

Appendix B

Correspondence Regarding

Motor Vehicle Emission Budgets

Geographical Extent

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North Carolina Department of Environment and Natural Resources
Division of Air Quality

Michael F. Easley, Governor

William G. Ross, Jr., Secretary
B. Keith Overcash, P.E., Director

September 16, 2005

Subject: Development of Motor Vehicle Emissions Budgets

Dear Transportation Partner:

The North Carolina Division of Air Quality (NCDAQ) is developing the attainment demonstrations for 8-hour ozone and PM_{2.5} nonattainment areas in North Carolina. The State Implementation Plan (SIP) attainment demonstration submitted to the U. S. Environmental Protection Agency (USEPA) establishes the motor vehicle emissions budgets (MVEBs) that will be used in future transportation conformity demonstrations once approved or deemed adequate by the USEPA. At stakeholder meetings held throughout 2005, NCDAQ presented different approaches for setting MVEBs. As a result of the feedback received by NCDAQ during the stakeholder meetings, the decision was made to develop a policy memo that provides an explanation of NCDAQ's preference for the geographical basis of MVEBs in nonattainment areas and clearly outlines the procedures and timelines for setting those MVEBs.

NCDAQ believes that the MVEBs should be set at the county level. The reason NCDAQ believes this is appropriate is as follows:

- The motor vehicle emissions generated for SIP attainment demonstration are by county; therefore, developing county level MVEBs would maintain consistency with the attainment modeling. County level sub-area MVEBs provide additional assurance that future conformity determinations, transportation plans, and TIPs will produce emission patterns that will achieve and maintain the National Ambient Air Quality Standards (NAAQS).
- County level sub-area MVEBs preserve the growth projected by Metropolitan Planning Organizations (MPOs)/Rural Planning Organizations (RPOs)/North Carolina Department of Transportation (NCDOT). NCDAQ has relied on MPOs/RPOs/NCDOT to provide these future projections of vehicle miles traveled (VMT) in the SIP process and will continue to rely on MPOs/RPOs/NCDOT as the source of this data throughout the MVEB setting process.
- County level sub-area MVEBs would eliminate the requirement for a new conformity analysis for all MPOs/RPOs in the nonattainment area if one of the MPOs/RPOs revises or updates their respective long range transportation plan or transportation improvement program when there are conforming plans in place for the other areas. In a situation where there are conforming plans in place and there are county level sub-area MVEBs, if one MPO in the nonattainment area had a conformity lapse, the neighboring MPOs/RPOs would not be impacted until their next conformity determination was due.

Planning Section

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- If an area-wide MVEB involving multiple MPOs/RPOs is set and conformity cannot be demonstrated, it could take significantly longer to resolve which projects should be removed from the various plans. If resolution is not reached in a timely manner, it could result in a conformity lapse for the entire nonattainment or maintenance area.

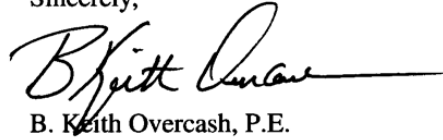
An important component to the SIP development process is interagency consultation. Therefore, NCDAQ requests feedback from the transportation partners on MVEBs development. NCDAQ's preference is not to set MVEBs for areas less than a county boundary since the emission estimates are made on a county level basis. The exception to this would be partial counties designated as nonattainment. Additionally, NCDAQ prefers not setting MVEBs based on MPO/RPO boundaries since this would result in having to update the MVEBs every time the MPO/RPO boundaries change. The process for recommending other approaches is provided below.

- Transportation partners are invited to provide in writing their preferred approach to setting MVEBs. If setting MVEBs for area-wide or multi-county sub-area is the desired approach, then it must be agreed upon by all of the transportation partners that are responsible for conducting conformity analyses for that area. This includes the MPO(s) and NCDOT after consultation with the RPO(s).
- NCDAQ requests that all written submittals outlining a MVEB approach that consists of more than one county (i.e., area-wide or multi-county sub-areas) include a technical explanation as to why the MVEBs should be set as such. This explanation should include information that illustrates the similarities between the counties listed in the approach such as, but not limited to: degree of urbanization, commuting patterns, expected population and VMT, and expected population and VMT growth rates.
- All requests should be submitted for consideration to NCDAQ by **January 16, 2006**. This will allow NCDAQ time to review and respond to the requests prior to finalizing the documentation for the SIP in February 2006.
- Requests should be submitted to the attention of the Attainment Planning Branch Chief, Laura Boothe, 1641 Mail Service Center, Raleigh, NC 27699-1641.

NCDAQ is responsible for submitting the SIP attainment demonstration and ensuring that the measures in the demonstration will allow the area to attain, as well as maintain the NAAQS. Transportation conformity was designed to help ensure that transportation plans, programs, and projects do not produce new air quality violations, worsen existing violations, or delay timely attainment of NAAQS. NCDAQ will take into consideration the recommended approaches from the transportation partners when developing the MVEBs. The transportation partners will have an opportunity to review the draft final MVEB approach prior to the SIP going through the public hearing process.

NCDAQ is committed to working with all of our partners during this process to determine the best course of action in achieving and maintaining air quality goals. If you should have any questions, please contact Laura Boothe of my staff at (919) 733-1488 or laura.boothe@ncmail.net.

Sincerely,



B. Keith Overcash, P.E.

BKO:lab

cc: Sheila Holman, NCDAQ
Laura Boothe, NCDAQ
Mike Abraczinskas, NCDAQ
Lynorae Benjamin, USEPA
Amanetta Wood, USEPA
Eddie Dancausse, FHWA
Loretta Barren, FHWA

Member Governments

Town of Carrboro
Town of Chapel Hill
County of Chatham
City of Durham
County of Durham
Town of Hillsborough
NC Department of
Transportation
County of Orange

January 19, 2006

Laura Boothe
Attainment Planning Branch Chief
Division of Air Quality
North Carolina Department of Environment
and Natural Resources
1641 Mail Service Center
Raleigh, NC 27699-1641

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JAN 26 2006

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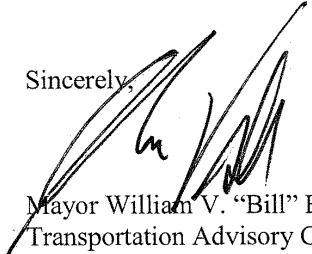
Dear Ms. Boothe:

In response to the North Carolina Division of Air Quality (NCDAQ) request for stakeholder feedback, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) Transportation Advisory Committee (TAC) recommends county-level motor vehicle emissions budgets be used in the development of the State Implementation Plan. This recommendation was approved at a TAC meeting on January 11, 2006.

The DCHC MPO believes that there is no compelling justification not to support the NCDAQ recommendation of county-level budgets. Furthermore, county-level budgets carry the greatest incentive for counties to make land use decisions that are compatible with air quality goals, and such budgets will be consistent with the proposed MPO land use model geography. In addition, county-level budgets are also consistent with the MPO's 2030 Long-Range Transportation Plan air quality targets and transportation performance measures.

Thank you for soliciting input from the DCHC MPO on this matter. If you need additional information, please contact Mark Ahrendsen, Chair, Technical Coordinating Committee at (919) 560-4366.

Sincerely,


Mayor William V. "Bill" Bell, Chair
Transportation Advisory Committee

cc: DCHC MPO TAC Members
Mark Ahrendsen, Chair, DCHC MPO Technical Coordinating Committee
Eddie Dancausse, USDOT FHWA
Mike Bruff, Director, NCDOT Transportation Planning Branch
Scott Walston, NCDOT Transportation Planning Branch
Jamal Alavi, NCDOT Transportation Planning Branch
Joe Bryan, Chair, Capital Area MPO Transportation Advisory Committee
Ed Johnson, Director, Capital Area MPO Lead Planning Agency



Neil Mallory
Executive Director

January 30, 2006

**Member
Governments**

Ms. Laura Boothe
Chief of Attainment Planning
Division of Air Quality
NC Department of Environment and Natural Resources
1641 Mail Service Center
Raleigh, NC 27699-1641

COUNTIES

Franklin
Granville
Person
Vance
Warren

RE: Motor Vehicle Emissions Budgets

MUNICIPALITIES

Bunn
Creedmoor
Franklin
Henderson
Kittrell
Louisburg
Macon
Middleburg
Norlina
Oxford
Roxboro
Stem
Stovall
Warrenton
Youngsville

Dear Ms. Boothe,

Thank you for the opportunity to comment on the subject of the Motor Vehicle Emissions Budgets for the Triangle Non-attainment Area. The Kerr-Tar RPO has three counties affected by this process: Franklin, Granville, and Person. As such, the Rural Transportation Advisory Committee (RTAC) has been interested in learning about air quality issues for the past year.

Upon review of the technical information provided by both DAQ and the Capital Area Metropolitan Planning Organization (CAMPO), the Kerr-Tar RPO voted on January 25, 2006 to endorse the CAMPO request for an MPO-wide Motor Vehicle Emissions Budget (MVEB). It would be our preference to include Person County as well as Franklin and Granville Counties in this regional budget. An MPO-wide, rather than County-wide MVEB will allow the inherent error in the NCDOT/DAQ model to be "spread" across the multi-county non-attainment area. Since all four MPO counties are already sanctioned if there is non-attainment in one County, it stands to reason that only one budget should be used in evaluating non-attainment.

The following excerpt from the "MVEB FAQ" developed by Triangle J Council of Governments and distributed to the SICM partners via email on January 26, 2006, outlines the primary reason for the Kerr-Tar RPO's decision to endorse the CAMPO recommendation:

Q. How is a non-exempt project (for example, a road widening) in a rural area (location outside an MPO) affected by an MPO planning lapse in a county that is partly in an MPO and partly outside an MPO? Here is an example: CAMPO has a planning lapse, so that either its TIP or LRTP is not adopted as conforming within the required time frame. There is a highway widening project in Franklin County, but the project is in the rural area outside the CAMPO boundary.

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- Can this project proceed to the next stage while CAMPO is in lapse under the 4 separate county-level budgets option?
- Can this project proceed to the next stage while CAMPO is in lapse under the single multi-county budgets option?

A. The situation would be the same under either the single 4-county budget or 4 separate individual county budgets (see below for FHWA response):

Can this project proceed to the next stage while CAMPO is in lapse under the 4 separate county-level budgets option? "No. The entire county has to be conforming under the separate county level budget option. Since Franklin county is now part of CAMPO and if CAMPO lapses we can not make a conformity determination for the part of the county (under the county level budget option). The only way this would work would be if NCDENR would be willing to provide partial county budgets."

