

National Institute on Alcohol Abuse and Alcoholism
Division of Biometry and Epidemiology
Alcohol Epidemiologic Data System*

SURVEILLANCE REPORT # 2

**APPARENT PER CAPITA ALCOHOL CONSUMPTION
NATIONAL, STATE AND REGIONAL TRENDS, 1977-1984**

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APPARENT PER CAPITA ALCOHOL CONSUMPTION NATIONAL, STATE AND REGIONAL TRENDS, 1977-84

INTRODUCTION

This report is the first in a series of periodic publications which present the latest available data on apparent alcohol consumption on a national, state and regional basis. The term "apparent" is used because, on the basis of gallons sold, per capita estimates artificially attribute average annual consumption to individuals in the population. Such attributions may or may not reflect actual consumption. As a surveillance report of trends, this report is intended to replace the Alcohol Epidemiologic Data System's (AEDS) annual publications on apparent consumption. In addition, for reasons stated below, data in this report supercede 1983 data presented previously in both the last annual consumption publication (Doernberg 1985) and the U.S. Alcohol Epidemiologic Data Reference Manual, Vol. 1 (Doernberg and Stinson 1985). Finally, this surveillance summary introduces the concept of deciles to our users, a statistic used in a recent article on consumption trends (Williams et al. 1986).

Data Sources and Limitations

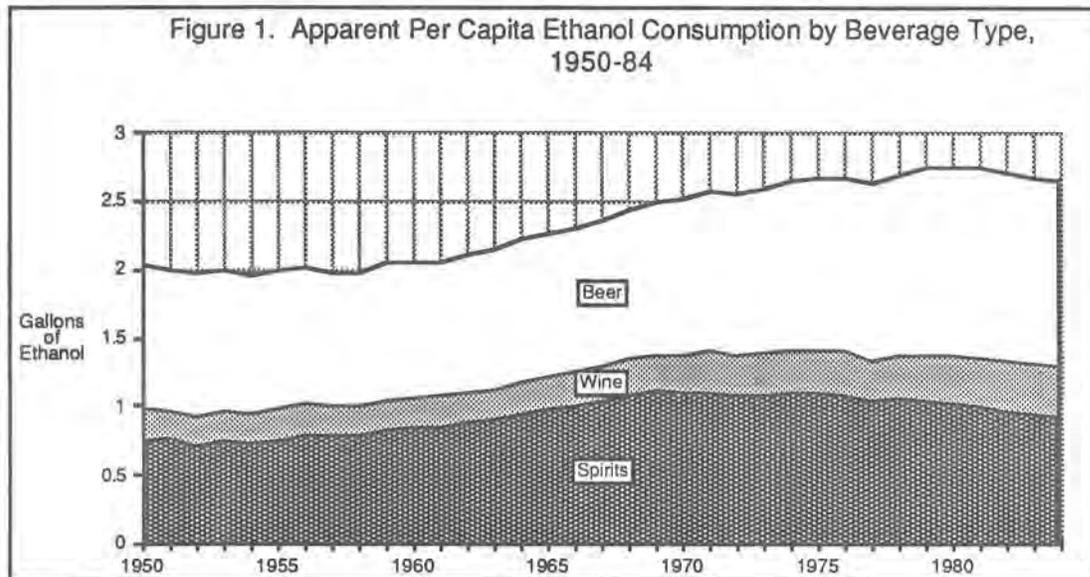
The users of this report should be aware of the following information in order to make appropriate interpretations of the data presented:

- AEDS receives routine reports of beverage sales and/or tax receipts from approximately 35 states and the District of Columbia. In order to develop data tables which encompass all 50 states and the District of Columbia, it is necessary to use shipments data from major beverage industry sources (Distilled Spirits Council of the United States, Inc., United States Brewers Association, and the Wine Institute) for non-reporting states. This procedure results in a hybrid of shipments and sales data in one table and therefore only approximates consumption volume on a state level. AEDS attempts to obtain beverage sales and/or tax receipt data from all the states and the District of Columbia in the belief that sales data better reflect beverage consumption.
- AEDS uses a drinking age population of 14 years and older for calculating per capita consumption rates in this report as well as in earlier publications (Doernberg 1985; Doernberg and Stinson 1985; Williams et al. 1986). The Bureau of the Census annually estimates the mid-year population of the United States in each state and provides these data to AEDS. Although age 14 is below the minimum drinking age in any of the states, this age was chosen because survey results have shown 14-year-olds to be drinking alcoholic beverages to some extent. For example, the 1983 Alcohol/Health Practices Survey indicates that 6.8 percent of the U.S. drinking population aged 18 and older started drinking at age 14 or younger (AEDS 1986).
- AEDS uses coefficients to convert the volume of beer, wine and spirits sold or shipped into volume of ethanol, an approximation of the actual alcohol content of the beverage studied. For the years 1977 to 1984, these conversion coefficients have remained constant.
- Since the publication of the annual report for 1983 (Doernberg 1985) and the U.S. Alcohol Epidemiologic Data Reference Manual (Doernberg and Stinson 1985), the 1983 gallonage data for beer and wine for Hawaii have been revised in

estimates published by the beverage industry (U.S. Brewers 1985). Therefore, the 1983 data presented in this report for Hawaii and the 1983 U.S. total per capita consumption supercede any figures published previously by AEDS.

Background

To provide some broader perspective on apparent alcohol consumption over the years, Figure 1 presents an area graph of U.S. per capita ethanol consumption by beverage type and total for the years 1950 through 1984. This figure shows a very small increase (1.0 percent) in overall per capita ethanol consumption through the 1950s, a rather rapid increase (21.3 percent) during the 1960s, a moderate increase (9.1 percent) in the 1970s and a slight decrease (-4.0 percent) for the first four years of 1980. It should be noted in the 1950-84 trends that a different population base (age 15 and older) was used in the years through 1969 and different percentages of absolute alcohol content were used prior to 1977 (Doernberg and Stinson 1985).



In Figure 1 the relative height of each separate area indicates the per capita ethanol consumption for each specific beverage type; the line at the top of each area indicates the cumulative total per capita consumption for all beverage types under the line. Thus, the line at the top of the area for beer indicates total per capita ethanol consumption for 1950 to 1984.

For the detailed analyses presented in this paper, the year 1977 was chosen as the base year because 1977 was the first year that AEDS began collecting and calculating per capita consumption from sales or tax receipt reports from the individual states. Also, since 1977 the coefficients used to convert beer, wine and spirits to ethanol have been constant: .045 for beer, .129 for wine and .414 for spirits (Doernberg and Stinson 1985).

