Report:

COST OF LIVING IN 1984

FOR LOW-INCOME FAMILIES IN WASHINGTON STATE

WASHINGTON STATE
DEPARTMENT OF
SOCIAL & HEALTH
SERVICES

DIVISION OF ADMINISTRATION AND PERSONNEL

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COST OF LIVING IN 1984
FOR LOW-INCOME FAMILIES
IN WASHINGTON STATE

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This 1986 printing corrects several small errors in Chapter 5's updates of 1980 cost of living figures. These errors did not affect the report's conclusions.

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EXECUTIVE SUMMARY

Washington State law requires that DSHS set need standards for public assistance recipients. Standards must include reasonable allowances for shelter, fuel, food, transportation, clothing, household maintenance and necessary incidentals. The Office of Research, Department of Social and Health Services, conducted a comprehensive study of the cost of these items for low-income households in 1980 and developed methods for updating public assistance need standards annually.1/ The study constructed market baskets of goods and services necessary for a minimum but adequate standard of living and priced these items. This report presents the findings of the first major repricing of Washington's cost of living market baskets since the earlier study.

Objectives

The primary objective of this study was to develop new cost of living estimates for Washington State based on 1984 prices. Additional objectives were:

1. To evaluate use of the revised U.S. Department of Agriculture Thrifty Food Plan as a basis for food consumption market baskets.

2. To evaluate the methods used to price rental costs in 1980.

3. To evaluate the methods used to price the utility components of the 1980 market baskets and develop a separate utility cost estimate.

4. To evaluate the adequacy of methods used to prepare annual updates of need standards.

Methods

This study prices market baskets of goods and services developed in the 1980 Cost of Living study. These market baskets include the components required by state law and a combined utility cost figure.2/ Goods and services in the market baskets were priced in April 1984 in retail outlets, from published price lists, from rental cost figures prepared by the U.S. Department of Housing and Urban Development, and from surveys of service providers. As in the 1980 study, separate market baskets were priced for two model families: a family of four and a household made up of a single elderly individual. Equivalence scales were used to estimate costs for families of different sizes.

The contents of the market baskets are based on judgments about what low-income people ought to be able to consume, regardless of the actual consumption choices they might make. This normative approach reflects

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1/ Russell M. Lidman, Thomas M. Sykes, et. al., Cost of Living in 1980 For Low-Income Families in Washington State, Office of Research, DSHS, January 1981.

2/ Detailed lists of items included in the market baskets are included in the 1980 Cost of Living study.

conventional market basket methods. Market basket contents, however, were based on research findings and the advice of consultants. Judgments of individual project staff were minimized.

The market baskets do not include items such as restaurant meals; home ownership; home repairs or decoration; purchase or repair of furniture, appliances, television or other home entertainment equipment; vacation or local recreational travel; admission to movies, plays, school, or sporting events; medical services; magazine subscriptions; charitable or religious contributions; purchase of toys, games, and gifts; alcohol or tobacco; and basic school fees and supplies.

This study divided Washington State into seven pricing areas and collected price data for each area. Statewide cost figures were then prepared using a weighting formula that gives costs in populous regions more weight than those in less populous ones.

FINDINGS

Evaluation of the methods used to measure food costs, rental costs and energy costs in the 1980 Cost of Living study showed them to be sound. The present study used 1980 procedures for measuring food and rental costs. While methods used to measure energy costs were substantially revised, they yielded results that are similar to 1980 cost figures updated for inflation.

In April 1984, the basic requirements for a family of four priced in this study cost $862.46 per month, up 21.9 percent from October 1980. The market baskets of goods and services for an elderly individual cost $464.00. Equivalence scales were used to calculate the costs faced by families of other sizes.

If the model family of four were on public assistance on July 1, 1984, and had no other income, it would receive $736.38 per month in AFDC, Food Stamp and Low-Income Home Energy Assistance benefits. A single elderly individual receiving Supplemental Security Income (SSI), Food Stamps and Low-Income Home Energy Assistance would receive $430.69 per month. Medical benefits have not been calculated because medical costs were not examined in this study. All medical needs were assumed to have been met through medical assistance and private sources.

When utility costs were isolated from the various market baskets in which they were included, the family of four needed $88.33 per month to purchase heat, other essential energy, telephone service, water, sewer and garbage. The equivalent costs for an elderly individual were $45.75 per month.

Four methods of preparing annual updates of cost of living results were analyzed. These included use of the Implicit Price Deflator (IPD), national data from the U.S. City Consumer Price Index (CPI), Seattle-Everett CPI data, and the combination of national and local CPI data recommended by the authors of the 1980 study. When applied to 1980 study findings, the recommended 1980 update methodology proved to be the best predictor of 1984 cost of living results. Unfortunately, the Seattle-Everett CPI data used in that method will not be available on a monthly basis after January 1987. U.S. City data provides an acceptable substitute for the local data, however. U.S. City CPI data should be used to produce annual updates after that date.

CHAPTER 1: INTRODUCTION

State law requires that the Department of Social and Health Services (DSHS) establish reasonable standards of need based on actual studies of the cost of living (COL). This study is the first major repricing of market baskets of goods and services developed in 1980.1/

A. Objectives

The primary objective of this study is to update 1980 estimates of the costs of a minimal but adequate standard of living for low-income persons in Washington State. Other specific objectives were:

1. To evaluate use of the revised U.S. Department of Agriculture Thrifty Food Plan as a basis for market baskets for food consumption. The 1980 market basket relied on a previous version of the Thrifty Food Plan, with revisions made by a nutritional consultant. The Thrifty Food Plan serves as the basis for setting Food Stamp allotments.

2. To evaluate the adequacy of the methods used to price the rent components of the 1980 market baskets. The 1980 market baskets used Fair Market Rents published by the U.S. Department of Housing and Urban Development (HUD). Changes in methods of calculating Fair Market Rents made it necessary to consider data from other sources.

3. To develop a separate cost of living estimate for utilities. Documentation of utility costs is useful for effective administration of the Food Stamp Program. The 1980 COL study did not prepare separate estimates of these costs.

4. To evaluate the adequacy of methods used to prepare annual updates of need standards. The methods used since 1980 rely on elements of the Consumer Price Index (CPI) for the Seattle-Everett Standard Metropolitan Statistical Area. A recent General Accounting Office (GAO) report has questioned the reliability of local CPI data.2/

B. Legal and Administrative Requirements

State law requires the Department of Social and Health Services to establish public assistance standards that reflect recipients' living requirements and include "... reasonable allowances for shelter, fuel, food, transportation, clothing, household maintenance and operation,

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1/ Russell M. Lidman, Thomas M. Sykes, et al., Cost of Living in 1980 for Low-Income Families in Washington State, Office of Research, DSHS, January 1981.

2/ General Accounting Office, Funds Needed to Develop CPI Quality Control System, Washington, D.C., Government Printing Office, April 1, 1983.

personal maintenance and necessary incidentals."3/ The law also requires that standards shall be based on studies of actual living costs. This law, and its accompanying administrative regulations4/, have been implemented using market basket surveys as a basis for the need standard. Market basket surveys identify a package of consumption items and then collect price data to compute the monthly cost of these items. This report documents the cost of these market baskets for low-income households in Washington.

C. Concept and Measurement of a Low-Income Living Standard

The 1980 market baskets designed to meet minimal but adequate living standards were subjected to three tests. First, the market baskets reflect the best judgment of experts in areas such as food and housing where expenditure shortfalls were apt to have an adverse impact on low-income people. Second, they reflected the best available studies of consumption patterns and the responsiveness of those patterns to price changes. Third, they were designed to make sense to the general public.

