

APPENDIX 8

Revised Air Quality Emission Calculations

Lake Tahoe 2014

Boating Emissions Analysis for Shorezone EIS

Updated		6/20/2006																		
Base Year		2014																		
Yearly trips were 15% greater than 2004																				
Watercraft Type	Engine Type	TRPA Assumptions	Avg. hp 2000	Avg. Load Factor (%)	Yearly Trips (2004#'s x 15%)	Avg. hrs/trip	Emission Factors (g/hp-				Emissions in Tons/Year									
							HC	NOx	CO	PM	HC	NOx	CO	PM						
Inboard	G2 FI	2040 PWC	250	21	13595.3	4	9.02	3.32	16.48	6.9	28.361	10.439	51.818	21.696						
Outboard	G2 FI	Use CARB 2007 fleet #	120	32	6312.35	4	21.9	6.31	43.5	7.1	23.385	6.738	46.45	7.581						
Inboard/Outboard	G2 FI	2040 PWC	185	21	1164.95	4	9.02	3.32	16.48	6.9	1.798	0.662	3.286	1.376						
Jet	G2 FI	2040 PWC	297	21	8156.95	3	9.02	3.32	16.48	6.9	15.162	5.581	27.701	11.598						
Inboard	G4 FI	Assume same as G4	250	21	52679.2	4	1.93	2.98	86.9	0.07	23.514	36.307	1058.747	0.853						
Outboard	G4 FI	Assume same as G4	36	32	11167.65	4	5.82	4.65	155.8	0.07	3.298	2.635	88.299	0.04						
Inboard/Outboard	G4 FI	Assume same as G4	185	21	72246.45	4	1.93	2.98	86.9	0.07	23.864	36.847	1074.488	0.866						
Jet	G4 FI	Assume same as G4	297	21	5244	3	1.93	2.98	86.9	0.07	2.086	3.22	93.906	0.076						
Inboard	G4	Directly from CARB 2008	250	21	17843.4	4	1.93	2.98	86.9	0.07	7.965	12.298	358.617	0.289						
Outboard	G4	Directly from CARB 2040#'s	120	32	6797.65	2	5.82	4.65	155.8	0.07	3.346	2.674	89.578	0.04	2040 was the only emission factor year provided by CARB					
Inboard/Outboard	G4	Directly from CARB 2008	185	21	43114.65	4	1.93	2.98	86.9	0.07	14.241	21.989	641.224	0.517						
Jet	G4	Directly from CARB 2008	297	21	1164.95	3	1.93	2.98	86.9	0.07	0.463	0.715	20.861	0.017						
Aux Sailboat	G4	Directly from CARB 2040#'s	6	35	0	2	5.82	4.65	155.8	0.07	0	0	0	0						
PWC	G4/G2FI	TRPA Avg hp #'s 2040 CARB	120	40	24276.5	3	9.02	3.32	16.48	6.9	34.727	12.782	63.448	26.565	2040 was the only emission factor year provided by CARB					
Inboard Diesel	D	CARB 2040#'s 250hp	244	35	849.85	2	2.6	11.3	4.7	0.34	0.416	1.806	0.751	0.054	2040 was the only emission factor year provided by CARB					
Auxiliary Sail DSL	D	CARB 2040#'s 15hp	10	35	2427.65	1	2.6	11.3	4.7	0.34	0.024	0.106	0.044	0.003	2040 was the only emission factor year provided by CARB					
G2=	Gasoline 2-stroke				267041.5															
G4=	Gasoline 4-stroke										182.65	154.799	3619.218	71.571						
FI=	Fuel injection																			
* Source = JD Fransz 2002																				
* Source = CARB 06/06																				
* Source = TRPA Calculation using above info																				
1 ton = 2000lbs																				

