

COMPARATIVE STUDY, COST OF OPERATION EIGHT SIMILAR BOOKMOBILES  
IN WESTERN WASHINGTON 1947-1951

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Washington State has had eight bookmobiles of similar design operating in the western part of the State for the last five years. A comparison of their operating costs brings to light factors which are important to libraries considering bookmobile operation problems.

The items used in this survey are based upon an accounting system set up for the bookmobiles of King County under the direction of Miss Ella McDowell, County Librarian, who retired in 1951. Records were not obtainable from two counties until the year 1951, but that year is complete. Where a single item was missing and a comparable item was substituted, the substitution was noted. Estimated figures were also noted. Libraries operating bookmobiles in Western Washington have stressed the completeness and high quality of their services and getting together their records for this survey has taken several months. Where library funds are limited, record details are secondary to accomplished values in service.

It will be noted that the eight libraries do not record the same items: Some include Oil and Lubrication with the gasoline account. Some have no separate expense for washing because their drivers take care of exterior washing. Some have no expense for storage and park their bookmobiles on library property either under or without shelter. The insurance item includes both truck and industrial insurance. In the case of Seattle, it is difficult to arrive at the insurance item because the bookmobile is included in the city vehicle coverage. In the absence of actual insurance figures for Seattle, King County's were substituted and in the 1947 record, Whatcom County's insurance figures were used for Grays Harbor County. Snohomish County includes oil with the gas account and considers lubrication and battery



and electrical service a part of the repair account. Snohomish County also includes tires, wheel changes, light globes and so forth in an Accessory account which has been entered in the Miscellaneous column. The mileage for Grays Harbor County was given in total and prorated for each year.

The Cost Per Mile was computed by taking the total expense of operation and dividing by the mileage. The Cost Per Book was computed by adding the Wages account to the total cost of truck operation and dividing by the circulation. The abbreviations "C P M" will indicate Cost Per Mile and "C P B" Cost Per Book in the following observations.

Of the eight bookmobiles, Seattle's is the only one serving an urban area with paved streets. The other seven bookmobiles serve county areas, both rural and more or less suburban, where the roads are dirt or gravel and the improved highways are cement or blacktop. The county headquarters are in the cities of Seattle, Tacoma, Bellingham, Vancouver, Everett, Bremerton and Montesano. The bookmobiles may have but a few minutes run to reach the county areas of service as in Grays Harbor County or almost a half-hour run as in King County to get out of heavy Seattle traffic. Grays Harbor County, with headquarters at Montesano, has the longest single run, the greatest mileage and probably the largest percentage of unimproved highways, although this last statement is debatable. There are many miles of gravel and dirt roads in all of the counties. Whatcom County is the most northerly one and the one most exposed to severe northeasterly storms that tie up and wear out the roads.

The bookmobiles with the higher mileages: Grays Harbor, Pierce, Whatcom and Snohomish Counties, and Vancouver Regional, have had the lower C P M. Seattle and King County, with lower mileages, have had higher C P M. Seattle's bookmobile, operating entirely within the crowded urban area, encounters many hills and cannot avoid heavy traffic. Short runs between stops and much



starting and stopping in traffic account for the higher operating costs. King County's bookmobile, with the second lowest mileage, also has the problem of heavy Seattle traffic. This bookmobile joined another already in service and a two-truck schedule made it possible to operate the new truck only on the more improved highways and the shorter runs. This has apparently kept down King County's repair costs but the C P M remains comparatively high. In 1951, when the Snohomish County and Kitsap County costs advanced above King County, Snohomish had mounting repair costs and Kitsap had the expense of a new motor and the rebuilding of the truck body.

It will be noted that the bookmobiles vary in their comparative repair costs except for Whatcom and Grays Harbor Counties which have been in the lower group for the last four years. Comparisons seem to show that higher repair costs do not follow the longest mileages, the heaviest traffic, the poorest roads or the hazards of weather or a combination of all four factors. Somewhere, one would expect the human element, the driver, to enter the picture and it may be that the skill and the ability of a driver to anticipate repair problems is an important factor in controlling repair costs.

