

Appendix E
Regional Trip-making Implications of Future Development
Forecasts

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One tangible way to describe the impact of regional growth is the change in the number of travel trips and their regional distribution. For this study, PM peak hour trips from the PACTS demand model were grouped into 14 districts, modeling trips for a typical weekday from 4 to 5 PM. These 14 districts are primarily comprised of municipalities but separates two major activity centers (the South Portland portion of the Maine Mall area and the Portland peninsula) into distinct districts and combines the towns of Yarmouth and Cumberland into one district. There are also three additional external districts that combine ‘external trips’ -- those trips that begin and/or end outside of the model area.

For the analysis both trip origins (where trips begin) and trips destinations (where trips end) were analyzed. Total trip origins from the 14 municipal districts in 2000 are estimated to be 74,285; total destinations are estimated to be 69,431. This shows about 5,000 trips leave the model region during the peak hour. Total trip origins in the PACTS model increased by over 23,000, approximately 31% from 2000 to 2025. This is relative to the model area population growth of 32%, household growth of 35% and employment growth of 23%. Figure E-1 and Table E-1 show these trip trends. Table E-1 shows that total Portland trip origins in 2000 (32,412) far exceed South Portland, the second highest (12,620).

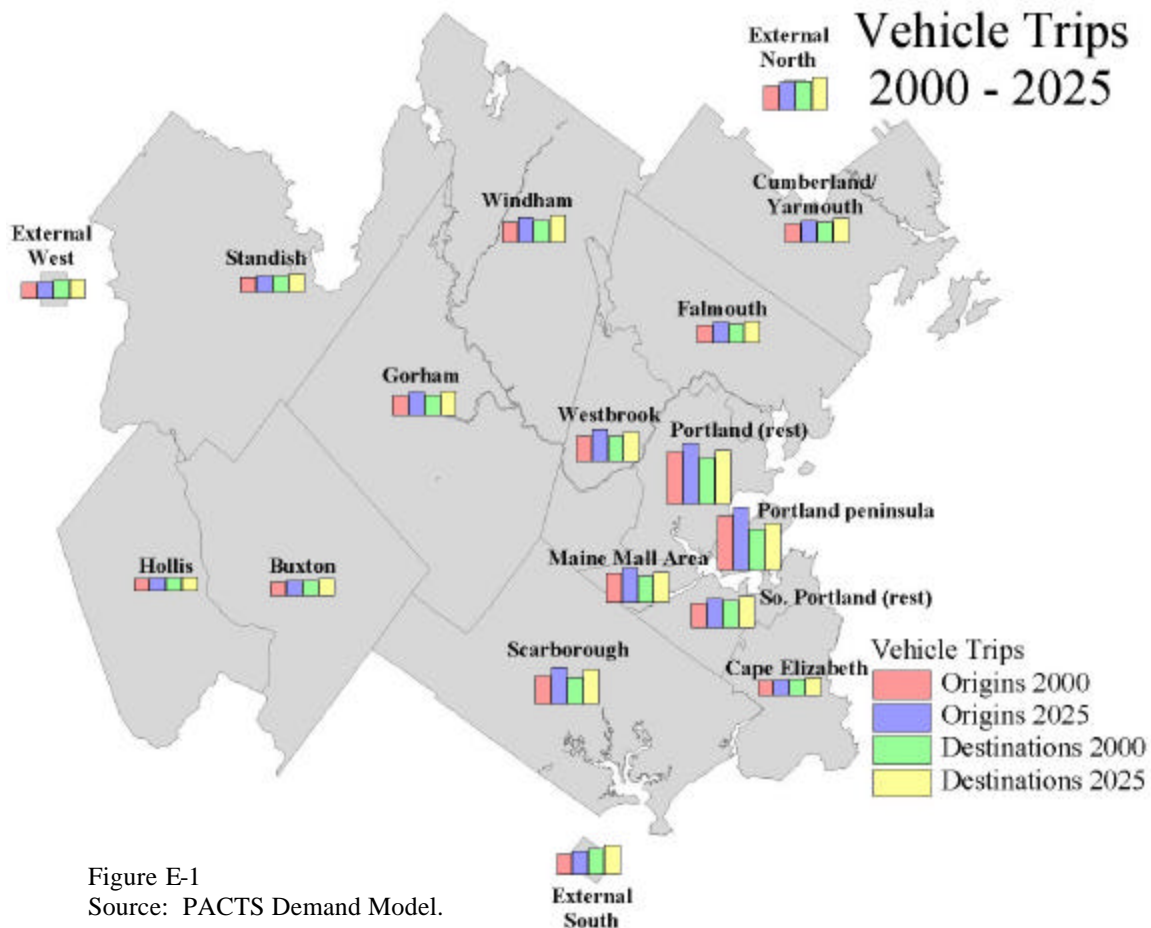


Figure E-1
Source: PACTS Demand Model.