Two sets of market baskets were developed: one for a family of four headed by a single woman and one for an elderly woman living alone. Once market baskets were established for these model households, the items in them were priced. Equivalence scales were then used to determine living costs for household units of other sizes. Equivalence scales identify the relationships between costs faced by households of different sizes. These relationships can be measured by recording consumption patterns of families of different sizes, by surveys, or by pricing different market baskets for different household sizes.

D. Outline of the Report

Chapter 2 presents an overview of methods used in the 1984 Cost of Living study. Chapter 3 summarizes the findings of the study and calculates a living standard for low-income families of various sizes. Chapter 4 presents costs for the components that comprise the basic necessities and evaluates the reliability of those estimates. Chapter 5 evaluates the methods developed in 1980 for updating cost of living estimates.

3/ RCW 74.04.770

4/ WAC 388-29-010

CHAPTER 2: METHODS

A. The Market Basket Approach

The market basket methodology used to measure the cost of living for low-income households is relatively uncomplicated. One first compiles a list of items that meet basic needs and reflect the consumption choices that low-income families might make. One then prices these items in retail outlets and with service providers that low-income families would patronize. Unfortunately, this method is not always easy to apply.

Construction of the market baskets follows a normative process. Decisions must be made on what the low-income population ought to be able to consume, regardless of the actual consumption choices they might make. At the same time, market baskets cannot deviate dramatically from actual consumption practices of the target population. Nearly all of the items included in the 1980 market baskets reflect some compromise between what people ought to consume and what they actually do consume. The current study elaborates on some of the choices made in 1980, reflecting information and study findings that have become available in the past four years.

B. Scope of the Study: Units of Analysis, Regional Pricing, and Equivalence Scales

1. Units of Analysis

The 1980 Cost of Living study examined living costs for a limited number of possible family configurations. Two model units were selected: a female headed family of four (a mother aged 35, and three children, ages 13, 9, and 3); and a single elderly woman, at least 65 years of age and living alone.1/ This allowed accurate measurement of the costs facing low-income households with children and elderly persons. The 1984 study continues that practice.

2. Area Pricing

Statewide costs presented here and in the 1980 report are the weighted averages of costs measured in seven areas of the state. Statewide averages were calculated to give areas with the largest public assistance caseloads greater weight in the overall average. Area pricing was adopted because researchers wanted to determine whether the cost of a minimum but adequate consumption standard varied in different regions of the state.

1/ These model families are referred to as a family of four and an elderly individual throughout the report, but the composition of each model family is constant throughout.

This study adopts the area pricing approach used in 1980, with modifications. Costs were measured in seven sample counties in 1980, but county costs ranged from only 4.3 percent below to 3.8 percent above the statewide average. Most of the variation stemmed from housing costs. The bulk of the remaining variation resulted from food, transportation, and heating costs, in that order.

To provide accurate information on regional price differences, this study divided the state into seven areas and collected price data from all counties in each area for high variation items. Items with prices that showed little variation in 1980 were priced in sample counties, as before, or priced in a sample of outlets expected to reflect prices statewide. Figure 2.1 shows the areas for which separate price data were collected. Sample counties used to reflect these areas when pricing items showing little price variation are shown along with weights assigned to areas for calculating statewide averages. Two sample counties were used to collect prices for low variation items in Areas 3 and 6 because of their size and diversity. Data for items priced in those sample counties were averaged to obtain area prices.

3. Equivalence Scales

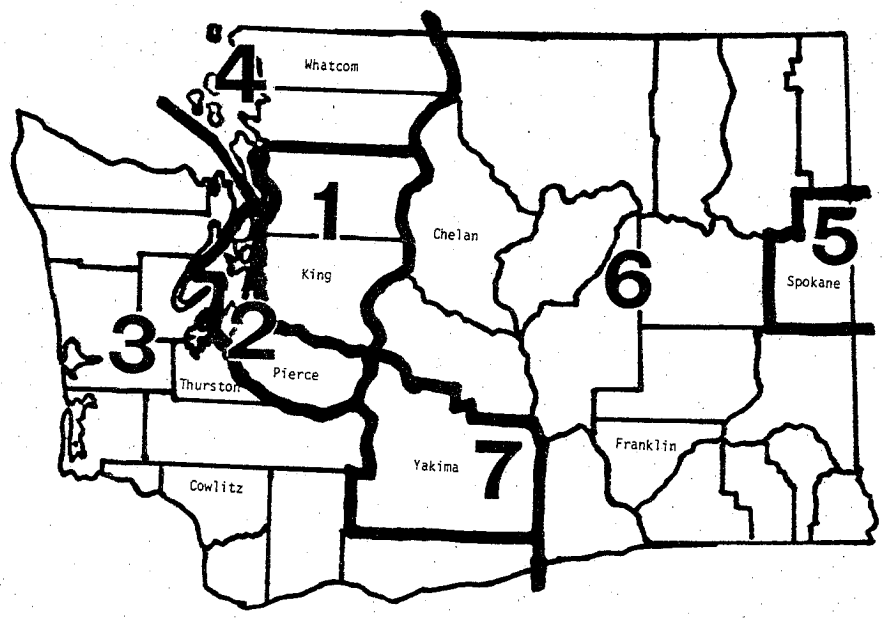
As in the 1980 Cost of Living study, equivalence scales were selected to calculate the cost of living for families of various sizes. Two sets of scales (Tables 2.1 and 2.2) were used in this study to provide cost of living estimates for families which differed from the model families.

The equivalence scale for adult households (Table 2.2) is based on work done by the Bureau of Labor Statistics Expert Committee on Family Budgets discussed in the 1980 Cost of Living study. The equivalence scale for families with children (Table 2.1) is the scale used by DSHS to set relative payment sizes for public assistance. This scale provides slightly more money to small households and less money to large households than the Bureau of Labor Statistics equivalent. Opinion surveys and studies of American consumption patterns show that such a scale is more in line with what families of different sizes spend and think they need than the Bureau of Labor Statistics scales.2/

2/ Sheldon Danziger, Jacques van der Gaag, Michael K. Taussig, Eugene Smolensky. The Direct Measurement of Welfare Levels: How Much Does It Cost to Make Ends Meet? Institute for Research on Poverty, Madison, Wisconsin, April 1983, and; Diane Colasanto, Arie Kapteyn, Jacques van der Gaag. Two Subjective Definitions of Poverty: Results of the Wisconsin Basic Needs Study, Institute for Research on Poverty, Madison, Wisconsin, Undated.

Figure 2.1

AREAS USED TO COLLECT 1984 LIVING COSTS



Area	Representative Counties	1984 Weights	
		Family of Four	Elderly Individual
1	King	.3023	.3767
2	Pierce	.1737	.1339
3	Thurston, Cowlitz	.2047	.1625
4	Whatcom	.0506	.0465
5	Spokane	.0880	.0807
6	Chelan, Franklin	.1103	.1145
7	Yakima	.0704	.0852
TOTAL		1.0000	1.0000

SOURCE: Data Support and Analysis Section, Office of Research and Data Analysis, DSHS.

NOTES: Weights are based on AFDC and SSI-Aged recipient populations in April 1984 for each region. The regions include the following counties: Area 1: King and Snohomish counties; Area 2: Pierce and Kitsap counties; Area 3: DSHS Region 6; Area 4: DSHS Region 3, excluding Snohomish County; Area 5: Spokane County; Area 6: DSHS Regions 1 and 2, except Spokane and Yakima Counties; Area 7: Yakima County. Representative counties were used to obtain area prices gathered by telephone surveys.