Organization of the Report

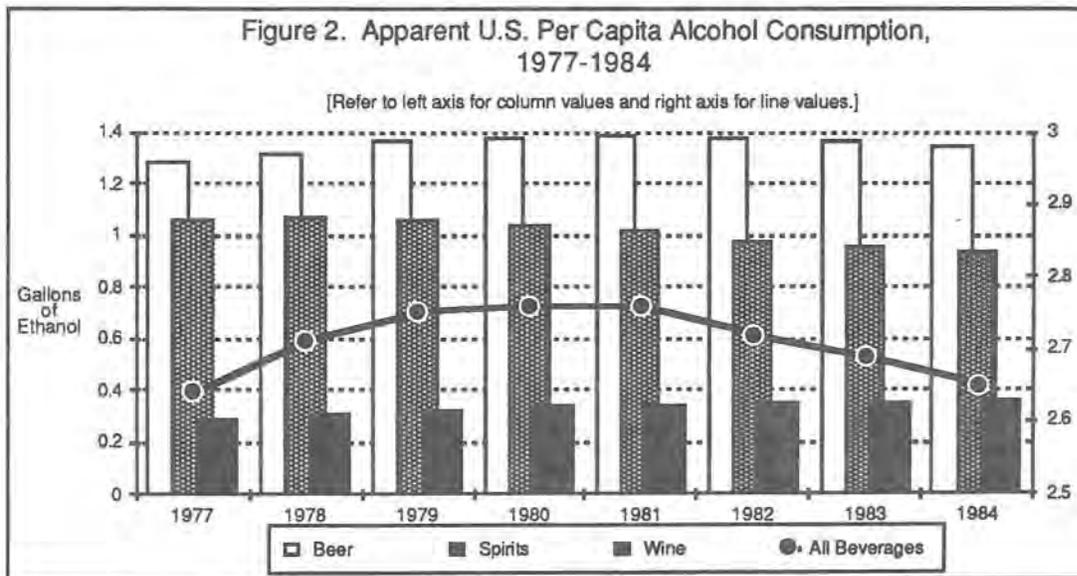
The first section of this report presents national data on U.S. per capita consumption for beer, wine, spirits and all beverages combined for the years 1977 through 1984. The second section deals with state level data for the same time period and the third section presents data and an analysis of trends on a regional basis, using the U.S. Bureau of the Census regions as the basis for aggregating states.

RESULTS

National Level

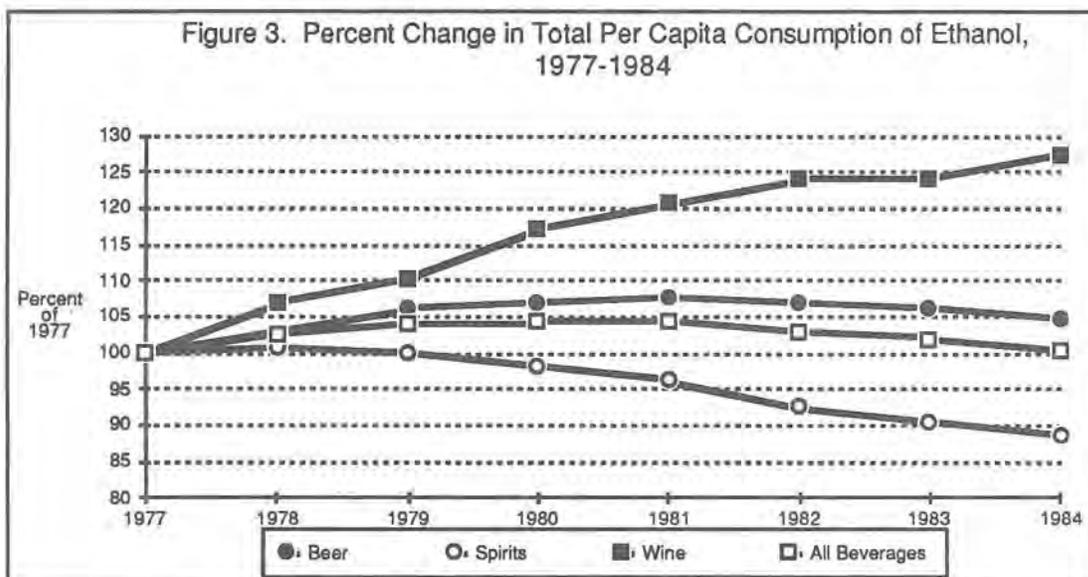
Per Capita Consumption, 1977-84

Figure 2 presents per capita ethanol consumption of beer, wine, spirits and all beverages combined for the years 1977 through 1984. Overall per capita consumption increases annually from 1977 to 1980, reaches a plateau in 1980 and 1981, and then begins an annual decline until 1984, when it is almost back to the 1977 level. However the trend for overall consumption masks substantial differences in consumption trends for the individual beverage types. Consumption of beer increases by 0.1 gallons of ethanol from 1977 to 1981 and then decreases slightly over the next three years, leaving consumption of beer at an overall increase of 0.06 gallons. Wine shows the greatest absolute increase (0.08 gallons) for this period, with no evidence of year-to-year decreases. Consumption of spirits shows the largest change over this period, decreasing steadily by 0.13 gallons from its peak in 1978 to reach a 1984 level 0.12 gallons below the 1977 level.



Percent Change in Per Capita Consumption, 1977-84

While per capita consumption of spirits shows the largest absolute change from 1977 to 1984, the relative change for these same years is greatest for wine. Relative changes in consumption for beer, wine, spirits and all beverages combined are presented in Figure 3, which shows the percentage of change for each year and beverage type relative to the 1977 value. Per capita consumption of ethanol for all alcoholic beverages shows a gradual percentage increase from 1977 to 1980, a leveling off in 1980 and 1981 and then a decline beginning in 1982 and continuing through 1984. Per capita beer consumption in gallons of ethanol shows an increase for the period from 1977 to 1981, but then decreases from 1981 to 1984 to end the period at 5 percent above 1977 levels. Per capita consumption of wine, on the other hand, increases substantially over the entire eight-year period, and in 1984 is 28 percent higher than in 1977. Per capita consumption of spirits increases slightly in 1978, but since then declines steadily to 11 percent below 1977 levels.



Hecht (1985a) suggests that the decline in spirits consumption reflects changes in drinking patterns and preferences of the drinking age population. One important factor has likely been the changing taste of the American consumer for lower alcohol beverages, perhaps coupled with increased public awareness of the problems of alcohol abuse and alcoholism. This changing taste is reflected in the relatively recent introduction and consumer acceptance of "light" and "low calorie" beers and "wine coolers" in the alcohol marketplace. The recent increase in the Federal Excise Tax on distilled spirits in 1985 may be another factor which will further the downward trend in the overall sales and consumption of spirits. Finally, data published by the Wine Institute (1986) suggest that areas which liberalize laws to allow for the sale of wine in grocery stores experience increases in the sales of wine. Some of the apparent increase in wine and beer consumption may be a result of access to these products in increasing numbers of outlets.

Table 1

Apparent Alcohol Consumption for States, Census Regions and United States, 1984

[Volume and ethanol in thousands of gallons, per capita consumption in gallons, based on population age 14 and older.]

