Tidewater Air Monitoring Evaluation project

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Tidewater Air Monitoring Evaluation project

- Application for grant submitted April 29, 2020
- Preliminary notification of reduced receipt of award – August 18
- EPA makes public announcement of national awards – September 28
- DEQ receives initial installment of funding – October 30
Tidewater Air Monitoring Evaluation project

- DEQ received a Community Scale Air Toxics Monitoring grant awarded by U.S. Environmental Protection Agency
- Project will characterize ambient concentrations of air toxics metals that may be related to coal dust in two Tidewater communities:
  - Southeast Community, Newport News
  - Lambert’s Point, Norfolk
- DEQ and the Va. Dept. of Health will develop air quality and health risk assessments
Community Scale Air Toxics Monitoring project

- The term “toxics” or hazardous air pollutants is an EPA definition for a list of pollutants in the Clean Air Act (§112(B))
- EPA currently addresses air toxics monitoring through National Air Toxics Trend Sites (NATTS) and grant awards for special local air toxics projects such as TAME
- DEQ maintains NATTS samplers in the Richmond area
- The grant program addresses several types of projects: Community Scale projects; Near source monitoring projects and testing method evaluations for toxics pollutants
Study locations

• Lambert’s Point community in Norfolk and Southeast Community in Newport News
• Residents have long expressed concern about ambient coal dust and air quality.
• Coal dust is known to contain metals, some of which may be present in amounts that could contribute to air quality and health issues.
• Project will enhance understanding of local air quality issues and will develop an air quality and a health risk assessment for air toxics metals.
Project areas
## Community Benefits, Engagement and Partnerships

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Data collection and analysis

- DEQ will install up to 5 air monitoring sites in each community to capture particulate pollutants that will be analyzed for air toxics metals.
- The metals analyzed will be arsenic, beryllium, cadmium, total chromium, lead, manganese, and nickel.
- The particulates that will be sampled will be TSP (total suspended particulates), PM10 (particulate matter less than 10 microns) and PM2.5 (less than 2.5 microns).
- The data received from the analysis will be compared to National Ambient Air Quality Standards (NAAQS).
Monitoring equipment

TSP Sampler

Schematic of Operation
Monitoring equipment

PM10 Sampler
Monitoring equipment

Continuous PM2.5 Monitor

Schematics with Continuous PM2.5
Characterize concentrations of toxics metals
Characterize concentrations of toxics metals
Air quality and health risk assessments

• DEQ will evaluate the data as it is received to compare PM10 and PM2.5 data to the NAAQS. This will help determine the need for a permanent particulates monitoring site.

• DEQ will create a data quality report to review the quality assurance requirements for the particulate data and demonstrate that EPA quality objectives have been met.

• Data quality report will include evaluation of metals results to be sure that all metals analysis meet performance criteria and precision test results of the NATTS program.
Perform air quality and health risk assessments

- DEQ will transmit all quality assured metals data to the Va. Dept. of Health
- VDH and DEQ will work together on health assessment
- This health assessment will be similar to the health assessment performed for the Hopewell study
- The final report to EPA will be the Health Assessment with next steps defined
Community Benefits, Engagement, and Partnerships

• Both communities have significant low income and minority populations and have a history of registered complaints about coal dust impacts

• By conducting this study DEQ intends to establish a working relationship with community members to address their concerns

• Project will include significant community involvement to assist DEQ with site selection, increasing understanding of air quality issues and including community review and input into the review process for the reports associated with this study
Community Benefits, Engagement, and Partnerships

• The study was originally designed with 6 face-to-face meetings with each community, which will be adjusted due to COVID
• DEQ is developing public engagement plan that addresses COVID concerns while maximizing public engagement
• The project budget includes funds for meetings, printed materials, publication and distribution of updates on progress
• Outreach will be ongoing: DEQ will continue to identify community stakeholders throughout the length of the project to increase participate in the outreach effort
Community Benefits, Engagement and Partnerships

• The study will identify potential long term air monitoring needs in either or both of these communities.

• This study will also include the use of air quality sensors and the sensors will remain after the project is complete.

• The health assessment results may assist community groups in concert with local government in establishing future local air quality and health program goals

• Sign up to receive updates: http://bit.do/TAMEproject
Tidewater Air Monitoring Evaluation project

Questions?