

Appendix E: MGM2 Multiplier Datasets

The four sets of generic multipliers (Tables E1 to E4) are built into the MGM2 workbook, so they can be readily imported for a particular application. Multipliers for 114 individual regions (Table E5) are also available and can be downloaded from the MGM2 website. The individual region multipliers can be imported into the MGM2 workbook using the "import custom multipliers button" on the Multipliers page. See the MGM2 User's Manual for guidance on interpreting these multipliers or selecting a set of multipliers for a particular application. Users with access to IMPLAN Pro 2.0, may export multipliers from any IMPLAN model to MGM2 (see Appendix F).

Table E1. Multipliers for rural areas (for regions with population below 30,000 and limited economic development)

Sector	Direct effects			Total effects multipliers					RPC (model)	
	Jobs/ MM sales	Personal inc/sales	Property Inc/sales	Value Added /sales	Sales II	JobsII/ MM sales	IncII/ sales	VA II/ sales		Sales I
Hotels And Lodging Places	28.88	0.29	0.10	0.44	1.37	35.24	0.42	0.67	1.25	67%
Eating & Drinking	35.25	0.31	0.07	0.44	1.30	40.41	0.42	0.62	1.19	87%
Amusement And Recreation	33.24	0.34	0.17	0.56	1.32	38.85	0.45	0.76	1.19	54%
Auto repair and service	14.62	0.28	0.12	0.44	1.26	19.23	0.37	0.60	1.16	80%
Local transportation	37.58	0.53	0.08	0.62	1.28	42.94	0.63	0.79	1.11	26%
Food processing	5.68	0.14	0.13	0.27	1.32	10.85	0.25	0.45	1.25	5%
Apparel from purchase	15.83	0.14	0.02	0.17	1.25	19.50	0.22	0.31	1.19	1%
Petroleum refining	0.62	0.05	0.05	0.12	1.51	4.24	0.16	0.44	1.45	5%
Sporting goods	8.32	0.27	0.20	0.51	1.25	12.50	0.36	0.66	1.16	2%
Manufacturing	10.64	0.23	0.16	0.39	1.32	16.11	0.34	0.58	1.21	0%
Retail Trade	39.88	0.51	0.13	0.80	1.26	44.67	0.60	0.96	1.10	74%
Wholesale trade	14.11	0.40	0.13	0.68	1.26	18.84	0.49	0.84	1.12	47%

Retail trade multipliers are the average or sum of the 7 IMPLAN retail trade sectors

Table E2. Multipliers for small metro areas (Larger rural regions or small metro areas with population up to 500,000)

Sector	Direct effects			Total effects multipliers					RPC (model)	
	Jobs/ MM sales	Personal inc/sales	Property Inc/sales	Value Added /sales	Sales II	JobsII/ MM sales	IncII/ sales	VA II/ sales		Sales I
Hotels And Lodging Places	24.57	0.33	0.11	0.50	1.52	33.04	0.52	0.83	1.32	55%
Eating & Drinking	32.28	0.34	0.07	0.47	1.44	38.80	0.49	0.74	1.24	88%
Amusement And Recreation	33.34	0.35	0.18	0.57	1.45	40.61	0.51	0.85	1.25	64%
Auto repair and service	12.75	0.31	0.14	0.48	1.41	18.87	0.45	0.72	1.23	84%
Local transportation	30.74	0.57	0.09	0.67	1.43	37.71	0.73	0.94	1.15	48%
Food processing	5.60	0.12	0.11	0.23	1.33	11.21	0.25	0.45	1.23	42%
Apparel from purchase	14.36	0.21	0.04	0.25	1.36	19.70	0.34	0.46	1.22	3%
Petroleum refining	0.51	0.04	0.05	0.11	1.05	2.77	0.10	0.24	1.01	8%
Sporting goods	12.57	0.21	0.15	0.39	1.42	18.48	0.36	0.64	1.27	2%
Manufacturing	10.42	0.21	0.14	0.36	1.33	15.83	0.35	0.58	1.19	2%
Retail Trade	30.89	0.51	0.13	0.80	1.38	37.00	0.65	1.04	1.13	92%
Wholesale trade	12.74	0.40	0.13	0.69	1.38	18.93	0.55	0.92	1.17	53%

