

NJTPA 2007

This workbook was developed to assist in the establishment of the transportation conformity budget for the NJTPA area. The worksheets contained in this workbook do not include the benefits of the Federal Tier 2/Sulfur program.

This workbook was developed by Chris N. Salmi, NJDEP, December 16, 1999.

<u>Worksheet</u>	<u>Description</u>
Documentation	This worksheet.
County List	Contains a listing of the counties, area number, and MPO. <<Hidden>>
Constants	Contains the constants used in the calculations.
njei07c	Contains the output (data base file) from PPAQ for the centralized enhanced I/M program. <<Hidden>>
njei07d	Contains the output (data base file) from PPAQ for the decentralized enhanced I/M program. <<Hidden>>
VMT	Contains the output of VMT by vehicle class and county.
Cent -Em by Veh Class by County	Contains a summary of the emissions for the centralized program by vehicle class and county.
Decent -Em by Veh Class by Co	Contains a summary of the emissions for the decentralized program by vehicle class and county.
VOC Em by Veh Clas by County	Contains a summary of the VOC emissions after application of the enhanced I/M program adjustments.
NOx Em by Veh Clas by Count	Contains a summary of the NOx emissions after application of the enhanced I/M program adjustments.

Enhanced I/M Adjustments

- Centralized / Decentralized split
- The decentralized program is 80% effective as the centralized program.

Constants

Fraction Centralized	0.7
Fraction Decentralized	0.3

Conversion Factor

kg->lbs	2.2046
lbs->tons	0.0005

Source: Slade, David, Meteorology and Atomic Energy, 1968, U.S. Atomic Energy Commission

NJTPA 2007 VMT

County	Area	VMT1	VMT2	VMT3	VMT4	VMT5	VMT6	VMT7	VMT8	VMTTOTAL
Bergen	3	16,260,791	1,690,790	985,730	227,778	423,797	127,415	419,092	203,383	20,338,776
Essex	13	10,004,498	1,159,703	576,302	158,555	266,420	73,506	295,690	126,616	12,661,290
Hudson	17	5,029,432	432,263	303,112	153,901	121,139	38,709	275,227	64,180	6,417,963
Hunterdon	19	3,252,756	532,765	372,329	131,491	150,805	49,475	236,355	47,739	4,773,715
Middlesex	23	13,343,352	1,624,482	868,792	397,902	387,004	109,077	729,844	176,370	17,636,823
Monmouth	25	12,687,491	2,640,285	1,262,180	270,535	593,001	160,373	551,979	183,497	18,349,341
Morris	27	13,899,992	1,232,934	864,758	306,399	347,381	111,943	557,182	174,954	17,495,543
Ocean	29	9,769,878	1,755,268	1,227,463	238,661	493,823	160,135	429,086	142,161	14,216,475
Passaic	31	7,299,997	726,826	438,256	136,055	186,074	57,808	246,161	91,833	9,183,010
Somerset	35	7,565,330	577,469	402,938	161,721	162,541	52,777	292,459	93,081	9,308,316
Sussex	37	3,109,144	598,765	418,365	115,468	168,589	55,139	206,551	47,188	4,719,209
Union	39	6,973,112	814,548	409,761	133,555	188,039	55,016	244,126	89,074	8,907,231
Warren	41	3,527,285	396,774	278,174	245,804	112,697	35,869	442,645	50,900	5,090,148
		112,723,058	14,182,872	8,408,160	2,677,825	3,601,310	1,087,242	4,926,397	1,490,976	149,097,840