	Beer			Wine			Spirits			All Beverages		
	Volume	Ethanol	Per Capita	Volume	Ethanol	Per Capita	Volume	Ethanol	Per Capita	Ethanol	Per Capita	U.S. Decile
AL	71,379	3,212	1.02	4,560	588	.19	5,270	2,166	.69	5,966	1.90	10
AK	14,187	638	1.73	1,652	213	.58	1,397	574	1.56	1,426	3.86	1
AZ	83,200	3,744	1.57	8,300	1,071	.45	6,178	2,539	1.06	7,354	3.08	3
AR	42,064	1,893	1.02	1,700	219	.12	2,871	1,180	.64	3,292	1.78	10
CA	627,963	28,258	1.38	116,927	15,084	.74	53,306	21,909	1.07	65,251	3.19	1
CO	84,373	3,797	1.51	8,995	1,160	.46	6,842	2,812	1.12	7,769	3.09	2
CT	63,963	2,878	1.10	10,056	1,297	.50	7,617	3,130	1.20	7,306	2.80	4
DE	16,607	747	1.51	1,473	190	.38	1,543	634	1.28	1,571	3.17	2
DC	18,028	811	1.56	4,464	576	1.11	3,394	1,395	2.68	2,782	5.34	1
FL	297,605	13,392	1.48	28,234	3,642	.40	27,436	11,276	1.24	28,311	3.12	2
GA	120,655	5,429	1.18	8,363	1,079	.23	11,871	4,879	1.06	11,387	2.48	7
HI	29,803	1,341	1.65	2,593	334	.41	1,803	741	.91	2,417	2.97	3
ID	23,155	1,042	1.40	1,800	232	.31	1,301	535	.72	1,809	2.43	7
IL	283,548	12,760	1.40	25,923	3,344	.37	22,373	9,195	1.01	25,299	2.77	5
IN	121,163	5,452	1.26	6,991	902	.21	7,654	3,146	.72	9,500	2.19	8
IA	69,960	3,148	1.36	2,131	275	.12	3,401	1,398	.61	4,821	2.09	9
KS	50,571	2,276	1.18	2,101	271	.14	2,958	1,216	.63	3,763	1.95	9
KY	68,633	3,088	1.05	2,832	365	.12	4,827	1,984	.68	5,438	1.85	10
LA	106,300	4,784	1.40	7,668	989	.29	7,786	3,200	.94	8,973	2.63	5
ME	25,656	1,155	1.25	2,204	284	.31	2,282	938	1.01	2,377	2.57	6
MD	102,856	4,629	1.31	10,013	1,292	.36	10,099	4,151	1.17	10,071	2.84	4
MA	138,070	6,213	1.30	18,848	2,431	.51	14,446	5,937	1.24	14,582	3.04	3
MI	210,473	9,471	1.32	17,236	2,223	.31	16,994	6,985	.97	18,679	2.60	6
MN	98,036	4,412	1.34	7,038	908	.28	8,582	3,527	1.07	8,847	2.68	5
MS	52,251	2,351	1.19	1,623	209	.11	3,698	1,520	.77	4,080	2.06	9
MO	118,942	5,352	1.34	7,841	1,011	.25	6,611	2,717	.68	9,081	2.27	8
MT	24,222	1,090	1.70	1,579	204	.32	1,441	592	.93	1,886	2.95	3
NE	40,406	1,818	1.44	1,997	258	.20	2,334	959	.76	3,035	2.41	7
NV	32,614	1,468	2.01	4,629	597	.82	4,200	1,726	2.36	3,791	5.19	1
NH	34,822	1,567	1.99	3,623	467	.59	4,472	1,838	2.33	3,872	4.91	1
NJ	161,942	7,287	1.19	25,946	3,347	.55	16,414	6,746	1.10	17,381	2.83	4
NM	41,229	1,855	1.71	2,357	304	.28	2,004	823	.76	2,983	2.75	5
NY	368,111	16,565	1.15	55,266	7,129	.49	36,325	14,930	1.03	38,624	2.67	5
NC	121,873	5,484	1.11	9,351	1,206	.24	9,460	3,888	.78	10,579	2.13	8
ND	16,570	746	1.40	683	88	.17	1,268	521	.98	1,355	2.55	6
OH	267,528	12,039	1.41	16,482	2,126	.25	12,621	5,187	.61	19,352	2.26	8
OK	57,511	2,588	1.01	3,290	424	.16	4,639	1,907	.74	4,919	1.91	9
OR	60,361	2,716	1.28	8,697	1,122	.53	4,237	1,741	.82	5,580	2.63	6
PA	296,774	13,355	1.37	15,945	2,057	.21	15,656	6,435	.66	21,846	2.25	8
RI	24,155	1,087	1.37	3,214	415	.52	1,986	816	1.03	2,318	2.92	3
SC	72,591	3,267	1.26	4,784	617	.24	6,313	2,594	1.00	6,478	2.50	7
SD	15,343	690	1.27	699	90	.17	1,182	486	.89	1,266	2.33	7
TN	92,719	4,172	1.11	4,423	571	.15	6,385	2,624	.70	7,367	1.95	9
TX	475,603	21,402	1.74	26,964	3,478	.28	23,729	9,753	.79	34,633	2.82	4
UT	22,149	997	.88	1,218	157	.14	1,423	585	.52	1,739	1.53	10
VT	13,943	627	1.48	1,612	208	.49	1,189	489	1.15	1,324	3.12	2
VA	148,151	6,667	1.46	10,199	1,316	.29	8,914	3,664	.80	11,646	2.55	6
WA	94,794	4,266	1.24	15,183	1,959	.57	7,619	3,131	.91	9,356	2.71	5
WV	38,369	1,727	1.12	1,465	189	.12	1,658	682	.44	2,597	1.68	10
WI	156,884	7,060	1.86	8,935	1,153	.30	9,460	3,888	1.03	12,101	3.19	2
WY	13,443	605	1.58	661	85	.22	974	400	1.05	1,091	2.86	4
<i>Regions</i>												
N. East	1,127,435	50,735	1.25	136,714	17,636	.43	100,386	41,259	1.01	109,629	2.70	
N. Cent	1,449,425	65,224	1.39	98,055	12,649	.27	95,438	39,225	.84	117,098	2.50	
South	1,903,195	85,644	1.34	131,405	16,951	.27	139,892	57,496	.90	160,091	2.51	
West	1,151,494	51,817	1.41	174,591	22,522	.61	92,725	38,110	1.04	112,449	3.05	
<i>U.S. Total</i>	5,631,550	253,420	1.35	540,766	69,759	.37	428,442	176,089	.94	499,268	2.65	

with similar figures presented in the U.S. Alcohol Epidemiologic Data Reference Manual, Vol. 1 (Doernberg and Stinson 1985). The use of consistent scales in per capita consumption over time permits the user to make quick visual comparisons between 1984 and other years (e.g., with maps for 1973 and 1983 in the data reference manual noted above).

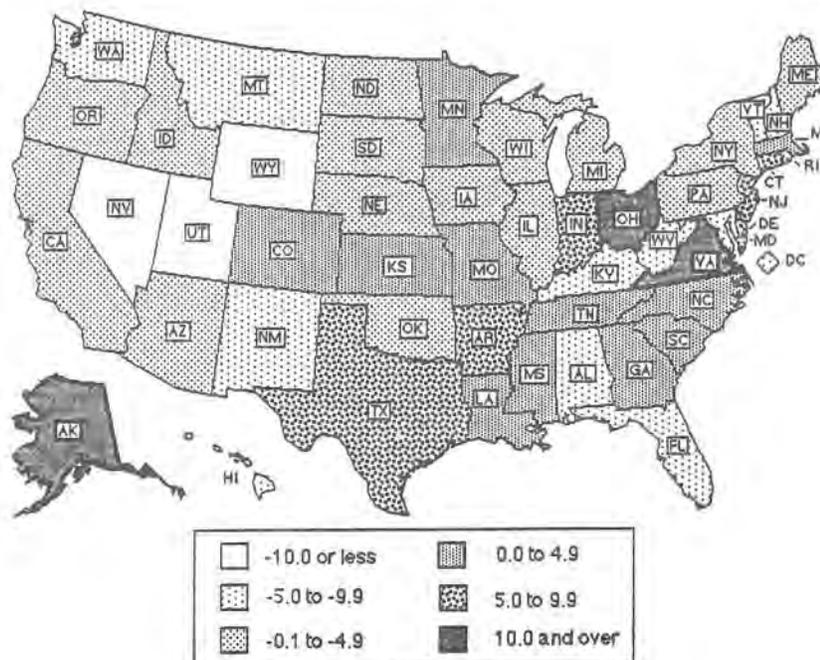
Trends in Apparent Consumption, 1977-84

Table 2 presents per capita consumption data by state for each of the years from 1977 to 1984 for each beverage type and for all beverages. (Due to the length of this table, it is attached to the end of this report.) Like Table 1, Table 2 presents aggregations for census regions and the U.S. as a whole at the end. Decile rankings have been computed for the per capita ethanol consumption for all beverages combined.