Can this project proceed to the next stage while CAMPO is in lapse under the single multi-county budgets option? "No. The single multi-county budget option [meaning the 4-county budget area] has to be conforming under this option. Since Franklin county is now part of CAMPO and if CAMPO lapses we can not make a conformity on anything less than the single multi-county budget option [meaning the 4-county budget area]."

According to this document and to FHWA, two of our counties (Franklin and Granville), as partial members of CAMPO, are intrinsically tied to CAMPO for the purposes of slowed projects resulting from planning lapses. Projects in our portions of these counties could not move forward if a lapse occurred within CAMPO. Likewise, a planning lapse in our rural area, although unlikely, could lead to slowed projects in the CAMPO area. For this reason, it is our desire to continue to work with CAMPO to proactively address the air quality non-attainment problem by working to meet a regional multi-county budget.

Thank you again for the opportunity to comment on this issue, and for working diligently to educate our rural decision makers on this complex issue. If you have questions or need additional information, please feel free to contact me at spowell@kerrtarcog.org or 252/436-2048.

Sincerely,



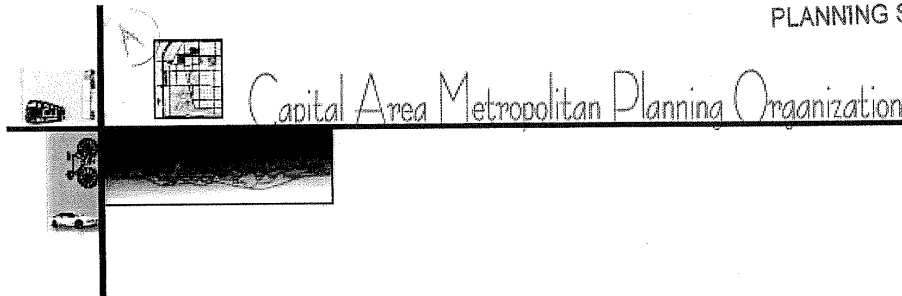
Shelby Powell, AICP
Kerr-Tar Rural Transportation Planning Organization
Rural Transportation Advisory Committee Staff

Cc: Ken Spaulding, NCDOT Board of Transportation
Mike Bruff, NCDOT Transportation Planning Branch
Scott Walston, NCDOT Transportation Planning Branch
Joe Bryan, Chair, CAMPO TAC
Vines Cobb, Chair, Upper Coastal Plain RPO
Kerr-Tar RPO RTCC & RTAC Members

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January 31, 2006

Ms. Laura Boothe
Chief of Attainment Planning
Division of Air Quality
North Carolina Department of Environment and Natural Resources
1641 Mail Service Center
Raleigh, NC 27699-1641

Dear Ms. Boothe:

SUBJECT: Comments on setting Motor Vehicle Emissions Budgets for attaining the 8-hour Ozone National Ambient Air Quality Standard (NAAQS).

The Capital Area MPO recognizes and appreciates the leadership and efforts of the North Carolina Department of Environment and Natural Resources (DENR), Division of Air Quality (DAQ) in developing the State Implementation Plan (SIP) to address ozone pollution in the Research Triangle region. As a part of our state's plan for improving air quality, the SIP will include Motor Vehicle Emission Budgets (MVEB) with limits on the amounts of Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOCs) that may be emitted by on-road motor vehicles in the Triangle Ozone Non-attainment Area.

Historically, the Division of Air Quality has set such emission budgets for each county designated as being in non-attainment, and has indicated this to be your preference for development of the upcoming SIP for attaining the eight-hour ozone NAAQS. However, your Division of Air Quality submitted a memorandum dated September 16, 2005 to its transportation partners (i.e. MPOs, RPOS, and NCDOT) inviting them to provide in writing their preferred approach to setting MVEBs by the end of January, 2006. I write to you today to provide those comments.

At its meeting on January 18, 2006, the N. C. Capital Area MPO's Transportation Advisory Committee (TAC) reviewed budget alternatives (i.e. area-wide, county by county, and MPO-wide) and after discussion of the various considerations, endorsed the alternative of having single consolidated emissions budgets for the MPO's entire geographic and political jurisdictions of Franklin, Granville, Johnston, and Wake counties (a copy of the resolution approving this action enclosed). The technical justifications for requesting this alternative follow.

Our MPO's reasons for preferring single consolidated emissions budgets lie mainly with our concerns about the large degree of uncertainty associated with the accuracy and subsequent applied precision of the mobile source emissions models used by NCDAQ (as required by the U.S. Environmental Protection Agency) to help set the emissions budgets for mobile sources in the SIP.

As documented in the "National Cooperative Highway Research Program (NCHRP) Report # 394 - Improving Transportation Data for Mobile Source Emission Estimates (1997)", that report presents the results of an extensive research effort that was conducted using Mobile 5a (a recent and very similar, but not current version of the Mobile emissions model) to calculate vehicle emission factors. The conclusion reached was that the likely actual vehicle pollutant emissions could easily vary from those predicted by the Mobile model by as much plus or minus forty (40) percent. Mainly, this was due to the uncertainty associated with the extensive variety of transportation-related input parameters required by the Mobile model (such as vehicle fleet mix, median age of vehicles, daily vehicle miles of travel and average speeds by facility type, percentage of cold vs. hot starts, etc.). Page 49 from that report with Table 4-7 and a summary of the study findings is enclosed for reference.

As you know, these motor vehicle emissions estimates used for setting the MVEB budgets, although quite uncertain, result in budgets that are applied very precisely as the means to demonstrate that each county's transportation plans and programs continue to conform to the SIP. As such, each county has been held accountable for these uncertain emissions estimates by applying them as regulatory budgets to the discrete kilogram per day level, a degree of precision far beyond that of either the transportation model's or emissions model's expected performance. Unfortunately, most elected officials and citizens are not aware of the details of just how precisely these relatively uncertain emissions estimates are applied in the typical regulatory context of demonstrating air quality conformity. Our recent discussions have indicated there is a very substantial degree of concern about this among nearly all of our MPO members and RPO partners.

Although the MVEBs set in the SIP for attaining the 8-hour ozone standard will be for the attainment demonstration year of 2008, that 2008 budget may need to be used to demonstrate conformity for our MPO's Long-Range Transportation Plan (LRTP) for planning year horizons as far into the future as 40 years from now. We acknowledge that, with the recent approval of the federal transportation reauthorization (SAFETEA-LU), there is a possibility that might result in this not being required. None-the-less, there does remain the distinct possibility that this comparison mismatch of horizon years could be required for several more years as well. These long-range future year comparisons to such short range MVEBs have even greater levels of uncertainty associated with a variety of additional factors, such as; (1) whether or not the area actually grows as forecasted in the transportation model, (2) what types of planned mobility improvements actually get implemented, (3) the types of vehicles actually driven in the future as opposed to what we forecast today, etc..

With all these uncertainties, at least one major level of possible error, that being how much emissions are sub-allocated by budget to each county within the Triangle's non-attainment region, would be eliminated by having a single emissions budget for the entire non-attainment area.

As we see it, the much larger single geographic domain would have several advantages including; (1) reducing from four to one the number of budget comparisons to potentially fail for reasons that could be solely due to inaccurate model parameter assumptions and results; (2) in the event

of an exceedance triggering a funding lapse, increasing the area over which air quality improvement solutions could be devised and applied; and, (3) encouraging close cooperation among all the stakeholders involved throughout the four counties in our MPO so that our shared air quality improvement efforts are proactively and effectively addressed.

We acknowledge that our neighboring Durham-Chapel Hill-Carrboro MPO has recently decided to support continuance of county-level budgets for its respective counties. In response, rather than requesting a single MVEB for the entire Triangle region as we would prefer, our MPO recommends and respectfully requests having single consolidated MVEBs for the entirety of our four counties, those being the counties of Franklin, Granville, Johnston, and Wake. Attached is additional information prepared by Mr. John Hodges-Copple at the Triangle J Council of Governments providing further detailed technical justification to support this request.

Because of the overarching importance of the outcome of SIP emissions budgets setting process, regardless of what geographic area(s) are ultimately used for setting the MVEBs in the Triangle non-attainment region, our TAC also respectfully requests the opportunity to review and concur with the motor vehicle emissions budgets and transportation-related input parameters to the emissions model before they become finalized for the 30-day public comment period and subsequent inclusion in the North Carolina's SIP for attaining the eight-hour ozone NAAQS.

As always, all of the members of the Capital Area MPO greatly appreciate your Department's leadership and steadfast commitment to improving North Carolina's air quality. As evidenced once again by your solicitation for input on this important matter as provided herein by our MPO, we are grateful for your long-standing commitment to seeking consensus among our many and varied stakeholders in cooperatively developing effective action plans for improving air quality in North Carolina.

We look forward to continuing to work closely with your department and our regional partners in developing and implementing a plan for improving air quality that also reinforces our efforts to sustain both the economic growth and overall quality of life for the greater Triangle region through cooperative and closely coordinated planning and implementation of multi-modal transportation investments. If you have any questions or comments, or need any additional information or assistance on this or other matters, please do not hesitate to contact me at 919-807-8511.

Sincerely,



Edison H. Johnson, Jr., P.E., Director
N.C. Capital Area Metropolitan Planning Organization
Clerk of the Transportation Advisory Committee

cc: Nina Szlosberg, NC Board of Transportation
Mike Bruff, PE, Transportation Planning Branch
Karl Pernell, RTAC Chair, Kerr Tar Rural Planning Organization
Vines Cobb, RTAC Chair, Upper Coastal Plain Rural Planning Organization
Marla Dorrel, Chair, Triangle J Council of Governments
TAC & TCC Members

**RESOLUTION OF THE
CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION
CONFIRMING MOTOR VEHICLE EMISSIONS BUDGET (MVEB)
STRATEGIES FOR THE FRANKLIN, GRANVILLE, JOHNSTON AND
WAKE PORTION OF THE TRIANGLE REGION**

A motion was made by TAC Member Buck Kennedy and seconded by TAC Member Robert Ahlert for the adoption of the following resolution, and upon being put to a vote was duly adopted.