Retail trade multipliers are the average or sum of the 7 IMPLAN retail trade sectors

Table E3. Multipliers for large metro areas (Larger metro areas with population up to 1,000,000)

Sector	Direct effects			Total effects multipliers						RPC (model)
	Jobs/ MM sales	Personal inc/sales	Property Inc/sales	Value Added /sales	Sales II	JobsII/ MM sales	IncII/ sales	VA II/ sales	Sales I	
Hotels And Lodging Places	20.93	0.35	0.12	0.54	1.62	30.26	0.59	0.93	1.36	63%
Eating & Drinking	30.49	0.36	0.07	0.49	1.54	37.86	0.54	0.82	1.29	88%
Amusement And Recreation	30.80	0.35	0.18	0.58	1.56	39.08	0.56	0.93	1.30	73%
Auto repair and service	12.17	0.31	0.14	0.49	1.48	18.80	0.48	0.78	1.26	89%
Local transportation	27.83	0.58	0.09	0.68	1.53	35.52	0.78	1.01	1.18	55%
Food processing	5.55	0.14	0.13	0.28	1.48	11.98	0.31	0.56	1.34	45%
Apparel from purchase	14.00	0.22	0.04	0.26	1.46	20.21	0.38	0.52	1.28	5%
Petroleum refining	0.61	0.05	0.06	0.13	1.40	3.74	0.15	0.38	1.33	11%
Sporting goods	10.91	0.23	0.17	0.44	1.52	17.70	0.42	0.74	1.33	3%
Manufacturing	10.64	0.22	0.15	0.39	1.49	17.22	0.41	0.68	1.31	2%
Retail Trade	27.67	0.51	0.13	0.80	1.46	34.42	0.68	1.09	1.16	94%
Wholesale trade	11.06	0.40	0.13	0.69	1.48	18.08	0.59	0.99	1.21	71%

Retail trade multipliers are the average or sum of the 7 IMPLAN retail trade sectors

Table E4. Multipliers for states (state level regions or regions including larger metro areas with populations of 1 million and more)

Sector	Direct effects			Total effects multipliers						RPC (model)
	Jobs/ MM sales	Personal inc/sales	Property Inc/sales	Value Added /sales	Sales II	JobsII/ MM sales	IncII/ sales	VA II/ sales	Sales I	
Hotels And Lodging Places	18.02	0.37	0.13	0.57	1.70	27.41	0.64	1.01	1.38	66%
Eating & Drinking	27.37	0.38	0.08	0.53	1.64	35.05	0.61	0.91	1.34	89%
Amusement And Recreation	26.87	0.36	0.18	0.59	1.66	35.47	0.62	1.01	1.35	77%
Auto repair and service	11.95	0.31	0.14	0.50	1.57	18.80	0.53	0.84	1.31	84%
Local transportation	24.96	0.59	0.09	0.70	1.64	32.98	0.83	1.09	1.23	71%
Food processing	5.37	0.15	0.14	0.30	1.57	12.11	0.36	0.63	1.39	53%
Apparel from purchase	12.70	0.27	0.05	0.32	1.58	19.72	0.48	0.66	1.34	7%
Petroleum refining	0.61	0.05	0.06	0.13	1.37	3.67	0.15	0.35	1.30	29%
Sporting goods	9.97	0.25	0.18	0.47	1.62	17.11	0.48	0.84	1.39	4%
Manufacturing	10.08	0.24	0.16	0.41	1.59	17.02	0.46	0.76	1.36	3%
Retail Trade	24.73	0.51	0.13	0.80	1.53	31.54	0.71	1.13	1.18	95%
Wholesale trade	9.10	0.41	0.13	0.69	1.57	16.40	0.63	1.04	1.26	91%

Retail trade multipliers are the average or sum of the 7 IMPLAN retail trade sectors