It is very interesting to note that the C P M of each bookmobile followed no set pattern for the five-year period. It would seem logical for the C P M of each to increase each year with use and age but, except for Snohomish County, this was not the case.

	COST PER MILE				
	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>
Snohomish County	.061	.108	.108	.126	.157
Grays Harbor County	.066	.091	.117	.123	.087
Fort Vancouver Regional					.095
Whatcom County	.132	.077	.074	.069	.106
Pierce County		.109	.115	.092	.12
King County	.156	.175	.164	.138	.138



COST PER MILE (Cont'd.)

	<u>1947</u>	<u>1948</u>	<u>1949</u>	<u>1950</u>	<u>1951</u>
Seattle	.314	.244	.188	.279	.174
Kitsap County					.248

Whatcom County showed a steady decline for four years and the increase in 1951 was well below the 1947 figure. Grays Harbor County increased for four years and in 1951 dropped below the 1948 figure. Pierce County fluctuated and in 1951 was slightly higher than it had been previously. King County and Seattle both had fluctuating C P M and each had lower cost figures in 1951 than in any previous year. A fluctuating C P M and a decreasing figure might indicate that early attention to certain repairs had postponed a general depreciation.

The eight bookmobiles each have a capacity of 2,200 books. They were ordered from a Chevrolet dealer in Vancouver, Washington who supplied the  $1\frac{1}{2}$  ton cab-over-engine 1946 chassis and sublet the order for the custom-built body to a company in Portland, Oregon. Ordered in April, 1946, they were delivered on various dates from November, 1946, when Clark County received theirs, to September, 1947, when Seattle's was delivered.\* War restriction and material shortages together with the impossibility of supervising the builder in his first venture with building bookmobiles, resulted in eight bookmobiles which seemed to some of the libraries to require reconstruction in certain details. Within the first two years, several of the bookmobiles had changed their lighting systems, replaced their heaters, readjusted the front axle and made minor rearrangements in their shelving, all of which contributed to a higher and a fluctuating C P M.

A consideration of the C P B of the eight trucks takes into account all the previously mentioned factors except mileage and two additional factors:

\*Specifications in A L A Bulletin. November, 1948. Part II pp 574-575



wages and book circulation. The circulation of books on each bookmobile showed a steady increase with a few exceptions. Snohomish County and King County both had a decrease in 1950 when Snohomish County added a second and King County added a third bookmobile to their service. 1951 found both counties with a further decrease. King County suffered a budget cut which reduced its service to two bookmobiles and increased the service interval from twice a month to three weeks, a reduction that is always damaging.

The variation in the Wages item is very great. Seattle's and King County's wage accounts are more than twice that of Grays Harbor County, 1948-1951. Although this is a reflection of a difference in city and rural wage levels, it is directly due to the size of the staff carried. The bookmobiles with the smaller wage items have budgets which allow for only a two-staff crew, a librarian and a driver-clerk. Snohomish bookmobile carries a clerical assistant part of the time but King County and Seattle, with the highest wage items, regularly carry a three-staff crew. The third person, a clerical assistant, relieves the professional librarian of the pressure of routines so that she can make as full use as possible of her abilities as a reader's advisor. This is especially important where the service is rushed and in urban and suburban areas where patrons may compare service from a bookmobile with that in a well-staffed branch or central library. In the wages account, the work done on registration, records and reserves at the headquarters office is also included. This varies in amount in the different libraries. Fort Vancouver Regional uses photographic charging and believes that this minimizes record work. King County and Seattle can accomplish much record work during service hours on the bookmobile.

The calculation of C P B is important to each of the libraries but the comparison of the C P B on one bookmobile with the C P B on another should



take into consideration the scope and character of the service on the individual bookmobile and the relation of the library's bookmobile service to the branch service maintained.

Bookmobile service in Washington State has proved so valuable to the public and is such an economical way of getting reading matter into the hands of readers that more libraries have been inaugurating the service and libraries with sufficiently large budgets have been adding to their bookmobile equipment. Several different local firms have constructed custom-built bodies and bookmobiles have been ordered from an eastern builder.