WHEREAS, the Capital Area Metropolitan Planning Organization (CAMPO), the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO), the Kerr-Tar Rural Planning Organization (Kerr Tar RPO), the Upper Coastal Plain Rural Planning Organization (UCP RPO), the Triangle J Council of Governments (TJCOG), and the North Carolina Department of Transportation (NCDOT) are working with the North Carolina Division of Air Quality (NCDAQ) to develop a State Implementation Plan (SIP) to address ozone non-attainment in the Triangle area; and

WHEREAS, the aforementioned agencies in the Triangle area wish to contribute to the solution of the non-attainment problem by 2009; and

WHEREAS, an important product of the SIP development process is the allocation of nitrogen oxides (NOx) and volatile organic compounds (VOC) Motor Vehicle Emissions Budgets (MVEB) for the non-attainment area; and

WHEREAS, NCDAQ has invited MPOs and RPOs in the Triangle area to provide in writing their preferred approach for establishing the MVEBs in our region; and

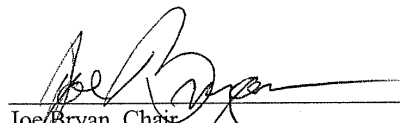
WHEREAS, NCDOT will consider the preference of the Kerr Tar RPO and UCP RPO,

WHEREAS, the MVEB, once found adequate or approved by, the United States Environmental Protection Agency (USEPA), must be compared to projected emissions in future conformity determinations;


NOW THEREFORE, BE IT RESOLVED that the Capital Area MPO agrees to recommend to NCDAQ that a single sub-regional MVEB be established for the counties of Franklin, Granville, Johnston, and Wake in the Triangle nonattainment area and to request the opportunity to review and concur with the MVEB(s) and transportation-related input parameters for the emissions model.; and

BE IT FURTHER RESOLVED that with the overarching importance of the outcome of the air quality budget setting process, regardless of what geographic area(s) are ultimately used for setting the MVEBs in the Triangle non-attainment region, the Capital Area MPO Transportation Advisory Committee also respectfully requests the opportunity to review and concur with the motor vehicle emissions budgets and transportation-related input parameters to the emissions model before they become finalized for the 30-day public comment period and subsequent inclusion in the North Carolina's SIP for attaining the eight-hour ozone NAAQS.

**RESOLUTION OF THE
CAPITAL AREA METROPOLITAN PLANNING ORGANIZATION
CONFIRMING MOTOR VEHICLE EMISSIONS BUDGET (MVEB)
STRATEGIES FOR THE FRANKLIN, GRANVILLE, JOHNSTON AND
WAKE PORTION OF THE TRIANGLE REGION**



Joe Bryan, Chair
Transportation Advisory Committee



Ed Johnson, Capital Area MPO Director
Transportation Advisory Committee Clerk

County of Wake
State of North Carolina

I, Shae F. Satterwhite, a Notary Public for said County and State, do hereby certify that Joe Bryan personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 18th day of January, 2006.

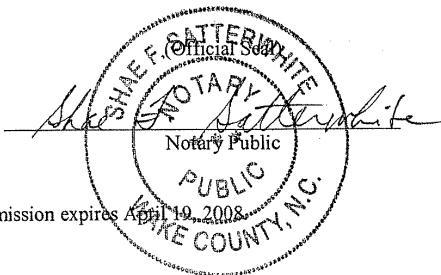

My commission expires April 19, 2008.

TABLE 4-7 Individual and combined effects of input errors

Case	Input Parameter	True Value vs. Estimated Value	Percentage Difference in Emission Rates ¹		
			CO	VOC	NOx
Freeway	Speed	65 vs. 60 mph	+42%	+13%	+16%
	HDDV Mix	10.6 vs. 6.2%	-1%	-1%	+18%
	Median Age of Vehicles	7.5 vs. 6.5 yrs	+7%	+8%	+6%
	All Three Combined (Compounded Effect)		+46%	+19%	+44%
Arterial	Speed	45 vs. 40 mph	-8%	-7%	+3%
	HDDV Mix	1.0 vs. 3.1%	-8%	-4%	-3%
	Median Age of Vehicles	5.5 vs. 6.5 yrs	-14%	-12%	-9%
	Cold Start Fraction	10.6 vs. 20.6%	-15%	-23%	-2%
	All Four Combined (Compounded Effect)		-38%	-28%	-15%
Collector	Speed	20 vs. 25 mph	+22%	+17%	+0.4%
	Median Age of Vehicles	7.5 vs. 6.5 yrs	+7%	+8%	+6%
	Cold Start Fraction	30.6 vs. 20.6%	+15%	+23%	+2%
	All Three Combined (Compounded Effect)		+38%	+32%	+9%

¹These percentages were calculated as [(True Value - Estimated Value) ÷ Estimated Value].

bined effect. It was anticipated that the combined effect would exceed the sum of the individual effects when all signs were in the same direction and that mixed signs would dampen the combined effect. No such clear pattern exists in the data. This can be seen in Table 4-8.

The only pattern observed is that the combined effect for NO_x is always higher than its component parts and the combined effect for CO and VOCs is always smaller than the sum of their components. Not enough conditions were observed to know whether this pattern holds over a broad range of parameter values.

CONCLUSIONS

On the basis of the results of a sensitivity analysis of the MOBILE5a emissions model, it was found that the emission

factors calculated by the model vary substantially when the travel-related inputs to the model are varied within the usual ranges of accuracy and precision expected with the current state of the practice in transportation planning. An error of 5 mph in the estimated value of speed for a freeway can cause a 42 percent difference in CO emission factor. A 4.4 difference in percent in HDDV mix can cause an 18 percent difference in NO_x emission factor. A 10.0 difference in percent of cold-start fraction can cause a 23 percent difference in VOC emission factor. The combined effect of the individual errors can create a difference in certain emission factors of nearly 50 percent. These errors in input factors are within reasonable and realistic limits and are not exaggerated—the effect of these errors on emission factors should be of serious concern.

With regard to the combined effect of different sources of error, the directions of errors in individual input parameters are unpredictable. It would be unwise to expect and rely on the compensatory effect of individual errors; rather, it would be prudent to recognize the likelihood of cases where the individual errors may be compounded to high levels. The three cases presented above represent realistic scenarios; the results point to the possibility of large errors in emission rates caused by errors in travel-related inputs to MOBILE5a.

REFERENCES

- Benson, P. E. (1988). "Corrections to Hot and Cold Start Vehicle Fractions for Microscale Air Quality Modeling." *Transportation Research Record*, No. 1176.

TABLE 4-8 Pattern of combined error¹

Case	Direction of Individual Errors	
	All Same Sign	Mixed Signs
Freeway	NO _x higher	CO lower VOC lower
Arterial	CO lower VOC lower	NO _x higher
Collector	CO lower VOC lower NO _x higher	

¹The table shows how the combined error compared with the algebraic sum of individual errors.



Triangle J Council of Governments

World
Class
Region

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Research Triangle Park, NC 27709
919.549.0551 FAX: 919.549.9390

MEMORANDUM

TO: ED JOHNSON, CAMPO
FROM: JOHN HODGES-COPPLE, TJCOG
DATE: JANUARY 30, 2006
TOPIC: TECHNICAL CONSIDERATIONS FOR MOTOR VEHICLE EMISSIONS BUDGETS

THE ISSUE

NCDAQ has indicated a preference for county-based Motor Vehicle Emission Budgets (MVEBs) and requested any alternate MVEB approach be unanimous among organizations responsible for transportation conformity [MPOs and NCDOT (in consultation with affected RPOs)], and include a technical justification. As requested, this document addresses technical issues associated with county-based budgets and a 4-county, MPO-centered budget that would include a single budget for Franklin, Granville, Johnston and Wake counties.

DAQ'S VIEWPOINT

The case for county-based budgets centers on the four reasons outlined in DAQ's September 16, 2005 letter:

1. The motor vehicle emissions generated for SIP attainment demonstration are by county; therefore, developing county level MVEBs would maintain consistency with the attainment modeling.
County level-sub area MVEBs provide additional assurance that future conformity determinations, transportation plans, and TIPs will produce emission patterns that will achieve and maintain the National Ambient Air Quality Standards (NAAQS).
2. County-level MVEBs preserve the growth projected by MPOs/RPOs and NCDOT.
NCDAQ has relied on MPOs/RPOs/NCDOT to provide these future projections of vehicle-miles of travel (VMT) in the SIP process and will continue to rely on MPOs/RPOs/NCDOT as the sources of this data throughout the MVEB setting process.
3. County level-sub area MVEBs would eliminate the requirement for a new conformity analysis for all MPOs/RPOs in the nonattainment area if one of the MPOs/RPOs revises or updates their respective long range transportation plan or transportation improvement program when there are conforming plans in place for the other areas.
In a situation where there are conforming plans in place and there are county level sub-area MVEBs, if one MPO in the nonattainment area had a conformity lapse, the neighboring MPOs/RPOs would not be impacted until their next conformity determination is due.¹
4. If an area-wide MVEB involving multiple MPOs/RPOs is set and conformity cannot be demonstrated, it could take significantly longer to resolve which projects should be removed from the various plans.
If resolution is not reached in a timely manner, it could result in a conformity lapse for the entire nonattainment or maintenance area.

TECHNICAL CONSIDERATIONS: 4-COUNTY CAMPO-CENTERED MVEB

A 4-county CAMPO-centered budget covering only Franklin, Granville, Johnston and Wake Counties adequately addresses DAQ's concerns and minimizes the problems inherent in the assumptions and simplifications used to translate growth into travel, travel into emissions and to allocate emissions to small areas. Compared to a single regionwide budget, Multi-County, MPO-Centred budgets include a greater degree of assurance on the geographic distribution of the on-road motor vehicle component of emissions and maintain the same degree of independence between DCHC MPO and CAMPO as county-level budgets would. A 4-county CAMPO-centered budget would avoid the potential problems associated with assigning budgets to very small contributors to emissions, as would be the case with county-level budgets, and would not substantially change the conformity consequences or decision-making schedule implications when compared to county-level budgets.

1. A 4-county CAMPO-centered budget would give reasonable assurance of geographic distribution of emissions and keep decision-making between Triangle MPOs separate, without the problems inherent in trying to apply budgets to areas that contribute relatively small amounts to overall emissions.