Table E5. Regional models and corresponding parks and cities

Model	Number of counties	NPS Parks/MSA's in the region*	Population (000's)	Area (acres)
<i>California</i>				
CA96	-	State model	31878	155973
SantaMNRA	2	Santa Monica NRA/ Los Angeles MSA, Ventura MSA	9842	5906
LA-MSA	1	Los Angeles MSA	9128	4060
RiversideMSA	2	Joshua Tree NM/ Riverside-San Bernardino	3016	27270
SanDiegoMSA	1	San Diego MSA	2655	4205
OrangeCyMSA	1	Orange County MSA	2637	790
OaklandMSA	2	Oakland MSA	2210	1458
SanFranciscoMSA	3	Golden Gate NRA, etc/ San Francisco MSA	1655	1016
SanJoseMSA	1	San Jose MSA	1600	1291
SacramentoMSA	3	Sacramento MSA	1482	4082
KingsCanyonNP	2	Kings Canyon NP	1101	10788
FresnoMSA	2	Fresno MSA	862	8102
SanFranciscoCo	1	Golden Gate NRA, etc	735	47
VenturaMSA	1	Ventura MSA	715	1846
BakersfieldMSA	1	Bakersfield MSA	623	8142
StocktonMSA	1	Stockton MSA	533	1399
NapaMSA	2	Vallejo-Fairfield-Napa MSA	482	1582
SantaRosaMSA	1	Santa Rosa MSA	421	1576
ModestoMSA	1	Modesto MSA	416	1495
SantaBarbaraMSA	1	Santa Barbara MSA	386	2739
VisaliaMSA	1	Visalia-Tulare-Porterville MSA	350	4824
SalinasMSA	1	Salinas MSA	339	3322
LassenV-NP	4	Lassen Volcanic NP/ Redding MSA	268	13848
SantaCruzMSA	1	Santa Cruz MSA	238	446
SanLuisMSA	1	San Luis MSA	229	3305
ChicoMSA	1	Chico-Paradise MSA	193	1640
MercedMSA	1	Merced MSA	192	1929
YosemiteNP	4	Yosemite NP	189	8870
ReddingMSA	1	Whiskeytown Shasta-Trinity NRA/ Redding MSA	162	3786
RedwoodNP	2	Red Wood NP	150	4581
YoloMSA	1	Yolo MSA	150	1012
YubaMSA	2	Yuba City MSA	137	1233
MendocinoCo	1	(single county region)	83	3509
LavaBedsNM	2	Lava Beds NM	54	10232
SiskiyouCo	1	(single county region)	44	6287
DelNorteCo	1	(single county region)	27	1008
GlennCo	1	(single county region)	26	1315
DeathValleyNP	1	Death Valley NP	18	10192
ModocCo	1	(single county region)	10	3944

Table E5. Regional Models (Continued)

Model	Number of counties	NPS Parks/MSA's in the region*	Population (000's)	Area (acres)
Colorado				
CO96	-	State model	3823	103729
DenverMSA	5	Denver MSA	1867	3761
RockyMtNP	3	Rocky Mountain NP	489	5194
COSpringsMSA	1	Florissant Fossil Beds NM/ Colorado Springs MSA	473	2127
BoulderMSA	1	Boulder MSA	258	743
FtCollinsMSA	1	Fort Collins MSA	222	2601
GreeleyMSA	1	Greeley MSA	152	3993
PuebloMSA	1	Pueblo MSA	131	2389
GDJunctionMSA	1	Colorado NM/ Grand Junction MSA	108	3328
CurecantiNRA	2	Curecanti NRA, Black Canyon of the Gunnison NM	42	5480
MontroseCo	1	Black Canyon of the Gunnison NM	30	2241
MesaVerdeNP	1	Mesa Verde NP	22	2037
AlamosaCo	1	Great Sand Dunes NM	14	723
DinosaurNP	1	Dinosaur NP	12	4743
BentsNM	1	Bent's Old Fort NHS	5	1514
Florida				
FL96	-	State model	14400	53937
EvergladeNP	3	EvergladesNP, Biscanye NP, Dry Tortugas NP/ Miami	2345	4967
TampaMSA	4	Tampa-St. Petersburg-Clear Water MSA	2199	2555
MiamiMSA	1	Miami MSA/ Biscanye NP	2076	1945
FtLauderdaleMSA	1	Ft Lauderdale MSA	1438	1209
OrlandoMSA	4	Orlando MSA	1417	3491
JacksonvilleMSA	4	Ft. Caroline NM, Castillo de San Marcos NM, Ft. Matanzas NM/ Jacksonville MSA	1009	2636
WPalmB-MSA	1	West Palm Beach-Boca Raton MSA	993	1974
SarasotaMSA	2	DeSoto NM/ Sarasota-Bradenton MSA	529	1313
DaytonaMSA	2	Daytona MSA	456	1591
MelbourneMSA	1	Melbourne-Titusville-Palm Bay MSA	454	1019
LakelandMSA	1	Lakeland-Winter Haven MSA	441	1875
PensacolaMSA	2	Gulf Islands NS/ Pensacola MSA	386	1679
FtMyersMSA	1	Fort Myers-Cape Coral MSA	380	804
FtPierceMSA	2	Fort Pierce-Port St. Lucie MSA	287	1128
TallahasseeMSA	2	Tallahassee MSA	259	1183
OcalaMSA	1	Ocala MSA	230	1579
GainesvilleMSA	1	Gainesville MSA	197	874
NaplesMSA	1	Naples MSA	188	2026
FtWaltonB-MSA	1	Ft. Walton Beach MSA	166	936
PanamaMSA	1	Panama MSA	145	764
PuntaGordaMSA	1	Punta Gorda MSA	130	694
JacksonCo	1	(single county region)	45	916
OkeechobeeCo	1	(single county region)	31	774
HolmesCo	1	(single county region)	18	483
TaylorCo	1	(single county region)	18	1042
DixieCo	1	(single county region)	12	704

