

TRIAD EARLY ACTION COMPACT

Alameda County and
Municipalities

Caswell County and
Municipalities

Davidson County and
Municipalities

Davie County and
Municipalities

Forsyth County and
Municipalities

Guilford County and
Municipalities

Randolph County and
Municipalities

Rockingham County and
Municipalities

Stokes County and
Municipalities

Surry County and
Municipalities

Yadkin County and
Municipalities

June 30, 2006

Ms. Kay T. Prince, Chief
Air Planning Branch
US Environmental Protection Agency, Region 4
61 Forsyth St. S.W.
Atlanta, GA 30303-8960

Dear Ms. Prince:

Enclosed is the June 30, 2006 Progress Report from the Triad Early
Action Compact.

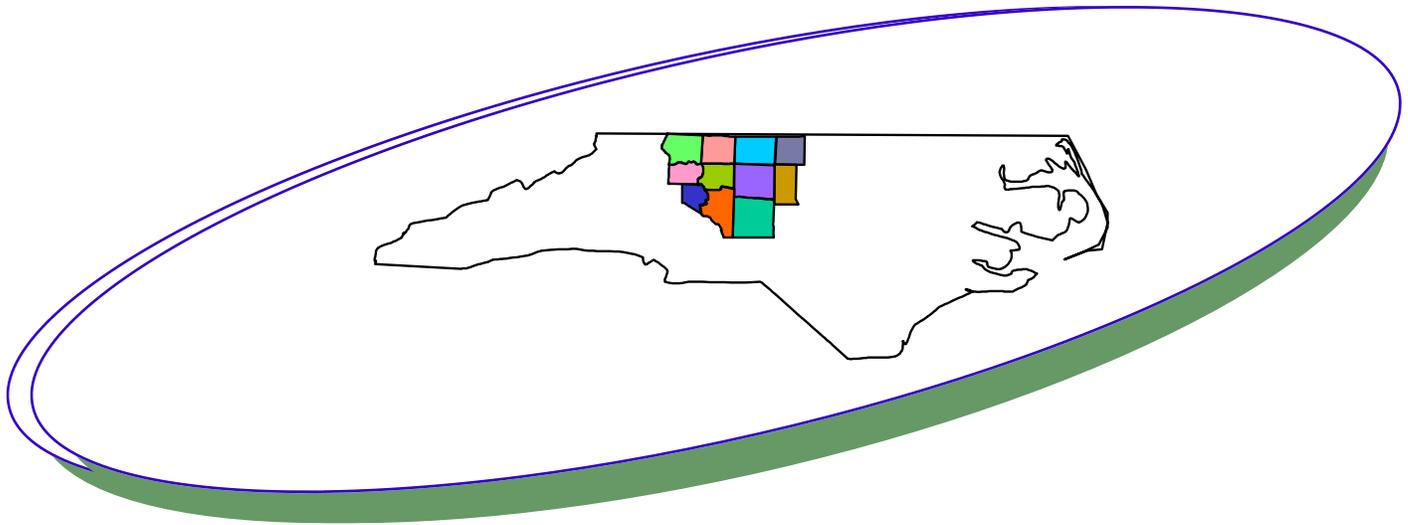
Please let me know if you or your staff has questions.

Sincerely,

Virginia G. Booker

Virginia G. Booker
Assistant Director
Piedmont Triad Council of Governments

Cc: Richard Schutt, Chief Regulatory Development Section, USEPA
Sheila Holman, Chief, Planning Section, NCDAQ



Triad Early Action Compact Progress Report June 30, 2006

An initiative of 11 counties and 20 municipalities in the Piedmont Triad Region of North Carolina and The North Carolina Department of Environment and Natural Resources, Division of Air Quality with guidance from USEPA Region 4.

June 30, 2006

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Triad Early Action Compact June 2006 Progress Summary Table

