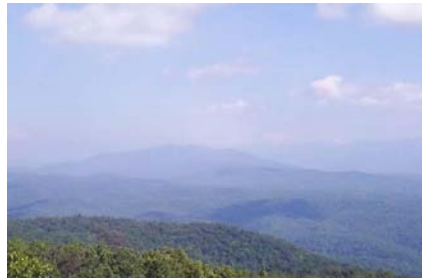


What is VISTAS?

State, local, and tribal agencies formed Visibility Improvement – State and Tribal Association of the Southeast, more commonly known as VISTAS, to address regional haze and visibility problems in the southeastern United States. Jurisdictions represented by VISTAS members include the Eastern Band of Cherokee Indians; the states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia; and the local air pollution control agencies in the states of Alabama, Florida, Kentucky, North Carolina, and Tennessee. VISTAS functions through a three-level organization beginning with a governing body called the State and Tribal Air Directors (STAD) which is responsible for obligating funds towards priority expenditures and handling policy issues. A Coordinating Committee of program chiefs from the member agencies handles more routine decisionmaking. Workgroups consisting of agency technical and managerial staff as well as a variety of stakeholders oversee the performance of technical work designed to address federal regional haze mandates.



Why Was VISTAS Formed?



The U.S. Environmental Protection Agency designed the regional haze program to improve visibility at special and environmentally sensitive Class I parks and wilderness areas. There are 18 such areas within the states represented by VISTAS. VISTAS was formed as a result of a recognition that many air quality problems experienced across the Southeast, including those impacting Class I areas, are regional in nature and cannot be solved efficiently without cooperation among the many agencies responsible for developing and implementing air quality plans in the region. Federal regulations under the Clean Air Act recognize the value of collaborative efforts and encourage the formation of regional planning bodies to consolidate resources and effectively address regional haze problems. For these reasons, the member agencies of VISTAS developed a memorandum of understanding and bylaws to govern the technical assessment that will deliver recommendations to the agencies in late 2005. While VISTAS will not set binding policies for its agencies, it will provide valuable scientific information necessary to assist the agencies in meeting December 2007 deadlines for filing state implementation plans (SIPs) to address regional haze.

Where Does VISTAS Get Its Funding?

The federal regional haze program provides the majority of the funding that supports VISTAS studies and projects. This funding has been received in several grant awards to Southeastern States Air Resource Managers, Inc., the nonprofit entity operated by the eight state air pollution control agencies within EPA's Region 4 and which is the official grant recipient for the VISTAS project.

While federal regional haze funds are supporting the majority of the financial assistance to VISTAS, SESARM has obligated additional federal funds from a regional emission inventory grant and a grant to develop emission factors for railroad operations. The agencies expect to use the products of both of these efforts in later phases of regional haze work.

What Is VISTAS Doing?

Primary objectives of the VISTAS project are to establish natural background visibility levels across the 18 Class I areas, identify current visibility levels and reasonable progress goals to improve visibility levels at these areas, analyze emission control levels that will achieve interim visibility goals, and provide adequate documentation to member agencies so that they can develop their regional haze SIPs. In addition, a considerable amount of the work being done will serve as starting points for member agencies as they prepare to develop SIPs for fine particulate nonattainment areas.

After organizing itself and obtaining the services of administrative staff, VISTAS began the detailed process of assessing the regional haze problem. Extensive data bases have been analyzed containing air quality data on pollutants that contribute to the formation of regional haze. Where desired data does not exist, is incomplete, or otherwise is not adequate to characterize air quality in the Southeast, VISTAS has begun the process of collecting that data, whether it means accessing another data base or setting up new ambient monitoring equipment. In particular, VISTAS is augmenting existing monitoring of fine particulate matter at three sites with continuous measurements of sulfate, nitrate, and organic carbon particles. VISTAS is initiating detailed analyses of source contributions to organic carbon particles. Separate initiatives are underway to gather emission data on stationary, area, and mobile sources of air pollution. VISTAS is coordinating with the states in the development of lists of point sources that may be required to install Best Available Control Technologies (BART) to comply with the regional haze requirements.

