

Trends and Forecasts

The Regional Transportation Plan (RTP) is a tool to guide the region's transportation needs 20 years into our future. The project recommendations, policies, goals, and planning priorities are largely built upon assumptions based on forecast data derived from past and present conditions. Information is gleaned from federal, state, regional, and local agencies to provide a comprehensive “glimpse” into how the future might unfold.

This appendix presents a glance at some of the types of data that informs the Thurston region's Travel Demand Forecast Model (Appendix I Modeling Process). Tables and figures clearly indicate the Thurston Region is growing. Between 1990 and 2000, Thurston County's population increased by over 46,000 people, or 28 percent (Table C-1). Yelm's population grew nearly 63 percent in the same period (Table C-2). While most residents have observed these high levels of growth, they may not realize that by 2025 we anticipate nearly 120,000 new neighbors within Thurston County's borders.

The individual choices we make – whether we drive alone, carpool, or take the bus, and the time we leave for work all have a cumulative effect on the region's transportation system (Table C-9). As more homes are built in cities, urban growth areas, and rural unincorporated Thurston County, a greater demand is placed on services such as police, fire, transit, sewers, and schools (Table C-6).

Additional lifestyle choices, economic conditions and other factors determine:

- The number of people working in the household,
- Whether children are driven to school, take the bus, bike, or walk,
- How close to work we live,
- How long we commute,
- The number of vehicles we own (Table C-16), and
- The number of miles we choose to drive (Figure C-1).

Maps C-1 and C-2 illustrate the region's 2025 forecasted residential and employment densities. Much of this density appears to concentrate in the urban areas. However, residents living in unincorporated Thurston County will be sharing the road with their rural neighbors on the way to their city jobs. Maps C-3 to C-6 display the average travel time in minutes, for segments of four major

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corridors, between 2000 and 2025. Average travel times will gradually increase for south county residents traveling north in the morning and returning home in the evening. Average travel times will also increase for people using Interstate 5 – no matter which way they are traveling or where they work.

The 2025 RTP raises many issues and questions. By asking questions, probing for more information, and working together to study these issues, our community can travel to the future.

**Table C-1
Thurston County Population 1990-2000**

Population	1990 Census		Census 2000		Change 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
Total	161,238	100.0%	207,355	100.0%	46,117	28.6%
In households	158,687	98.4%	203,946	98.4%	45,259	28.5%
In group quarters	2,551	1.6%	3,409	1.6%	858	33.6%

Source: Census Transportation Planning Package (CTPP 2000).

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Table C-2
Small Area Population Estimates and Population Forecast,
Thurston County Jurisdictions, 1990-2025

Jurisdiction		Census		Estimate	Forecast				
		1990	2000	2003	2005	2010	2015	2020	2025
Bucoda	Total	536	628	645	619	629	633	637	641
Lacey	City	19,279	31,226	32,240	36,218	39,856	42,882	45,757	48,049
	UGA	25,127	28,632	29,652	31,746	35,624	40,082	43,768	46,648
	Total	44,406	59,858	61,892	67,964	75,479	82,964	89,525	94,697
Olympia	City	33,729	42,514	42,860	45,440	48,080	51,034	54,020	56,969
	UGA	7,195	9,269	9,859	10,639	12,940	16,467	19,627	22,057
	Total	40,924	51,783	52,719	56,078	61,019	67,501	73,647	79,025
Rainier	City	991	1,492	1,515	1,626	1,794	1,914	2,022	2,127
	UGA	65	163	169	157	166	173	179	186
	Total	1,056	1,655	1,684	1,783	1,961	2,088	2,201	2,314
Tenino	City	1,292	1,447	1,495	1,502	1,503	1,510	1,538	1,566
	UGA	193	151	155	130	149	170	186	365
	Total	1,485	1,598	1,650	1,632	1,652	1,680	1,724	1,931
Tumwater	City	9,976	12,698	12,740	14,200	15,179	16,461	17,991	19,423
	UGA	6,053	7,281	7,542	8,849	10,157	12,025	14,768	18,742
	Total	16,029	19,979	20,282	23,050	25,336	28,486	32,758	38,165
Yelm	City	1,337	3,289	3,830	4,377	5,561	6,681	7,730	8,559
	UGA	1,360	1,095	1,123	1,221	1,268	1,635	2,128	2,827
	Total	2,697	4,384	4,953	5,597	6,829	8,316	9,858	11,386
Grand Mound UGA	Total	708	811	824	1,316	1,517	1,700	1,876	2,064
Total Cities		67,140	93,294	95,325	103,982	112,601	121,116	129,696	137,334
Total UGAs		40,700	47,401	49,324	54,057	61,821	72,252	82,532	92,890
Total Urban Areas		107,840	140,695	144,649	158,039	174,422	193,368	212,228	230,223
Rural Unincorporated County		53,398	66,660	70,151	78,368	85,365	91,931	98,502	104,035
Thurston County Total		161,238	207,355	214,800	236,406	259,787	285,299	310,730	334,258