	A. Control Measure	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, \$\$)	H. Additional Information
7. Triad, NC (Effective date of nonattainment designation deferred)								
1.	Open burning ban -ozone action days	Bans open burning on code orange and red days in ozone season in counties for which NC Div. of Air Quality forecasts next day ozone levels.	Mandatory statewide	June 2004	2.1 TPD	1.5 TPD		
2.	Reduce NOx emissions at Belews Creek Power Plant, Stokes County and Marshall Power Plant, Catawba County .	In June 2002, the N.C. General Assembly enacted the Clean Smokestacks Act, requiring coal-fired power plants to reduce annual NOx emissions by 78% by 2009 (from a 1998 baseline). These power plants must also reduce annual sulfur dioxide emissions by 49% by 2009 and by 74% in 2013.	As of December 2005, Belews Creek NOx emissions are 30 tons per summer day (5234 tons per year), compared to 330 tons per summer day in 2000 (32,500 tons per year). NOx emissions at the Marshall Plant have been reduced to 16.98 tons per day and will be reduced an additional 4.95 tons per day before the start of the 2007 ozone season. Both plants are also ahead of schedule in meeting sulfur dioxide reductions.	NOx reduction project at Belews Creek (selective catalytic reduction) completed in 2004. Nox controls at Marshall #4 ar on schedule for completion before 2007 ozone season.		300 TPD Belews Creek - 80% reduction		
3.	Expand vehicle I& M	NC will expand vehicle I & M from 9 counties to 48 counties between July 1, 2002 and January 1, 2006.	Implemented	July 2002; July 2003; January 2004; July 2004; July 2005	1.7 TPD	4.0 TPD		
4.	Purchase newer, less polluting vehicles and reduce fleet emissions	Reduce aggregate fleet emissions in Triad EAC cities and counties as quickly as possible considering public budget constraints. A substantial part of this strategy includes purchase of alternative fuel and lower emission vehicles that are cleaner burning than the ones they replace. As a part of the Regional Clearinghouse function, the Triad EAC will maintain and track information on public fleet vehicle purchases and replacements.	Progress continues to be made. See accompanying Progress Report for details of CMAQ funding for CNG vehicles in Davidson County, Winston-Salem's comprehensive Vehicle Fuel Management and Vehicle Acquisition Program, Greensboros grant to retrofit diesel oxidation catalysts on trucks, and PART's new heavy duty buses operating on ultra low sulfur diesel.	Began October 2004. Ongoing	1.1 TPY	0.9 TPY		Further information on local and regional strategies #4-#29 can be obtained from the Piedmont Triad Council of Governments www.ptcog.org
5.	Increase use of biodiesel in the region. (Reworded from initial EPA language.)	Increase use of biodiesel in the region - At the time the SIP was submitted, the City of Greensboro had begun to use biodiesel in all its diesel vehicles, using 1.5 million gallons of B20 a year. The goal is to spread use of biodiesel to other jurisdictions in the region.	As of June 2006, 2 Greensboro universities continue to use biodiesel in all diesel vehicles. Forsyth County uses biodiesel for 25 county vehicles. The North Carolina Zoo's new biofuel processor is on-line, producing B100 which is then diluted to B20 for use in the Zoo's trams, buses and other equipment. Elon University, a private college in Alamance County, has ordered 3 buses to run in town and on campus -- the first for this small town. Bid are being accepted for construction of an on-campus biodiesel fuel depot.	Implementation began in Spring 2003and is ongoing.			Committed	
6.	Tax to support PART regional work program	Continue support for PART (Piedmont Authority for Regional Transportation) - PART obtains federal and state grants to fund specific projects. Income from transportation services contributes operating costs. But a rental car tax authorized by all counties that are members of PART will provide the financial basis for strong regional support.	The rental car tax went into effect in Surry County in April. Guilford and Forsyth counties have levied the tax for 3 years.	2003			2.5 million in 2003	
7.	Add 20 Park and Ride lots	Build a network of regional park and ride lots. PART was awarded a Federal Transit Administration grant that could fund up to 20 Park and Ride lots in the region.	As of June 2006 7 park and ride lots are operating in the region. 2 more are scheduled to open in July.	2004-2007	1.8 TPY	3.2 TPY	Funds on hand	
8.	Add 5 vans/yr to ridesharing	Expand PART Ride Sharing and Vanpooling of the Piedmont (RSVP). RSVP provides vanpool and ride-match services to employers and employees. In December 2004, there were 27 vans.	As of June 2006, PART's RSVP program has 30 vans. It has vans for riders to and from the eight counties it serves: Guilford, Forsyth, Alamance, Davidson, Randolph, Rockingham, Stokes and Surry. Curenly, it also has vanpools traveling outside the region east to Chapel Hill and south to Charlotte.	Jan. 2004	0.7 TPY	0.7 TPY		

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9.	Increase ridership on regional bus service	Increase ridership on PART Express, the regional bus service. The bus service travels from downtown transit centers in Winston-Salem, Greensboro and High Point to the PART regional transfer facility. From there shuttles travel to businesses and hotels in the urban core of the region.	Ridership on PART Express has increased every month since its beginning, for a significant reduction in miles traveled on the region's road network. Bolstered by high fuel prices, ridership in the first half of 2006 is up some months as much as 38% over 2005. During peak hours, PART sometimes runs 2 buses "bumper to bumper" to accommodate all passengers.	On-going	8.9 TPY	7.3 TPY	Committed	
10.	Expand carpooling - PART	Expand carpooling through PART website sign-ups, promotions and advertisements. PART participates with other regional organizations in the statewide commuter information network that connects riders with transportation options. While PART facilitates the service through its website, it does not manage or get involved in linking drivers and passengers.	Strongest participation is with car/vanpools between Greensboro and Research Triangle area.	Jan. 2004	23.2 TPY	19 TPY		
11.	RJ Reynolds-Tobaccoville-eliminate use of coal fired boilers during ozone season	Eliminate use of the 4 coal fired boilers during ozone season at the RJR plant in Tobaccoville.	Implemented before beginning of 2004 ozone season	2004		5.4 TPD		
12.	Energizer-reduce vehicle fleet; 90% of forklifts-battery	Energizer Battery Company - Reduce vehicle fleet by 57%. Power 90% of folk lifts with batteries. Use smaller natural gas fired boiler during ozone season. Test diesel powered fire pumps and natural gas powered emergency generators during cooler morning hours only.	Implementation complete by summer 2004.	June 2004				
13.	Duke-reduce mobile reading-56 trucks	Duke Energy - Initiate a mobile meter reading program and eliminate daily use of 56 pick-up trucks.	Implementation complete in 2003.	2003		1300 lb/ozone season		
14.	Duke-idling reduction guidelines	Duke Energy - Initiate company-wide idling reduction guidelines for all fleet vehicles.	Implementation complete in summer of 2004.	Summer 2004				
15.	Diesel retrofits-50-100school buses	School systems within the EAC will retrofit or replace at least 165 school buses with lower emissions equipment.	This goal has been exceeded, led by Guilford County's retrofit of 123 older buses, and progress continues. Guilford County will take delivery of 40 new lower emissions buses this summer, in addition to the 48 delivered last year. Other counties in the region will also replace older buses with lower emission vehicles.	2004	17 TPY	23 TPY	100,000 awarded	
16.	No idling-all school buses	New statewide idling policy adopted by State Board of Education in November 2005. See write-up in text under State Control Measures	Implemented in all Triad EAC counties.	2003-2005				
17.	Energy efficient public buildings	Implement energy efficiency in operation and design of facilities, purchase and use of equipment	New and energy-savings standards adopted for building retrofits and new construction for: High Point city buildings, Davidson County office buildings, Guilford County schools, City of Greensboro buildings, Rockingham County schools, and Asheboro city buildings. --- High Point also provides energy audit links on the city website for residents to improve energy consumption in their homes. --- In early 2006 Forsyth County "benchmarked" the building housing its Environmental Affairs Department and other offices using EPA's Building Benchmark Initiative.	2003 and ongoing				
18.	E-government/increase available locations/provide direct deposit	Provide telephone and web-based services, both for information and transactions and/or multiple locations for payments to save VMTs.	The 3 largest cities in the EAC, Greensboro, Winston-Salem, and High Point have on-line bill pay, as does the smaller city of Thomaville, in Davidson County. Cities and counties provide extensive access to information, applications and customer service on their websites. (See extensive discussion in December 2005 Progress Report.)	2004 and continuing	189 TPY	155 TPY		
19.	ITS	Use intelligent transportation systems such as detection loops and other systems to monitor traffic and help reduce non-recurring congestions and associated emissions	3 largest cities in EAC, Greensboro, Winston-Salem and High Point use local and CMAQ funds for on-going development of ITS. Greensboro has a new state-of-the-art ITS center.	On-going				