By segmenting emissions between portions of the region, wholesale changes in growth or facilities as compared to the assumptions used in setting the budgets would not be possible. And keeping DCHC MPO and CAMPO in separate budget areas would remove the concern that lapses in one MPO would immediately affect the other MPO. But by grouping some counties together, the potential problems of setting budgets for areas with very small contributions to overall emissions can be avoided. The next section provides more detail and examples about the assumptions and simplifications that are required to translate growth into travel, travel into emissions and to allocate emissions to small areas.

2. The assumptions and simplifications used in translating growth into travel, travel into emissions, and allocating emissions to geographic areas in the transportation and air quality modeling processes are too imprecise to justify setting separate budgets for counties or portions of counties that are small contributors to overall regional emissions, especially for rural counties without travel demand modelling.

The table below gives the amount and percentage of motor vehicle NO_x emissions in each county or partial county in the non-attainment area in the Year 2010 from the conformity report for the region's 2030 Long Range Transportation Plans. The last column gives the approximate contribution of these NO_x emissions to all NO_x emissions in the non-attainment area *based on motor vehicle emissions representing roughly one-half of total NO_x emissions*:

<i>Motor Vehicle Emissions</i>	2010 NO_x motor vehicle emissions (kg/day)	Percent of region's motor vehicle NO_x emissions	Approximate percent of NO_x emissions from all sources
Chatham County (4 townships)	503	0.85%	0.42%
Durham County	9,672	16.29%	8.14%
Franklin County	1,829	3.08%	1.54%
Granville County	3,076	5.18%	2.59%
Johnston County	10,182	17.15%	8.57%
Orange County	6,711	11.30%	5.65%
Person County	1,103	1.86%	0.93%
Wake County	26,311	44.30%	22.15%
Total Non-attainment area	59,387	100.0%	50.00%

County level budgets would mean setting firm limits for sources that, in the case of Chatham County, Person County, Franklin County and Granville County, represent less than one-half of one percent, less than one percent, 1.5 percent and 2.5% of regional NO_x emissions, respectively. County level budgets would treat these relatively small contributors in the same way that Wake, Johnston and Durham counties are treated, not because these specific relatively small contributors are more important for air quality than portions of Wake or Durham counties which generate the same or more emissions, but because of arbitrary county boundaries. Setting hard budgets for these small contributions is not supported by the levels of accuracy inherent in the analysis processes or by any logic that these areas are more significant from an air quality perspective than similar areas.

Assigning eight separate, individual motor vehicle emissions implies a level of geographic precision in transportation and air quality modeling that is not supported by the estimation techniques that are used. The Air Quality model is a sophisticated and complex tool, but it still includes significant simplifications in how it represents the transportation system and growth, and in how it distributes motor vehicle emissions geographically. The argument that smaller geographies must be preserved would have a stronger technical basis if the mechanisms for generating and distributing motor vehicle emissions geographically were more representative of reality, or if any sensitivity analysis were conducted to show that the geographic distribution that is being used results in significantly different values at monitored sites when compared to other distributions that would be reasonably possible under a multi-county budget. The data exists to distribute emissions on a more accurate geographic basis based on existing outputs from the Triangle Travel Demand Model and detailed data from NCDOT's Universe File, but this effort has not yet been undertaken.

The NCDOT Rural Spreadsheet Model

In rural portions of the region – where some of the fastest growth rates are occurring – air quality modeling being performed for attainment demonstration purposes does not directly account for any forecasts of growth in population and jobs and so any adjustments to land use plans or population and job forecasts would not be reflected in emissions calculations. Population and job growth estimates and forecasts and long range transportation facilities are not used in the current version of the rural spreadsheet model (the version used for attainment demonstration modeling), either initially or in the future forecasts of motor vehicle emissions. Instead, traffic count data from a sample of roadway segments is used to estimate VMT over the period 1994-2003. Based on the trends during this period, regression analysis is used to forecast the total VMT during analysis years (2008 for the Triangle attainment demonstration, and future analysis years as required for SIP budgets and LRTPs and TIPs). This total VMT forecast is then distributed across the 12 roadway functional classes in each county based on the VMT distribution from the most recent year for that county (i.e. 2003 for the version of the rural spreadsheet used for attainment demonstration modeling). The Rural Spreadsheet Model does add in lane miles from projects forecast to be open to traffic by the end of the TIP period, and this influences the average speed, but there is not direct consideration of future growth in population or jobs, nor an adjustment made to the VMT regression as future lane miles are opened (the same VMT is assumed to be spread over more lane miles, resulting in less congestion and hence higher average speed). Under the current version of the spreadsheet, the VMT regression is assumed to account for all growth in travel, whether due to increased travel associated with existing development, new travel from local population and job growth, or increased through traffic.

Therefore, future growth by location is not an independent factor in the calculation of future emissions in areas where the Rural Spreadsheet Model is used. In a newer version of the rural spreadsheet model that is under review, any future facilities would also be used to increase the amount of VMT after the regression equation amount is determined by applying the same per-lane-mile amount of VMT for the appropriate roadway functional class for the most recent year of data in the Universe File. For example, if a new five-mile long segment of 4-lane rural freeway is to open before the analysis year, resulting in an additional 20 lane-miles of freeway, and on average each existing lane mile of rural freeway in the county had 10,000

VTMT per day, then the new version of the rural spreadsheet would increase the rural freeway VMT by 200,000 VMT per day.

Up to two additional factors are applied to VMT forecasts in the rural spreadsheet model in particular modeling situations. It is important to remember that there are three main modeling efforts, and each uses somewhat different techniques or inputs, although efforts are made to make them consistent:

- Attainment demonstration modeling – combines motor vehicle emissions with emissions from all other sources to model ozone levels at the monitoring sites during selected weather episodes.
- SIP MVEB setting modeling – uses only motor vehicle emissions to set the budgets that will be included in the State Implementation Plan.
- Conformity modeling – uses only motor vehicle emissions to compare the emissions from a long range plan or TIP to the budgets established during the SIP MVEB modeling.

For *attainment modeling* and *SIP MVEB modeling*, the forecast VMT amount is increased by 30% in counties where the NCDOT Universe File/HPMS (Rural Spreadsheet Model) is used to develop the VMT forecast, but where the county is already in or may be brought into, a travel demand model in the future, based on observations showing that Universe File/HPMS VMT tended to under-report modeled VMT by 30% in counties where Universe File/HPMS and travel demand model VMT can be compared. This factor can be thought of as an “equivalency” factor to ensure that rural spreadsheet VMT is essentially equivalent to travel demand model VMT as the county is brought into the regional travel demand model.

A final factor may be used in both *attainment modeling* and *SIP MVEB modeling* to try and reflect especially large anticipated growth in counties on the edge of fast growing metropolitan regions, recognizing that past VMT growth (as reflected in the regression equation) may under-represent what is to come. These factors are arrived at through discussions among the state and local agency staffs involved in transportation and air quality planning; after soliciting input from these partners, DAQ will apply an additional 10% growth factor in Johnston County and an additional 20% growth factor in Franklin County over and above the 30% “equivalency” factor described in the previous paragraph.

For *conformity modeling*, VMT from a regional travel demand model must be used where it is available. In rural areas not covered by the regional travel demand model, **unfactored** NCDOT rural spreadsheet model VMT is used. In these rural areas, the 30% “equivalency” factor essentially serves as an additional cushion for the VMT comparison, since the MVE budget was developed with the factor, but the emissions developed for a long range plan or TIP that are compared to the budget are developed without the factor. The table below summarizes the source of VMT by county that DAQ will use for each of the three modeling efforts, **given the current coverage** of the Triangle Regional travel demand Model:²

<i>VTMT source</i>	Chatham	Durham	Franklin	Granville	Johnston	Orange	Person	Wake
Attainment	RSM x 1.3	TRM	RSM x 1.5	RSM x 1.3	RSM x 1.4	RSM x 1.3	RSM	TRM
SIP MVEB	TRM	TRM	RSM x 1.5	RSM x 1.3	RSM x 1.4	RSM x 1.3	RSM	TRM
Conformity	TRM	TRM	TRM/RSM	TRM/RSM	TRM/RSM	TRM	RSM	TRM

RSM means NCDOT Rural Spreadsheet Model; TRM means Triangle Regional travel demand Model
TRM/RSM means the TRM is used in the part of the county covered by the TRM; RSM is used in rest of county.
1.3 means a 30% equivalency factor is applied; 1.4 or 1.5 means an additional 10% or 20% growth factor is applied.

It is understandable that DAQ would choose to use factoring as a mechanism to try and account for data differences and potential future growth in traffic, whether due to increased travel associated with existing development, new development, or increased pass-through traffic such as may occur on interstate highways. Nevertheless, factoring is a simple technique that relies on limited data and has not been subject to sensitivity analysis. Basing strict motor vehicle emissions budgets for counties that are small contributors on this technique seems to unnecessarily introduce risk that is not justified by the technical processes used.

The Air Quality Model

A different, but equally important simplification, occurs when the air quality model used for attainment demonstration modeling assigns motor vehicle emissions into the 12km x 12km cells within each county. The emissions are assigned to cells based on the centerline road mileage (by functional class) from the 2000 Census street network (called TIGER line files), not by actual measured VMT or by lane miles on the current highway network. Therefore – to take one example – a mile of I-40 in the Research Triangle Park in Durham County receives exactly the same amount of emissions as a mile of I-85 in Durham County at the Granville County line, even though the former carries 3.7 times as much traffic as the latter. And this same Year 2000 representation of the road system is used to allocate emissions in the future. Roads open to traffic after 2000 – such as the extension of I-540 and the US 64 bypass – are not reflected in the allocation.

In short, the assumptions and simplifications used in translating growth into travel, travel into emissions, and allocating emissions to geographic areas in the transportation and air quality modeling processes are too imprecise to justify setting separate budgets for counties or portions of counties that are small contributors to overall regional emissions, especially for rural counties without travel demand modelling. This is especially problematic in the four townships of Chatham County and in Person, Franklin and Granville Counties, where motor vehicle NO_x emissions represent, respectively, less than 0.5%, 1.0%, 1.5% and 2.5% of the region's total NO_x emissions.

3. A 4-county CAMPO-centered budget would group counties together logically based on travel patterns, providing the scale needed to address any changes if conformity can not be demonstrated.

If conformity can not be demonstrated, areawide or corridor specific measures may be needed and a 4-county CAMPO-centered budget results in logical groupings of counties; the county lines are arbitrary dividing lines that tend to mask actual travel patterns. The US 1 and US 401 corridors carry traffic from Franklin County into Wake County and the I-40 and US 70 corridors carry traffic from Johnston County into Wake County. From the 2000 Census, 40% of the Johnston County workforce commutes to Wake County, and 47% of the Franklin County workforce commutes to Wake County.