Sources: The Profile, 2003; Thurston Regional Planning Council.

Explanation: UGA is unincorporated Urban Growth Area. UGA figures include that population outside the city limits but within the long-term Urban Growth Management boundary, and population growth by annexation. Census and estimates are for April 1 of each year.

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**Table C-3
Population Increases through
Migration and Natural Increase
Thurston County, 1950-2003**

Interval	Initial Population	Terminal Population	Total Change	% Increase	Natural Increase	% of Change	Net Migration	% of Change
1950-1960	44,884	55,049	10,165	22.6%	6,817	67.1%	3,348	32.9%
1960-1970	55,049	76,894	21,845	39.7%	6,756	30.9%	15,089	69.1%
1970-1980	76,894	124,264	47,370	61.6%	7,530	15.9%	39,840	84.1%
1980-1990	124,264	161,238	36,974	29.8%	11,675	31.6%	25,299	68.4%
1990-2000	161,238	207,355	46,117	28.6%	10,847	23.5%	35,270	76.5%
2000-2003	207,355	214,800	7,445	3.6%	2,948	39.6%	4,497	60.4%

Sources: The Profile, 2003; Thurston Regional Planning Council.

Explanation: Data are from April 1 of each year.

**Table C-4
Household Size**

Household Type	1990 Census		Census 2000		Change 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
Total	62,047	100.0%	81,666	100%	19,619	31.6%
1-person household	14,896	24.0%	20,455	25%	5,559	37.3%
2-person household	21,402	34.5%	29,086	35.6%	7,684	35.9%
3-person household	10,598	17.1%	13,646	16.7%	3,048	28.8%
4-person household	9,426	15.2%	11,419	14%	1,993	21.1%
5-or-more-person household	5,725	9.2%	7,060	8.6%	1,335	23.3%
Mean number of persons per household	2.56	(X)	2.5	(X)	-0.06	(X)

Source: Census Transportation Planning Package (CTPP 2000).

(X) Not Available.

**Table C-5
Dwelling Unit Estimates of Cities and UGAs
Thurston County, 1994-2002**

Jurisdiction		1994	1995	1996	1997	1998	1999	2000	2001	2002
Bucoda	Total	212	214	220	228	232	235	236	238	242
Lacey	City	10,332	11,036	11,594	12,121	12,477	12,898	13,160	13,304	13,491
	UGA	10,534	10,419	10,525	10,602	10,758	10,900	11,014	11,132	11,492
	Total	20,866	21,455	22,119	22,723	23,235	23,798	24,174	24,436	24,983
Olympia	City	17,689	18,138	18,464	18,820	19,049	19,325	19,738	19,742	19,889
	UGA	3,453	3,474	3,436	3,512	3,616	3,694	3,806	3,942	4,039
	Total	21,142	21,612	21,900	22,332	22,665	23,019	23,544	23,684	23,928
Rainier	City	486	492	502	530	542	547	551	549	551
	UGA	60	62	63	62	67	67	66	67	68
	Total	546	554	565	592	609	614	617	616	619
Tenino	City	531	568	581	592	601	610	615	621	627
	UGA	83	54	56	56	57	59	60	60	62
	Total	614	622	637	648	658	669	675	681	689
Tumwater	City	5,281	5,626	5,716	5,749	5,793	5,897	5,953	5,987	6,031
	UGA	2,795	2,844	2,844	2,899	2,939	2,999	3,089	3,117	3,167
	Total	8,076	8,470	8,560	8,648	8,732	8,896	9,042	9,104	9,198
Yelm	City	847	952	1,039	1,110	1,163	1,230	1,323	1,379	1,487
	UGA	429	408	414	415	425	433	425	431	439
	Total	1,276	1,360	1,453	1,525	1,588	1,663	1,748	1,810	1,926
Grand Mound UGA	Total	302	305	307	310	313	316	316	318	324
Chehalis Reservation		13	13	13	13	13	13	13	13	13
Nisqually Reservation		211	211	212	212	212	212	212	212	213
Total Cities		35,378	37,026	38,116	39,150	39,857	40,742	41,576	41,820	42,318
Total UGAs		17,656	17,566	17,645	17,856	18,175	18,468	18,776	19,067	19,592
Total Urban Areas		53,034	54,592	55,761	57,006	58,032	59,210	60,352	60,887	61,910
Rural Unincorporated County		22,005	22,789	23,511	24,205	24,882	25,593	26,300	26,934	27,655
Thurston County Total		75,039	77,381	79,272	81,211	82,914	84,803	86,652	87,821	89,565