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20.	Encourage non-motorized transportation with sidewalks, greenways and bicycle routes	The Triad EAC goal is to construct an additional 98 miles of public sidewalks, 14.25 miles of public linear greenways suitable for pedestrian and bicycle transportation, and establish or improve 190 miles of signed bicycle routes by December 31, 2007.	This goal will be exceeded and progress continues. 3 MPOs in the region allocate local funds and receive CMAQ funds annually for greenway and sidewalk construction. The Rural Transportation Planning Authority (RPO) is also conducting pedestrian and greenway initiatives. The Piedmont Triad Council of Governments has hired a planner to work specifically with local governments on greenways, bicycle and pedestrian planning. See www.pedpower.org , the Piedmont Triad Council of Government's website for more information on regional pedestrian and bicycle resources.	On-going	279 TPY	229 TPY		
21..	Smart growth policies	Adopt planned growth measures including pedestrian friendly communities and transportation strategies that promote connectivity and less reliance on automobiles.	Attachment B in the Triad EAC's SIP submission detailed examples of smart growth provisions in zoning and development ordinances throughout the region. Since then, local governments continue to adopt ordinances to implement smart growth measures.	On-going			Committed	
22.	Truck stop electrification	Provide electrification equipment at truck stops	The region's first truck stop electrification site opened in Mebane in July 2004. There are 58 berths which have an average annual occupancy rate of 30%. Emissions reductions for the Jan-June 2006 period are in the text of the accompanying report. Also see text for information on Volvo Trucks North America (headquartered in Greensboro) testing of new mobile-idle reduction technology kit.	Jul-04	1.8 TPY	35 TPY	Committed	
23.	Emission reduction clearinghouse	The Triad EAC will develop and maintain a regional emissions reduction clearinghouse. This strategy is linked to compiling and disseminating information necessary for decision makers to reduce fleet emissions.	The clearinghouse function is in place. Feedback and reports from local governments are the source for information for semi annual EPA reports	April 2005 and continuing				
24.	Hospital transportation shuttle	PART Connections Express is the shuttle system that connects hospitals in the Triad to 2 university/teaching hospitals and the veterans' hospital in the Triangle region.	PART Connections Express began in April 2004. There were approximately 450 riders per month by the end of 2004. Monthly average ridership increased to 556 in 2005. Late in 2005 PART reduced the fare to the general public (e.g. non Medicaid riders). Through March 2006, this has resulted in a 289% increase in ridership.	April 2004				
25.	Enhance mass transit facilities	Enhance municipal mass transit facilities, bus stops and accessibility as means of increasing ridership.	All 3 municipal transit systems in the EAC area add to their existing bus stops by request of riders or employers. Funds are budgeted annually for this purpose. Greensboro and Winston-Salem have web based scheduling. Greensboro has a newly renovated historic depot as its multi-modal transportation center, and High Point has renovated its downtown transportation terminal for moving tens of thousands of marketgoers on shuttles and buses during the semi-annual International Home Furnishings Market.	Ongoing				
26.	Mass transit incentives	Provide mass transit incentives and passes as means of increasing ridership.	The 3 municipal bus systems as well as PART provide incentives and frequent system upgrades to increase ridership. High Point, Greensboro and PART have experienced ridership increases between 17% and 22% in the last year. Greensboro has recently adopted significant system upgrades outlined in the text of the accompanying report.	Dec. 2005				

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27.	Commuter/intercity rail	Proceed with plans for commuter transit or intercity rail -- In the fall of 2004 PART contracted for Phase II of a Major Investment Study to determine feasibility of a regional mass transit system. Primary options are bus rapid transit and commuter rail. Several factors distinguish this study and the Triad region from the Triangle and Charlotte areas.	PART Board received the Major Investment Study in the spring of 2006. It provides extensive analysis of the rail option versus the bus option for a regional mass transit system. The bus option does best in measures related to cost and also projects highest ridership in high-traffic corridors. The rail option performs better on access, convenience and environmental factors. The PART Board is studying the report and will narrow the policy choices in order for the study to move forward into the next phase of analysis.	Fall 2004 and continuing				
28	Feasibility of HOV/HOT lanes - I-40	Determine feasibility of developing HOV / HOT lanes along I-40. A component of the study is to determine feasibility of a value pricing lane along the major I-40 east-west corridor in the region.	The study is complete and has been submitted to the PART Board and NC DOT. Implementation is many years away.	Summer 2005				
29	Support Air Awareness Program	Support Triad Air Awareness Program -Provide education, outreach and public information on air quality in the region and ways to improve air quality.	In March 2006 the Triad Air Awareness Program became a partnership between the Forsyth County Environmental Affairs Department, an original partner, and PART. PART will provide annual financial support in the place of funding that ran out from the NC Division of Air Quality. Examples of activities are cited in the report with this submission.	Ongoing - with new participation from PART				
Previously Submitted Strategies That Were Omitted From December 2005 Spreadsheet								
30	Emissions Reductions at Syngenta Crop Protection	1) Delivery vehicles are not allowed to idle in shipping and receiving area during deliveries or pick-ups. 2) Instituted temperature adjustments to reduce operations of boilers since 2001. Temperatures raised in buildings after-hours in summer and lowered after-hours during winter. 3) Improved efficiency of boiler operations and removed a boiler in 2001. 4) Boilers go through annual tunings as part of preventive maintenance to increase operational efficiency.	Fully implemented	2001, 2003				
31	Determine Potential and Value of Open Burning and Lawnmower Buy-Back Policies	Forsyth County Environmental Affairs Department to study and report to EAC on Feasibility of county-by-county open burning policies and lawnmower buy-back policies by December 31, 2005	Open-burning ban on ozone action days was implemented statewide. See #1 above Lawnmower buy-backs not implemented. Forsyth County Environmental Affairs Department (FEAD) made the following findings: (1) Grants or local appropriations are needed to fund buy-backs. (2) There is no revenue source readily available in this region. (3) Based on emissions factors developed by FEAD, greatest impact is on VOCs. Susequent modeling by NC Div. of Air Quality verified that NOx is the significant ozone precursor in this region and state. EAC dropped strategy from consideration due to lack of cost benefit, which is not the case in western US where VOCs are a major problem.	June 2004 Not implemented	2.1 TPD	1.5 TPD		
32	Partner with Triangle area in two-region Clean Cities program	Develop and maintain a cooperative relationship with the Triangle area Clean Cities program. Areas of cooperation to include information sharing, education of local officials, advocacy and other emissions reduction strategies.	NC Solar Center has become the lead agency through which Triad EAC and Triagle Clean Cities conduct cooperative activities. (Original Triangle Clean Cities program staff is now a program manager at NC Solar Center.) Examples of 2006 joint efforts include: advocacy with local officials and NC legislature for passage of emissions reduction/fuel diversity legislation; and work on statewide database of major public/private sector fleets. Database will be used to guage use of alternative fuels and emissions reductions efforts.	April 1, 2004				

