



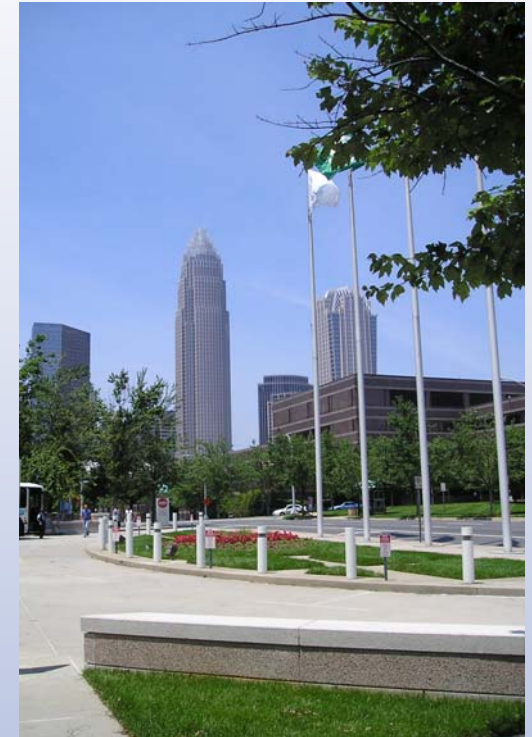
SEQL Environmental Benefits

Presentation to STAPPA/ALAPCO
October 24, 2005



What This Briefing Covers

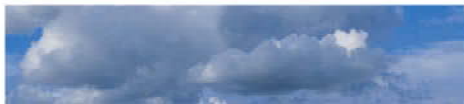
- **What SEQL Has Accomplished**
 - Implementation of hundreds of environmentally beneficial actions across the region
 - Implementation of at least six specific emission reduction programs
 - Integration into land use policy change
 - Public education and outreach
 - "Amending the regional agenda"
- **SEQL Lessons for the Rest of the Nation**
- **Next Steps**



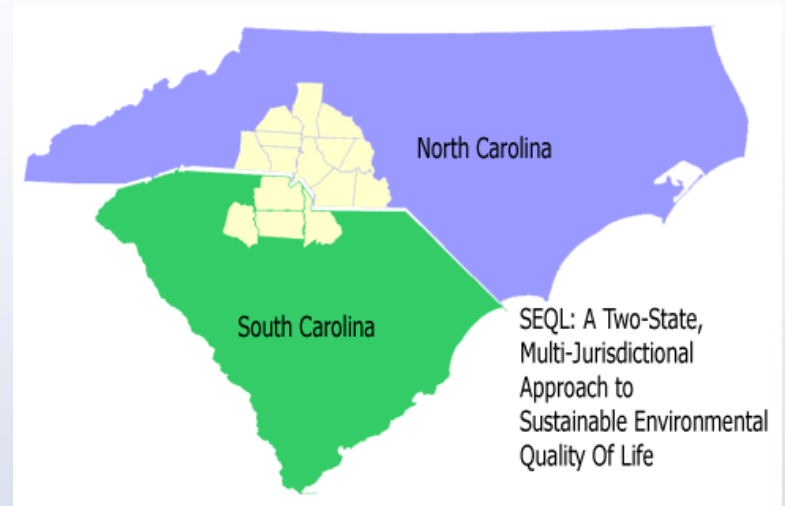
A Vision of the Future

From OAQPS Long-Range Planning

- **EPA Already Issued Most Major National Rules**
- **Air Quality Affected by Local Government/Developer Decisions**
- **Stovepipes Continue: Water, Air, Land Use, Economic Development**
- **Growth of City-States/Sprawl**
- **No One in Charge**
- **High Turnover of Elected Officials**



SEQL Region



Who Is Involved with SEQL?



*N.C. Department of
Environment & Natural Resources*



*S.C. Department of
Health & Environmental Control*

- Local governments
- Businesses/developers

- Environmentalists
- Community groups
- Citizens



Components of SEQL

- **Local Communities call the shots**
- **Aggressive Effort to engage all 15 counties**
- **Early Successes**
- **EPA Brings Technical Assistance to the Table**
- **Visioning**
- **Alternative Future Scenarios**
- **Sharing information with Other Parts of the Country**



Action Item Implementation

- **84 jurisdictions have self-reported implementation of 732 actions in four areas:**
 - Air quality
 - Water quality
 - Sustainable growth
 - Additional environmental measures