4. A 4-county CAMPO-centered budget would enable different decision-making schedules by DCHC MPO and CAMPO and involve similar decision-making and conformity consequences as county-level budgets.

There is virtually no difference in the decision-making and conformity consequences between a 4-county CAMPO-centered budget and county-level budgets for CAMPO and its member counties. The impacts on cooperative decision-making between DCHC MPO and CAMPO would be the same with a 4-county CAMPO-centered budget as with county level budgets. As described in more detail in the documents titled, "What If?" and "Motor Vehicle Emissions Budgets FAQs," FHWA has determined that a conformity planning lapse in CAMPO or any of the rural portions of Johnston, Granville and Franklin counties would halt advancement of projects in all four eastern counties in the same way under either the county-level or 4-county CAMPO-centered budget options.

5. Federal rules specifically permit regionwide budgets and many regions that are much larger than the Triangle and with worse air quality use a regionwide budget.

The federal rules governing the conformity process describe two alternatives to apply the emissions budget to a nonattainment areas; a county budget is not one of them. Section 93.124(d) of the rules states:

"If a nonattainment area includes more than one MPO, the implementation plan may establish motor vehicle emissions budgets *for each MPO, or else* [italics added] the MPOs must collectively make a conformity determination *for the entire area.*" [Italics added]

The language of the federal rules is clear that either a regionwide budget or MPO-centered budgets are adequate (in fact, no mention of county-based budgets is in the rules). If DAQ is concerned that precise distribution of motor vehicle emissions within a region is a significant concern, DAQ should justify that concern through sensitivity analysis demonstrating how changes in growth forecasts or facility construction would affect ozone levels at monitored sites. Many regions of far larger geographic extent than the Triangle, with much higher emission levels, and with much worse air quality, use regionwide budgets. For a list of how MVEBs are set in other regions, visit the following web sites:

<http://www.fhwa.dot.gov/environment/conformity/complex/attacha.htm>

<http://www.fhwa.dot.gov/environment/conformity/complex/attachb.htm>

<http://www.fhwa.dot.gov/environment/conformity/complex/group2.htm>

By explicitly permitting multi-county budgets, up to and including a single region-wide budget, the US EPA recognizes that a regional budget is sufficient to demonstrate conformity of transportation plans with air quality attainment goals.

6. Requiring motor vehicle emissions to meet county-level budgets treats this source differently from all the other sources.

Four sources of emissions are included in air quality analysis, some of which are divided into subcategories:

- i. On-road mobile sources (motor vehicles)
- ii. Point sources
 - Electricity generating units (EGUs)
 - Other point sources (factories, etc.)
- iii. Non-road mobile sources (airplanes, trains, boats, construction equipment, farm machinery)
- iv. Area sources
 - Biogenic sources (trees and other vegetation)
 - Other area sources (dry cleaners, water heaters, etc.)

Listed below are estimated NO_x emissions for the eight Triangle Non-attainment counties:

2009 Summer Day Emissions (tons/day)		
	NO _x	%
Point	38	20%
Mobile	99	51%
Nonroad	35	18%
Area	22	11%
Total	193	100%

None of the other pollution sources are held to as strict and disaggregated a standard as are motor vehicle emissions. Only motor vehicle emissions would have actual county-based limits (budgets) under DAQ's preferred option.

Point Sources – EGU: There are no plant-by-plant emission limits in the Clean Smokestacks Bill, only emissions caps for all power plants within a particular system combined. Thus, Duke and CP&L have systemwide budgets. They are required on an annual basis to submit a plan indicating the maximum emissions by unit. Because of the schedule of technology investments, the state feels it has a reasonable understanding of the likely emissions over time by unit. If the state feels one of the submitted plans may threaten attainment, the state can require limits on particular units based on what was modeled in the attainment analysis.

Point Sources – other: An economic model based on industry sectors (e.g. textiles, paper) is used to predict emissions from other point sources. These sources are required to install particular technologies, but typically have no actual limits per facility, by county, or regionwide. The state may put limits on specific facilities if it feels it is warranted; this has been done for gas pipeline pumping stations in North Carolina (none are in the Triangle Ozone Non-attainment Area). If a point source engages in emissions trading, it must undertake Continuous Emissions Monitoring for its units or can choose to have actual limits placed on the units and use a different form of monitoring; some facilities choose the latter because it is viewed as less stringent.

Non-road mobile: No actual limits are placed on emissions from this source category, either regionwide or by county, which includes three components in the Triangle: aircraft, trains, and equipment. Aircraft emissions are estimated from airport operations and train emissions from train operations and assigned to track locations. Large projects, such as a major RDU expansion, are required to do a general conformity analysis to ensure that they won't threaten attainment, but do not have pre-set limits. Emissions from other sources (construction equipment, farm machinery, etc.) are estimated based on national data.

Area Sources: Biogenic sources are estimated from a land use grid and are assumed to remain constant from the base year into the future. Other area sources (boilers, dry cleaners, hot water heaters, house fires, etc.) are estimated based on population distribution, but as with the other source categories except motor vehicles, there is no actual limitation, either by county or regionwide.

7. County-level budgets are not based on any optimal distribution of emissions for air quality or by any “fair share” mechanism that would encourage communities to build facilities, provide services or grow in ways that best support air quality goals. In fact, county-based budgets could be an incentive to project growth at the upper ends of reasonableness.

County-level budgets do not establish the “optimal” amount of motor vehicle emissions for each county, nor do they attempt to allocate some kind of “fair share” of emissions per county; they simply reflect the likely amount of motor vehicle emissions *given the growth forecasts (or regression of past travel patterns) and planned transportation facilities and services at the time the MVEB was set*. With individual county-level budgets, a county with better “emissions efficiency” (e.g. emissions per capita or per job or per VMT) could exceed its budget while a county with worse emissions efficiency could be within its budget simply because the latter county was better able to predict (or even overestimate) its growth at the time the budgets were set. This is especially problematic in areas with relatively small populations like the non-attainment portion of Chatham County and Franklin, Granville and Person Counties where growth forecasts are less clear, but where emissions account for small fractions of the regional total (see table on page 2 above). DAQ has not conducted any scenario testing to establish an optimum allocation of growth or VMT in the region for emissions purposes, nor has DAQ conducted any sensitivity analysis to indicate at what levels growth or VMT at locations throughout the region would threaten attainment. Higher than expected growth in one county with concomitant lower than expected growth in another county could result in a budget exceedence under county-level budgets, even if this changed distribution of growth actually resulted in *better* air quality for the region.

8. County based budgets are unlikely to be effective at influencing land use.

One reason for supporting county-based budgets is the belief that they will encourage counties to adhere to land use plans in place at the time budgets were set. However, as noted above, emissions estimates in rural areas have no relation to adopted land use plans or growth forecasts. And if supporters of county-based budgets believe that land use development, as reflected in the socioeconomic forecasts used in the Triangle Regional Model, should have firmer controls, there may be more effective mechanisms that can be used outside of the conformity process, for three reasons:

- Land use is only one response to a budget exceedence; the others are the funding of transportation facilities/services and the implementation of “off-model” activities such as incident management, transportation demand management programs and ridesharing.
- MPOs have no land use authority and can only request that individual local governments make land use changes; land use plan changes significant enough to influence air quality may require a substantial amount of time for a community to undertake.
- The cause of a motor vehicle budget exceedence may be due to a number of factors that are not the result of a change in a community’s land use plan from the time budgets were set, including a higher rate of growth than was initially anticipated, increased rates of trip-making, or increased traffic traveling through a county, among a host of other factors.

Although county-based budgets may narrow the range of jurisdictions involved in making any land use changes should a budget be exceeded and a land use option is used to address the exceedence, it would not eliminate potential disagreements among localities. Each MPO and rural county consists of several independent jurisdictions, each with its own land use authority.

County-based budgets could have the perverse incentive for communities to estimate growth at the topmost range of reasonableness in order to receive a higher allocation of emissions in the budget-setting process (a similar situation has occurred in estimating growth to receive water supply allocations in the region in the past). Based on the way the modeling is conducted, it would seem that if a jurisdiction wished to preserve its growth options, it would be to its advantage to estimate the highest reasonable amount of growth and most extensive roadway network at the time a budget is established, so as to produce the highest level of VMT and emissions that would be budgeted to it.

Counties are an arbitrary boundary for emissions, but the air quality model treats them as firm boundaries. This is most problematic at the Wake/Durham line where the highest amount of VMT and most congestion occurs. But the model takes all of the emissions just on the Durham side of the line and spreads them throughout Durham County and all of the emissions just on the Wake side of the line and spreads them throughout Wake County.

If communities wish to use socioeconomic data and emissions data to address land use concerns, they can use this data in discussions whether budgets are set at the county level or multi-county level. Multi-county budgets do not change how emissions are calculated or reported, only how they are applied in comparing forecast emissions to budgets. County level reporting of input data is a convenience, not a requirement of any of the data sets, and either multi-county inputs or sub-county inputs could be generated from the TRM or Rural Spreadsheet model.

9. Ozone is a regional problem (as demonstrated by the extent of the non-attainment area, which even includes areas without a violating monitor) and is best addressed by the entire region working together; the region has demonstrated that it can work cooperatively on an identical schedule to address conformity.

Further progress on air quality may be most likely when leaders perceive that it is a shared concern, rather than a concern that can be compartmentalized. Most of the steps that leaders have taken to address air quality involve programs that transcend MPO and county boundaries, including the Triangle AirAwareness program, TTA transit and ridesharing programs, the Triangle Best Workplaces for Commuters program, the Triangle Clean Cities Coalition alternative fuel incentives and the IMAP program to manage incidents on the region’s freeways. The region has demonstrated its ability to plan together, even when not required to: the recent conformity reports associated with the 2030 LRTPs and 2006-12 TIPs were undertaken in the same manner as would be required with a single region-wide budget. The close planning coordination required by a regionwide MVEB would be a continuation of the precedent set with the 2030 LRTPs and 2006-12 TIPs, would dovetail with the existing schedule for future LRTP and TIP conformity reports throughout the region, and is appropriate for a regionwide issue such as

ozone pollution. Furthermore, the only step an MPO would be required to undertake if another MPO or rural county changed its LRTP is follow its public involvement process and re-adopt its existing plan. It need not undertake any additional analysis or change any projects or growth projections.