PART B. LOCAL AND REGIONAL STRATEGIES

Section 1 Implementation of Strategies

The eleven counties and their municipalities in the Triad Early Action Compact are implementing all strategies in the Triad section of the State Implementation Plan. Some are complete; others are ongoing. Following are progress summaries on all strategies:

Numbers correspond to strategy numbers on EAC June 30,2006 Progress Summary Table

Strategies 1-3 are state measures.

1. Open burning ban - ozone action days
 2. Emissions reductions at Belews Creek Power Plant and Marshall Power Plant
 3. Expand vehicle I & M
- 4. Purchase newer, less polluting vehicles and reduce fleet emissions** - Progress continues to be made. Examples:
- (a) In Davidson County both the County and the City of Lexington have CMAQ funds, plus other state funds to be available in October. This will allow the county and the city to purchase 2 additional compressed natural gas vehicles each this fall.
 - (b) In April, Winston-Salem adopted a comprehensive Vehicle Fuel Management and Vehicle Acquisition Policy. The purpose is to ensure that fuel efficiency and pollution control become systematic priorities for city vehicle use. Policies include: an annual fuel conservation plan, with performance tracked monthly; managing vehicle acquisition to assure that the city actively pursues the most fuel-efficient, lowest-emission vehicles that meet service delivery needs; an emphasis on preventive maintenance; and managing vehicle use so that the right-sized vehicles are actively used. The city is already implementing the plan by purchasing 3 ultra-efficient Honda Civic hybrids. They will be used to gauge maintenance experience and the overall cost-efficiency of these low-pollution vehicles. Second, staff is comparing other smaller sedans (like the Ford Focus) before making a recommendation to council on what to purchase for the remaining 12 sedans needed this year.
 - (c) (3) In March the City of Greensboro received a \$20,000 NC Mobile Source Emissions Reduction grant. This will be used to install diesel oxidation catalysts on trucks.
 - (d) PART (regional transportation authority) will take delivery next week of eight heavy duty buses that will operate on ultra low sulfur diesel fuel. Six more will be operating by the end of the year. PART is building a storage tank for ultra low diesel at the garage in Winston-Salem.

Throughout the region, approximately 85%-90% of local government fleet vehicle purchases continue to replace older higher emissions models.

5. **Increase use of biodiesel in the region** - See June 2006 Summary Table for update to activities described in detail in December 2005 Progress Report. Note buses for Elon University (Alamance County) and bids for an on-site biodiesel storage facility. Note also operation of NC Zoo's biodiesel processor. Due to demand for diesel, Zoo staff is identifying funds to purchase parts and build a second processor. Progress on this front is expected in the next six months.
6. **Tax to support PART regional work program** - See June 2006 Summary Table for update to activities described in detail in December 2005 Progress Report.
7. **Add 20 Park and Ride lots** – See June 2006 Summary Table for current status. Development of lots is more difficult than PART anticipated due to local government's (or private owner's) reluctance to sell or lease otherwise usable property for the lots. In each case, securing and negotiating land for a site is a lengthy process.
8. **Add 5 vans/yr to ridesharing** – See June 2006 Summary Table for current status – 30 vans total. PART projected that it could add 5 new vans per year in 2005 and 2006 to the base of 27 vans in 2004. The estimate was based on population projections and estimated new business openings. These projections have not been met and may not have been realistic, primarily to the unanticipated number of plant closings. The largest new plant, Dell Computer, in Forsyth County will ultimately hire 1300 workers. PART has added a bus to transport workers, but there has not been demand for a ridesharing van. PART continues an aggressive marketing program for this service and has recently contacted representatives of two large employers (over 100 each) to open in High Point.
9. **Increase ridership on regional bus service (PART Express)** – See June 2006 Summary Table for current status.
10. **Expand carpooling through PART** – Interested riders learn about carpooling opportunities through PART's website, promotions, and advertisements. They can link up with other riders and drivers on the web. This strategy also benefits from PART's participation with other regional organizations in the statewide commuter information network www.sharetheridenc.com that connects riders with transportation options. PART facilitates this service but does not oversee or manage the carpooling.
11. **RJ Reynolds Tobacconville Plant -eliminate use of coal fired boilers during ozone season** – Implemented in 2004.
12. **Energizer Battery Company, Inc.-reduce vehicle fleet; power 90% of forklifts with batteries** –All measures implemented beginning in 2003, with completion in the summer of 2004.
13. **Duke Power-reduce mobile meter reading trucks** –Implemented in 2003.

