

Appendix I. Emissions Analysis

The following tables list the emissions analysis results by location, pollutant and year.

**Emissions Analysis Results: Durham County
USING MOBILE6.2**

NOx Comparison Table (kg/day)																													
Analysis Year	Model	Off-Model	Comparison Amount	Budget Amount																									
2015	5,561	-35	5,526	13,106	OK																								
2017	4,440	-28	4,412	4,960	OK																								
2025	2,711	-26	2,685	4,960	OK																								
2035	2,600	-33	2,567	4,960	OK																								
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CO Comparison Table (kg/day)																													
Analysis Year	Model	Off-Model	Comparison Amount	Budget Amount																									
2015	97,962	-545	97,417	160,771	OK																								
2025	92,287	-856	91,431	160,771	OK																								
2035	100,677	-1,243	99,434	160,771	OK																								
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	Year		<u>Budget Amount</u>	<u>Budget Amount</u>																									
	2015		177.22	160,771																									

**Emissions Analysis Results: Orange County
USING MOBILE6.2**

NOx Comparison Table (kg/day)					
Analysis Year	Model	Off Model	Comparison Amount	Budget Amount	
2015	3,291	0	3,291	9,933	OK
2017	2,579	0	2,579	3,742	OK
2025	1,529	0	1,529	3,742	OK
2035	1,431	0	1,431	3,742	OK

Emissions Analysis Results: Wake County
USING MOBILE6.2

NOx Comparison Table (kg/day)														
Analysis Year	Model	Off-Model	Comparison Amount	Budget Amount										
2015	17,264	-81	17,183	36,615	OK									
2017	13,974	-63	13,911	16,352	OK									
2025	9,197	-58	9,139	16,352	OK									
2035	8,599	-89	8,510	16,352	OK									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="text-align: center;"><u>NOx(kg/day)</u></th> </tr> <tr> <th style="text-align: center;">Year</th> <th style="text-align: center;"><u>Budget Amount</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2015</td> <td style="text-align: center;">36,615</td> </tr> <tr> <td style="text-align: center;">2016-2035</td> <td style="text-align: center;">16,352</td> </tr> </tbody> </table>							<u>NOx(kg/day)</u>	Year	<u>Budget Amount</u>	2015	36,615	2016-2035	16,352	
	<u>NOx(kg/day)</u>													
Year	<u>Budget Amount</u>													
2015	36,615													
2016-2035	16,352													
CO Comparison Table (kg/day)														
Analysis Year	Model	Off-Model	Comparison Amount	Budget Amount										
2015	300,957	-1,216	299,741	348,604	OK									
2025	303,502	-1,820	301,681	348,604	OK									
2035	316,885	-2,281	314,604	348,604	OK									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;"></th> <th style="text-align: center;"><u>CO(tons/day)</u></th> <th style="text-align: center;"><u>CO(kg/day)</u></th> </tr> <tr> <th style="text-align: center;">Year</th> <th style="text-align: center;"><u>Budget Amount</u></th> <th style="text-align: center;"><u>Budget Amount</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2015</td> <td style="text-align: center;">384.27</td> <td style="text-align: center;">348,604</td> </tr> </tbody> </table>							<u>CO(tons/day)</u>	<u>CO(kg/day)</u>	Year	<u>Budget Amount</u>	<u>Budget Amount</u>	2015	384.27	348,604
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Year	<u>Budget Amount</u>	<u>Budget Amount</u>												
2015	384.27	348,604												

Emissions Analysis Results: Chatham County
USING MOBILE6.2

NOx Comparison Table (kg/day)						
Analysis Year	Model	Non-Model Spreadsheet	Off-Model	Comparison Amount	Budget Amount	
2015	987	14	0	1,001	1,565	OK
2017	847	12	0	859	948	OK
2025	505	7	0	512	948	OK
2035	449	5	0	454	948	OK

**Emissions Analysis Results: Granville County
USING MOBILE6.2**

NOx Comparison Table (kg/day)					
Analysis Year	Model	Non-Model Spreadsheet	Comparison Amount	Budget Amount	
2015	1,274	724	1,998	4,649	OK
2017	1,057	562	1,619	1,714	OK
2025	608	237	845	1,714	OK
2035	476	153	629	1,714	OK

**Emissions Analysis Results: Franklin County
USING MOBILE6.2**

NOx Comparison Table (kg/day)					
Analysis Year	Model	Non-Model Spreadsheet	Comparison Amount	Budget Amount	
2015	1,100	198	1,298	2,048	OK
2017	915	157	1,072	1,139	OK
2025	534	50	584	1,139	OK
2035	454	42	496	1,139	OK

Emissions Budget Comparison (Non-model Spreadsheet)

County PERSON

NO_x Comparison Table

Analysis Year	Estimated VMT	Estimated Emissions from the Transportation System (KG)	Emissions Budget Amount (KG)
2015	920,393.8	710.90	1,359.00
2017	938,420.4	607.17	791.00
2025	1,010,527.1	406.54	791.00
2035	1,100,660.4	369.79	791.00

**Emissions Analysis Results:
USING MOBILE6.2**

Johnston County

NOx Comparison Table (kg/day)					
Analysis Year	Model	Non-model Spreadsheet	Comparison Amount	Budget Amount	
2015	3,102	1,698	4,800	12,583	OK
2017	2,545	1,261	3,806	5,958	OK
2025	1,428	468	1,896	5,958	OK
2035	1,163	345	1,508	5,958	OK