Table 2.1

EQUIVALENCE SCALE FOR FAMILIES WITH CHILDREN

Persons	Scale Value
1 a/	.543
2	.687
3	.850
4	1.000
5	1.152
6	1.307
7	1.510
8	1.671
9	1.835
10	1.994

SOURCE: Division of Income Assistance, DSHS.

NOTES: a/ Expectant mother or a child living with a protective payee.

Table 2.2

EQUIVALENCE SCALE FOR ADULT HOUSEHOLDS

Persons	Scale Value
1 aged	1.00
1 nonaged	1.08
2 aged	1.22
1 aged/1 nonaged	1.28
2 nonaged	1.34

SOURCE: 1980 Cost of Living study.

C. Consumption Standards

In order to construct cost estimates, the authors of the 1980 study specified lists of consumption goods and quantities to be consumed. External validation of these lists came from two sources: examination of market baskets used in other cost of living studies and the expert advice of knowledgeable consultants. This approach was used to minimize the number of subjective judgments made by project staff.

The 1980 market baskets included items from the following categories: food, shelter, heating fuel, transportation, household maintenance (including utilities other than fuel, household supplies, housewares and linens), clothing, personal care, and medicinal supplies. Items in these categories are repriced in this study.

The 1984 market baskets excluded the same items as the 1980 study. Medical costs, although a necessary part of any family budget, were assumed to be covered by Medicaid and other public or private health programs. The 1984 market baskets also excluded expenditures on restaurant meals; home ownership; exterior or interior home repair or decoration; furniture or appliance purchase or repair; television or other home entertainment purchase or repair; automobile purchase, depreciation or insurance; vacation or local recreational travel; admission to movies, plays, school or sporting events; magazine subscriptions; charitable or religious contributions; purchase of toys, games, and gifts; alcohol or tobacco; and basic school fees and supplies.

D. Pricing Methods

This study used three methods to measure the current cost of the 1980 cost of living market baskets:

First, the costs of food, some household supplies, and personal care items were collected from detailed price lists published by Jensen Price Surveys, Inc. Separate price lists were available for Western Washington as a whole and five Eastern Washington cities. These data were used to provide prices for the various areas examined in this study. Jensen's 1980 price lists were examined to determine how closely the prices collected using this method matched the prices collected directly from 27 stores in the 1980 study.

Second, most nonfood items were priced in K-Mart department stores, as in the 1980 study. K-Mart was chosen on the recommendation of the 1980 clothing and household operations consultant. Price data were collected in four outlets in King, Pierce and Thurston Counties. Analysis of 1980 K-Mart data showed that prices varied little from one location to another, so average prices from the four stores were used to estimate one statewide cost figure for each item. A few items which could not be located in K-Mart stores were priced from Sears or J.C. Penney's catalogues or in Olympia area discount stores.

Finally, prices for goods and services not available in supermarkets or discount stores (housing, utilities, fuels, transportation, laundry and other services) were gathered from other sources. These included Washington State Utilities and Transportation Commission rate schedules, industry sources, and telephone surveys of suppliers. The methods used to obtain cost figures for each component are outlined in Chapter 4.

CHAPTER 3: SUMMARY OF FINDINGS

This chapter summarizes the findings of the study and presents the costs associated with a minimum but adequate standard of living in Washington State.

The chapter has three parts. First, a breakdown of the costs of each component is provided for the family of four and the elderly individual. Second, equivalent budget totals for families of different sizes have been calculated using equivalence scales. Third, the chapter describes the resources available to the model households relying solely on public assistance: Aid to Families with Dependent Children (AFDC) or Supplemental Security Income (SSI), Food Stamps, and Low-Income Home Energy Assistance. All costs are presented as of April 1984. Taxes are included in all estimates, where appropriate.

A. Cost of Living for Model Families

Table 3.1 illustrates the costs of each major consumption category necessary to provide a minimum but adequate living standard for the two model households. The total cost of meeting minimum but adequate consumption standards is $862.46 per month for the single parent family of four and $464.00 per month for the elderly individual. Food, housing, fuel and other utilities, and transportation account for 87 percent of the costs for the family of four. Utility costs for the family of four average $88.33 per month. For a single elderly adult, utility costs average $45.75 per month. These utility figures include the costs of heating fuel, electricity, water, sewer, garbage, and telephone service. Total costs measured in individual pricing areas are shown in Appendix Table A3.1.

B. Cost of Living for Other Family Sizes

Table 3.2 presents the estimated cost of meeting minimum but adequate consumption standards for households of different sizes and composition. These costs are calculated using the equivalence scales shown in Chapter 2.

Equivalence scales show the total amount that a family would have to spend to maintain a living standard equivalent to that of households of another size. They do not apply to individual components of the market baskets, which might exhibit different economies of scale than all components combined.

Table 3.1

1984 COST OF LIVING: FAMILY OF FOUR AND ELDERLY INDIVIDUAL
(Weighted, Statewide Average Monthly Costs)

Need Component	Family of Four		Elderly Individual	
	Dollars	Percent of Budget	Dollars	Percent of Budget
1. Food	$293.17	34%	$ 90.18	19%
2. Shelter: Housing	332.53	38	255.91	55
3. Shelter: Fuels	39.17	5	15.63	3
4. Transportation	35.28	4	29.11	6
5. Household Maintenance	84.59	10	41.41	9
6. Clothing	43.76	5	12.15	3
7. Personal Care	23.75	3	10.44	2
8. Medicinal Supplies	1.97	a/	.94	a/
9. Miscellaneous	8.24	1	8.23	2
TOTAL	$862.46	100%	$464.00	100%
TOTAL UTILITIES b/	$ 88.33	10%	$ 45.75	10%

SOURCE: Consumption lists published in the 1980 Cost of Living study; 1984 grocery price data published by Jensen Price Surveys, Inc.; Fair Market Rents for April 1984 from the U.S. Department of Housing and Urban Development; 1980 U.S. Census data; 1982 energy consumption data and 1984 energy price data furnished by the Washington State Energy Office, Washington State Utilities and Transportation Commission, and Bonneville Power Administration; 1982 transportation cost data from the U.S. Department of Transportation and 1983 auto mileage data from the Washington State Department of Transportation; 1984 surveys of retail clothing and household maintenance prices in discount department stores and telephone surveys of other suppliers.

NOTES: Costs in this table are for April 1984. When cost data were obtained for earlier periods they were updated using appropriate Consumer Price Indices. Costs include all appropriate taxes.

a/ Less than one percent.
b/ Includes costs of heating, cooking, water, garbage, sewer and telephone. These are included in the Shelter: Housing, Shelter: Fuels, and Household Maintenance components shown above.

Table 3.2

1984 COST OF BASIC REQUIREMENTS FOR FAMILIES OF DIFFERENT TYPES AND SIZES
(Weighted, Statewide Average Monthly Costs)

Number of Persons	Adult Only Households
1 aged	$464.00
1 nonaged	501.12
2 aged	566.08
1 aged/1 nonaged	593.92
2 nonaged	621.76

Number of Persons	Households With Children
1 a/	$ 468.32
2	592.51
3	733.09
4	862.46
5	993.55
6	1,127.24
7	1,302.31
8	1,441.17
9	1,582.61
10	1,719.75

SOURCE: Tables 2.1, 2.2 and 3.1

NOTES: Cost figures for model families are underlined.

a/ Expectant mother or a child living with a protective payee.