- 14. Duke Power-idling reduction guidelines** –Implemented in the summer of 2004
- 15. Diesel retrofits-50-100 school buses** - See June 2006 Summary Table for current status.
- 16. No idling-all school buses** – This state policy has been implemented in all Triad EAC counties.
- 17. Energy efficient public buildings** – See June 2006 Summary Table for current status including benchmarking of one Forsyth County office building using EPA’s Building Benchmark Initiative. Note reference in December 2005 Progress Report
With regard to private residences, the City of High Point has even installed a link to Energy Depot® on its web page www.high-point.net/sustsrv/depot.cfm. As explained on the city’s web page, residents can use this resource to obtain personalized energy profiles with estimates of energy costs for each home energy system, complete a do-it-yourself home energy audit, learn specific things they can to reduce energy use, and more.
- 18. E-government; increase available locations; provide direct deposit** – No additions to extensive examples and websites provided in December 2005 Progress Report.
- 19. ITS** - Greensboro, High Point and Winston-Salem (each in a separate MPO) have Intelligent Transportation Systems (ITS) and incorporate ITS upgrades into their long-range transportation updates. See December 2005 Progress Report for more details.
- 20. Encourage non-motorized transportation with sidewalks, greenways and bicycle routes** - Linear greenways and bicycle routes are being constructed throughout the region, and new master plans are in the works. This was extensively discussed with numerous examples provided in the December 2005 Progress Report. Examples of new initiatives since December include:
- Work of the Piedmont Triad RPO (Rural Transportation Planning Organization) to:
 - Conduct field work gathering data on sidewalk characteristics and location in 22 non-urban municipalities. Results will help local governments verify sidewalk locations and analyze and prioritize gaps for improvements.
 - Provide a scenic byways screening for 5 counties
 - Carry out field location for a 6.5 mile greenway planned from Asheboro to the NC Zoo
 - Conduct a Safe Routes to Schools pilot project at 21 middle schools in 5 non-urban Piedmont Triad Counties. Purpose is to enable and encourage children to walk and bike to school. Outcomes include: analysis, at each school, of opportunities for and barriers to walking and biking within 2 miles; cataloging potential educational and enforcement opportunities; a list of prioritized projects and an inventory of potential implementation strategies. Schools can then apply for competitive funding to implement Safe Routes to School at their location.
 - Public education through the PedPower program developed by the Piedmont Triad Council of Governments www.pedpower.org The website provides regional bicycle

and trails maps, safety resources, a message board and bike mentoring. This program also provides event support for Bike to Work Week, National Trails Day and National Trails Day.

- Winston-Salem projects including: City Bike Route signs along 76 miles of city streets, bike lane striping along 15 miles; greenway and sidewalk improvements
- Greensboro projects including: MPO Bike Ped Plan in final stages of completion. The plan recommends approximately 453 miles of new greenway facilities, 362 miles of new sidewalk, and 850 miles of bicycle accommodations. The plan is expected to be completed late summer. Implementation of the bicycle accommodations including edgelines or additional paved shoulders has already begun to coincide with the repaving of certain facilities. Currently the city of Greensboro has a total of 16.85 miles of sidewalk which have been constructed or are under construction since 2004

Information on greenway and bicycle transportation plans for Greensboro, Winston-Salem and High Point can be found on the city websites at www.greensboro-nc.gov, www.high-point.net and www.cityofws.org.

- 21. Smart growth policies** – The December 2004 SIP and the December 2005 Progress Report described and provided web links to comprehensive development plans and development ordinances incorporating smart growth principles adopted by Triad local governments. Notable progress between January and June 2006 includes several new mixed use, infill projects (either new construction or renovation) in Winston-Salem and Greensboro. Notably, in May the City of Greensboro and Guilford County approved an incentive package which assured a project to reclaim and renovate Greensboro’s downtown Wachovia Tower, empty for 20 years. Also, in June the Piedmont Triad Council of Governments received a \$200,000 EPA Brownfields grant to begin assessment of industrial sites in downtown Lexington, Reidsville and Eden. Potential developers have already been identified for 2 of the 3 sites.
- 22. Truck Stop Electrification (TSE)**- The truck stop electrification site in Mebane (Interstate 85/40 Exit 157) opened in July 2004. The site has 58 electrified spaces. As reported in the December 2005 Progress Report, occupancy is still running about 30%, measured between 5:00 p.m. and 5:00 a.m., the hours when most drivers fulfill their Hours of Sleep obligations. IdleAire Technologies operates this and other sites throughout the country and projects occupancy will increase as the TSE network grows. At TSE sites in destination locations such as Atlanta, occupancy is considerably higher. By not idling diesel engines 8-10 hours at a time, each electrified truck stop saves about 263,000 gallons of fuel annually. Each stop will prevent about 2,732 tons of carbon dioxide, 35 tons of nitrogen oxides (NOx), 15 tons of carbon monoxide, 1.8 tons of hydrocarbons, and 1 ton of particulate matter emissions from reaching the air per year.

IdleAire Technologies reports the following results for the January – June 2006 period:

Emissions Reductions 01/01/2006 through 6/30/2006	
CO	2.640 metric tons
CO ₂	488.867 metric tons
NO _x	6.348 metric tons
PM	0.173 metric tons
VOC	0.322 metric tons
Total Emissions Reductions Jan-June	498.349 metric tons
Total Fuel Reductions	138,695.81 gals.

IdleAire will open a second truck stop electrification site in the region in Greensboro in August 2006.

In another development, Volvo Trucks North America, headquartered in Greensboro, will engineer and test a new mobile-idle reduction technology kit. The goal is to develop a standard installation kit that will make it easier and more affordable for truck owners to use idle-reduction technology. Volvo will install the kits in at least 20 trucks and test them over 2 years. The NC Solar Center will receive and analyze the data.