The states show considerable variation in per capita consumption increases or decreases over this period, but the decile rankings indicate that the relative positions of the states are fairly uniform across the eight-year period. Even so, the decile rankings of some states do change from year to year. Users of this report should interpret these changes with caution and with reference to the actual per capita consumption figures presented. Using California for illustrative purposes, this state moves from a decile ranking of 3 in 1982 to a decile ranking of 2 in 1983 and then to a decile ranking of 1 in 1984. Looking only at deciles, this would suggest that per capita consumption in California was increasing over this three-year period. However, examination of per capita consumption reveals a different picture. The apparent per capita consumption for 1982 and 1983 did not change. In 1984 the apparent per capita consumption decreased. Even though consumption in California decreased from 1983 to 1984, this state's decile rank moved in the direction of higher levels of consumption because the decrease seen in California was relatively less than the decrease seen for United States as a whole.

Figure 5 presents a map showing the percentage of increase or decrease in overall per capita consumption from 1977 to 1984 for each state and the District of Columbia. This figure reflects the finding that the greatest increase in per capita consumption is associated

Figure 5. Percent Change in Apparent Per Capita Consumption, 1977-84



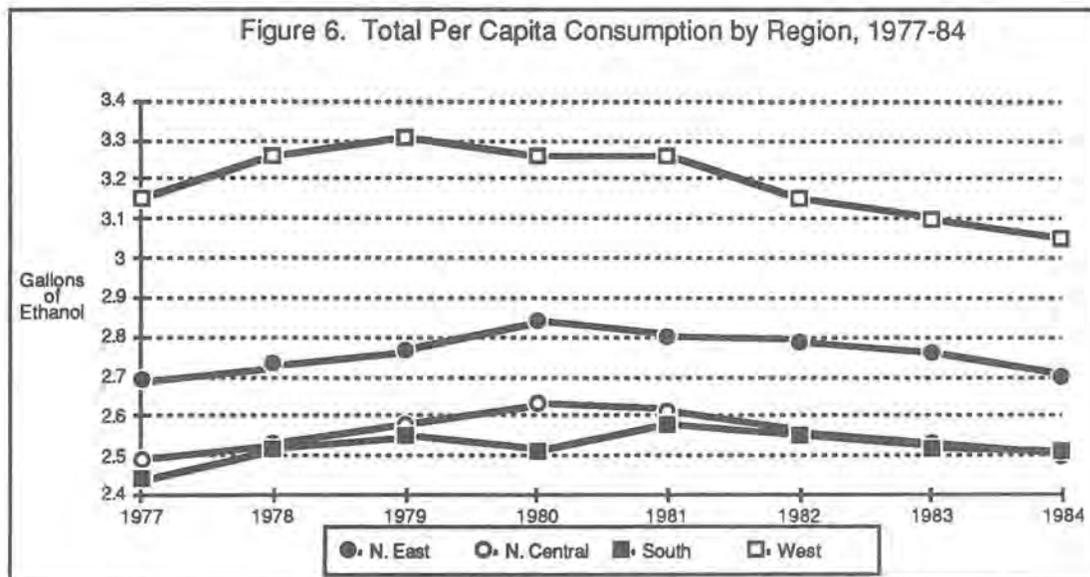
with Alaska, Ohio and Virginia, while the greatest decrease is associated with Nevada, Utah and Wyoming. Again, these changes should be interpreted with reference to actual consumption values. Using Nevada for illustrative purposes, this state shows one of the highest percentages of decrease from 1977 to 1984. Nevertheless, Nevada remains in the top decile for per capita consumption.

Regional Level

Several AEDS analyses have been made using U.S. census regions* (Doernberg and Stinson 1985; Williams et al. 1986). One advantage in using regions for analysis is that the data can be compared to survey data which often can be aggregated by region. One notable example of the use of survey data to estimate apparent consumption based upon survey estimates of the adults who drink alcohol is presented in the data reference manual on U.S. apparent consumption (Doernberg and Stinson 1985). The reader is encouraged to review those data as well as the regional data presented in this report.

Trends in Consumption for All Beverages, 1977-84

Figure 6 presents apparent per capita consumption by region for all beverages combined. Overall, per capita consumption for all beverages is highest in the West and second highest in the North East region, with the North Central and South regions showing little overall difference. More interesting are the regional differences in changes in



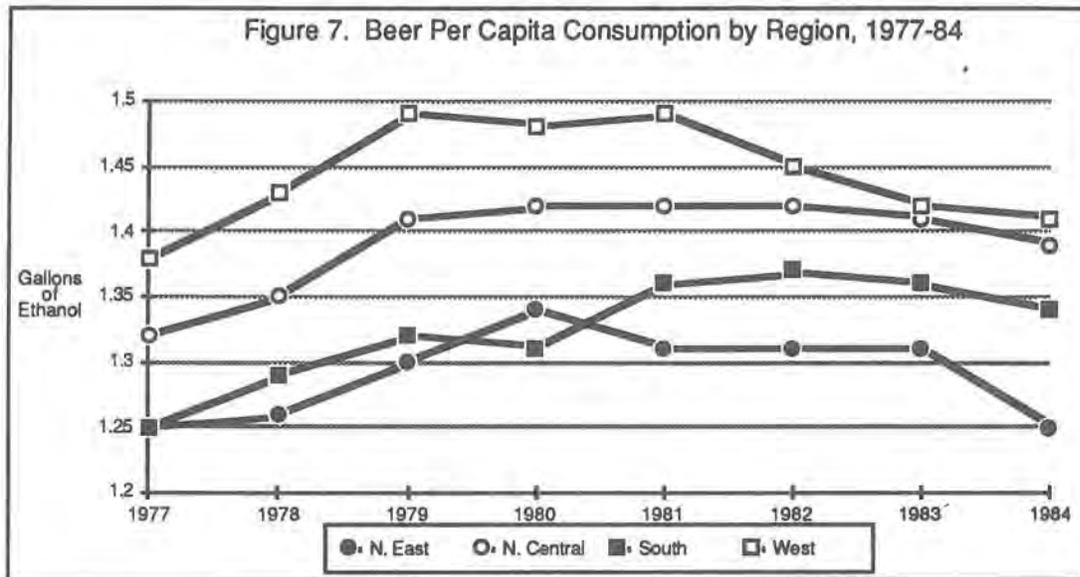
* The following are the U.S. Bureau of the Census regions and their component states:

North East: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont. **North Central:** Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin. **South:** Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia. **West:** Alaska, Arizona, California, Colorado, Hawaii, Montana, New Mexico, Oregon, Utah, Washington, Wyoming

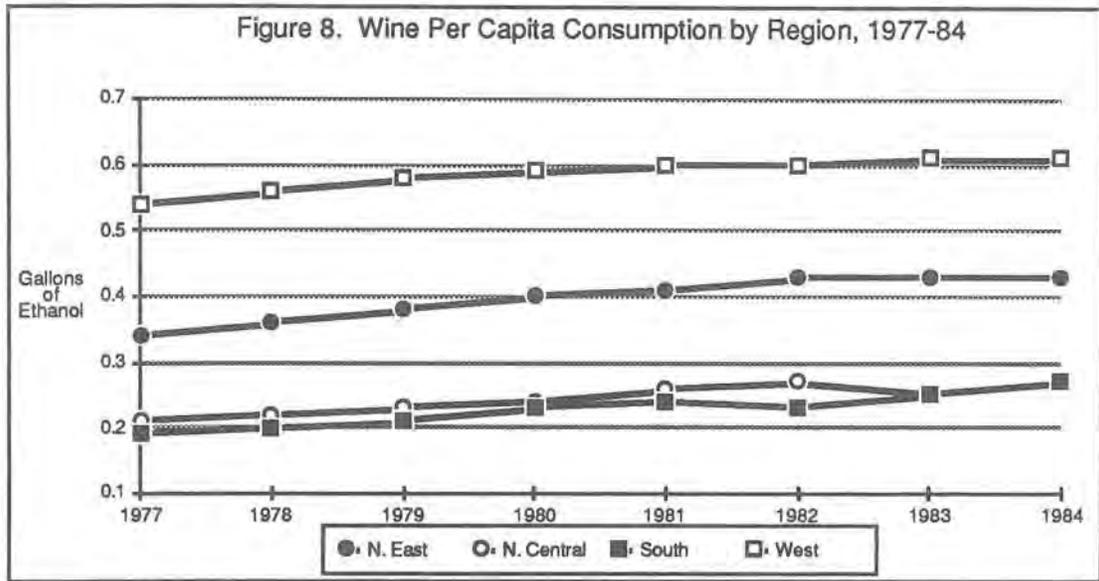
consumption from 1977 to 1984. Although the South region shows the lowest overall consumption, this region shows the greatest increase for this period. The West region has the highest overall consumption, but it is the only region to show a decrease from 1977 to 1984. Overall change for the North East and North Central regions is minimal, but positive.

Trends in Consumption for Individual Beverage Types, 1977-84

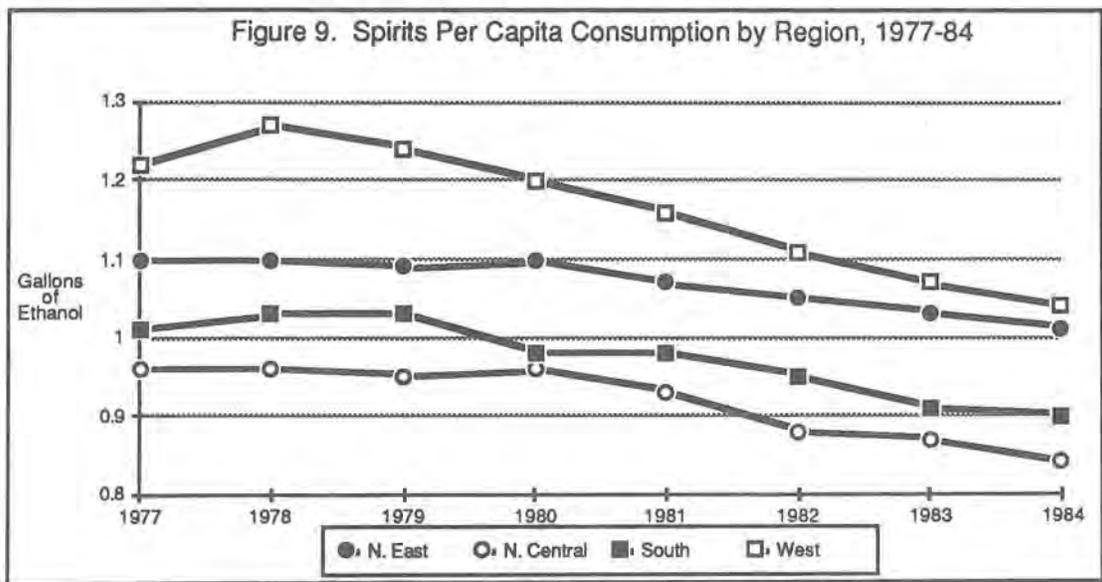
As is true for the United States as a whole, at a regional level analysis of trends in consumption of all beverages combined masks regional differences in consumption for specific beverage types. Figure 7 presents apparent per capita consumption for beer in each of the census regions from 1977 through 1984. Overall, consumption of beer is highest in the West region, followed by the North Central, South and North East regions. From 1977 to 1984 the South region shows the largest increase (0.09 gallons per capita), with the North Central region having the second largest increase (0.07 gallons per capita). The West region shows a smaller increase (0.03 gallons per capita) and the North East region shows no overall increase.



Regional patterns for consumption of wine are different, as shown in Figure 8. For wine, as for beer, the West region consistently shows the largest levels of per capita consumption; however, the North East region has the second highest level of per capita consumption. The North Central and South regions have the lowest level of per capita consumption, with little difference between the two. All regions show increases from 1977 to 1984: North East (0.09 gallons per capita), South (0.08 gallons per capita), West (0.07 gallons per capita), and North Central (0.07 gallons per capita).



The largest changes in per capita consumption from 1977 to 1984 appear in analyses of consumption of spirits; these data are presented in Figure 9. Overall, regional per capita consumption of spirits is highest in the West region, followed by the North East, South and North Central regions, in decreasing order. From 1977 to 1984 all regions show a decrease in consumption of spirits, with the West region showing the largest decrease (-0.18 gallons per capita). The North Central (-0.12 gallons per capita) and the South (-0.11 gallons per capita) show similar decreases in consumption. The North East region (-0.09 gallons per capita) shows the smallest decrease in consumption for spirits from 1977 to 1984.