This study in cost of operation considers only the eight similar bookmobiles and aims to show the different factors involved and the variation in resulting cost figures. Further study, which includes all the bookmobiles of Washington, will add to this information and provide a broader basis for understanding the factors determining the cost of operation of bookmobiles. Out of this further study may eventually come some basic pattern of equipment and service especially adaptable to Washington State.



COMPARATIVE STUDY COST OF OPERATION EIGHT SIMILAR BOOKMOBILES IN WESTERN WASHINGTON 1947-1951

1947

	Clark County (1)	Grays Harbor County (2)	King County (5)	Kitsap County (3)	Pierce County (7)	Snohomish County (4)	Seattle City (8)	Whatcom County (6)
Headquarters	Vancouver	Montesano	Seattle	Bremerton	Tacoma	Everett		Bellingham
Mileage		12,000	3,550			10,732	°1,179	5,230
Circulation Total		33,922	43,957		14,568	83,283	23,584	16,467
EXPENSES:								
Gas		215.24	95.94		113.41	412.81	37.78	98.64
Oil & Lube		36.99	30.65		12.72			22.31
Storage		80.00	61.00		45.00		45.00	105.00
Washing			3.27		27.70			
Miscellaneous			91.53		76.53	19.55		134.80
Battery & Electric		26.38			1.25			
Tires		54.16			43.31			58.04
Repairs		182.92	118.57		23.32		152.93	73.30
Insurance		*199.80	134.57		262.64	232.55	⊕134.57	199.80
Tolls: Bridge, Ferry			19.90		36.10			
Total - Truck		795.49	555.43		641.98	664.91	370.28	691.89
Wages		4,860.00	3,156.66		2,390.00	7,410.00		2,190.00
GRAND TOTAL		5,655.49	3,712.09		3,031.98	8,074.91		2,881.89
Cost per mile		.066	.156			.061	.314	.132
Cost per book		.17	.084		.208	.097		.175

\* Insurance figure missing - Whatcom County figure substituted

° Mileage estimated

⊕ Insurance figure missing - King County figures substituted

() Order in which bookmobiles were delivered

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1948

	Clark County	Grays Harbor County	King County	Kitsap County	Pierce County	Snohomish County	Seattle City	Whatcom County
Headquarters	Vancouver	Montesano	Seattle	Bremerton	Tacoma	Everett		Bellingham
Mileage		16,000	9,047		15,000	13,870	4,592	11,296
Circulation Total		58,651	132,212		97,822	165,220	109,318	75,286
EXPENSES:								
Gas		472.95	331.47		438.68	546.15	188.88	252.90
Oil & Lube		35.79	61.05		64.08			50.46
Storage		180.00	192.00		120.00		201.00	
Washing			18.54					15.50
Miscellaneous		26.50	15.03		28.74	277.40		12.79
Battery & Electric		29.11	260.25		1.00			4.42
Tires		285.57	5.32		215.28			223.57
Repairs		233.59	394.57		353.71	438.91	446.04	115.97
Insurance		208.24	284.78		275.84	241.51	⊕284.78	200.80
Tolls: Bridge, Ferry			27.50		150.12			
Total - Truck		1,471.75	1,590.51		1,647.45	1,503.97	1,120.70	876.41
Wages		4,980.00	10,259.67		6,780.00	7,820.00	10,320.00	6,056.00
GRAND TOTAL		6,451.75	11,840.18		8,427.45	9,323.97	11,440.70	6,932.41
Cost per mile		.091	.175		.109	.108	.244	.077
Cost per book		.11	.089		.086	.056	.104	.092