Air Quality Actions Identified and Adopted by SEQL Region

- **315 actions of the following:**

- Flexible Work schedule
- Tax-free commuter benefits
- Tree Planting Standards
- Clean Cities Program
- Local government energy plan
- MPO/RPO Coordination
- Designated local expert on air quality
- Smoking Vehicles enforcement
- Carpooling/Vanpooling
- Enhanced ozone awareness
- Air Awareness Programs
- Open Burning limits



Examples

- **City of Concord (Cabarrus County)**
- **800+ employees receive air quality training, including AQI**
- **City employees engage community on air quality issues**
- **City developed air awareness program**
- **Concord has implemented specific actions:**
 - Applying for grant to build publicly accessible natural gas refueling station
 - Plan to replace 10 gasoline vehicles with CNG
 - Stakeholders in the Clean Cities Program
- City purchased first hybrid vehicle as part of its fleet
- Started mass transit system
- Fund Express Transit service into Charlotte
- Reduced fueling hours during the summer months
- Use of teleconferencing to reduce travel between facilities
- Use of 4-day work weeks in various departments
- No idling policy for City vehicles



Examples

- **City of Salisbury (Rowan County)**
 - No idling policy
 - Alt fuels fleet enhancements and fueling
- **City of Monroe (Union County)**
 - Alt fuels fleet enhancements and fueling
- **City of Charlotte/Mecklenburg County**
 - Commuter support programs
 - Participation in episodic ozone control program
- **Centralina COG**
 - Flex work schedules
 - Modified telecommuting
 - Hybrid vehicle purchase



Water Quality Actions Identified and Adopted by SEQL Region

- **192 actions of the following:**
 - Natural buffer zones
 - Sedimentation and erosion control
 - Wastewater treatment plans
 - Wastewater treatment programs
 - Watershed impact
 - Water supply plans



Examples

- **SEQL Water grant awarded by EPA Region 4**
- **Duke Foundation provided \$2,500 for Lake Norman Bike Trail planning to support natural buffers**
- **City of Gastonia received a NCDENR award for advanced wastewater treatment at the Long Creek Water Resources Reclamation facility**
- **Charlotte-Mecklenburg establishing post-construction ordinances for stormwater management and sedimentation/erosion control**



Sustainable Growth Identified and Adopted by SEQL Region

- **179 actions of the following:**
 - Annexation agreements
 - Connectivity for multi-modal transit
 - Efficient parking
 - Greenways and open space
 - Multi-jurisdictional land use regulations
 - Pedestrian friendly streetscapes



Examples

- **Gaston County developing comprehensive Unified Development Ordinance for the county and 14 municipalities**
 - Provides consistent, integrated regulations to support growth and quality of life issues
- **Trust for Public Lands, Catawba Lands Conservancy, and others collaborating on development of Catawba Regional Trail system**
- **Nine communities working on Pedestrian Plans to increase walkability and connectivity**
- **Cabarrus County master plan for parks, greenways, recreational facilities, open space and bicycle and pedestrian transportation routes**
 - Includes County, towns, MPO, schools



Specific Emissions Reduction Programs

- **46 actions of the following:**

- Diesel retrofit programs
- Truckstop electrification
- Lawn mower rebates and gas-can trade outs
- Idle reduction policy
- Air quality education for educators
- Design for the Environment autobody shop P2
- High-performance building techniques
- Brownfields redevelopment
- Promotion of infill development
- Pervious pavements
- Adsil energy efficiency coatings for HVAC units
- **OAQPS, Region IV and other parts of EPA have initiated and supported many of these measures**



School Bus Retrofits

- **379 buses retrofitted with oxidation catalysts in:**
 - Mecklenburg, Iredell, and Rowan Counties
- **Achieves emission reductions for:**
 - VOC
 - PM
 - CO
- **Gaston and Union Counties applied for EPA Clean School Bus funding**
- **COG will be seek funding for rest of non-attainment counties**

Estimated Emission Reductions

	VOC	PM	CO
Lbs/year/ bus	12.39	3.37	33.667
Lbs/year for 379 buses	4,696	1,277	12,759



Adsil Energy Efficiency Coating

- Applied Adsil coating to 150 HVAC units in 28 buildings in 13 jurisdictions
- Improved energy efficiency of units by 12.3%
- Annual savings of:
 - 461,400 kilowatt-hours
 - Over \$37,000
- Lower energy demand should delay the need for the construction of a new power plant to provide energy for the region
- Study report includes Energy Savings Projection Tool
- Both Adsil study report and tool going on EPA website



