

Software Showcase

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Marine Emission Inventory Tool - Klym Bolechowsky , ClearSkyEngineering,
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The Marine Emission Inventory Tool was developed to estimate emissions from commercial marine vessels operating in coastal and inland waters. This includes domestic and internationally flagged vessels used for international and domestic freight and passenger transport, workboats, fishing vessels, and government vessels to support defense and regulatory activities. The application consists of a SQL Server database back-end with a user interface to enable importing activity data, generating emission estimates, and production of reports. The application includes a number of routines that calculate underway, maneuvering and dockside emissions. The calculations facilitate development of an emissions inventory that can be spatially allocated within a gridded emissions file.

MAIRIS – Jeff Heatwole, Perrin Quarles Associates, marketing@pqa.com

State of Maine’s Emissions Inventory Data Collection and Reporting System exporting CERS format for EIS submissions.

CAMD’s Interactive Mapping -Michael Cohen, EPA, CAMD, cohen.michael@epa.gov

CAMD has created maps that enable users to display geo-spatial data on an interactive 3D platform such as Google Earth. The maps are downloaded directly to the user's computer as kmz files (compressed Keyhole Markup Language (kml)). It is easy for users to add and display CAMD maps using new or existing 3D platforms. CAMD’s map layers include emissions, concentration, and deposition data and display as points, area outlines, and isopleths; map layers contain metadata at both the point and layer level. Users can combine CAMD map layers with data from other EPA offices, federal agencies, and the public domain.

CAMD uses Interactive Mapping for several purposes. Google Earth initially was used for quality control, visually checking every regulated facility in CAMD’s air emission reduction programs (Acid Rain Program and NOx Budget Trading Program). CAMD has also created kmz files for internal use both for visualizing data as part of analyses and for

creating graphics for presentations. More recently, CAMD has used Google Earth to create public kmz files as supplements to our annual environmental progress and compliance reports and as stand-alone projects. Through this approach, CAMD has enabled both technically savvy and less knowledgeable public users to interact with our data in ways that were previously impossible.

Emissions Inventory Exchange Network (EIEN) Desktop Client - Jason Bunker, Windsor Solutions, Inc, jason_bunker@windsorsolutions.com

The EIEN Desktop Client provides users with a simple and intuitive way to view and share emissions inventory data. The software can be used to import emissions inventories from a variety of data sources (e.g., MS Access, flat files, XML, RDBMS, etc.). The EIEN application can also be used to prepare emissions inventory data for submission to the EPA's NEI system via the Exchange Network.

In addition, the EIEN client can easily navigate and review emissions inventory data. In future releases, the EIEN application will also be compatible with the new EPA EIS and Consolidated Emissions Reporting Schema (CERS) formats and support greenhouse gas emissions data reporting and exchanges.

Emissions Mapping & Information Tool (EMT)- Wayne Boulton, RWDI, wayne.boulton@rwdi.com

The Emissions Mapping & Information Tool (EMIT), is a Toolbar extension to ESRI's ArcMap platform that can be used to load, query, map, and report on pre-compiled Canadian and US national emissions data at a number of geo-political levels using a simple query wizard. Air pollutant emissions can be queried and mapped down to the Census Subdivision (CSD) level in Canada (large cities, municipalities, etc.), and at the County level in the US. Query results are, by default, generated as new map layers and plotted in ArcMap. Once generated, these GIS layers (personal geodatabases) can then be manipulated to produce custom maps and support subsequent analyses such as the comparison of emissions data with ambient pollution concentrations and Air Quality Health Indices (AQHI).

State Air Emissions Inventory System - Maria Marcella, CIBER, Inc, mmarcella@ciber.com

CIBER designs, develops and implements web-based emissions inventory reporting systems that are used to manage industry-to-state and state-to-EPA reporting and processing of point, area and mobile emissions. In 2004, we implemented the point source Air Emissions Inventory System for Pennsylvania DEP. That system includes extensive XML reporting. We are now in process of implementing the Air Emissions Inventory System for Connecticut DEP, a system that has been developed with Microsoft .NET and SQL Server technologies, web services and XML. Connecticut's Air Emissions

Inventory System will be used to manage the reporting and processing of point, area and mobile emissions and will also include a greenhouse gas inventory and reporting to The Climate Registry and regional partners. As a reporting and management tool, it will serve the state's attainment planning goals and reduce costs by eliminating burdensome paper-based processes. Connecticut's new Air Emissions Inventory System will serve as a model for other states.

Emissions Reporting and Inventory Center -Vivian Aucoin, Louisiana Department of Environmental Quality, Vivian.aucoin@la.gov

ERIC is a web-based portal for which point sources in the state of Louisiana report their annual emissions inventory data. ERIC offers facilities the ability to create new inventories based on prior year submittals, to edit those inventories online using simple data entry forms, or to download their entire inventory to a Microsoft Excel workbook where they can enter and edit inventory data offline and later upload the data to ERIC. It is also the database for the LDEQ EI staff to use in accessing the point source emissions inventory data.