C. Resources Available to Low-Income Families on Assistance

If the model low-income families received only public assistance, and spent the full amount of the rent standard shown for housing, their benefits, as of July 1, 1984, would fall 7 to 15 percent short of the living standards described above. Estimated benefits for the model families (excluding medical assistance) are shown in Table 3.3.

Table 3.3

MONTHLY RESOURCES AVAILABLE TO LOW-INCOME FAMILIES ON PUBLIC ASSISTANCE AS OF JULY 1, 1984

Source of Benefits	AFDC Family of Four	SSI-Aged Individual
Public Assistance Grant a/	$561.00	$342.88
Food Stamps b/	160.00	72.76
Low-Income Home Energy Assistance Program (LIHEAP) Benefit c/	15.38	15.05
TOTAL	$736.38	$430.69

SOURCE: Division of Income Assistance, DSHS

NOTES: a/ For SSI, the grant combines the federal benefit and the state supplement. There are two SSI payment levels in the state for two different geographic regions. The SSI figure is a weighted average of Area I and Area II grants.

b/ Food Stamp benefits are based on 1984 cost standards for rent. Families with lower rental costs would receive lower benefits. This is particularly true for SSI recipients due to differences in treatment of their rental costs in Food Stamp calculations.

c/ Low-Income Home Energy Assistance payments are made in one lump sum grant. There are three LIHEAP payment levels in the state for three different geographic regions. Figures shown in the table are one-twelfth of the weighted average of Zone I, Zone II and Zone III grants.

CHAPTER 4: COSTS OF INDIVIDUAL COMPONENTS

Chapter 4 examines the assumptions and methods used to reprice the market baskets of goods and services developed in the 1980 Cost of Living study. It provides considerably less detail on the contents of these market baskets than does the 1980 study. Readers interested in greater detail on the construction of consumption lists should consult that report.

A. Food

1. Standards of Measurement

The 1980 Cost of Living study used the U.S. Department of Agriculture's 1975 Thrifty Food Plan as a point of departure for developing food consumption lists.1/ This Plan serves as the basis for setting food stamp allotments and is designed to reflect the food consumption patterns and minimum nutritional needs of low-income families. Although the 1975 Thrifty Food Plan had been judged to be nutritionally adequate, it has also been criticized on grounds of both quality and quantity. In response to these criticisms, the 1980 Cost of Living study developed modified food plans for Washington State with the assistance of a nutritionist at the University of Washington. Those Washington food plans were repriced in this study. Detailed lists of items included in the Washington food plans can be found in the 1980 Cost of Living study.2/

The U.S. Department of Agriculture, responding to the same criticisms that prompted Washington's modifications, developed a revised Thrifty Food Plan, published in August 1983.3/ Comments received from the University of Wisconsin's Institute for Research on Poverty and the Community Nutrition Institute, of Washington, D.C., suggest that the new food plan, while nutritionally improved, is subject to many of the same problems

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1/ U.S. Department of Agriculture, Agricultural Extension Service, The Thrifty Food Plan, Washington, D.C.: Government Printing Office, September 1975; U.S. Department of Agriculture, Science and Education Administration, Food for Thrifty Families, Washington, D.C.: Government Printing Office, September 1978.

2/ Cost of Living for Low-Income Families in Washington State in 1980, Ibid., pp. 27-31, 67-93.

3/ U.S. Department of Agriculture, Consumer Nutrition Division, The Thrifty Food Plan 1983, Washington, D.C.: Government Printing Office, August 1983; U.S. Department of Agriculture, Human Nutrition Information Service, Making Food Dollars Count, Washington, D.C.: Government Printing Office, June 1983.

as the previous plan.4/ The major problem with the new plan is that it was constrained politically to cost no more than the previous one. Those who argued that the old plan underestimated the cost of providing an adequate diet have the same criticism of the new plan.

The 1983 Thrifty Food Plans were priced for comparison with Washington State plans, but the Washington State plans remain the basis for food cost measurement in this study.

2. Data Collection Methods

1980 data collection methods were modified to take advantage of published price lists prepared by Jensen Price Surveys, Inc. The use of published lists saved the time and expense required for statewide data collection. Separate lists were available for Western and Eastern Washington. One set of Western Washington prices was used for pricing areas 1 through 4. Separate prices were available for Spokane (Area 5) and Yakima (Area 7). Area 6 prices were obtained by averaging prices gathered for the Tri-Cities, Walla Walla and Ephrata-Moses Lake. Prices of a few items could not be obtained from published lists. These items were priced by Jensen's data collectors in Eastern Washington, and by project staff in the Olympia area for Western Washington. Prices were gathered from lists for the weeks of April 2nd and 9th, 1984.

The 1980 study priced items in 27 separate stores selected by local DSHS staff as stores patronized by welfare recipients. Data were then collected in those stores by Jensen's grocery pricing staff. Since the methods used in 1980 and 1984 collected prices in different locations using different procedures, efforts were made to compare results produced by the two approaches. To do this, grocery price lists were obtained from Jensen Price Surveys for October 1980, the period during which prices were gathered for the 1980 study. The results of the two pricing methods are quite similar. Appendix Table A4.1 compares 1980 food costs measured by the two methods.

3. Findings

Table 4.1 displays the monthly costs of Washington's food plans and the 1983 Thrifty Food Plans for a family of four and an elderly individual. Prices are provided by area, along with the weighted average used for statewide cost estimates. Since

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4/ "Thrifty Food Plan Revised by USDA; First Change Since 1976," Nutrition Week, Washington, D.C., Vol. XIII, No. 33, August 25, 1983, pp. 1-2.

only one set of prices was developed for the four Western Washington pricing areas, only one is presented. The Washington market baskets cost 16 to 19 percent more than the 1983 Thrifty Food Plans; however, data from the Community Nutrition Institute indicate that small increases in food expenditure dramatically increase the proportion of the low-income population that actually meet the nutritional standards assumed in the Thrifty Food Plan.5/

Table 4.1

1984 MONTHLY COST OF WASHINGTON'S
COST OF LIVING FOOD PLAN AND THE USDA THRIFTY FOOD PLAN

Pricing Area (Counties Included)	Washington's COL Food Plan		USDA 1983 Thrifty Food Plan	
	Family of Four	Elderly Individual	Family of Four	Elderly Individual
Areas 1 to 4 (Western Washington)	$296.16	$90.92	$248.84	$78.58
Area 5 (Spokane)	283.25	88.12	244.48	76.22
Area 6 (Chelan, Franklin)	290.93	89.66	246.59	76.53
Area 7 (Yakima)	278.50	86.54	235.37	75.86
STATEWIDE AVERAGE	$293.17	$90.18	$247.26	$77.92

SOURCE: Grocery price lists for April 1984, provided by Jensen Price Surveys, Inc.; 1980 Cost of Living study; Making Food Dollars Count, USDA, 1983; personal communication with Betty Peterkin, Food and Nutrition Service, USDA.

NOTES: Washington's Cost of Living Food Plan was used to price the monthly cost of food in the 1980 Cost of Living study and the current study.

5/ Nutrition Week, Ibid., p.2.

B. Shelter: Housing

This section evaluates the method for pricing shelter costs established in the 1980 study, and presents 1984 shelter costs. The standards developed for this study are based on Fair Market Rents (FMRs) published by the U.S. Department of Housing and Urban Development (HUD). This was also the case in 1980, but changes in the way HUD calculates FMRs require changes in the way standards are calculated.

