEQ to complete and submit a periodic emissions inventory in the amount of time proposed in 2011, less than 12 months; all while using only two full-time and three part time employees.

More EI with Less Time and Money Invested

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GOALS

- Complete emissions inventory projects faster, using fewer people, lower cost, and maintain or improve accuracy
- Solve point source data collection problems experienced in the past
- Ensure point source emissions data submittals match CERR requirements
- Automate placement of data into NIF eight-table format
- Provide a user-friendly method for facility data submissions
- Reduce QA needs by controlling data entry for each field
- Allow data received to be manipulated or corrected while stored in an SQL server database compatible with other in-house database systems
- Find additional methods for area source gathering of emissions data that will further speed the inventory process while improving data estimate accuracy
- Use available software programs and inter-agency cooperation to speed and improve mobile source emissions estimates
- Meet proposed 2011 EPA deadlines for submittal of inventories for the NEI in 2005 using automated methods wherever possible

METHODS

- Scheduled periodic inventory projects to meet the 12-month time standard proposed in the Air Emissions Reporting Rule (AERR), used Idaho fiscal year changeover to provide adequate funding for all portions of the project throughout the calendar year, and reduced the number of personnel used on the project by improving methodologies, data sources, and using automated means wherever possible
- Created a user-friendly Web-based point source emissions survey tool to standardize data submittals, included Title V pollutant registration for fee purposes, provided a large measure of built-in quality assurance as data is entered by end users, and allowed flexibility between database formats for easier correction and submission of data
- Developed cooperative relationships with other Idaho state agencies in order to receive data needed for improved heavy-duty fleet-mix and vehicle miles traveled estimates for faster, more accurate emissions estimates in mobile and area sources
- Used available software to decode statewide Vehicle Identification Numbers for an accurate light duty fleet-mix at the county level
- Researched creation of Web-based program for direct industrial and commercial area source data surveying, looked into authority for using such a tool, and were able to link use to PSD increment tracking and regional haze SIP visibility goals

INVENTORY SCHEDULING

- Creative scheduling allows Idaho DEQ to use two pots of money – federal and state – to complete inventory projects when funds can become limited at certain times in the calendar year
- The point source data is gathered at the beginning of the calendar year, but near the end of Idaho’s fiscal year (January to June), which means federal money remains available for use on this portion of the project
- Area, on-road, non-road, and biogenic sources are completed in the first months of the Idaho fiscal year, but in the second half of the calendar year (July – December) to ensure state money is available and used
- This scheduling ensures the emissions inventories are completed without budget shortages and remain a priority in the agency, while at the same time meeting the projected 2011 schedule for completing an inventory in 12 months rather than the 17 months currently in the CERR

WEB-BASED SURVEY TOOL

- Created user-friendly, Web-based program that allows industry representatives to submit emissions data directly into IDEQ database without program incompatibility issues experienced in previous projects
- Program matches the 44 data elements required in the CERR for the National Emissions Inventory
- Software was written to conduct quality assurance (QA) of most entry fields while end user enters emissions data – saves IDEQ valuable QA time
- Data is stored in a SQL Server database that allows export to Access in the eight-table NIF, use of EPA QC tools, submission to EPA, or for use completing Public Information Requests
- Web program is written in HTML, uses ColdFusion and some Java script for the main menu tree
- Software was created in-house by IDEQ personnel to reduce costs and is available to other agencies free of charge under a General Public License

NEW RELATIONSHIPS

- Creation of new relationships with other state agencies that have data for direct use or that are advantageous to IDEQ emissions inventories
- Transportation department provides roadway counter and weigh-in-motion data, which allows for more accurate heavy-duty fleet-mix and for better statewide vehicle miles traveled estimates
- Contractor performs decoding of vehicle identification numbers (VINs) for more accurate light-duty portion of fleet-mix
- Metropolitan Planning Organizations (MPOs) provide Travel Demand model outputs and laser-based vehicle counts in some congested counties