¹ This is not strictly the case for many counties in the Triangle; where MPOs and RPOs would share a county budget, as in Chatham, Orange, Franklin, Granville and Johnston, more than one MPO or RPO would be affected by a lapse. See the accompanying documents titled "What If?" and "Motor Vehicle Emissions Budgets FAQs" for a more complete description of the consequences of conformity lapses.

² Although both Orange County and the four townships of Chatham County in the Non-attainment area are covered by the Triangle Regional travel demand Model (TRM), DAQ has indicated that discussions with NCDOT have resulted in a recommendation to use factored Rural Spreadsheet Model (RSM) VMT in the attainment demonstration modeling for both counties and also in the SIP budget setting modeling for Orange County. In Chatham County, this is so consistently generated emissions can be used for the entire county in the large geographic area used in the Community Multiscale Air Quality model for attainment modeling. In Orange County, this is because TRM VMT was observed to be less than RSM VMT, which was judged to be counter-intuitive; using factored RSM VMT would thus provide more of a cushion in estimating mobile source emissions both in the attainment modeling and the SIP budget modeling.



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January 31, 2006

Ms. Laura Boothe
Chief of Attainment Planning
Division of Air Quality
NC Department of Environment and Natural Resources
1641 Mail Service Center
Raleigh, North Carolina 27699-1641

RECEIVED

FEB 20 2006

NC DAQ
PLANNING SECTION

Dear Ms. Boothe:

We recently became aware of the fact that the North Carolina Department of Environment and Natural Resources (DENR), Division of Air Quality (DAQ), is developing a State Implementation Plan (SIP) to address ozone pollution in the Triangle region, including Franklin County. Due to the serious health effects that can be caused by ozone pollution, Franklin County and the Town of Louisburg support this effort.

It is our further understanding that the SIP will include Motor Vehicle Emissions Budgets (MVEB) which serve as limits on the amounts of Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOCs) that may be emitted by on-road motor vehicles in the Triangle Ozone Non-attainment Area (TNAA), including Franklin County.

This is significant because, under Federal law, if MVEB emissions of NO_x and VOCs are exceeded in the TNAA, all roadway improvement project not directly related to safety concerns ("non-exempt projects") can be halted until emissions are brought below the level set in the MVEB. This has obvious and far-reaching implications for development in Franklin County.

Under Federal law, these MVEBs can be established a) at the County level, i.e.: 8 separate county-based budgets, b) at the Metropolitan Planning Organization (MPO) level, i.e.: Wake, Johnston, Franklin and Granville, or c) at the Regional level, i.e.: Wake, Durham, Orange, Granville, Johnston, Franklin and Chatham counties. The Chapel-Hill / Durham MPO has already voted to go with County-wide budgets, so only options "a" and "b" above remain. Additionally, it is our understanding that NCDOT and DAQ have advocated for "County level" MVEBs.

Ms. Laura Boothe
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At the January 18, 2006, Capital Area MPO (CAMPO) meeting, of which Franklin County is a member, the CAMPO Transportation Advisory Committee (TAC) voted overwhelmingly (only 1 dissenting vote from a NCDOT representative) to recommend to NCDOT and DAQ for a CAMPO-wide MVEB. The Kerr-Tar RPO has also endorsed a CAMPO-wide MVEB.

The purpose of this letter is to request that NCDOT, on behalf of the Kerr-Tar RPO, follow the recommendation of CAMPO and advocate for a CAMPO Region-wide MVEB to DAQ.

The reasoning for this recommendation is that the model being used by NCDOT to establish the MVEB simply extrapolates historical traffic trends into the future for purposes of establishing the MVEB. Although DAQ has agreed to adjust this extrapolation upward to account for the rapid growth faced by Franklin County, the transportation model being used by NCDOT/DAQ is likely to underestimate the increase in motor vehicle miles traveled associated with population growth and thus to understate our MVEB budget. This is particularly true in light of the very large number of Franklin County citizens that commute to Wake or Durham Counties.

A MPO-wide, rather than County-wide MVEB will allow the inherent error in the NCDOT model to be "spread" across the 4 county non-attainment area. Since all four counties are already sanctioned if there is non-attainment in one County, it stands to reason that only one budget should be used in evaluating non-attainment.

As stated above, Franklin County is committed to clean air, but we believe the burden on our County should be fair and based on our explosive population growth and the inevitable increase in vehicle miles traveled (VMT) associated with that growth.

At a minimum, we are requesting that any MVEB be provided to CAMPO and RPO staff for review and approval before inclusion in any SIP.

Thank you for your time and attention to this request. Please contact the County's TCC representative to the RPO and CAMPO, Franklin County Planning Director Patrick Young at (919) 496-2909 with any questions or concerns regarding this matter.

Sincerely,

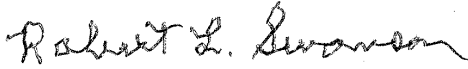


Karl Pernell, Mayor
Town of Louisburg
TAC Chair, Kerr-Tar RPO

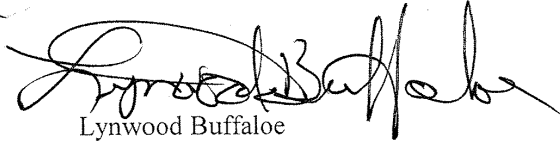


Sidney Dunston
Chairman, Franklin County
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Ms. Laura Boothe
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Robert L. Swanson
Franklin County RPO TAC Representative
Franklin County Commissioner



Lynwood Buffaloe
Franklin County CAMPO
Representative, Franklin County
Commissioner

cc: Lyndo Tippet, Secretary, North Carolina Department of Transportation
William G. Ross, Jr., Secretary, North Carolina Department of Environment and Natural Resources
Ken Spaulding, NCDOT Board Representative
Joe Bryan, Chair, CAMPO TAC
Nina Szlosberg, NC Board of Transportation
Marla Dorrell, Chair, Triangle J Council of Governments
Representative Lucy Allen
Senator Doug Berger
Mike Bruff, PE, Branch Manager, Transportation Planning Branch, NCDOT
Scott Walston, PE, Planning Group Supervisor, NCDOT
Keith Overcash, Director, NCDAQ
Michael Abraczinskas, Environmental Engineer II, NC Division of Air Quality
Wake County Board of Commissioners
Granville County Board of Commissioners
Johnston County Board of Commissioners
City of Raleigh City Council
City of Creedmoor City Council
Town of Clayton Town Council
Ed Johnson, Director, CAMPO
John Hodges-Copple, Planning Director, Triangle J COG
Shelby Powell, Transportation Planner, Kerr-Tar COG
Chris Lukasina, Transportation Planner, UCP COG



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

January 31, 2006

Ms. Laura Boothe
NC Division of Air Quality
1641 Mail Service Center
Raleigh, North Carolina 27699-1641

Subject: Development of Motor Vehicle Emissions Budgets

Dear Laura:

In response to your September 16, 2005 letter concerning development of Motor Vehicle Emissions Budgets (MVEB) we are providing the following comments for the Metrolina and Triangle regions.

For the Metrolina region, the Cabarrus-Rowan MPO has elected to support the county-level MVEB for Cabarrus and Rowan counties. The Mecklenburg-Union MPO and Gaston Urban Area MPO have requested a sub-area budget that includes all nonattainment counties in the region except for Cabarrus and Rowan. The Lake Norman and Rocky River RPOs also support a sub-area budget that includes all the nonattainment counties except for Cabarrus and Rowan. While NCDOT has supported a countywide budget, we recognize that our planning partners in the region have fully discussed this issue and have taken their position based on valid technical reasons. We do not oppose the county-level budget for Cabarrus and Rowan counties and a sub-area budget for the remainder of the nonattainment area.

For the Triangle region, the Durham-Chapel Hill-Carrboro MPO has elected to support the county-level MVEB. The Capital Area MPO has requested a sub-area budget that includes Franklin, Granville, Johnston, and Wake counties. The Kerr-Tar RPO supports a sub-area budget that includes all the nonattainment counties except for Durham and Orange counties. While NCDOT has supported a countywide budget, we recognize that our planning partners in the region have fully discussed this issue and have taken their position based on valid technical reasons. We do not oppose the county-level MVEB for Durham, Orange, and Person counties and a sub-area budget for Franklin, Granville, Johnston, and Wake counties.

NCDOT recognizes that NC Division of Air Quality has the responsibility and authority to establish MVEB for North Carolina and we fully support the course of action you choose to achieve and maintain the air quality goals for our State. Thank you for working with us and our planning partners throughout the State as we have wrestled with this issue. If you have any questions concerning our position or would like to discuss SIP development further with NCDOT, please do not hesitate contacting me at 919-715-5482 ext. 389.

Sincerely,

Dan Thomas, P.E.
Technical Services Unit Head

cc: Mike Abraczinskas, NC Division of Air Quality
Mike Bruff, P.E., NCDOT

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING BRANCH
1554 MAIL SERVICE CENTER
RALEIGH NC 27699-1554

NCDOT T P B
TRANSPORTATION PLANNING BRANCH
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LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601
Phone: 919-715-5482 ext 389
Fax: 919-715-1160

bcc: Jamal Alavi, P.E., NCDOT
Derry Schmidt, P.E., NCDOT

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING BRANCH
1554 MAIL SERVICE CENTER
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TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
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Fax: 919-715-1160



Upper Coastal Plain Rural Planning Organization
Municipalities and Counties of Edgecombe, Johnston, Nash, Wilson



"WORKING TOGETHER FOR BETTER TRANSPORTATION"

A.P. Coleman, RTAC Chairman Joey Raczkowski, RTCC Chairman Greg T. Godard, LPA Executive Director

February 16, 2006

Ms. Laura Boothe *LB*
Chief of Attainment Planning
Division of Air Quality
NC Department of Environment and Natural Resources
1641 Mail Service Center
Raleigh, NC 27699-1641

RECEIVED

FEB 24 2006

NC DAQ
PLANNING SECTION

RE: Motor Vehicle Emissions Budgets

Dear Ms. Boothe,

Thank you for the opportunity to comment on the Motor Vehicles Emissions Budget for the Triangle Non-Attainment Area. Johnston County, a member of the Upper Coastal Plain RPO is affected by this process. As such, the Rural Transportation Advisory Committee (RTAC) has been interested in learning about air quality issues over the past 12 months.