1. Criteria and Standards of Measurement in 1980

The 1980 Cost of Living study based its shelter cost standards on the costs of rented housing, since most low-income households rent, rather than own, their housing. FMRs measure the cost of renting units meeting the quality standards used by the Section 8 Housing Program. FMRs are set using Annual Housing Surveys conducted nationally for HUD by the U.S. Census Bureau. In 1980, FMRs were calculated at the median rent for recently rented housing meeting the quality standards, so that FMRs would allow access to 50 percent of the housing market in a given area.6/ Since 1983, FMRs have been calculated at the 45th percentile of rents, allowing access to 45 percent of such housing.7/ HUD uses FMRs to determine whether it will subsidize housing under the Section 8 Program.

The 1980 study used FMRs for two-bedroom units to estimate the cost of housing needed by the model family of four, and rents for studio apartments to estimate the needs of an elderly SSI individual. FMRs are gross rents, including rent and all utilities. Consequently, the 1980 study measured net rental costs by subtracting HUD estimates of heating and electricity costs from FMR figures. The 1980 rent standard excluded energy costs, but included the costs of water, sewer, and garbage service. The costs of these services are often included in the rent.

6/ FMRs used in the 1980 Cost of Living study were published in the Federal Register, Volume 45, No. 6, March 26, 1980, and the procedure used to calculate those rents was published in the Federal Register, Volume 44, No. 122, June 22, 1979.

7/ FMRs estimating 45th percentile rents for April 1984 were published in the Federal Register, Volume 48, No. 186, September 23, 1983, which also describes the procedure used to calculate them.

2. Analysis of FMR Data

Prior to setting 1984 standards, care was taken to determine whether FMRs were reasonable measures of housing costs in 1980. 1980 Census data were used to see if the FMRs used in the 1980 study accurately reflected Washington rents and to determine the best method of calculating net rents from FMR data. The statewide average of the FMRs for the seven counties used to measure rents in 1980 was almost identical to the statewide average of median rent for units meeting HUD quality standards, according to the 1980 Census ($293.30 vs. $293.93 for a two-bedroom unit). This indicates that FMRs were quite accurate as a measure of gross rents in 1980. However, energy costs, measured using methods described later in this report, were higher than the HUD energy allowances used to calculate net rents in 1980.

3. Cost Data for Shelter: Housing Component

As in 1980, housing cost standards are set at the 50th percentile of net rents for recently rented two-bedroom units for the family of four, and at the 50th percentile of net rents for recently rented studio units for elderly individuals. Fiftieth percentile rents were calculated using current FMRs, set at the 45th percentile, and the relationship between 45th and 50th percentile rents measured in U.S. Census data. Net rents were produced by subtracting energy costs for heat and household maintenance. FMRs for each pricing area were calculated by taking a weighted average of the FMRs for the counties in those areas, using the proportion of AFDC recipients in each county as weights.

Table 4.2 shows the shelter standards that result from these procedures, by pricing area. The average figure for a family of four, statewide, is $332.53 per month, and the average figure for an SSI individual is $255.91 per month.

C. Shelter: Fuels

This section evaluates the energy and utility cost components of the cost of living market baskets. Several approaches were used to evaluate energy costs. This section considers heating costs for low-income households. Energy costs for other essential uses will be considered as part of the household maintenance component. A separate utility cost estimate combining the costs of all essential utilities will be presented at the end of this chapter (p.27).

1. Criteria and Standards of Measurement

The 1980 Cost of Living study measured heating costs from data on Washington residents who responded to a survey of energy consumption conducted for the Bonneville Power Administration.8/

8/ Elrick and Lavidge, Inc., Pacific Northwest Residential Energy Survey, Bonneville Power Administration and Pacific Northwest Utilities Conference Committee, July 1980.

Table 4.2

1984 MONTHLY COST FOR SHELTER: HOUSING

Pricing Area (Counties Included)	Family of Four	Elderly Individual
Area 1 (King)	$402.46	$314.33
Area 2 (Pierce)	333.57	243.60
Area 3 (Cowlitz, Thurston)	287.85	219.72
Area 4 (Whatcom)	300.23	232.90
Area 5 (Spokane)	294.38	238.06
Area 6 (Chelan, Franklin)	300.72	210.11
Area 7 (Yakima)	280.84	177.02
STATEWIDE AVERAGE	$332.53	$255.91

SOURCE: Fair Market Rents, U.S. Department of Housing and Urban Development; Washington State Energy Office; 1980 U.S. Census data.

NOTES: Figures shown in this table are net rents based on Fair Market Rents effective April 1, 1984, minus energy costs. Energy costs were calculated from energy consumption data provided by the Washington State Energy Office and U.S. Census data. Standards for the family of four are based on rents for two-bedroom units. Standards for the elderly individual are based on rents for studio units.

Sample sizes available from that survey were somewhat small, but the major drawback to this approach was that it estimated energy needs for low-income people based on the amount of energy they purchased rather than on social norms regarding their needs.

Two additional data sources were used in this study to measure energy consumption using a more normative approach.

Household energy consumption figures provided by the Washington State Energy Office were used to measure quantities of energy consumed to heat Washington households, by type of energy used.9/ These data, combined with current energy prices, made it possible to measure the annual cost of energy used to heat the average Washington household in April 1984. Cost standards for model families were established using U.S. Census data, which showed that the average four-person household renting two-bedroom housing units spent 90 percent of the average amount spent on energy by all households statewide. The standard for a single elderly individual was set at 36 percent of the statewide average, since individuals renting studio units characteristically spend 36 percent of the average amount spent on energy statewide. Use of these relationships calibrates the heating cost standard to norms in the statewide population, rather than norms for low-income people alone.

2. Cost Data for Shelter: Fuels Component

The average Washington household used 68.6 million BTUs to provide residential space heat in 1982, the most recent year for which consumption data are available. Just over one-third of this energy was in the form of electricity, with the remainder provided by natural gas, wood, fuel oil, and liquified petroleum (LP) gas in order of importance.

Average monthly consumption figures were developed by dividing annual consumption figures by twelve. Prices for energy from each source were gathered in April 1984 for each pricing area from the Washington State Energy Office, Washington State Utilities and Transportation Commission, and a telephone survey of fuel oil and LP gas suppliers in sample counties. In April 1984 prices, the average monthly cost of home heating requirements for Washington's households was $43.52 per month. The standards for the model families, based on 90 percent of the average costs for the seven pricing areas for the family of four and 36 percent for the elderly individual, were $39.17 and $15.63 per month respectively.

9/ George Hinman, et al., Washington State Energy Use Profile 1960-1981, Prepared by the Office of Applied Energy Studies, Washington State University, for the Washington State Energy Office, December 1982. Average residential consumption was calculated from Table 75, which has been updated to 1982 by its authors.

Table 4.3 shows the monthly cost of heating for the two model households, by pricing area. Climatic conditions influence heating requirements, and heating costs are adjusted to increase costs in areas with higher heating requirements and decrease costs in warmer areas. This is done using heating degree days, a measure of heating requirements, in the same manner as the 1980 study.