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Table 2

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
Alabama					
1984	1.02	.19	.69	1.90	10
1983	1.01	.17	.71	1.89	10
1982	1.00	.18	.72	1.89	10
1981	1.00	.19	.73	1.92	10
1980	.96	.16	.74	1.86	10
1979	.98	.12	.84	1.94	10
1978	.98	.12	.88	1.97	9
1977	.99	.13	.84	1.96	9
Alaska					
1984	1.73	.58	1.56	3.86	1
1983	1.76	.61	1.70	4.06	1
1982	1.75	.56	1.74	4.05	1
1981	1.71	.57	1.82	4.10	1
1980	1.55	.50	1.70	3.76	1
1979	1.50	.47	1.65	3.62	1
1978	1.39	.45	1.68	3.52	2
1977	1.19	.42	1.70	3.31	2
Arizona					
1984	1.57	.45	1.06	3.08	3
1983	1.62	.44	1.00	3.06	3
1982	1.74	.40	.99	3.13	3
1981	1.78	.42	1.01	3.22	3
1980	1.69	.36	.98	3.03	4
1979	1.86	.39	1.17	3.42	2
1978	1.77	.37	1.10	3.25	2
1977	1.70	.34	1.05	3.10	3
Arkansas					
1984	1.02	.12	.64	1.78	10
1983	1.03	.13	.63	1.78	10
1982	1.03	.12	.63	1.78	10
1981	1.06	.12	.68	1.87	10
1980	1.00	.12	.69	1.81	10
1979	.93	.10	.57	1.60	10
1978	.97	.11	.73	1.82	10
1977	.92	.10	.63	1.65	10
California					
1984	1.38	.74	1.07	3.19	1
1983	1.37	.75	1.11	3.23	2
1982	1.37	.72	1.14	3.23	3
1981	1.43	.72	1.21	3.36	2
1980	1.42	.71	1.25	3.38	2
1979	1.42	.70	1.28	3.40	2
1978	1.36	.68	1.32	3.36	2
1977	1.31	.67	1.28	3.25	2

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
Colorado					
1984	1.51	.46	1.12	3.09	2
1983	1.57	.46	1.12	3.15	2
1982	1.64	.46	1.18	3.28	2
1981	1.63	.44	1.26	3.33	2
1980	1.57	.47	1.31	3.35	2
1979	1.68	.47	1.37	3.52	2
1978	1.64	.47	1.43	3.54	1
1977	1.43	.36	1.22	3.01	3
Connecticut					
1984	1.10	.50	1.20	2.80	4
1983	1.10	.49	1.23	2.82	4
1982	1.04	.49	1.20	2.73	6
1981	1.05	.44	1.18	2.67	6
1980	1.06	.43	1.21	2.70	6
1979	1.13	.40	1.20	2.72	5
1978	1.07	.38	1.20	2.65	6
1977	1.05	.35	1.21	2.61	6
Delaware					
1984	1.51	.38	1.28	3.17	2
1983	1.53	.35	1.34	3.22	2
1982	1.53	.34	1.36	3.23	3
1981	1.51	.32	1.39	3.23	3
1980	1.45	.29	1.38	3.12	4
1979	1.38	.27	1.34	2.99	4
1978	1.33	.25	1.33	2.91	4
1977	1.32	.24	1.35	2.91	4
District of Columbia					
1984	1.56	1.11	2.68	5.34	1
1983	1.55	1.08	2.79	5.41	1
1982	1.48	1.00	2.91	5.39	1
1981	1.50	1.06	2.92	5.49	1
1980	1.49	.99	2.94	5.42	1
1979	1.48	.99	3.03	5.49	1
1978	1.43	.94	3.14	5.51	1
1977	1.39	.89	3.26	5.53	1
Florida					
1984	1.48	.40	1.24	3.12	2
1983	1.56	.40	1.23	3.19	2
1982	1.56	.40	1.33	3.29	2
1981	1.55	.39	1.38	3.31	3
1980	1.42	.37	1.43	3.22	3
1979	1.47	.37	1.51	3.34	2
1978	1.41	.34	1.48	3.23	3
1977	1.33	.33	1.47	3.13	2

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
Georgia					
1984	1.18	.23	1.06	2.48	7
1983	1.14	.22	1.05	2.42	7
1982	1.12	.21	1.04	2.37	7
1981	1.10	.18	1.09	2.38	8
1980	1.07	.19	1.09	2.35	8
1979	1.17	.19	1.22	2.58	7
1978	1.14	.19	1.26	2.59	7
1977	1.08	.16	1.23	2.47	7
Hawaii					
1984	1.65	.41	.91	2.97	3
1983	1.57	.44	1.12	3.13	3
1982	1.80	.48	1.14	3.42	1
1981	1.74	.44	1.16	3.34	2
1980	1.65	.46	1.21	3.31	2
1979	1.60	.44	1.28	3.32	3
1978	1.38	.46	1.30	3.15	3
1977	1.61	.36	1.26	3.23	2
Idaho					
1984	1.40	.31	.72	2.43	7
1983	1.44	.30	.76	2.51	7
1982	1.47	.31	.81	2.58	7
1981	1.54	.33	.83	2.70	6
1980	1.53	.30	.77	2.60	7
1979	1.55	.27	.84	2.65	6
1978	1.50	.26	.80	2.56	7
1977	1.50	.22	.79	2.52	7
Illinois					
1984	1.40	.37	1.01	2.77	5
1983	1.42	.35	1.03	2.80	5
1982	1.41	.35	1.06	2.83	5
1981	1.43	.35	1.12	2.91	5
1980	1.43	.33	1.24	3.00	4
1979	1.45	.33	1.17	2.94	4
1978	1.38	.31	1.19	2.88	4
1977	1.35	.30	1.22	2.87	4
Indiana					
1984	1.26	.21	.72	2.19	8
1983	1.27	.19	.73	2.19	8
1982	1.29	.18	.76	2.23	8
1981	1.29	.18	.78	2.25	8
1980	1.26	.17	.77	2.21	8
1979	1.23	.15	.79	2.18	8
1978	1.19	.16	.79	2.14	8
1977	1.14	.14	.77	2.05	8

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
Iowa					
1984	1.36	.12	.61	2.09	9
1983	1.38	.13	.64	2.15	8
1982	1.39	.13	.65	2.17	8
1981	1.44	.13	.69	2.27	8
1980	1.41	.13	.71	2.25	8
1979	1.40	.11	.71	2.22	8
1978	1.38	.11	.74	2.22	8
1977	1.33	.10	.74	2.17	8
Kansas					
1984	1.18	.14	.63	1.95	9
1983	1.20	.13	.64	1.96	9
1982	1.22	.13	.67	2.02	9
1981	1.23	.12	.70	2.05	9
1980	1.23	.11	.62	1.96	9
1979	1.17	.11	.73	2.01	9
1978	1.14	.12	.64	1.89	10
1977	1.13	.10	.65	1.88	10
Kentucky					
1984	1.05	.12	.68	1.85	10
1983	1.13	.12	.69	1.94	9
1982	1.14	.12	.73	1.99	9
1981	1.13	.10	.75	1.99	9
1980	1.08	.10	.73	1.91	10
1979	1.10	.09	.77	1.97	10
1978	1.07	.09	.77	1.93	10
1977	1.19	.09	.75	2.03	9
Louisiana					
1984	1.40	.29	.94	2.63	5
1983	1.43	.30	1.02	2.75	5
1982	1.49	.30	1.00	2.78	5
1981	1.48	.27	1.02	2.77	6
1980	1.41	.27	1.04	2.71	6
1979	1.36	.26	1.08	2.70	6
1978	1.35	.25	1.07	2.67	6
1977	1.30	.25	1.03	2.57	6
Maine					
1984	1.25	.31	1.01	2.57	6
1983	1.32	.29	1.03	2.63	6
1982	1.30	.30	1.02	2.63	6
1981	1.24	.28	1.05	2.57	7
1980	1.32	.29	1.06	2.67	6
1979	1.30	.27	1.08	2.65	6
1978	1.31	.27	1.05	2.62	6
1977	1.37	.23	1.04	2.64	5