23. Emission reduction clearinghouse - The EAC has implemented a central monitoring and reporting clearinghouse housed within the Piedmont Triad COG. Additional staff support is provided by Forsyth Environmental Affairs Department, and PART. The clearinghouse develops and maintains databases and compiles information on public fleet vehicle purchases, use of alternative fuels, school bus purchases and retrofits; smart growth ordinances and projects; pedestrian and greenway projects; public transit initiatives and commuter transit planning. This information is summarized in semi-annual reports to the Triad EAC Stakeholders Group and EPA.

24. Hospital transportation shuttle – See June 2006 Summary Table for current status.

25. Enhance mass transit facilities – See June 2006 Summary Table for current status. Greensboro, Winston-Salem, and High Point have excellent and recently renovated central facilities. Greensboro and Winston-Salem have web based scheduling.

26. Mass transit incentives - Winston-Salem Transit, Greensboro Transit, High Point Transit and PART) offer incentives and fund system upgrades as feasible. A combination of facilities improvements, incentives, system upgrades and high gas prices has resulted in significant regionwide increases in mass transit ridership. This was outlined in detail in the December 2005 Progress Report. Last week the Greensboro City Council approved additional major upgrades in Greensboro Transit service.

- Funding to support making all 14 Greensboro city bus routes 30-minute service by January 1, 2007. This includes 10 new buses over and above replacement buses. (7 routes currently have 60-minute service).
- Initiation of a new connector service to south Greensboro, effective September 1, that will not require riders to transfer at the city's transportation center. This will be Greensboro's first cross-town one-seat ride and is provided in response to travel demand.

(Reminder that in September 2006 Greensboro Transit will launch HEAT - Helping Education Access Transit. The much anticipated system will be a dedicated service routes at a nominal fee for students at Greensboro's 6 colleges and universities that will provide expanded options for getting to and from classes, shopping, off campus housing, and employment.)

- 27. Commuter/intercity rail feasibility** – See June 2006 Progress Summary for current status.
- 28. Feasibility of HOV/HOT lanes - I-40** -PART partnered with NC A&T University and UNC Chapel to produce a study one component of which is to determine the feasibility a value pricing line along this major I-40 east-west artery. The study is now complete and has been submitted to the N.C. Department of Transportation. It is believed the implementation of such a line will be many years away.
- 29. Support Triad Air Awareness Program** - Refer to the Triad Air Awareness tab at www.co.forsyth.nc.us/envaffairs for current activities, programs, and the numerous resources this program makes available. Examples of December 2005 – June 5, 2006 initiatives include: school visits; Earth Day events; presentations at Asthma Summit, health and wellness fairs, Air Quality Summit, Sustainable Energy Conference and college classes; increase in air quality forecast subscriptions from 400 to 900; ongoing work with media environmental/weather reporters on accurate reporting of air quality information; summer project developing program to make schools no idling zones in child drop off and pick up areas, following a “It All Adds Up To Cleaner Air” model.

Updates on 3 strategies not listed in December 2005 submission:

- 30. Emissions Reductions at Syngenta Crop Protection** – See June 2006 Progress Summary
- 31. Determine Potential and Value of Open Burning and Lawnmower Buy-Back Policies** - See June 2006 Progress Summary
- 32. Partner with Triangle area in two-region Clean Cities program** - See June 2006 Progress Summary

Section 2 Activities of Triad EAC Stakeholders Group

The Triad EAC Stakeholders Group meets quarterly now that its focus is on strategy implementation rather than strategy development. In the January – June 2006 period, the group's primary work focused on:

- (1) monitoring progress on SIP strategies;
- (2) reviewing and confirming the Stakeholders Group's role (particularly in the public sector) as :
 - a clearinghouse and disseminator of information
 - an advocate for local policies and practices that reduce emissions and promote fuel conservation and diversity
 - a facilitator of networking for public and private sector staff with hands-on responsibility for air quality, vehicles and emissions reduction
 - an advocate, *through participating local governments*, for legislation under active consideration in the NC legislation to reduce emissions and provide financial incentives for fuel conservation
- (3) drafting resolutions and working actively with local governments, the NC Solar Center, Triangle Clean Cities Coalition and legislators for passage of S2051 or similar NC legislation providing incentives for emissions reduction and fuel efficiency.
- (4) Participating in a statewide clean air conference - Clean Air: Community Strategies in Action – at the Catawba College Center for the Environment

PART B. NORTH CAROLINA DIVISION OF AIR QUALITY STATUS REPORT

Air Quality Analysis

Compact areas must certify progress toward attainment since their previous milestone, e. g., continued implementation and progress toward improvement in air quality and emissions reductions. Based on this June 30, 2006, progress report, the U.S. Environmental Protection Agency (USEPA) will determine whether or not to defer the effective date of the nonattainment designation to April 15, 2008 for the counties participating in the Triad Early Action Compact (EAC) area.

The North Carolina Division of Air Quality (NCDAQ) evaluated design value (DV) trends and ozone exceedance trends from 1994 to 2005 to determine if the Triad EAC area shows decreases in ozone formation. Specifically, the NCDAQ evaluated the following data as part of the air quality analyses:

- 1-Hour Ozone Design Value Trends – Most recent 1-hour ozone design values compared to the trend in 1-hour ozone design values from the 1994-1996 timeframe to present.
- 8-hour Ozone Design Value Trends – Most recent design values (3 year average of the 4th highest 8-hour ozone average), compared to the trend in design values from the 1994-1996 timeframe to present.
- 1-Hour Ozone Exceedances – Number of exceedances of the 1-hour ozone standard at each monitor in the EAC area for the most recent ozone season, compared to the number of exceedances at each monitor from 1994 to present.
- 8-Hour Ozone Exceedances – Number of exceedances of the 8-hour ozone standard at each monitor in the EAC area for the most recent ozone season, compared to the number of exceedances at each monitor from 1994 to present.