D. Transportation

1. Criteria and Standards of Measurement

As in 1980, cost standards for transportation are based on the cost of minimal use of a private automobile. Data published by the U.S. Department of Transportation (DOT) were used to measure the cost of operating 7 to 12-year old automobiles, using a standard four-door automobile for both model families.10/

As in 1980, four types of adjustments were made to the costs reported in the DOT study: 1) non-essential ownership costs were eliminated, 2) travel costs were reduced to reflect only necessary trips, 3) local prices were used in place of the Baltimore prices used in the DOT report, and 4) maintenance costs were updated to reflect a 15 percent increase in the Consumer Price Index for automobile maintenance and repair between July 1981 and April 1984.11/

2. Data Collection Methods

Standards for annual mileage traveled by the model families were used to determine operating costs. This study used a 1983 survey conducted by the GMA Research Corporation for the Washington State Department of Transportation to produce minimum but adequate mileage figures. Data on distances traveled to the store by households with incomes under $10,000 per year were obtained for each COL pricing area.12/ Total mileage figures were calculated

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10/ U.S. Department of Transportation, Federal Highways Administration, Cost of Owning and Operating Automobiles and Vans: 1982. The 1980 Cost of Living study relied on a similar document, published in 1979.

11/ The 1982 DOT study presented prices in 1981 dollars. Inflation indices were obtained in telephone conversations with the staff of the Bureau of Labor Statistics, U.S. Department of Labor, Region IX - San Francisco.

12/ The 1980 Cost of Living study relied on a similar survey conducted in 1980. The 1983 survey was more useful than the 1980 survey, since it collected mileage information for all COL pricing areas and recorded miles traveled in actual miles rather than in mileage ranges. Mileage estimates produced by the 1983 survey are somewhat higher than those produced by the 1980 survey, but are probably more accurate.

Table 4.3

1984 MONTHLY COST FOR SHELTER: FUELS

Pricing Area (Counties Included)	Family of Four	Elderly Individual	Annual Heating Degree Days
Area 1 (King)	$37.28	$14.91	5185
Area 2 (Pierce)	37.35	14.94	5501
Area 3 (Cowlitz, Thurston)	40.40	16.16	5580
Area 4 (Whatcom)	40.11	16.04	5162
Area 5 (Spokane)	44.16	17.67	6835
Area 6 (Chelan, Franklin)	38.29	15.32	6035
Area 7 (Yakima)	42.74	17.09	6009
STATEWIDE AVERAGE	$39.17	$15.63	5619

SOURCE: Washington State Energy Office, Washington State Utilities and Transportation Commission, and telephone surveys of fuel oil and LP gas suppliers.

NOTES: The figure for annual heating degree days in Area 4 is lower than the 5754 used in the 1980 Cost of Living study. The 5162 figure for Anacortes is more representative of the population centers in this area than the 5754 figure for Newhalem.

using the 1980 allowance of 2.3 two-way trips to the store for an elderly person and 4.6 two-way trips to the store per week for the family of four.

The price of regular gasoline was obtained from an April 1984 statewide survey conducted by the Automobile Club of Washington.13/ The prices of oil filters, oil changes, and tires were obtained from the discount stores used to price clothing and housewares. Driver license renewal fees (four-year) were obtained from the Washington State Department of Licensing. 1984 car registration fees were obtained from the Washington State Department of Revenue for 7 to 12-year old Chevrolet Impalas. These costs were then averaged.

3. Cost of the Transportation Component

Annual mileage allowances and monthly transportation costs were calculated for the model households in each pricing area and are shown in Table 4.4. Total ownership costs were $15.47 per month for both model families, since ownership costs do not depend on mileage. Monthly operating costs for the family of four ranged from a low of $15.57 in Region 1 (including King and Snohomish Counties) to $32.78 in Region 6 (rural Eastern Washington, including Franklin and Chelan Counties). The weighted average cost of the transportation component statewide was $35.28 for the family of four and $29.11 for the elderly individual.

E. Household Maintenance, Clothing and Personal Care/Medicinal Supplies Components

Household maintenance items include: electricity and gas for non-heating purposes; telephone service; household supplies such as cleaning agents and lightbulbs; and household operations. Household operations include: supplies for clothing repair; stamps and writing supplies; laundry costs (at a laundromat); and checking account fees. Household maintenance items also include housewares and linens. Clothing, personal care items, medicinal supplies, and newspapers were treated as separate components.

1. Quality and Quantity Standards

Electricity and gas costs for non-heating purposes were priced using Washington State Energy Office data on the average amount of energy used for six essential functions: heating water, cooking, refrigeration, lighting, operation of a television, and operation of fans for cooling. The energy components of this market basket were priced by the same method used to price heating costs. Quality standards and quantities of other goods and services are described in detail in the 1980 study.

13/ Automobile Club of Washington, Press Release, April 13, 1984.

Table 4.4

1984 ANNUAL MILEAGE ALLOWANCE AND
MONTHLY COST FOR TRANSPORTATION

Pricing Area (Counties Included)	Family of Four		Elderly Individual	
	Annual Mileage	Monthly Cost	Annual Mileage	Monthly Cost
Area 1 (King)	751	$31.04	376	$27.13
Area 2 (Pierce)	1,196	35.70	598	29.46
Area 3 (Cowlitz, Thurston)	981	33.55	490	28.36
Area 4 (Whatcom)	1,674	41.23	837	32.22
Area 5 (Spokane)	1,196	35.94	598	29.57
Area 6 (Chelan, Franklin)	2,335	48.25	1,167	35.72
Area 7 (Yakima)	837	32.12	418	27.67
STATEWIDE AVERAGE	1,141	$35.28	570	$29.11

SOURCE: U.S. and Washington State Departments of Transportation; Automobile Club of Washington; surveys of the cost of oil changes and automotive supplies and assumptions published in the 1980 Cost of Living study.

NOTES: Mileage figures differ from those used in the 1980 Cost of Living study, and are based on a more recent survey of the travel habits of Washington residents.

2. Collection of Price Data

Energy prices were obtained from the Washington State Energy Office and the Washington State Utilities and Transportation Commission. Many household maintenance items were priced in supermarkets in 1980. These were priced using price lists provided by Jensen Price Surveys in 1984. Those items previously priced in K-Mart stores were priced in four Western Washington K-Mart stores in 1984. Prices from those stores were averaged and used for all regions of the state, since the 1980 data showed that K-Mart prices were similar statewide. As in 1980, some items were not available in K-Marts, and these were priced in Sears and J.C. Penney's catalogues. Shipping costs were applied to catalogue purchases in the manner described in the 1980 study. Sales tax was also applied, where appropriate, at the average sales tax rate in each pricing area. Price data for items that could not be priced in stores, such as haircuts and laundry services, were priced in the nine sample counties by telephone survey, following methods described in the 1980 Cost of Living study.

Telephone service was priced in sample counties for each pricing area assuming use of a leased dial telephone on a four-party line. No long distance service was included. Tariffs and appropriate taxes were obtained from the Washington State Utilities and Transportation Commission for April 1984. These procedures are identical to those used in 1980.

Procedures used to price clothing were also the same as those used in 1980. New clothing was priced; however, one-third of all clothing needs, except those of the toddler, were assumed to be met through the purchase of used clothing. New clothing prices were reduced to reflect the purchase of used clothing, using assumptions spelled out in the 1980 study. The toddler's clothing needs were assumed to be met by a combination of new items and clothes handed down from older children.

3. Costs of Household Maintenance

The average Washington household used 28.7 million BTUs of energy for essential non-heat purposes in 1982. Just over half of this amount was used to heat water, and 90 percent of the energy used for these purposes was in the form of electricity. The average monthly cost of this energy was $23.72 in April 1984 prices. The standards established for the model families were $21.35 per month for a family of four (90 percent of the statewide average) and $8.57 per month for an elderly individual (36 percent of the average).