Source: Regional Benchmarks for Thurston County, 2003; Thurston Regional Planning Council.

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Table C-6 Dwelling Unit Forecast of Cities and UGAs Thurston County, 2005-2025

Jurisdiction	Total Dwelling Units						Single-Family					
	2005	2010	2015	2020	2025	258	200	204	205	206	207	208
Bucoda	Total	245	251	254	256	258	9,574	10,632	11,400	12,045	12,478	12,830
Lacey	City	15,020	16,681	18,101	19,400	20,366	9,388	10,624	12,054	13,186	14,035	
	UGA	12,156	13,788	15,651	17,166	18,342	18,962	21,256	23,454	25,231	26,513	
Olympia	Total	27,176	30,469	33,752	36,566	38,708	11,547	11,849	12,197	12,515	12,830	
	City	21,787	23,510	25,343	27,081	28,601	3,293	4,048	5,179	6,166	6,897	
Rainier	UGA	4,338	5,329	6,862	8,235	9,295	14,840	15,897	17,375	18,680	19,727	
	Total	26,126	28,839	32,205	35,315	37,896	413	463	500	531	563	
Tenino	City	637	708	760	804	845	52	56	59	61	64	
	UGA	74	80	83	86	90	465	520	558	592	627	
Tumwater	Total	711	788	843	890	935	445	448	452	463	472	
	City	625	633	643	657	669	35	42	49	55	124	
Yelm	UGA	53	61	69	76	145	480	490	501	517	596	
	Total	678	694	712	732	814	3,262	3,441	3,744	4,132	4,457	
Grand Mound UGA	City	6,660	7,273	7,993	8,776	9,470	2,237	2,539	3,080	3,970	5,373	
	UGA	3,877	4,479	5,296	6,442	8,060	5,499	5,980	6,825	8,102	9,831	
Total Cities	Total	10,537	11,753	13,289	15,218	17,531	1,191	1,465	1,650	1,810	1,923	
	City	1,786	2,304	2,820	3,305	3,684	326	342	494	698	989	
Total UGAs	UGA	555	581	740	950	1,245	1,517	1,807	2,143	2,508	2,911	
	Total	2,341	2,885	3,560	4,254	4,930	114	143	166	184	199	
Total Urban Areas	Total	427	489	541	581	610	26,633	28,504	30,148	31,703	32,931	
	UGA	46,761	51,360	55,914	60,277	63,894	15,445	17,793	21,081	24,319	27,681	
Rural Unincorporated County	Total	21,480	24,807	29,243	33,535	37,788	42,078	46,297	51,229	56,022	60,612	
	UGA	68,240	76,166	85,157	93,812	101,682	22,535	24,988	27,373	29,690	31,603	
Thurston County Total	Total	33,529	36,677	39,583	42,295	44,520	64,613	71,285	78,602	85,712	92,215	
	Total	101,769	112,843	124,740	136,107	146,202						

Sources: Regional Benchmarks for Thurston County, 2003; Thurston Regional Planning Council.