NJTPA 2007 VOC Emissions

Units = kg

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Bergen	3	6,562.80	784.97	721.50	376.82	126.42	53.88	563.81	785.08	9,975.27
Essex	13	3,896.38	519.17	418.33	254.21	76.72	30.85	381.18	485.43	6,062.27
Hudson	17	2,061.79	215.13	228.29	237.42	38.84	17.08	351.45	246.41	3,396.41
Hunterdon	19	1,158.45	232.85	247.73	159.28	42.97	19.05	261.82	161.77	2,283.92
Middlesex	23	5,245.92	765.75	653.71	543.22	116.89	47.07	796.06	688.66	8,857.28
Monmouth	25	4,790.71	1,177.62	909.61	441.99	168.20	65.10	709.11	707.80	8,970.14
Morris	27	5,405.95	574.37	609.15	441.14	98.72	43.12	649.88	674.99	8,497.32
Ocean	29	3,920.39	818.63	866.98	372.15	144.39	63.90	544.29	548.79	7,279.53
Passaic	31	3,066.51	351.56	333.11	226.85	58.05	25.27	333.18	358.41	4,752.94
Somerset	35	3,014.49	272.77	289.13	237.68	47.05	21.02	349.95	361.54	4,593.63
Sussex	37	1,326.56	298.92	314.64	207.75	54.71	24.51	315.72	179.86	2,722.67
Union	39	2,842.68	382.35	310.58	178.44	56.29	23.55	260.61	350.13	4,404.63
Warren	41	1,370.87	185.73	199.01	353.07	33.84	14.72	599.32	178.77	2,935.33
Total		44,663.50	6,579.83	6,101.78	4,030.02	1,063.09	449.12	6,116.38	5,727.64	74,731.35

Units = lbs

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Bergen	3	14,468	1,731	1,591	831	279	119	1,243	1,731	21,991
Essex	13	8,590	1,145	922	560	169	68	840	1,070	13,365
Hudson	17	4,545	474	503	523	86	38	775	543	7,488
Hunterdon	19	2,554	513	546	351	95	42	577	357	5,035
Middlesex	23	11,565	1,688	1,441	1,198	258	104	1,755	1,518	19,527
Monmouth	25	10,562	2,596	2,005	974	371	144	1,563	1,560	19,776
Morris	27	11,918	1,266	1,343	973	218	95	1,433	1,488	18,733
Ocean	29	8,643	1,805	1,911	820	318	141	1,200	1,210	16,048
Passaic	31	6,760	775	734	500	128	56	735	790	10,478
Somerset	35	6,646	601	637	524	104	46	771	797	10,127
Sussex	37	2,925	659	694	458	121	54	696	397	6,002
Union	39	6,267	843	685	393	124	52	575	772	9,710
Warren	41	3,022	409	439	778	75	32	1,321	394	6,471
Total		98,465	14,506	13,452	8,885	2,344	990	13,484	12,627	164,753

Units = tons

County	Area	HC1	HC2	HC3	HC4	HC5	HC6	HC7	HC8	HCTOTAL
Bergen	3	7.23	0.87	0.80	0.42	0.14	0.06	0.62	0.87	11.00
Essex	13	4.29	0.57	0.46	0.28	0.08	0.03	0.42	0.54	6.68
Hudson	17	2.27	0.24	0.25	0.26	0.04	0.02	0.39	0.27	3.74
Hunterdon	19	1.28	0.26	0.27	0.18	0.05	0.02	0.29	0.18	2.52
Middlesex	23	5.78	0.84	0.72	0.60	0.13	0.05	0.88	0.76	9.76
Monmouth	25	5.28	1.30	1.00	0.49	0.19	0.07	0.78	0.78	9.89
Morris	27	5.96	0.63	0.67	0.49	0.11	0.05	0.72	0.74	9.37
Ocean	29	4.32	0.90	0.96	0.41	0.16	0.07	0.60	0.60	8.02
Passaic	31	3.38	0.39	0.37	0.25	0.06	0.03	0.37	0.40	5.24
Somerset	35	3.32	0.30	0.32	0.26	0.05	0.02	0.39	0.40	5.06
Sussex	37	1.46	0.33	0.35	0.23	0.06	0.03	0.35	0.20	3.00
Union	39	3.13	0.42	0.34	0.20	0.06	0.03	0.29	0.39	4.86
Warren	41	1.51	0.20	0.22	0.39	0.04	0.02	0.66	0.20	3.24
Total		49.23	7.25	6.73	4.44	1.17	0.50	6.74	6.31	82.38