The costs of household maintenance items, clothing, personal care, medicinal supplies, and newspapers are displayed in Tables 4.5 and 4.6 for the two model households.

TABLE 4.5

FAMILY OF FOUR: 1984 MONTHLY COST FOR HOUSEHOLD MAINTENANCE, CLOTHING, PERSONAL CARE, MEDICINAL SUPPLIES, AND MISCELLANEOUS COMPONENTS

Components	Area 1 (King)	Area 2 (Pierce)	Area 3 (Cowlitz/ Thurston)	(Area 4 (Whatcom)	Area 5 (Spokane)	Area 6 (Chelan/ Franklin)	Area 7 (Yakima)	Statewide Average
Household Maintenance	$ 88.06	$ 81.30	$ 87.72	$ 86.15	$ 75.26	$ 79.11	$ 88.00	$ 84.59
1. Utilities								
a. Telephone	10.07	9.46	8.30	8.54	9.27	8.57	8.38	9.17
b. Electricity-Gas	22.45	19.69	22.93	26.34	18.27	17.66	22.22	21.35
2. Household Supplies	11.18	11.17	11.07	11.14	11.22	10.52	10.78	11.05
3. Household Operations								
a. Sewing Supplies	.82	.82	.81	.82	.82	.81	.82	.82
b. Household Management	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
c. Laundry	23.77	20.65	24.58	20.21	15.55	21.67	25.81	22.39
d. Checking Account	3.89	3.64	4.28	3.27	4.28	4.09	4.14	3.97
4. Housewares and Linens								
a. Housewares	5.08	5.08	5.03	5.06	5.07	5.05	5.07	5.07
b. Linens	9.05	9.04	8.97	9.02	9.03	8.99	9.03	9.02
Clothing	43.88	43.88	43.52	43.76	43.85	43.69	43.80	43.76
Personal Care	23.76	23.75	23.62	23.70	23.82	23.61	24.31	23.75
Medicinal Supplies	1.96	1.96	1.95	1.96	2.01	2.00	2.01	1.97
Miscellaneous: Newspapers	8.50	8.25	8.25	9.75	8.75	7.17	7.08	8.24
TOTAL	$166.16	$159.14	$165.06	$165.32	$153.69	$155.58	$165.20	$162.31

SOURCE: Surveys of prices in discount stores, grocery price lists supplied by Jensen Price Surveys, Inc.; Washington State Energy Office; Washington State Utilities and Transportation Commission, and telephone surveys of service providers.

NOTES: Sales taxes are included, where appropriate, at the average sales tax rate for each pricing area.

TABLE 4.6

ELDERLY INDIVIDUAL: 1984 MONTHLY COST FOR HOUSEHOLD MAINTENANCE, CLOTHING, PERSONAL CARE, MEDICINAL SUPPLIES, AND MISCELLANEOUS COMPONENTS

Components	Area 1 (King)	Area 2 (Pierce)	Area 3 (Cowlitz/ Thurston)	(Area 4 (Whatcom)	Area 5 (Spokane)	Area 6 (Chelan/ Franklin)	Area 7 (Yakima)	Statewide Average
Household Maintenance	$43.91	$39.95	$42.27	$40.17	$36.96	$38.07	$40.43	$41.41
1. Utilities								
a. Telephone	10.07	9.46	8.30	8.54	9.27	8.57	8.38	9.25
b. Electricity-Gas	8.98	7.88	9.17	10.54	7.31	7.07	8.89	8.57
2. Household Supplies	4.24	4.24	4.20	4.22	4.29	4.04	4.17	4.21
3. Household Operations								
a. Sewing Supplies	.27	.27	.27	.27	.27	.27	.27	.27
b. Household Management	1.55	1.54	1.54	1.54	1.54	1.54	1.54	1.54
c. Laundry	9.16	8.00	9.45	7.81	5.97	8.41	9.91	8.71
d. Checking Account	2.56	1.48	2.32	.19	1.25	1.13	.21	1.80
4. Housewares and Linens								
a. Housewares	3.61	3.61	3.58	3.60	3.60	3.59	3.60	3.60
b. Linens	3.47	3.47	3.44	3.46	3.46	3.45	3.46	3.46
Clothing	12.18	12.18	12.08	12.14	12.17	12.12	12.16	12.15
Personal Care	10.46	10.46	10.39	10.43	10.42	10.36	10.54	10.44
Medicinal Supplies	.94	.94	.93	.94	.96	.95	.96	.94
Miscellaneous: Newspapers	8.50	8.25	8.25	9.75	8.75	7.17	7.08	8.23
TOTAL	$75.99	$71.78	$73.92	$73.43	$69.26	$68.67	$71.17	$73.17

SOURCE: Surveys of prices in discount stores, grocery price lists supplied by Jensen Price Surveys, Inc.; Washington State Energy Office; Washington State Utilities and Transportation Commission, and telephone surveys of service providers.

NOTES: Sales taxes are included, where appropriate, at the average sales tax rate for each pricing area.

F. Utility Costs

This section provides estimates of the overall cost of utilities for low-income families. The USDA Food Stamp program disregards the portion of AFDC benefits that covers utility costs when calculating benefits, so accurate measurement of utility costs faced by low-income households is important.

1. Criteria and Standards of Measurement

The utilities examined in this section include: heat, non-heat electricity and gas, telephone service, water, sewer, and garbage. The first three components have been discussed in earlier sections of this report. Water, sewer, and garbage costs were not priced separately because the cost of these utilities is often included in rent. Net rents presented in this and the 1980 reports include water, sewer and garbage costs.

2. Cost Data for All Utilities Combined

Separate cost estimates for water, sewer, and garbage collection were obtained to be combined with the costs of energy and telephone service already presented in this report. This was done through a telephone survey of suppliers in the nine counties reflecting the seven pricing areas. Water and sewer costs for a four-person household were based on the use of 600 cubic feet of water per month. Garbage costs were based on the cost of collecting two cans per week. Costs for the elderly individual were based on the use of 300 cubic feet of water per month and one can of garbage per week. Table 4.7 illustrates statewide utility costs, by utility.

Table 4.7
1984 MONTHLY STATEWIDE UTILITY COSTS, BY UTILITY

Utility	Family of Four	Elderly Individual
Heat	$ 39.17	$ 15.63
Electricity and Gas for Non-Heat Uses	21.35	8.57
Telephone	9.17	9.25
Water	4.94	3.35
Sewer	6.09	3.55
Garbage	7.61	5.40
Total	$ 88.33	$ 45.75

SOURCE: Washington State Energy Office, Washington State Utilities and Transportation Commission, and telephone surveys of fuel oil, LP gas, water, sewer, and garbage disposal supplies.

CHAPTER 5: UPDATING THE COST OF LIVING STUDY

The 1980 Cost of Living study included a plan for regular updating of cost of living results. Annual updates were needed to meet the mandate of Washington State law. More comprehensive updates, such as this one, were scheduled on a less frequent basis, to allow revisions in market baskets as original lists became obsolete. This chapter evaluates the annual update procedures developed in 1980.

A. Update Methodology

The authors of the 1980 Cost of Living study proposed the use of Consumer Price Index (CPI) data to produce annual updates of that study's results. They divided the items priced in the study into 22 components and used the CPI index appropriate for each component to update the cost of that portion of the need standard. The costs of the updated components were then added together to yield a new updated cost of living figure.1/

This procedure has several advantages. First, it ensures that the annual updates are based on inflation for only those items included in the market baskets. Second, the relative importance of different items in the updated index is determined by the cost of living study. Most criticisms of CPI indices concern the proper definition of CPI components and relative weights assigned to each component.2/ By selecting the appropriate components and using weights generated by Washington cost of living studies, these problems can be avoided.