Monitoring and emissions data will be used in atmospheric modeling efforts to gain an understanding of the probable causes of regional haze, the behavior of pollutants in the atmosphere, and the relative potential of various pollutants to contribute to haze formation. Meteorological modeling has begun to identify the factors from a meteorological standpoint that affect air quality. Emissions and air quality modeling and analyses are underway to evaluate the effectiveness of emission control options to improve air quality. These activities will be ongoing through 2005.

VISTAS has employed the services of a technical coordinator (Pat Brewer) and two technical advisors (Ivar Tombach and Greg Stella) to manage the technical design and contracts and to provide expert advice, respectively. .

Outreach is an important aspect of the VISTAS work as progress is made toward delivering information to agencies for SIP development work. Executive/administrative staff of SESARM and technical/managerial staff from the VISTAS agencies frequently provide updates to interested stakeholder groups across the country. These presentations provide information on the status of VISTAS efforts to define the nature and extent of the regional haze problem. Presentations to-date have been made at international emissions inventory conferences, national and chapter meetings of the Air and Waste Management Association, state and local agencies and their boards and commissions, stakeholder and director meetings of other regional planning

organizations, a tribal environmental meeting, and various meetings of industrial associations. This work will continue due to its value in informing stakeholders of the purposes and activities of VISTAS. Outreach materials (other than newsletters and the VISTAS web site) have not been developed yet but are expected to be needed over the next two years.

An area which has had limited attention to this point but which will be critical in the future is staff training. Only two courses have been funded and held to-date. As modeling outputs are received from the VISTAS project, it will be necessary to train member agency staff on how the models operate and how to interpret data from them. Expenditures for training to this point have been associated with only two courses, but the funding reserved for this task will be critical to the agencies. Additional training will be provided as it becomes necessary.

In summary, there are many activities ongoing within VISTAS. A timeline has been developed which ensures that the agencies with the longest regulation and SIP development schedules will receive work products from VISTAS in ample time to complete all regulatory and SIP obligations by December 2007. At this point, North Carolina and Virginia, with a two-year SIP development process, appear to have the longest SIP development timelines.

What Are The Specific Work Tasks That VISTAS Is Doing?

The table below contains a summary of VISTAS work plan tasks underway or pending:

VISTAS Work Area	Description	Status
Administrative Operations & Staffing	Personnel, fringe, office operations, general support	Offices operational. Staffing completed.
Web Site Support	Development and maintenance of VISTAS Web Site	Site developed and recently redesigned. Maintenance and updates ongoing.
Organizational and Intergovernmental Coordination	Meetings, logistics, member agency/tribal/environmental travel support	Scheduling meetings throughout the year. Participating in RPO work and communicating VISTAS activities.
Technical Advisor Support	Use of technical experts to advise VISTAS on various aspects of project	Two technical advisors under contract.
Characterization of Visibility in the Southeast	Formation of baseline and basis for regional haze work	A conceptual description has been drafted.
Monitoring Data Collection and Analysis	Collection and analysis of existing monitoring data	Initial work completed and report received from contractor. Additional analyses to be conducted.
Ambient Monitoring	Expanded and enhanced monitoring to address new sites/parameters	Three sites operational with all major equipment purchases completed. Contracts awarded for operation of two sites. Third site operated as in-kind service by state of SC.
Radar Profiler Maintenance	Support of profiler repairs as needed	Repairs as needed.
Emissions Inventory Development	Stationary, area, and mobile source emissions inventory evaluations, development, projection to future years	First draft 2002 base year inventories delivered fall 2003, revised 2002 inventory will be delivered January 2004. Inventory improvements underway. Inventory projections to future years begin January 2004. Work will continue over next two years.
Characterization of Meteorology	Determine relationship between meteorology, fine particulate matter, and visibility.	Contract awarded fall 2003. Analyses underway.
Meteorological Modeling	Development of predicted weather patterns for modeling efforts	Evaluation of meteorological model configuration and performance completed, report and initial model protocol delivered, Annual 2002 meteorological modeling underway.
Emissions and Air Quality Modeling	Evaluation of emissions and predicted air quality impacts	Evaluation of emissions and air quality model configuration and performance to be completed in January 2004, Report and model protocol delivered and annual 2002 modeling begin in February 2004.
BART Source Identification	Support of efforts to gather/interpret data from potential BART sources	Lists of potential BART-eligible sources have been developed by the agencies and posted on the web site. Assumptions of potential BART control levels and sources impacted must be developed for early modeling efforts by spring 2004.
Support of National Databases	Regional contributions to national monitoring data archival system	Contributions are being made to the VIEWS data base with the money being taken from the grants before they are awarded to VISTAS.