Truckstop Electrification

- COG received grant to electrify 50 spaces at a Rowan County truckstop
- CMAQ funds to make up remaining cost
- 250 trucks idle at site on average night
- Will achieve emission reductions for:
 - NOx
 - VOC
 - CO
 - PM
- Adding this TSE stop allows trucker to drive almost entire stretch of I-85 from GA thru NC without having to idle
 - Six TSE sites along that route

Estimated Emission Reductions

	NOx	VOC	PM	CO
Lbs/day/ truck	4.76	0.45	0.008	3.5
Lbs/year for 250 trucks	434,350	41,063	730	319,375



Autobody Shop Pollution Prevention

- **Goal to encourage auto refinish shops to implement best practices to reduce:**
 - Diisocyanates
 - Organic solvents
 - Other toxics
- **Several diisocyanates and organic solvents used in auto refinishing are HAPs**
- **EPA contractor did before and after visits to eight shops**
- **Recommended work practice changes to shops to reduce emissions**

Activity Improve-ment	Emission Reduction
Increase Usage of HVLP Spray Guns	Isocyanate: 36% per shop VOC: 12% per shop
Increased Usage of Spray Booths	Isocyanate: 53-55% per shop



Integration into Public Policy

- **Adoption of environmental considerations into local policy and regional documents**
- **Anti-idling policies**
- **Land use plans**
 - "General Development Policies"
 - Visioning
- **Adoption of specific tools into ordinances for land use regulation**
 - Connectivity in subdivisions
 - Sidewalks and trees



Examples

- **Charlotte and Mecklenburg County adopted a series of General Development Policies**
 - Provide guidance for future growth and encourage compact, pedestrian-oriented development and integration of transportation and land-use planning
 - Uses GIS-based point system to make it advantageous to developers to find building locations well-connected and to build facilities for alternative transportation modes, such as sidewalks and bicycle paths
- **Cleveland County adopted “rural smart growth” land use plan**
 - Greenway network
 - Rural open space preservation and farmland protection
 - Support for focusing smart growth in towns
- **4 School Districts have anti-idling policies**



Examples

- **Salisbury has a tree ordinance and will begin a high resolution canopy study to enable better planning**
- **Charlotte limits cul-de-sacs in new subdivisions**
- **Mooresville is coordinating land use plan, transportation plan, and pedestrian planning efforts to produce a truly integrated plan**
- **Midland has requested SEQL input in their new land use planning/ordinance development process**



SEQL Public Information Campaign

- Developed interactive website
- Meetings with editorial boards
- Developed promotional materials
- SEQL informational brochure
- “100 Ways You Can Improve the Environment” brochure
- Outreach to Schools
- Working with transportation directors and other stakeholders
- Programs for PTAs
- Video and TV show on Air Quality and child health
- Partnering with other outreach organizations such as Carolinas Clean Air Coalition, Trust for Public Lands, etc.



Amending the Regional Agenda

- **COGs have conducted over 80 meetings across the region**
 - Elected officials
 - Chambers of Commerce
 - Citizens/environmental groups
 - Universities
- **66 jurisdictions have become formal SEQL partners**
- **Willing to review list of action items to see what they can and will implement**
- **SEQL is insinuating its message into the way local governments do business: policies, programs, ordinances, and interests**



SEQL Impact on Rest of Nation

- **OAQPS held national broadcast featuring SEQL and other similar efforts**
- **SEQL/COG officials participated in several national meetings**
- **Across the Southeast**
 - Association of County Commissioners of Georgia using SEQL “how-to” documents as technical resource for Southeastern States
- **Bartow County, GA used SEQL tool kit as starting point for developing their own regional tool kit**
- **Sustainable Sandhills in NC using SEQL as model**



SEQL Lessons

- **Good working relationships among federal, state and local officials ARE possible**
- **Local elected officials will generally “do the right thing” if they**
- **Have education/information**
- **Have public and peer support**
- **See multiple benefits**



Next Steps

- COG is gathering more data on action item implementation
- Conducting 30-40 site visits to largest jurisdictions
- COG developing regional vision and future quality growth scenarios to ensure a high quality of life in the region
- Integration of land, air, water, transportation, energy, economic development
- Key to capturing cross-sectoral impacts is ReVA



ReVA and Scenario Planning

- **Allows comparison of multiple environmental indicators across a large geography**
 - Air
 - Terrestrial
 - Water
- **Trick is how to make the results understandable to broad audiences**
 - “Black box”
 - “Dueling Models”