After review of technical information provided by DAQ, the Capital Area MPO (CAMPO), the Triangle J Council of Governments (TJCOG) and the North Carolina Department of Transportation (NCDOT), the Upper Coastal Plain RPO voted on February 15, 2006 to endorse the CAMPO request for an MPO-wide Motor Vehicle Emissions Budget (MVEB). An MPO-wide, rather than County-wide MVEB will allow the inherent error in the NCDOT/DAQ model to be "spread" across the multi-county non-attainment area. Since all four MPO counties would already be in non-attainment should one of those counties be sanctioned with non-attainment, it is reasonable and prudent that only one regional budget be used to evaluate non-attainment.

The following excerpt from the "MVEB FAQ" as developed by TJCOG and distributed to SICM partners via email on January 26, 2006, outlines the primary reason for the UCPRPO's decision to endorse the CAMPO recommendation:

Q. How is a non-exempt project (for example, a road widening) in a rural area (location outside an MPO) affected by an MPO planning lapse in a county that is partly in an MPO and partly outside an MPO? Here is an example: CAMPO has a planning lapse, so that either its TIP or LRTP is not adopted as conforming within the required time frame. There is a highway widening project in Franklin County, but the project is in the rural area outside the CAMPO boundary.

- Can this project proceed to the next stage while CAMPO is in lapse under the 4 separate county-level budgets option?
- Can this project proceed to the next stage while CAMPO is in lapse under the single multicounty budgets option?

A. The situation would be the same under either the single 4-county budget or 4 separate individual county budgets (see below for FHWA response):

Can this project proceed to the next stage while CAMPO is in lapse under the 4 separate county-level budgets option?

1309 S. Wesleyan Boulevard·PO Drawer 2748·Rocky Mount, NC 27802·(252) 446-0411 Voice·(252) 446-5651 Facsimile



Upper Coastal Plain Rural Planning Organization
Municipalities and Counties of Edgecombe, Johnston, Nash, Wilson



"WORKING TOGETHER FOR BETTER TRANSPORTATION"

A.P. Coleman, RTAC Chairman Joey Raczkowski, RTCC Chairman Greg T. Godard, LPA Executive Director

"No. The entire county has to be conforming under the separate county level budget option. Since Franklin county is now part of CAMPO and if CAMPO lapses we can not make a conformity determination for the part of the county (under the county level budget option). The only way this would work would be if NCDENR would be willing to provide partial county budgets."

Can this project proceed to the next stage while CAMPO is in lapse under the single multi-county budgets option?

"No. The single multi-county budget option [meaning the 4-county budget area] has to be conforming under this option. Since Franklin county is now part of CAMPO and if CAMPO lapses we can not make a conformity on anything less than the single multi-county budget option [meaning the 4-county budget area]."

According to FHWA and the FAQ document developed by TJCOG, Johnston County, as a partial member of CAMPO, is intrinsically tied to CAMPO for the purposes of slowed projects resulting from planning lapses. Projects in our portion of Johnston County could not move forward if a lapse occurred within CAMPO. Likewise, a planning lapse in our rural area, however unlikely, could lead to slowed projects in the CAMPO area. For this reason, it is our desire to continue working with CAMPO to proactively address air quality non-attainment issues by working to meet a regional multi-county budget.

Thank you again for the opportunity to comment on this issue and for your conscientious efforts to educate our rural decision makers on this complex issue. If you have any questions or would like additional information please contact me at clukasina@ucpcog.org or 252-446-4011.

Sincerely,

Chris Lukasina, GISP

Upper Coastal Plain Rural Transportation Organization
Rural Transportation Advisory Committee Staff

Cc: Tom Betts, NCDOT Board of Transportation
Mike Bruff, NCDOT Transportation Planning Branch
Travis Marshall, NCDOT Transportation Planning Branch
Michael Lindenbeck, NCDOT Transportation Planning Branch
John Hodges-Copple, Triangle J Council of Governments
Joe Bryan, Chair, CAMPO TAC
A.P. Coleman, Chair, UCPRPO TAC
Karl Pernell, Chair, Kerr-Tar RPO RTAC
UCPRPO RTCC & RTAC Members

1309 S. Wesleyan Boulevard • PO Drawer 2748 • Rocky Mount, NC 27802 • (252) 446-0411 Voice • (252) 446-5651 Facsimile

Subject: Support for County-Level MVEB
From: roland tilley <ron_d_tilley@yahoo.com>
Date: Sun, 19 Feb 2006 09:30:00 -0800 (PST)
To: laura.booth@ncmail.net

Laura,
On behalf of citizens for Smrth Growth, I am writing to express our support for county level MVEBs and urge you to continue with your traditional method for setting budgets.
Thanks
Ron

Yahoo! Mail
Use Photomail to share photos without annoying attachments.

Subject: Support for County-by-County MVEBs

From: clean aqnow <cleanaqnow@yahoo.com>

Date: Sun, 19 Feb 2006 09:25:22 -0800 (PST)

To: laura.booth@ncmail.net

Dear Ms. Boothe,

We support the County level MVEB for the reasons outlined in the letter from DAQ. We feel that County governing boards who received your letter and did not respond also supported county level option. We believe that MVEB effects both transportation conformity and attainment demonstration. Attainment issues affect counties therefore should be intimately involved in the MVEB discussions. We have spoken to County Commissioners in the Triangle who were unaware of the MPO/RPO votes concerning MVEBs. They interpreted DAQ's letter, and right so, to mean that if they support county level they don't have to do any thing.

We urge you to continue with county level emissions budgets option. We do not feel that any valid and concrete justifications have been made to do otherwise. Also, we feel that County Governments are in support.

Thanks for your time.

Smelzer, on behalf of Triangle Clean Air Quality Now.

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North Carolina Department of Environment and Natural Resources
Division of Air Quality

Michael F. Easley, Governor

William G. Ross, Jr., Secretary
B. Keith Overcash, P.E., Director

June 21, 2006

Mr. Edison H. Johnson, Jr., PE
Director
N.C. Capital Area Metropolitan Planning Organization
The Professional Building, Suite 406
127 West Hargett Street
Raleigh, NC 27601

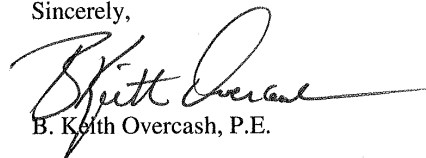
Dear Mr. Johnson:

Thank you for your letter about setting motor vehicle emission budgets (MVEBs) for the Raleigh-Durham-Chapel Hill 8-hour ozone nonattainment area. We greatly appreciate your feedback on the setting of the MVEBs.

My staff has thoroughly reviewed and discussed your submittal and it is our decision to set county level MVEBs for transportation conformity purposes. We believe that many of your points of concern can be addressed through safety margins in the redesignation/maintenance SIP. My staff will work with your region to develop the most appropriate MVEBs that meet our goals of attaining and maintaining the National Ambient Air Quality Standards for 8-hour ozone in order to protect public health.

The North Carolina Division of Air Quality is committed to working with all our partners during the State Implementation Plan (SIP) process to determine the best course of action in achieving and maintaining air quality goals. If you should have any questions, please contact Laura Boothe of my staff at (919) 733-1488 or laura.boothe@ncmail.net.

Sincerely,



B. Keith Overcash, P.E.

BKO:lab

cc: Sheila Holman, NCDAQ
Laura Boothe, NCDAQ
Nina Szlosberg, NC Board of Transportation
Mike Bruff, PE, Transportation Planning Branch
Karl Pernell, RTAC Chair, Kerr Tar Rural Planning Organization
Vines Cobb, RTAC Chair, Upper Coastal Plain Rural Planning Organization
Marla Dorrel, Chair, Triangle J Council of Government
Joe Bryan, Chair, CAMPO TAC
Chip Russell, Chair, CAMPO TCC

Planning Section

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Division of Air Quality

Michael F. Easley, Governor

William G. Ross, Jr., Secretary
B. Keith Overcash, P.E., Director

June 21, 2006

The Honorable William V. Bell
Chair, Transportation Advisory Committee
Durham-Chapel Hill- Carboro Metropolitan Planning Organization
101 City Hall Plaza
Durham, NC 27701


Dear Mayor Bell:

Thank you for your letter about setting motor vehicle emission budgets (MVEBs) for the Raleigh-Durham-Chapel Hill 8-hour ozone nonattainment area. We greatly appreciate your feedback on the setting of the MVEBs.

We have decided to set county level MVEBs for transportation conformity purposes in this nonattainment area and appreciate your support of this. We believe that county level MVEBs better serve our goals of attaining and maintaining the standard in order to protect public health.

The North Carolina Division of Air Quality is committed to working with all our partners during the State Implementation Plan (SIP) process to determine the best course of action in achieving and maintaining air quality goals. If you should have any questions, please contact Laura Boothe of my staff at (919) 733-1488 or laura.boothe@ncmail.net.

Sincerely,



B. Keith Overcash, P.E.

BKO:lab

cc: Sheila Holman, NCDAQ
Laura Boothe, NCDAQ
Mark Ahrendsen, Chair, DCHC MPO Technical Coordinating Committee
Eddie Dancausse, USDOT FHWA
Mike Bruff, Director, NCDOT Transportation Planning Branch
Scott Walston, NCDOT Transportation Planning Branch
Dan Thomas, NCDOT Transportation Planning Branch
Joe Bryan, Chair, Capital Area MPO Transportation Advisory Committee
Ed Johnson, Director, Capital Area MPO Lead Planning Agency

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Michael F. Easley, Governor

William G. Ross, Jr., Secretary
B. Keith Overcash, P.E., Director

June 21, 2006

The Honorable Karl Pernell
Town of Louisburg
TAC Chair, Kerr-Tar RPO
113 Market Street
Louisburg, NC 27549


Dear Mayor Pernell:

Thank you for your letter about setting motor vehicle emission budgets (MVEBs) for the Raleigh-Durham-Chapel Hill 8-hour ozone nonattainment area. We greatly appreciate your feedback on the setting of the MVEBs.

My staff has thoroughly reviewed and discussed your submittal and it is our decision to set county level MVEBs for transportation conformity purposes. We believe that many of your points of concern can be addressed through safety margins in the redesignation/maintenance SIP. My staff will work with your region to develop the most appropriate MVEBs that meet our goals of attaining and maintaining the National Ambient Air Quality Standards for 8-hour ozone in order to protect public health.