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
Maryland					
1984	1.31	.36	1.17	2.84	4
1983	1.34	.35	1.20	2.89	4
1982	1.27	.32	1.17	2.77	5
1981	1.39	.34	1.33	3.06	4
1980	1.42	.33	1.35	3.09	4
1979	1.43	.31	1.39	3.14	3
1978	1.41	.31	1.38	3.09	3
1977	1.37	.30	1.39	3.05	3
Massachusetts					
1984	1.30	.51	1.24	3.04	3
1983	1.36	.50	1.21	3.07	3
1982	1.35	.49	1.22	3.07	3
1981	1.44	.49	1.24	3.17	3
1980	1.47	.45	1.27	3.19	3
1979	1.39	.42	1.23	3.04	4
1978	1.37	.40	1.25	3.02	4
1977	1.34	.37	1.24	2.95	3
Michigan					
1984	1.32	.31	.97	2.60	6
1983	1.35	.28	.97	2.60	6
1982	1.35	.39	.98	2.72	6
1981	1.34	.29	1.00	2.63	6
1980	1.34	.28	1.03	2.65	6
1979	1.37	.25	1.03	2.65	6
1978	1.43	.25	1.05	2.74	5
1977	1.45	.24	1.02	2.71	5
Minnesota					
1984	1.34	.28	1.07	2.68	5
1983	1.37	.27	1.10	2.74	5
1982	1.36	.27	1.11	2.75	5
1981	1.39	.27	1.18	2.83	5
1980	1.40	.26	1.20	2.85	5
1979	1.35	.24	1.16	2.75	5
1978	1.31	.23	1.15	2.69	5
1977	1.30	.20	1.15	2.65	5
Mississippi					
1984	1.19	.11	.77	2.06	9
1983	1.19	.11	.79	2.09	9
1982	1.19	.11	.82	2.11	9
1981	1.19	.11	.84	2.14	9
1980	1.13	.10	.86	2.09	9
1979	1.15	.10	.84	2.09	9
1978	1.16	.10	.91	2.18	8
1977	1.08	.11	.86	2.05	9

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
Missouri					
1984	1.34	.25	.68	2.27	8
1983	1.37	.22	.78	2.37	8
1982	1.38	.21	.79	2.38	7
1981	1.40	.21	.83	2.45	7
1980	1.39	.20	.84	2.44	7
1979	1.37	.20	.86	2.43	7
1978	1.31	.20	.89	2.40	7
1977	1.23	.19	.83	2.25	8
Montana					
1984	1.70	.32	.93	2.95	3
1983	1.79	.32	.99	3.09	3
1982	1.82	.32	1.02	3.17	3
1981	1.90	.33	1.05	3.28	3
1980	1.82	.35	1.04	3.21	3
1979	1.83	.41	1.05	3.29	3
1978	1.82	.20	1.07	3.10	3
1977	1.83	.20	1.10	3.12	3
Nebraska					
1984	1.44	.20	.76	2.41	7
1983	1.49	.21	.79	2.49	7
1982	1.50	.28	.58	2.37	8
1981	1.57	.20	.88	2.66	6
1980	1.56	.19	.89	2.64	6
1979	1.50	.18	.88	2.57	7
1978	1.47	.18	.89	2.54	7
1977	1.45	.17	.91	2.53	6
Nevada					
1984	2.01	.82	2.36	5.19	1
1983	1.98	.79	2.45	5.22	1
1982	1.99	.77	2.50	5.25	1
1981	2.08	.80	2.71	5.59	1
1980	2.09	.79	2.94	5.82	1
1979	2.28	.88	3.28	6.44	1
1978	2.20	.85	3.65	6.69	1
1977	2.15	.83	3.85	6.84	1
New Hampshire					
1984	1.99	.59	2.33	4.91	1
1983	2.17	.56	2.35	5.08	1
1982	1.89	.58	2.34	4.81	1
1981	1.89	.59	2.44	4.92	1
1980	2.21	.69	2.86	5.76	1
1979	1.98	.62	2.61	5.20	1
1978	1.99	.54	2.94	5.46	1
1977	1.89	.50	2.93	5.32	1

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
New Jersey					
1984	1.19	.55	1.10	2.83	4
1983	1.21	.52	1.13	2.86	4
1982	1.22	.52	1.13	2.87	4
1981	1.22	.51	1.15	2.87	5
1980	1.23	.47	1.13	2.83	5
1979	1.18	.43	1.10	2.71	5
1978	1.17	.42	1.10	2.69	5
1977	1.16	.40	1.13	2.69	5
New Mexico					
1984	1.71	.28	.76	2.75	5
1983	1.72	.31	.98	3.00	4
1982	1.72	.34	.94	3.00	4
1981	1.74	.32	.95	3.01	4
1980	1.66	.32	1.00	2.99	4
1979	1.71	.30	1.01	3.02	4
1978	1.68	.32	.98	2.99	4
1977	1.65	.32	.96	2.93	4
New York					
1984	1.15	.49	1.03	2.67	5
1983	1.23	.49	1.05	2.77	5
1982	1.26	.48	1.10	2.84	5
1981	1.25	.46	1.12	2.83	5
1980	1.28	.46	1.18	2.91	5
1979	1.21	.44	1.17	2.82	5
1978	1.18	.42	1.17	2.77	5
1977	1.18	.38	1.17	2.74	5
North Carolina					
1984	1.11	.24	.78	2.13	8
1983	1.10	.22	.80	2.12	9
1982	1.07	.21	.85	2.13	9
1981	1.10	.21	.86	2.17	9
1980	1.11	.20	.86	2.17	9
1979	1.08	.22	.88	2.18	9
1978	1.06	.20	.86	2.12	9
1977	1.01	.20	.84	2.05	8
North Dakota					
1984	1.40	.17	.98	2.55	6
1983	1.48	.17	1.05	2.71	6
1982	1.52	.18	1.09	2.79	5
1981	1.53	.18	1.14	2.85	5
1980	1.53	.17	1.14	2.83	5
1979	1.45	.16	1.10	2.71	6
1978	1.45	.16	1.15	2.76	5
1977	1.35	.15	1.12	2.62	6

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
Ohio					
1984	1.41	.25	.61	2.26	8
1983	1.36	.22	.65	2.22	8
1982	1.40	.22	.66	2.28	8
1981	1.35	.22	.68	2.25	8
1980	1.39	.22	.72	2.33	8
1979	1.36	.20	.71	2.26	8
1978	1.19	.20	.70	2.09	9
1977	1.17	.18	.70	2.04	9
Oklahoma					
1984	1.01	.16	.74	1.91	9
1983	1.05	.16	.77	1.98	9
1982	1.17	.16	.83	2.17	9
1981	1.14	.16	.83	2.13	9
1980	1.08	.16	.71	1.95	9
1979	1.05	.13	.80	1.98	9
1978	1.08	.14	.82	2.04	9
1977	1.07	.14	.78	1.98	9
Oregon					
1984	1.28	.53	.82	2.63	6
1983	1.31	.53	.85	2.69	6
1982	1.33	.53	.88	2.74	6
1981	1.38	.50	.92	2.80	5
1980	1.37	.51	.94	2.82	5
1979	1.39	.47	.96	2.82	5
1978	1.34	.47	.98	2.79	5
1977	1.33	.46	.96	2.74	5
Pennsylvania					
1984	1.37	.21	.66	2.25	8
1983	1.41	.22	.67	2.29	8
1982	1.44	.23	.70	2.36	8
1981	1.42	.23	.72	2.37	8
1980	1.45	.22	.71	2.39	8
1979	1.42	.22	.73	2.37	8
1978	1.36	.21	.74	2.32	8
1977	1.35	.20	.74	2.29	8
Rhode Island					
1984	1.37	.52	1.03	2.92	3
1983	1.48	.50	1.06	3.04	3
1982	1.34	.55	1.04	2.93	4
1981	1.36	.52	1.04	2.92	4
1980	1.46	.53	1.14	3.14	3
1979	1.46	.50	1.11	3.07	3
1978	1.41	.50	1.16	3.07	3
1977	1.39	.43	1.12	2.93	4