The National Ambient Air Quality Standard (NAAQS) for 1-hour ozone is 0.12 parts per million (ppm). When a monitor measures ozone above 0.124 ppm (per rounding convention), an exceedance of the NAAQS occurs. The design value for 1-hour ozone is calculated by rank ordering the highest monitor reading for a three-year period and the 4th highest value is the design value for that monitor. The design value for an area would be the highest monitor design value.

The NAAQS for 8-hour ozone is 0.08 ppm. When a monitor measures ozone above 0.084 ppm, an exceedance of the NAAQS occurs. The design value for 8-hour ozone is calculated by averaging the annual 4th highest daily maximum for three consecutive years for a monitor. The design value for an area would be the highest monitor design value.

In the sections below the four matrices listed above are discussed.

Section 1. 1-hour Design Value Trends

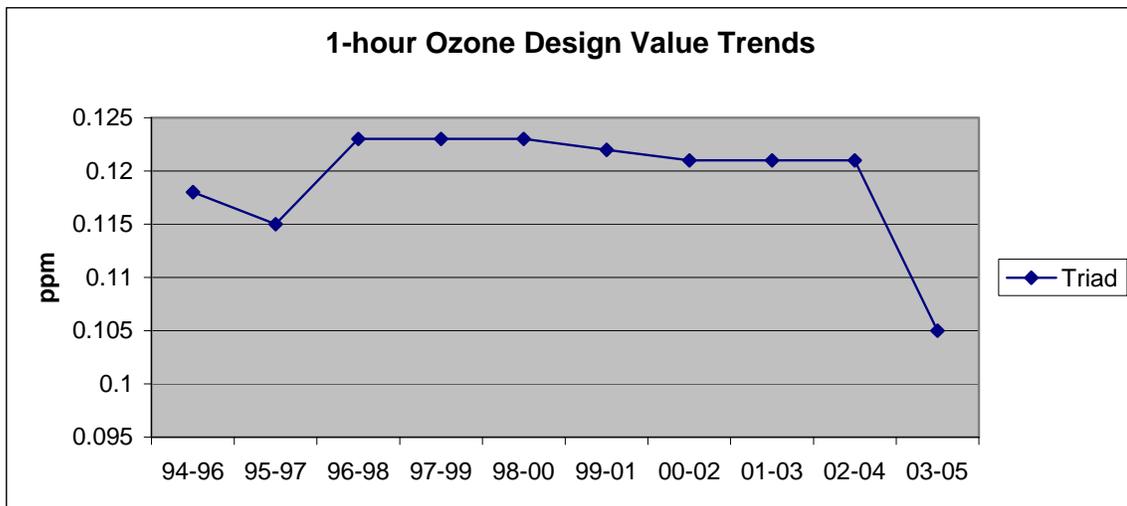
In the Triad, 1-hour ozone design values peaked during the 1996-1998 period, then showed a slight decrease through the 2002-2004 period, with a greater decrease in the 2003-2005 period (see Table 1 below). The design values are presented in parts per million, with design values exceeding the standard highlighted in orange. The blanks indicate that no data or incomplete data was available. The Mendanhall site (AIRS ID 37-081-0013) is not listed in the Table below since it did not start operating until 2005 and there is not enough data to show any trends analysis.

Table 1: 1-Hour Ozone Design Values for Triad EAC Area

Monitoring Sites	AIRS ID	Design Value Summary (ppm)									
		94-96	95-97	96-98	97-99	98-00	99-01	00-02	01-03	02-04	03-05
Cooleemee	37-059-0002			0.113	0.123	0.123	0.122	0.118	0.119	0.116	0.105
Hattie Ave.	37-067-0022	0.108	0.115	0.115	0.117	0.113	0.112	0.116	0.116	0.116	0.102
Union Cross	37-067-1008	0.109	0.115	0.12	0.119	0.118	0.11	0.11	0.109	0.108	0.097
Shiloh Church	37-067-0028	0.118	0.11	0.112	0.112	0.112	0.113	0.115	0.115	0.113	0.088
Cherry Grove	37-033-0001	0.109	0.111	0.118	0.118	0.119	0.112	0.119	0.114	0.112	0.099
McLeansville	37-081-0011	0.111	0.109	0.112	0.112	0.115	0.112	0.121	0.121	0.121	0.103
Bethany	37-157-0099	0.111	0.113	0.123	0.112	0.112	0.105	0.109	0.109	0.109	0.092
Sophia	37-151-0004						0.102	0.104	0.104	0.104	0.095
Pollirosa	37-067-0027	0.096	0.096	0.107	0.111	0.111	0.107	0.107	0.107	0.103	0.086

Figure 1 below shows the trend in highest monitor 1-hour DVs for the Triad EAC area. After the 1997-1999 DV period, values roughly plateau until a significant drop is seen in the 2003-2005 DV period.

Figure 1: Trend in the area-wide ozone design values (in parts per million) for the Triad EAC area from 1994-2005