The North Carolina Division of Air Quality is committed to working with all our partners during the State Implementation Plan (SIP) process to determine the best course of action in achieving and maintaining air quality goals. If you should have any questions, please contact Laura Boothe of my staff at (919) 733-1488 or laura.booth@ncmail.net.

Sincerely,



B. Keith Overcash, P.E.

BKO:lab

cc: Willam G. Ross, Jr., Secretary, NCDENR
Sheila Holman, NCDAQ
Laura Boothe, NCDAQ
Mike Abraczinskas, NCDAQ
Sidney Dunston, Chairman, Franklin County Board of Commissioners
Robert L. Swanson, Franklin County RPO TAC Representative, Franklin County Commissioner
Lynwood Buffaloe, Franklin County CAMPO, Representative, Franklin County Commissioner
Lyndo Tippet, Secretary NCDOT
Ken Spaulding, NCDOT Board of Transportation
Joe Bryan, Chair, CAMPO TAC

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Representative Lucy Allen
Senator Doug Berger
Mike Bruff, PE, Transportation Planning Branch
Scott Walston, Transportation Planning Branch
Tony Gurley, Chair, Wake County Board of Commissioners
R. David Currin, Jr., Chair, Granville County Board of Commissioners & City of Creedmoor City Council
Annabeth Surbaugh, Chair, Johnston County Board of Commissioners
Mayor Charles Meeker, Chair, City of Raleigh City Council
Bob Satterfield, Chair, Town of Clayton Town Council
Ed Johnson, Director CAMPO
John Hodges-Copple, Triangle Council of Governments
Shelby Powell, Transportation Planner, Kerr-Tar COG
Chris Lukasina, Transportation Planner, UCP COG



North Carolina Department of Environment and Natural Resources
Division of Air Quality

Michael F. Easley, Governor

William G. Ross, Jr., Secretary
B. Keith Overcash, P.E., Director

June 21, 2006

Ms. Shelby Powell, AICP
Rural Transportation Advisory Committee Staff
Kerr-Tar Rural Transportation Planning Organization
P.O. Box 709
1724 Graham Ave.
Henderson, NC 27536

Dear Ms. Powell:

Thank you for your letter about setting motor vehicle emission budgets (MVEBs) for the Raleigh-Durham-Chapel Hill 8-hour ozone nonattainment area. We greatly appreciate your feedback on the setting of the MVEBs.

My staff has thoroughly reviewed and discussed your submittal and it is our decision to set county level MVEBs for transportation conformity purposes. We believe that many of your points of concern can be addressed through safety margins in the redesignation/maintenance SIP. My staff will work with your region to develop the most appropriate MVEBs that meet our goals of attaining and maintaining the National Ambient Air Quality Standards for 8-hour ozone in order to protect public health.

The North Carolina Division of Air Quality is committed to working with all our partners during the State Implementation Plan (SIP) process to determine the best course of action in achieving and maintaining air quality goals. If you should have any questions, please contact Laura Boothe of my staff at (919) 733-1488 or laura.boothe@ncmail.net.

Sincerely,

B. Keith Overcash, P.E.

BKO:lab

cc: Sheila Holman, NCDAQ
Laura Boothe, NCDAQ
Ken Spaulding, NCDOT Board of Transportation
Mike Bruff, PE, Transportation Planning Branch
Scott Walston, Transportation Planning Branch
Joe Bryan, Chair, CAMPO TAC
Vines Cobb, RTAC Chair, Upper Coastal Plain Rural Planning Organization
Karl Pernell, RTAC Chair, Kerr-Tar Rural Planning Organization
Tommy Marrow, TCC Chair, Kerr-Tar Rural Planning Organization

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June 21, 2006

Dan Thomas
Technical Services Unit Head
Transportation Planning Branch, NCDOT
1554 Mail Service Center
Raleigh, NC 27699-1554

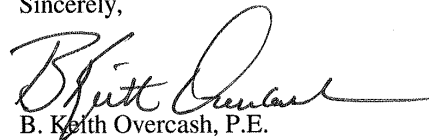
Dear Mr. Thomas:

Thank you for your letter about setting motor vehicle emission budgets (MVEBs) for the Raleigh-Durham-Chapel Hill and Charlotte-Gastonia-Rock Hill 8-hour ozone nonattainment areas. We greatly appreciate your feedback on the setting of the MVEBs.

We have decided to set county level MVEBs for transportation conformity purposes in these two nonattainment areas. We believe that county level MVEBs better serve our goals of attaining and maintaining the standard in order to protect public health.

The North Carolina Division of Air Quality is committed to working with all our partners during the State Implementation Plan (SIP) process to determine the best course of action in achieving and maintaining air quality goals. If you should have any questions, please contact Laura Boothe of my staff at (919) 733-1488 or laura.boothe@ncmail.net.

Sincerely,



B. Keith Overcash, P.E.

BKO:lab

cc: Sheila Holman, NCDAQ
Laura Boothe, NCDAQ
Mike Abraczinskas, NCDAQ
Mike Bruff, PE, NCDOT
Derry Schmidt, PE, NCDOT

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William G. Ross, Jr., Secretary
B. Keith Overcash, P.E., Director

June 21, 2006

Mr. Chris Lukasina, GISP
Rural Transportation Advisory Committee Staff
Upper Coastal Plain Council of Governments
1309 S. Wesleyan Blvd.
P.O. Drawer 2748
Rocky Mount, NC 27802

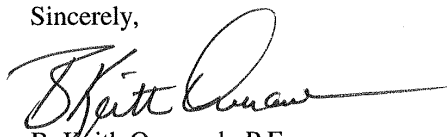
Dear Mr. Lukasina:

Thank you for your letter about setting motor vehicle emission budgets (MVEBs) for the Raleigh-Durham-Chapel Hill 8-hour ozone nonattainment area. We greatly appreciate your feedback on the setting of the MVEBs.

My staff has thoroughly reviewed and discussed your submittal and it is our decision to set county level MVEBs for transportation conformity purposes. We believe that many of your points of concern can be addressed through safety margins in the redesignation/maintenance SIP. My staff will work with your region to develop the most appropriate MVEBs that meet our goals of attaining and maintaining the National Ambient Air Quality Standards for 8-hour ozone in order to protect public health.

The North Carolina Division of Air Quality is committed to working with all our partners during the State Implementation Plan (SIP) process to determine the best course of action in achieving and maintaining air quality goals. If you should have any questions, please contact Laura Boothe of my staff at (919) 733-1488 or laura.boothe@ncmail.net.

Sincerely,



B. Keith Overcash, P.E.

BKO:lab

cc: Sheila Holman, NCDAQ
Laura Boothe, NCDAQ
Tom Betts, NCDOT Board of Transportation
Mike Bruff, NCDOT Transportation Planning Branch

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Michael Lindebeck, NCDOT Transportation Planning Branch
John Hodges-Copple, Triangle Council of Governments
Joe Bryan, Chair, CAMPO TAC
A. P. Coleman, Chair, UCPRPO TAC
Karl Pernell, RTAC Chair, Kerr Tar Rural Planning Organization
Joey Raczkowski, Chair, UCPRPO TCC



North Carolina Department of Environment and Natural Resources
Division of Air Quality

Michael F. Easley, Governor

William G. Ross, Jr., Secretary
B. Keith Overcash, P.E., Director

March 29, 2006

Subject: Development of Motor Vehicle Emission Budgets

Dear Triangle Transportation Partner:

The North Carolina Division of Air Quality (NCDAQ) sent out a letter September 16, 2005 requesting comments on how the motor vehicle emission budgets (MVEBs) should be established in the 8-hour ozone attainment demonstration. Several of the Triangle partners responded to that letter, with some partners requesting the NCDAQ establish county level MVEBs and others requesting multi-county MVEBs.

At a recent Statewide Interagency Consultation Meeting (SICM), the NCDAQ announced that the Triangle area was attaining the 8-hour ozone standard based on the 2003-2005 data. Immediately following the SICM meeting, an interagency consultation meeting was held with the Triangle transportation partners to discuss the schedule and data needs for the redesignation demonstration and maintenance plan.

During the Triangle interagency consultation meeting, one of the issues discussed was the setting of MVEBs. The original request for comments on how the MVEBs would be established was for an attainment demonstration. In an attainment demonstration, the MVEBs are set for only one year, the year the area is required to meet the 8-hour ozone standard. The required attainment year for the Triangle area is 2008. The MVEBs set in attainment demonstration would be in place until the area attained the standard and a redesignation demonstration and maintenance plan was approved by the U. S. Environmental Protection Agency, in which new MVEBs would be established.

In a maintenance plan, MVEBs can be set for a number of years with the latest year having to be at least ten years from when the plan is expected to be approved. For the Triangle area, this required MVEB year is 2017. Additionally, a portion of the safety margin can be added to the MVEBs in a maintenance plan to address uncertainty in the data that is used to calculate the highway mobile source emissions.

Due to these differences in how MVEBs are set in an attainment demonstration versus a maintenance plan, the NCDAQ is providing the Triangle transportation partners an opportunity to revisit the issue. Since the NCDAQ has not yet made any decisions on the responses to the September 16, 2005 letter, the agency has decided to hold off on reviewing these responses and wait until the area has an opportunity to re-address the issue if they desire.

Planning Section

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Triangle Transportation Partners
March 29, 2006
Page 2

The NCDAQ requests that any additional correspondence regarding this issue be submitted no later than May 31, 2006. The process for recommending approaches other than county level MVEBs is outlined in the September 16, 2005 letter. Partners that responded to the original letter and are comfortable with their current position may respond as such and no further action will be required. The NCDAQ will take into consideration the recommended approaches from the transportation partners when developing the MVEBs.

The NCDAQ is committed to working with all of our partners during this process to determine the best course of action in achieving and maintaining air quality goals. If you should have any questions, please contact Mike Abraczinskas of my staff at (919) 715-3743 or michael.abraczinskas@ncmail.net or myself at (919) 733-1488 or laura.booth@ncmail.net.

Sincerely,

/s/

Laura A. Booth
Attainment Planning Branch Chief

cc: Keith Overcash, NCDAQ
Sheila Holman, NCDAQ
Mike Abraczinskas, NCDAQ
Lynorae Benjamin, USEPA
Amanette Wood, USEPA
Eddie Dancausse, FWHA
Loretta Barren, FHWA