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
South Carolina					
1984	1.26	.24	1.00	2.50	7
1983	1.26	.20	1.01	2.47	7
1982	1.24	.20	1.00	2.44	7
1981	1.25	.19	1.05	2.49	7
1980	1.22	.18	1.06	2.46	7
1979	1.25	.17	1.18	2.60	7
1978	1.20	.17	1.21	2.59	6
1977	1.17	.17	1.14	2.49	7
South Dakota					
1984	1.27	.17	.89	2.33	7
1983	1.30	.17	.95	2.43	7
1982	1.29	.18	.98	2.45	7
1981	1.32	.19	1.05	2.56	7
1980	1.30	.18	1.07	2.56	7
1979	1.23	.17	1.04	2.44	7
1978	1.19	.17	1.05	2.42	7
1977	1.15	.17	1.06	2.38	7
Tennessee					
1984	1.11	.15	.70	1.95	9
1983	1.10	.14	.69	1.93	10
1982	1.13	.14	.70	1.96	10
1981	1.14	.13	.72	1.98	10
1980	1.10	.12	.69	1.92	9
1979	1.14	.11	.73	1.98	9
1978	1.16	.11	.72	1.99	9
1977	1.10	.10	.71	1.91	10
Texas					
1984	1.74	.28	.79	2.82	4
1983	1.73	.27	.79	2.79	5
1982	1.83	.18	.84	2.85	4
1981	1.84	.24	.85	2.93	4
1980	1.77	.22	.81	2.80	5
1979	1.76	.14	.87	2.77	5
1978	1.70	.14	.84	2.68	6
1977	1.63	.14	.81	2.58	6
Utah					
1984	.88	.14	.52	1.53	10
1983	.88	.14	.50	1.52	10
1982	1.01	.15	.55	1.71	10
1981	1.01	.14	.58	1.74	10
1980	.96	.14	.60	1.71	10
1979	.97	.16	.62	1.75	10
1978	.96	.15	.61	1.72	10
1977	.97	.14	.59	1.70	10

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
Vermont					
1984	1.48	.49	1.15	3.12	2
1983	1.52	.50	1.19	3.21	2
1982	1.49	.50	1.25	3.24	2
1981	1.49	.50	1.33	3.32	2
1980	1.43	.48	1.39	3.30	2
1979	1.57	.47	1.50	3.54	1
1978	1.53	.47	1.59	3.59	1
1977	1.42	.44	1.58	3.44	1
Virginia					
1984	1.46	.29	.80	2.55	6
1983	1.47	.27	.82	2.57	6
1982	1.45	.27	.86	2.59	6
1981	1.23	.27	.89	2.39	7
1980	1.23	.25	.90	2.39	7
1979	1.23	.25	.92	2.40	8
1978	1.22	.21	.90	2.33	8
1977	1.19	.21	.90	2.30	7
Washington					
1984	1.24	.57	.91	2.71	5
1983	1.29	.54	.94	2.76	5
1982	1.33	.53	.99	2.85	4
1981	1.38	.54	1.05	2.97	4
1980	1.52	.52	1.08	3.12	3
1979	1.41	.48	1.10	2.99	4
1978	1.39	.48	1.09	2.96	4
1977	1.36	.45	1.07	2.89	4
West Virginia					
1984	1.12	.12	.44	1.68	10
1983	1.13	.13	.48	1.74	10
1982	1.11	.14	.55	1.80	10
1981	1.06	.14	.66	1.85	10
1980	1.00	.09	.72	1.82	10
1979	.97	.09	.77	1.83	10
1978	.96	.09	.79	1.84	10
1977	.98	.09	.78	1.85	10
Wisconsin					
1984	1.86	.30	1.03	3.19	2
1983	1.93	.33	1.07	3.33	1
1982	1.93	.30	1.04	3.27	2
1981	1.95	.31	1.20	3.47	1
1980	1.96	.31	1.20	3.46	1
1979	1.88	.28	1.17	3.33	3
1978	1.80	.28	1.18	3.25	2
1977	1.78	.27	1.26	3.31	2

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
Wyoming					
1984	1.58	.22	1.05	2.86	4
1983	1.66	.22	1.09	2.98	4
1982	1.80	.24	1.21	3.25	2
1981	1.91	.24	1.27	3.42	2
1980	1.85	.24	1.32	3.42	2
1979	1.86	.22	1.30	3.38	2
1978	1.82	.22	1.36	3.41	2
1977	1.79	.21	1.32	3.31	1
Regions					
N. East					
1984	1.25	.43	1.01	2.70	
1983	1.31	.43	1.03	2.76	
1982	1.31	.43	1.05	2.79	
1981	1.31	.41	1.07	2.80	
1980	1.34	.40	1.10	2.84	
1979	1.30	.38	1.09	2.77	
1978	1.26	.36	1.10	2.73	
1977	1.25	.34	1.10	2.69	
N. Central					
1984	1.39	.27	.84	2.50	
1983	1.41	.25	.87	2.53	
1982	1.42	.27	.88	2.56	
1981	1.42	.26	.93	2.61	
1980	1.42	.24	.96	2.63	
1979	1.41	.23	.95	2.58	
1978	1.35	.22	.96	2.53	
1977	1.32	.21	.96	2.49	
South					
1984	1.34	.27	.90	2.51	
1983	1.36	.25	.91	2.52	
1982	1.37	.23	.95	2.55	
1981	1.36	.24	.98	2.58	
1980	1.31	.23	.98	2.51	
1979	1.32	.21	1.03	2.55	
1978	1.29	.20	1.03	2.52	
1977	1.25	.19	1.01	2.44	
West					
1984	1.41	.61	1.04	3.05	
1983	1.42	.61	1.07	3.10	
1982	1.45	.60	1.11	3.15	
1981	1.49	.60	1.16	3.26	
1980	1.48	.59	1.20	3.26	
1979	1.49	.58	1.24	3.31	
1978	1.43	.56	1.27	3.26	
1977	1.38	.54	1.22	3.15	

Table 2 (Continued)

Per Capita Ethanol Consumption for States, Census Regions and U.S., 1977-84

[Gallons of ethanol, based on population age 14 and older.]

	Per Capita Consumption				U.S. Decile for All Beverages
	Beer	Wine	Spirits	All Beverages	
<i>U.S. Total</i>					
1984	1.35	.37	.94	2.65	
1983	1.37	.36	.96	2.69	
1982	1.38	.36	.98	2.72	
1981	1.39	.35	1.02	2.76	
1980	1.38	.34	1.04	2.76	
1979	1.37	.32	1.06	2.75	
1978	1.32	.31	1.07	2.71	
1977	1.29	.29	1.06	2.64	