**Table C-7
Workers by Gender**

Workers 16 years and over	<u>1990 Census</u>		<u>Census 2000</u>		<u>Change 1990 to 2000</u>	
	Number	Percent	Number	Percent	Number	Percent
Total	75,364	100.0%	100,985	100.0%	25,621	34.0%
Male	40,172	53.3%	52,660	52.1%	12,488	31.1%
Female	35,192	46.7%	48,325	47.9%	13,133	37.3%

Source: Census Transportation Planning Package (CTPP 2000).

**Table C-8
Household Vehicles**

Vehicles Available	<u>1990 Census</u>		<u>Census 2000</u>		<u>Change 1990 to 2000</u>	
	Number	Percent	Number	Percent	Number	Percent
Total households	62,047	100.0%	81,666	100%	19,619	31.6%
0 vehicle available	3,433	5.5%	5,145	6.3%	1,712	49.9%
1 vehicle available	18,439	29.7%	24,170	29.6%	5,731	31.1%
2 vehicles available	25,515	41.1%	33,038	40.5%	7,523	29.5%
3 vehicles available	10,540	17.0%	13,896	17.0%	3,356	31.8%
4 vehicles available	2,851	4.6%	3,723	4.6%	872	30.6%
5 or more vehicles available	1,269	2.0%	1,694	2.1%	425	33.5%
Mean vehicles per household	1.93	(X)	1.91	(X)	-0.02	(X)

Source: Census Transportation Planning Package (CTPP 2000).

(X) Not Available.

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**Table C-9
Means (Mode) of Transportation to Work**

Workers 16 years and over	1990 Census		Census 2000		Change 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
Total	75,364	100.0%	100,986	100.0%	25,622	34.0%
Drove alone	59,337	78.7%	77,933	77.2%	18,596	31.3%
Carpooled	9,116	12.1%	12,808	12.7%	3,692	40.5%
Public transportation (including taxicab)	1,089	1.4%	2,184	2.2%	1,095	100.6%
Bicycle or walked	2,539	3.4%	3,521	3.5%	982	38.7%
Motorcycle or other means	655	0.9%	653	0.6%	-2	-0.3%
Worked at home	2,628	3.5%	3,887	3.8%	1,259	47.9%

Source: Census Transportation Planning Package (CTPP 2000).

**Table C-10
Travel Time to Work**

Non-At Home Workers	1990 Census		Census 2000		Change 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
Total	72,736	100.0%	97,099	100.0%	24,363	33.5%
Less than 5 minutes	2,006	2.8%	2,935	3.0%	929	46.3%
5 to 9 minutes	7,828	10.8%	9,736	10.0%	1,908	24.4%
10 to 14 minutes	14,078	19.4%	16,197	16.7%	2,119	15.1%
15 to 19 minutes	15,704	21.6%	18,443	19.0%	2,739	17.4%
20 to 29 minutes	16,452	22.6%	21,698	22.3%	5,246	31.9%
30 to 44 minutes	10,006	13.8%	15,240	15.7%	5,234	52.3%
45 or more minutes	6,662	9.2%	12,850	13.2%	6,188	92.9%
Mean travel time to work (minutes)	20.7	(X)	24.4	(X)	3.7	(X)

Source: Census Transportation Planning Package (CTPP 2000).

(X) Not Available.

**Table C-11
Time Leaving Home to Go to Work**

Non-At Home Workers	1990 Census		Census 2000		Change 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
Total	72,736	100.0%	97,099	100.0%	24,363	33.5%
5:00 a.m. to 6:59 a.m.	18,078	24.9%	26,461	27.3%	8,383	46.4%
7:00 a.m. to 7:59 a.m.	27,367	37.6%	32,439	33.4%	5,072	18.5%
8:00 a.m. to 8:59 a.m.	10,839	14.9%	13,369	13.8%	2,530	23.3%
9:00 a.m. to 9:59 a.m.	3,205	4.4%	5,118	5.3%	1,913	59.7%
10:00 a.m. to 11:59 a.m.	2,213	3.0%	3,900	4.0%	1,687	76.2%
12:00 p.m. to 11:59 p.m.	9,122	12.5%	12,071	12.4%	2,949	32.3%
12:00 a.m. to 4:59 a.m.	1,912	2.6%	3,741	3.9%	1,829	95.7%

Source: Census Transportation Planning Package (CTPP 2000).