Staff Training	Particularly in modeling performance and results interpretation	Two courses have been held so far. Additional courses will be presented, especially in the area of modeling and data interpretation.
Preparation of Materials for Policymakers	Outreach materials to assist agencies in stakeholder interaction	This is a future work activity.

Are there additional planned and upcoming projects?

VISTAS anticipates that the following new activities, contracts, and expenditures will be incurred by the end of FFY 2004.

- Sources of primary organic carbon will be determined from samples collected by future monitoring at Class I areas. Operating procedures for preparing filters and monitoring methods are being developed. A request for proposals for Chemical Mass Balance analyses will be released in December 2003.

Who Are The Contractors VISTAS Has Hired?

This table indicates the contractors currently under contract to provide services to VISTAS:

VISTAS Contractor Name	Project Description
Air Resource Specialists	Data collection and analysis
Alpine Geophysics	Technical Advisor – Emissions Inventory
Atmospheric Research & Analysis	Monitoring operations – Millbrook, NC
Baron Advanced Meteorological Systems	Meteorological Modeling
ENVIRON and subcontractors - University of California-Riverside and Alpine Geophysics	Emissions and Air Quality Modeling
Georgia Tech	Emissions Sensitivity Modeling
MACTEC – Pacific Environmental Services	Emissions Inventory – stationary and area sources Future Year Emissions Inventories and Improvements
Pechan, E. H., and Associates	Emissions Inventory – mobile sources – highway and non-road, inventory improvements
Research Triangle Institute	Laboratory analysis – IMPROVE filters – ammonium
Systems Applications International	Characterization of Meteorology
Tennessee Valley Authority	Technical coordinator services
Tennessee Valley Authority	Monitoring operations – Look Rock, TN
Tombach, Ivar, Ph.D.	Technical advisor – Data, monitoring, and modeling
Vaisala	Radar profiler maintenance and repair – Pensacola, FL

What Is The Timeframe Within Which VISTAS Is Operating?

The chart below lists major activities that VISTAS is conducting and the general timeframes for those activities:

VISTAS Schedule				
CY 2003	CY 2004	CY 2005	CY 2006	CY 2007
Describe current trends in PM2.5 and regional haze	Initiate monitoring and analysis of sources contributing to organic carbon	Deliver results of chemical mass balance analyses of source contributing to organic carbon.		
Initiate continuous speciated PM2.5 monitoring and augment PM2.5 monitoring at selected IMPROVE sites.	Continue operation of continuous speciated PM2.5 monitoring and augmented monitoring.			
Deliver draft 2002 emissions inventory; revise in response to state review.	Develop future year emissions inventory.	Finalize future year emissions control strategies. Deliver economic analyses of costs of controls		
Evaluate atmospheric model performance and draft modeling protocol.	Begin annual modeling in Jan 2004. Complete modeling of base year and begin future year modeling.	Complete future year modeling and evaluate PM2.5 and haze response to emissions control strategies.		
States submit preliminary lists of BART eligible sources	Develop and demonstrate source apportionment capabilities within atmospheric model. Continue BART ID/analysis	Finalize BART analysis		
Determine baseline visibility and natural conditions	Determine baseline visibility and natural conditions			
Determine reasonable progress goals	Determine reasonable progress goals			
Define relationship between meteorology and air quality	Evaluate sensitivity of PM2.5 and haze to changes in emissions for selected episodes.	Evaluate model changes in visibility compared to reasonable progress goals	Evaluate state specific options to reduce haze and compare to reasonable progress goals.	
		Prepare technical options.		
		Present options to agencies.		
			Agencies begin SIP development work.	
				Agencies submit SIPs to EPA.