NJTPA 2007 NOx Emissions

Units = Kg

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Bergen	3	13,307.72	1,584.56	1,394.81	1,052.47	458.27	147.67	3,120.58	196.40	21,262.48
Essex	13	8,289.57	1,108.80	818.47	747.61	292.85	85.14	2,255.32	125.44	13,723.20
Hudson	17	3,940.28	374.36	415.31	722.42	124.13	43.63	2,015.24	58.79	7,694.16
Hunterdon	19	2,758.24	461.14	509.00	661.67	152.59	55.31	2,226.24	51.88	6,876.07
Middlesex	23	11,329.07	1,564.08	1,214.65	2,029.95	419.50	124.02	6,737.61	180.63	23,599.52
Monmouth	25	10,680.31	2,556.54	1,785.14	1,267.57	658.86	186.80	4,410.04	186.44	21,731.71
Morris	27	11,797.16	1,183.39	1,312.02	1,519.59	403.43	143.85	4,900.60	179.61	21,439.65
Ocean	29	7,763.05	1,552.26	1,715.54	1,123.98	510.87	181.76	3,207.22	132.83	16,187.50
Passaic	31	5,817.52	662.43	610.68	631.66	196.81	66.21	1,843.13	85.05	9,913.49
Somerset	35	6,397.63	558.63	616.33	797.80	189.66	67.78	2,615.62	94.94	11,338.39
Sussex	37	2,321.83	490.90	542.22	496.97	158.43	57.04	1,319.70	40.35	5,427.44
Union	39	5,944.53	822.40	600.94	687.97	217.48	67.19	2,316.40	91.57	10,748.48
Warren	41	3,142.46	375.80	416.67	1,129.34	131.94	46.39	3,431.20	56.61	8,730.42
Total		93,489.38	13,295.29	11,951.79	12,869.00	3,914.82	1,272.79	40,398.90	1,480.54	178,672.51

Units = lbs

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Bergen	3	29,338	3,493	3,075	2,320	1,010	326	6,880	433	46,875
Essex	13	18,275	2,444	1,804	1,648	646	188	4,972	277	30,254
Hudson	17	8,687	825	916	1,593	274	96	4,443	130	16,963
Hunterdon	19	6,081	1,017	1,122	1,459	336	122	4,908	114	15,159
Middlesex	23	24,976	3,448	2,678	4,475	925	273	14,854	398	52,027
Monmouth	25	23,546	5,636	3,936	2,794	1,453	412	9,722	411	47,910
Morris	27	26,008	2,609	2,892	3,350	889	317	10,804	396	47,266
Ocean	29	17,114	3,422	3,782	2,478	1,126	401	7,071	293	35,687
Passaic	31	12,825	1,460	1,346	1,393	434	146	4,063	188	21,855
Somerset	35	14,104	1,232	1,359	1,759	418	149	5,766	209	24,997
Sussex	37	5,119	1,082	1,195	1,096	349	126	2,909	89	11,965
Union	39	13,105	1,813	1,325	1,517	479	148	5,107	202	23,696
Warren	41	6,928	828	919	2,490	291	102	7,564	125	19,247
Total		206,107	29,311	26,349	28,371	8,631	2,806	89,063	3,264	393,901

Units = tons

County	Area	NOX1	NOX2	NOX3	NOX4	NOX5	NOX6	NOX7	NOX8	NOXTOTAL
Bergen	3	14.67	1.75	1.54	1.16	0.51	0.16	3.44	0.22	23.44
Essex	13	9.14	1.22	0.90	0.82	0.32	0.09	2.49	0.14	15.13
Hudson	17	4.34	0.41	0.46	0.80	0.14	0.05	2.22	0.06	8.48
Hunterdon	19	3.04	0.51	0.56	0.73	0.17	0.06	2.45	0.06	7.58
Middlesex	23	12.49	1.72	1.34	2.24	0.46	0.14	7.43	0.20	26.01
Monmouth	25	11.77	2.82	1.97	1.40	0.73	0.21	4.86	0.21	23.95
Morris	27	13.00	1.30	1.45	1.68	0.44	0.16	5.40	0.20	23.63
Ocean	29	8.56	1.71	1.89	1.24	0.56	0.20	3.54	0.15	17.84
Passaic	31	6.41	0.73	0.67	0.70	0.22	0.07	2.03	0.09	10.93
Somerset	35	7.05	0.62	0.68	0.88	0.21	0.07	2.88	0.10	12.50
Sussex	37	2.56	0.54	0.60	0.55	0.17	0.06	1.45	0.04	5.98
Union	39	6.55	0.91	0.66	0.76	0.24	0.07	2.55	0.10	11.85
Warren	41	3.46	0.41	0.46	1.24	0.15	0.05	3.78	0.06	9.62
Total		103.05	14.66	13.17	14.19	4.32	1.40	44.53	1.63	196.95