**Table C-12
Worksite Destinations of Thurston County
Residents**

County of Worksite	1970	1980	1990	2000	Change 1990 to 2000	
					Number	Percent
Thurston, WA	23,391	42,659	59,069	74,078	15,009	25.4%
Pierce, WA	1,975	3,768	8,526	14,352	5,826	68.3%
Lewis, WA	702	1,950	2,610	2,843	233	8.9%
King, WA	359	812	2,064	5,350	3,286	159.2%
Mason, WA	243	717	1,086	1,597	511	47.1%
Grays Harbor, WA	67	1,651	683	951	268	39.2%
Kitsap, WA	23	40	180	267	87	48.3%
Snohomish, WA	21	38	172	243	71	41.3%
Cowlitz, WA	28	34	74	69	-5	-6.8%
Clallam, WA	11	119	68	7	-61	-89.7%
Pacific, WA	7	31	30	77	47	156.7%
Chelan, WA	0	0	25	7	-18	-72.0%
Clark, WA	13	29	21	37	16	76.2%
Yakima, WA	0	93	19	53	34	178.9%
Whatcom, WA	0	40	7	15	8	114.3%
Benton, WA	0	49	4	0	-4	-100.0%

Source: U.S. Census Bureau.

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Table C-13
Average Monthly Covered Employment by Industry
Thurston County, 1980, 1990, 1995, 2000, 2001

Industry Category	Average # Employees/Month					Percent of Total Employees				
	1980	1990	1995	2000	2001	1980	1990	1995	2000	2001
Ag., Forestry, Fishing	1,138	1,632	1,858	1,807	1,797	2.7%	2.5%	2.5%	2.1%	2.1%
Mining	26	36	68	63	57	0.1%	0.1%	0.1%	0.1%	0.1%
Construction	1,636	2,982	2,982	3,690	3,571	3.8%	4.6%	4.0%	4.4%	4.2%
Manufacturing	3,381	4,241	4,131	4,073	3,765	7.9%	6.6%	5.5%	4.8%	4.4%
Trans. & Public Utilities	1,276	1,720	1,705	2,216	2,232	3.0%	2.7%	2.3%	2.6%	2.6%
Wholesale & Retail Trade	8,607	13,201	15,374	16,680	16,702	20.2%	20.5%	20.7%	19.8%	19.6%
Finance, Ins., Real Estate	1,637	2,125	2,635	2,906	3,131	3.8%	3.3%	3.5%	3.5%	3.7%
Services	6,273	11,699	15,884	19,603	19,573	14.7%	18.2%	21.3%	23.3%	23.0%
Government	18,594	26,813	29,807	33,193	34,258	43.7%	41.6%	40.0%	39.4%	40.3%
Total Employment	42,568	64,449	74,444	84,231	85,086	100.0%	100.0%	100.0%	100.0%	100.0%

Source: The Profile, 2003; Thurston Regional Planning Council.

Table C-14
Intercity Transit Ridership
1990-2002

Year	Annual Ridership	Population	Ridership per Capita
90	2,526,451	161,238	15.7
91	2,968,744	167,663	17.7
92	2,823,989	172,425	16.4
93	2,947,172	177,058	16.6
94	3,314,271	181,715	18.2
95	3,517,437	186,419	18.9
96	3,727,505	190,409	19.6
97	3,946,748	194,440	20.3
98	3,930,627	198,435	19.8
99	3,939,654	203,167	19.4
00	3,122,762	207,355	15.1
01	2,868,870	212,200	13.5
02	2,785,175	212,300	13.1

Sources: Regional Benchmarks, 2003; Thurston Regional Planning Council.