Table E5. Regional Models (Continued)

Model	Number of counties	NPS Parks/MSA's in the region*	Population (000's)	Area (acres)
<i>Massachusetts</i>				
MASS96	-	State model	6092	7838
GrBoston	4	Massachusetts part of Boston MSA**/ Boston area NHS's and NHP's	2695	1282
MiddlesexCo	1	Longfellow NHS, Lowell NHS, Minute Man NHP	1413	824
Boston	1	Boston African American NHS, Boston NHP	645	59
NorfolkCo	1	Adams NHS, F L Olmsted NHS, J F Kennedy NHS	637	400
WorcesterCo	1	(single county region)	720	1513
EssexCo	1	Salem Maritime NHS, Saugus Iron Works NHS	687	498
SpringfieldMSA	2	Springfield MSA/ Springfield NHS	592	1148
SpringfieldNHS	1	Springfield NHS	442	619
CapeCodNS	1	Cape Cod NS/ Barnstable-Yarmouth MSA	202	396
PittsfieldMSA	1	Pittsfield MSA	135	931
FranklinCo	1	(single county region)	71	702
<i>Michigan</i>				
MI96	-	State model	9594	56809
DetroitMSA	6	Detroit MSA	4318	3897
GrRapidsMSA	4	Grandrapids-Muskegon-Holland MSA	1015	2759
AnnArborMSA	3	Ann Arbor MSA	530	2029
LansingMSA	3	Lansing-East Lansing MSA	448	1707
Kzo-BtCk-MSA	3	Kalamazoo-Battle Creek MSA	444	1882
FlintMSA	1	Flint MSA	436	640
SaginawMSA	3	Saginaw-Bay City-Midland MSA	403	1775
MuskegonCo	1	(single county region)	165	509
BentonHarborMSA	1	Benton Harbor MSA	161	571
JacksonMSA	1	Jackson MSA	155	707
SleepBD-NP straits	3	Sleeping Bear Dunes NL	125	1612
E-UP	4	(Mackinac Strait area counties)	99	3766
IsleRoyaleNP	3	(Eastern Upper Peninsula counties)	55	3486
AlpenaCo	2	Isle Royale NP, Keweenaw NHP	38	1553
DickinsonCo	1	(single county region)	31	574
RoscommonCo	1	(single county region)	27	766
AntrimCo	1	(single county region)	23	521
PicturedRocksNP	1	(single county region)	21	477
LakeCo	1	Pictured Rocks NL	10	918
	1	(single county region)	10	568

* MSA: Metropolitan Statistical Area; NP: National Park; NRA: National Recreation Area; NHS: National Historical Site; NHP: National Historical Park, NL: National Lakeshore; NS: National Seashore

** The BEA defined Boston-Worcester-Lawrence-Lowell-Brockton MSA model was not constructed because data sets for counties in New Hampshire were not available.