Section 2. 8-hour Design Value Trends

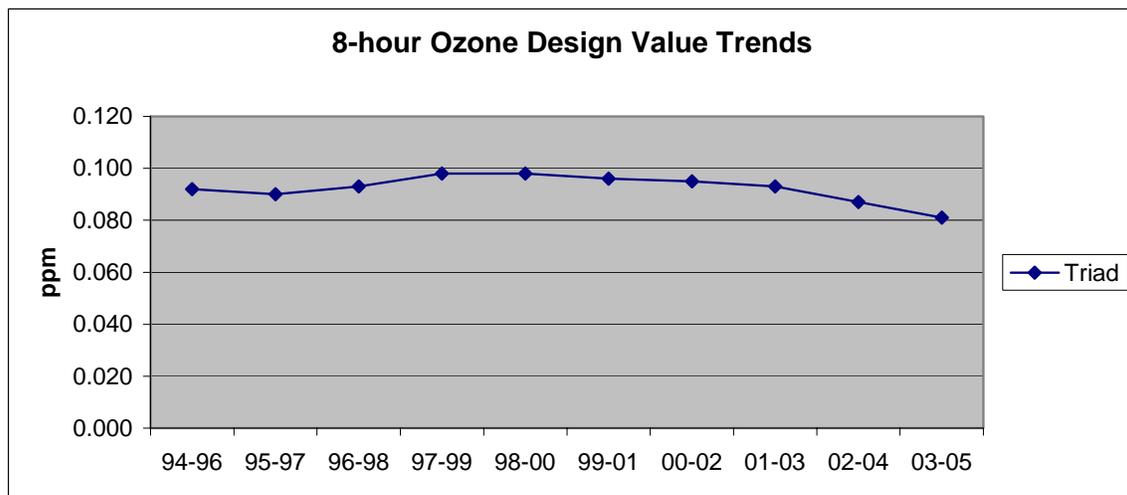
Much like the 1-hour values, 8-hour design values peaked in 1997-1999 and 1998-2000, with a steady decline in DVs in following years. For the 2002-2004 DVs, the Triad EAC area had two DVs in excess of 0.085 ppm. As for the 2003-2005 DVs, all were 0.081 ppm or less. The design values are presented in parts per million, with design values exceeding the standard highlighted in orange. The light shading indicates that no data or incomplete data was available.

Table 2: 8-Hour Ozone Design Values for the Triad EAC Area

Monitoring Sites	AIRS ID	Design Value Summary (ppm)									
		94-96	95-97	96-98	97-99	98-00	99-01	00-02	01-03	02-04	03-05
Cooleemee	37-059-0002			0.092	0.098	0.098	0.096	0.095	0.093	0.086	0.081
Hattie Ave.	37-067-0022	0.083	0.087	0.091	0.097	0.096	0.094	0.094	0.093	0.087	0.078
Union Cross	37-067-1008	0.088	0.089	0.092	0.094	0.093	0.093	0.092	0.089	0.084	0.079
Shiloh Church	37-067-0028			0.087	0.086	0.088	0.089	0.092	0.088	0.079	0.074
Cherry Grove	37-033-0001	0.085	0.089	0.093	0.094	0.093	0.090	0.091	0.088	0.084	0.077
McLeansville	37-081-0011	0.086	0.085	0.088	0.092	0.094	0.090	0.093	0.089	0.084	0.076
Bethany	37-157-0099	0.092	0.090	0.089	0.085	0.083	0.085	0.090	0.091	0.084	0.077
Sophia	37-151-0004								0.085	0.082	
Pollirosa	37-067-0027	0.078	0.081	0.084	0.084	0.083	0.082	0.084	0.082	0.079	

Figure 2 below shows the trend in the highest monitor 8-hour DVs for the Triad EAC area. The graph shows the peak in the 1997-1999 and 1998-2000 design values. Design values decrease through the rest of the graph. The Triad area drops to the 8-hour standard by 2003-2005 period.

Figure 2: 1994-2005 Trend in Area-Wide 8-Hour Design Values (parts per million) For the Triad EAC Area



Section 3. 1-Hour and 8-Hour Ozone Exceedance Trends

The number of 1-hour ozone exceedance peaked during the 1998 season, when six exceedances were observed in the Triad EAC area. There have been no exceedances of the 1-hour standard in the last 3 years in the Triad EAC area (see Table 3 below). The light shading indicates that no data was available for the period.

Table 3: The number of 1-Hour Ozone Exceedances Within the Triad EAC Area

Number Of 1-Hour Exceedances Per Year		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cooleemee	37-059-0002			0	0	1	2	0	1	0	0	0	0
Hattie Ave.	37-067-0022	0	1	0	0	1	1	0	0	0	0	0	0
Union Cross	37-067-1008	0	0	0	0	1	0	0	0	1	0	0	0
Shiloh Church	37-067-0028			1	0	1	1	0	0	0	0	0	0
Cherry Grove	37-033-0001	0	0	0	0	0	0	0	0	0	0	0	0
McLeansville	37-081-0011	0	0	1	0	0	0	0	0	2	0	0	0
Bethany	37-157-0099	0	0	0	0	1	0	0	0	2	0	0	0
Sophia	37-151-0004								0	0	0	0	
Pollirosa	37-067-0027	0	0	0	0	1	0	0	0	0	0	0	0

The number of 8-hour ozone exceedances (Table 4) shows a downward trend since peaking in 1998 and 1999 in the Triad EAC area. In the Triad in 2003, the Hattie Avenue monitor had five exceedances, and the Cooleemee monitor had four exceedances, with less than four exceedances elsewhere in the Triad. In both 2004 and 2005, no monitor has had more than three exceedances. The light shading indicates that no data was available for the period and orange highlighting indicates a monitor with four or more exceedances for that year.

Table 4: The number of 8-Hour Ozone Exceedances Within the Triad EAC Area

Number Of 8-Hour Exceedances Per Year		1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Cooleemee	37-059-0002			3	11	18	24	17	11	22	4	0	3
Hattie Ave.	37-067-0022	2	8	3	9	15	16	6	10	15	5	0	0
Union Cross	37-067-1008	4	4	5	12	18	11	9	8	15	3	0	0
Shiloh Church	37-067-0028			4	1	9	6	5	10	8	0	0	0
Cherry Grove	37-033-0001	3	4	7	17	19	7	9	6	15	3	0	0
McLeansville	37-081-0011	5	5	3	3	18	18	8	4	20	2	0	3
Bethany	37-157-0099	8	0	6	11	5	2	3	9	15	3	0	0
Sophia	37-151-0004								7	10	2	1	
Pollirosa	37-067-0027	1	1	3	1	6	3	1	2	6	0	0	0

Section 4. Conclusions

The Triad EAC area continues to show decreases in both the 1-hour and 8-hour ozone design values. In fact, the summer of 2005 was both hot and dry and none of the Triad area monitors had more than 3 exceedances of the 8-hour ozone standard, the number of exceedances the USEPA allows to be discounted when calculating the design value. It is believed that the Triad EAC area is well on its way to meet the December 2007 milestone of having a design value below the 8-hour ozone standard.