Table C-15
Mode Share - State Mandated CTR Work Sites
Thurston County, 1993, 1999, and 2001

1993 (Base Year)	Travel Mode						
	Drive Alone	Carpool	Transit	CWW ¹	Walk	Bike	Other
Unincorp. County	79.30%	12.20%	3.50%	2.40%	0.80%	1.30%	0.60%
Lacey	80.00%	10.60%	1.60%	2.40%	1.30%	1.50%	2.70%
Olympia	79.20%	10.50%	2.50%	2.80%	2.00%	1.00%	2.10%
Tumwater	83.50%	10.60%	1.20%	1.80%	0.80%	0.70%	1.60%
Yelm	76.20%	21.60%	0.00%	0.10%	0.80%	1.30%	0.00%
1999							
Unincorp. County	68.70%	14.60%	3.50%	3.20%	1.30%	4.80%	3.70%
Lacey	74.50%	13.40%	2.30%	3.40%	0.80%	1.50%	4.10%
Olympia	73.80%	12.90%	3.20%	4.20%	1.90%	1.40%	2.40%
Tumwater	74.10%	13.80%	2.60%	4.50%	0.90%	0.70%	3.40%
Yelm	78.00%	15.50%	0.10%	0.10%	3.20%	1.70%	1.30%
2001							
Unincorp. County	72.10%	14.60%	5.20%	2.50%	1.90%	2.50%	1.20%
Lacey	75.20%	13.20%	2.50%	3.60%	0.50%	1.50%	3.50%
Olympia	75.70%	12.40%	2.70%	4.40%	2.00%	1.00%	1.90%
Tumwater	76.80%	13.50%	1.40%	4.50%	0.80%	0.50%	2.50%
Yelm	77.60%	19.60%	0.00%	0.10%	1.30%	0.60%	0.70%

Source: The Profile, 2003; Thurston Regional Planning Council.

Explanations: Reported by work site location. The Washington State Commute Trip Reduction law stipulates that all employers with 100 or more employees arriving at a work site during the morning commute period must take measures to reduce the share of drive-alone trips and the number of vehicle miles traveled. Data is based on mandated employee surveys.

¹CWW refers to Compressed Work Week, whereby full-time employees compress their schedules into something less than the traditional 5-day work week.

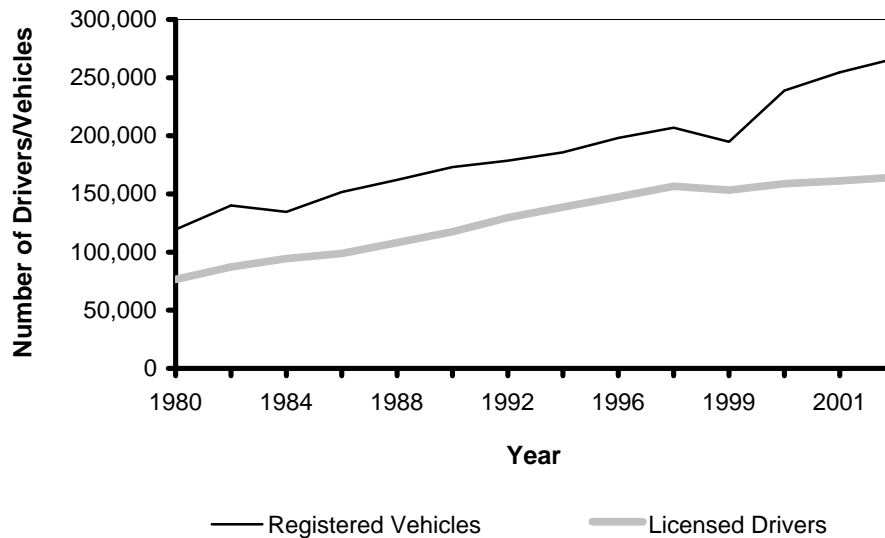
Appendix C

**Table C-16
Trends in Population Compared to Vehicle
Registration - Thurston County, 1970-2000**

Year	Population		Registered Vehicles	
	Count	Avg. Annual Rate of Change	Count	Avg. Annual Rate of Change
1970	76,890	-	42,948	-
1980	124,264	4.9%	119,479	10.8%
1990	161,238	2.6%	173,118	3.8%
2000	207,355	2.5%	238,830	3.3%
Thirty Year Change	130,465	3.4%	195,882	5.9%

Sources: U.S. Bureau of the Census; Washington State Department of Licensing; TRPC.

**Figure C-1
Driver and Vehicle Trends in Thurston County, 1980-2002**



Sources: Department of Licensing; TRPC.

Explanations: The methodology for determining if a truck was registered (versus a title transfer) prior to May 2000 used the combination of fees collected. The effect of Referendum 49 was to undercount old trucks (the \$30 rebate eliminated the excise tax).