The present study evaluated the accuracy of this method and the choice of indices used in the update methodology. Three major choices are available. The first is to use indices for components of the U.S. Cities CPI, which reflect nationwide inflation rates. The second is to use similar indices from the Seattle-Everett CPI, which measure price changes in the Seattle-Everett Standard Metropolitan Statistical Area. The third is to use components of the Implicit Price Deflator (IPD), which are available on a national basis only. The current procedure uses the Seattle-Everett CPI to update food, energy, and transportation costs, and the U.S. Cities CPI to update the remaining components.

1/ See Russell Lidman, David Pavelchek, Worksheet for Updating Cost of Living Estimates Cost of Living Study Background Notes: 5, Office of Research, DSHS, February 1981.

2/ The major definitional problem concerns the way that interest rates influence the costs of home ownership. The update procedure avoids this problem by using the CPI component for residential rent to update housing costs.

Use of the IPD to update cost of living estimates was rejected in 1980, because the assumptions on which it is based are not consistent with Washington's market basket methodology. The composition of IPD components shifts in response to relative price changes as consumers change their consumption from more expensive to less expensive items. Washington cost of living updates attempt to track changes in the cost of a fixed market basket set at subsistence levels. Use of the IPD to prepare annual updates would be inappropriate because it would allow market basket quantities to change over time.

This evaluation centered, therefore, on whether use of CPI indices produced accurate annual updates, and whether U.S. Cities or Seattle-Everett indices should be used. Local area CPI data, such as the Seattle-Everett indices, have come under criticism by the U.S General Accounting Office for potential inaccuracy. They generally are based on small sample sizes and have a larger margin of statistical error than national figures.3/

B. Evaluation of CPI Based Updates

In order to measure the accuracy of updates based on U.S. Cities and Seattle-Everett data, three separate updates of 1980 cost of living data were prepared. The first was based entirely on U.S. Cities CPI component indices. The second was based, as much as possible, on Seattle-Everett CPI data. This used Seattle-Everett data for food, rent, energy and transportation cost components. The third used the 1980 update procedure, which used Seattle-Everett data for food, energy and transportation components, and U.S. Cities data for rent and the remaining components. All updates were prepared for the month of April 1984. The results are compared with actual 1984 cost of living findings in Table 5.1.

The update prepared using the 1980 update methodology came the closest to the actual 1984 cost of living figures. The two cost figures are only 71 cents apart. The update based on U.S. City data was also close, at $850.88, or 98.7 percent of the 1984 cost figures. 4/ This was due to lower food and energy cost increases than indicated in Seattle-Everett data. The update which used the Seattle-Everett rental cost CPI component produced the lowest 1984 cost estimate. This is because the residential rent component of the Seattle-Everett CPI increased by only 9.0 percent between October 1980 and April 1984. This increase appears to have been too low, since a survey of rental costs in Seattle conducted by the Seattle-Everett Real Estate Research Committee showed a 16 percent increase for the same period.

3/ Funds Needed to Develop CPI Quality Control, Ibid., pp. 29-30.

4/ Revised slightly from previous printings of this report to correct calculation errors.

TABLE 5.1

COMPARISON OF 1984 COST OF LIVING
WITH 1980 COST OF LIVING FIGURES
UPDATED WITH CONSUMER PRICE INDEX DATA

Need Component	Actual 1984 Cost	Updated 1980 Costs Using: U.S. City CPI	Seattle CPI a/	1980 Methodology
1. Food	$293.17	$291.97	$293.56	$293.56
2. Shelter: Housing	332.53	332.63	290.03	332.63
3. Shelter: Fuels	39.17	32.32	37.72	37.72
4. Transportation	35.28	35.59	34.83	34.83
5. Household Maintenance	84.59	83.58	89.64	89.64
6. Clothing	43.76	39.79	39.79	39.79
7. Personal Care	23.75	25.02	25.02	25.02
8. Medicinal Supplies	1.97	1.85	1.85	1.85
9. Miscellaneous	8.24	8.13	8.13	8.13
TOTAL	$862.46	$850.88	$820.57	$863.17

SOURCE: 1980 Cost of Living study and Consumer Price Indices for all consumers in U.S. Cities and in the Seattle-Everett Standard Metropolitan Area, provided by the U.S. Bureau of Labor Statistics.

NOTES: The updated 1980 figures were produced using the methodology described in the 1980 Cost of Living study Technical Paper Number 5. Household maintenance, personal care, and total cost figures differ slightly from those in previous printings of this report to correct calculation errors.

a/ Clothing, personal care, medicinal supply and miscellaneous (newspaper) costs are based on U.S. City CPI data due to lack of local data. Non-energy portions of household maintenance costs are also based on U.S. City data, for the same reason.

Data on the Seattle-Everett CPI components used in the 1980 update methodology are currently available on a monthly basis. Beginning in January 1987, these data will be published only twice a year as a result of changes planned by the Bureau of Labor Statistics. U.S. Cities CPI data will continue to be available on a monthly basis, however, and will be an acceptable substitute for local data in the annual update methodology. The present study recommends that U.S. Cities CPI indices be used to prepare annual updates after 1987.

APPENDIX TABLES

TABLE A3.1

1984 MONTHLY COST OF LIVING, BY PRICING AREA

Pricing Area (Counties Included)	Cost of Living	
	Family of Four	Elderly Individual
Area 1 (King)	$933.10	$523.28
Area 2 (Pierce)	861.92	450.70
Area 3 (Cowlitz, Thurston)	823.02	429.08
Area 4 (Whatcom)	843.05	445.51
Area 5 (Spokane)	811.42	442.68
Area 6 (Chelan, Franklin)	833.77	419.48
Area 7 (Yakima)	799.40	379.49
STATEWIDE AVERAGE	$862.46	$464.00

SOURCE AND NOTES: Refer to Table 3.1

Table A4.1

WASHINGTON'S COL FOOD PLAN FOR A FAMILY OF FOUR
IN OCTOBER 1980 MEASURED BY SURVEY AND BY JENSEN PRICE LISTS

Pricing Area (Representative County)	Costs Based On: 1980 Survey	1980 Price Lists
Area 1 (King)	$253.87	$253.93
Area 2 (Pierce)	251.16	253.93
Area 3 (Thurston)	252.72	254.20
Area 4 (Whatcom)	256.95	254.20
Area 5 (Spokane)	258.65	255.36
Area 6 (Franklin)	264.39	256.69
Area 7 (Yakima)	253.12	250.08
STATEWIDE AVERAGE	$254.69	$254.13

SOURCE: 1980 Cost of Living study and grocery price lists for October 1980, provided by Jensen Price Surveys, Inc.

NOTES: Statewide averages are calculated using 1980 caseload weights published in the 1980 Cost of Living study. The 1980 survey collected grocery prices in three stores in each of the counties listed above, while 1980 price lists data were gathered using one list for Western Washington, one list for Spokane, one list for Yakima, and average prices from lists for Tri-Cities, Walla Walla, and Ephrata/Moses Lake for the balance of Eastern Washington. Jensen's 1980 price lists divided Western Washington into two regions. This division was eliminated by 1984, due to changes in market structure that reduced price differences.