In the PACTS model, trip origins are paired with trip destinations to define vehicle trips in a trip table in the model’s trip distribution process. The trip table for 2000 and 2015 was analyzed to identify trends in trip-making. The 13 model communities and external zones were grouped into 5 categories:

- Urban -- Portland, South Portland, Westbrook
- Suburban -- Falmouth, Gorham, Scarborough, Cape Elizabeth
- Rural/North -- Windham, Cumberland, Yarmouth, North External
- Rural/West -- Standish, Hollis, Buxton, External West
- External, South. -- primarily Maine Turnpike and Route 1 south of Scarborough.

Table E-1
Afternoon Peak Hour (4-5 PM) Trip Origins & Destinations: 2000 - 2025

Town	Vehicle Trip Origins				Vehicle Trip Destinations			
	2000	2025	Absolute Change	Percent Change	2000	2025	Absolute Change	Percent Change
Buxton	947	1,440	493	52%	1,532	2,322	790	52%
Cape Elizabeth	1,404	1,750	346	25%	1,979	2,563	584	30%
Cumberland/ Yarmouth	2,998	4,168	1,170	39%	3,639	5,102	1,463	40%
Falmouth	2,910	4,130	1,220	42%	3,042	4,440	1,398	46%
Gorham	3,235	4,559	1,324	41%	3,384	4,933	1,549	46%
Hollis	556	845	289	52%	870	1,306	436	50%
Portland	32,412	39,403	6,991	22%	25,254	30,349	5,095	20%
Scarborough	6,542	9,629	3,087	47%	5,895	8,954	3,059	52%
South Portland	12,620	16,252	3,632	29%	12,160	15,523	3,363	28%
Standish	1,323	1,948	625	47%	1,900	2,851	951	50%
Westbrook	5,545	8,084	2,539	46%	5,384	7,262	1,878	35%
Windham	3,793	5,366	1,573	41%	4,392	6,249	1,857	42%
Total	74,285	97,574	23,289	31%	69,431	91,854	22,423	32%

Source: PACTS Demand Model. Shaded cells are PACTS communities.

Does not include external trip origins and external trips destinations.

Table E-2 shows the results of this analysis. Urban-to-Urban trips remain by far the largest number of trips in both 2000 and 2025 and increase by 20% over that period, but their share drops from 40% of the total to 38%. The increase of approximately 8,200 is the largest by far of the increase in trips in absolute terms. The Urban to Suburban trips have the second highest share of trips at 8% and 9% of the total in 2000 and 2025, respectively. They increase by 29%, or approximately 3,000 trips. Suburban-to-suburban trips are 5% and 7% of the trips in 2000 and 2025, but show the largest percentage increase, 37%, or approximately 2,700 trips. This follows the pattern of greater population and employment growth in the suburban PACTS communities over the urban communities. Trips from the suburban PACTS communities to the Rural/West grouping showed the second highest percentage growth, 31%, or 633 trips.

Overall, trips between the Urban and Suburban PACTS communities comprise 59% of the total vehicle trips made in both 2000 and 2025. A higher percentage of these trips though begin and/or end in a Suburban community.

Table E-2
Afternoon Peak Hour (4-5 PM) Trip Table Analysis: 2000 - 2025

Type of Trip	Trips 2000	% of Total	Trips 2025	% of Total	Absolute Change	% Increase
Urban to Urban	33,653	40%	41,856	38%	8,203	20%
Urban to Suburban	7,135	8%	10,094	9%	2,959	29%
Urban to Rural/North	5,026	6%	6,155	6%	1,129	18%
Urban to Rural/West	1,816	2%	2,382	2%	566	24%
Urban to External South	2,947	3%	3,252	3%	305	9%
Suburban to Urban	4,908	6%	6,419	6%	1,511	24%
Suburban to Suburban	4,559	5%	7,261	7%	2,702	37%
Suburban to Rural/North	1,632	2%	2,236	2%	604	27%
Suburban to Rural/West	1,410	2%	2,043	2%	633	31%
Suburban to External, South	1,582	2%	2,109	2%	527	25%
All other trips	<u>20,172</u>		<u>27,198</u>			
All Trips, Total	84,840		111,005			

Source: PACTS Demand Model. Table does not include all trips except in totals.