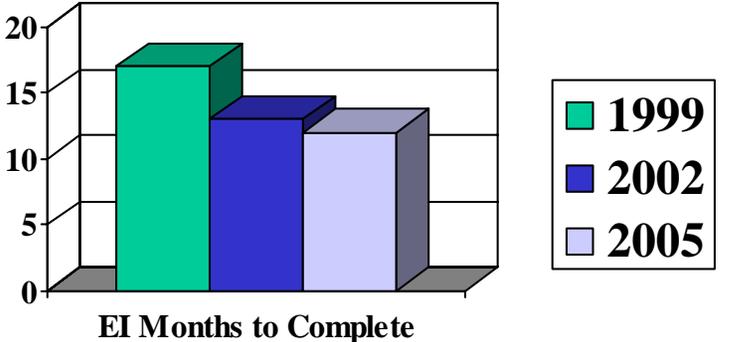
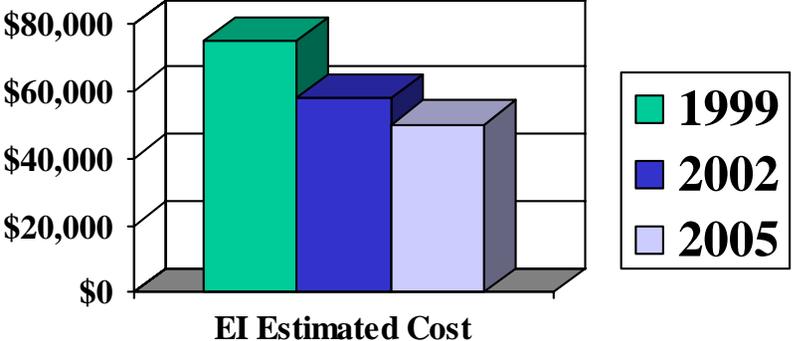
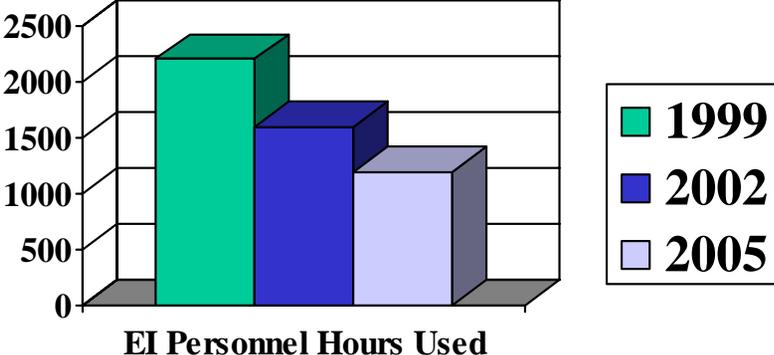
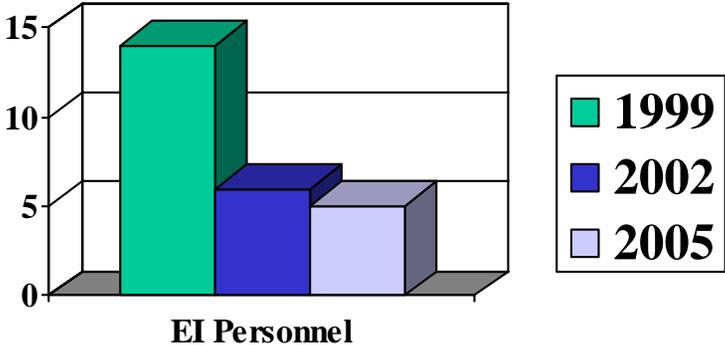
IN THE WORKS

- IDEQ is researching the authority to survey smaller commercial and industrial sources in Idaho directly via Web-interface for use in the area source portion of inventory projects, PSD increment tracking, and regional haze SIP control strategy development
- IDEQ is creating an agency-wide database/network that will allow universal querying of each permit holder; to include air, water, drinking water, hazardous waste, enforcement and inspection information, as well as on-line permit applications and access to the data for the public

CONCLUSION

IDEQ's Web-based point source survey tool greatly reduces work time and expense in our emissions inventory projects by speeding point data submittals; providing a consistent data format ready for correction, QC tool runs, or EPA submittal; and delivering QA on most data entry fields. Other hi-tech projects on the IDEQ horizon may speed up the inventory process a little bit more by providing easier access to good data, but most will simply improve the accuracy of those source calculations. Available services and software from contractors or other agencies within Idaho will also enhance speed and accuracy in the mobile source category. All in all, there are methods available at a pretty low price, or through constructive planning, which allow for an accurate and speedy emissions inventory; an inventory that meets all of EPA's requirements in the CERR.

THE NUMBERS



LOGIN SCREEN

Emissions Inventory

Please Login to the Emissions Inventory Application

Not Logged In: [Login](#)

[Main Menu](#) | [Contact](#) | [About](#)

Welcome to the DEQ Emissions Inventory Graphic User Interface.

Thank you for using this online tool to report your facility air emissions. Emissions registration is required annually for Title V facilities. Full emissions inventories are required for those facilities meeting the requirements of the Consolidated Emissions Reporting Rule (CERR). We believe this interface will simplify and expedite both of these requirements. Thank you once again for your cooperation on these projects.

Department of Environmental Quality

User Name:

Password:

Out of State Agencies: To download the software for your use contact
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<http://www.deq.state.id.us/air/ei/login.cfm##> Local intranet