⊕ Insurance figure missing - King County figures substituted

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1949

	Clark County	Grays Harbor County	King County	Kitsap County	Pierce County	Snohomish County	Seattle City	Whatcom County
Headquarters	Vancouver	Montesano	Seattle	Bremerton	Tacoma	Everett		Bellingham
Mileage		16,000	9,360		15,000	13,673	4,749	11,450
Circulation Total		58,500	147,233		106,233	187,544	122,007	97,556
EXPENSES:								
Gas		508.28	330.29		420.45	523.60	199.40	261.54
Oil & Lube		17.40	94.82		63.19			53.01
Storage		180.00	220.00		120.00		216.00	105.89
Washing			27.81					29.25
Miscellaneous		46.50	7.88		57.57	149.08		1.50
Battery & Electric		272.68	12.21		90.17			12.31
Tires		272.81	180.76		81.60			
Repairs		355.98	368.83		478.56	554.83	196.01	152.80
Insurance		233.24	282.93		270.34	251.26	⊕ 282.93	233.80
Tolls: Bridge, Ferry			13.75		155.34			
Total - Truck		1,886.89	1,539.28		1,737.22	1,478.77	894.34	850.10
Wages		5,100.00	10,621.54		6,900.00	8,715.00	11,340.00	6,540.00
GRAND TOTAL		6,986.89	12,160.82		8,637.22	10,193.77	12,234.34	7,390.10
Cost per mile		.117	.164		.115	.108	.188	.074
Cost per book		.119	.082		.081	.054	.100	.0757

⊕ Insurance figure missing - King County figures substituted

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## COMPARATIVE STUDY COST OF OPERATION EIGHT SIMILAR BOOKMOBILES IN WESTERN WASHINGTON 1947-1951

1951

	Fort Vancouver Regional	Grays Harbor County	King County	*Kitsap County	Pierce County	Snohomish County	Seattle City	Whatcom County
Headquarters	Vancouver	Montesano	Seattle	Bremerton	Tacoma	Everett		Bellingham
Mileage	11,115	15,590	8,604	10,373.7	14,867	10,682	4,636	11,390
Circulation Total	150,507	76,635	128,764	83,991	118,029	128,227	121,749	120,632
EXPENSES:								
Gas	358.12	436.73	328.35	546.53	507.86	470.59	199.86	328.24
Oil & Lube	32.67	33.45	52.58		53.41			43.69
Storage		180.00	198.00		120.00		216.00	
Washing			41.62					12.90
Miscellaneous	37.59	16.43	2.37	10.53	53.52	329.22		9.83
Battery & Electric	1.50	64.90	6.18		30.05			21.42
Tires	20.46	81.60	105.54	62.83	115.81		32.40	416.90
Repairs	464.64	390.11	217.39	1,716.85	537.74	668.02	124.21	206.94
Insurance	150.40	157.24	238.81	242.29	216.68	212.76	238.81	177.30
Tolls: Bridge, Ferry					149.82			
Total - Truck	1,065.38	1,360.46	1,190.84	2,579.03	1,784.89	1,680.59	811.28	1,217.22
Wages	8,160.00	5,820.00	12,769.25	6,214.23	7,834.93	9,535.00	11,880.00	6,795.00
GRAND TOTAL	9,225.38	7,180.46	13,960.09	8,793.26	9,619.82	11,215.59	12,691.28	8,012.22
Cost per mile	.095	.087	.138	.248	.12	.157	.174	.106
Cost per book	.061	.092	.108	.104	.081	.087	.104	.066

\* Off 1½ months for repairs

○ Mileage estimated - speedometer faulty

⊕ Insurance figure missing - King County figure substituted

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## COMPARATIVE STUDY COST OF OPERATION EIGHT SIMILAR BOOKMOBILES IN WESTERN WASHINGTON 1947-1951

1950

	Fort Vancouver Regional	Grays Harbor County	King County	Kitsap County	Pierce County	Snohomish County	Seattle City	Whatcom County
Headquarters	Vancouver	Montesano	Seattle	Bremerton	Tacoma	Everett		Bellingham
Mileage	(formerly	16,000	7,350		15,584	11,717	4,344	11,545
Circulation Total	Clark County)	67,077	135,984		122,035	150,259	105,725	113,075
EXPENSES:								
Gas		466.63	274.87		437.12	449.97	219.84	359.84
Oil & Lube		52.85	43.89		58.67			37.22
Storage		180.00	216.00		120.00		216.00	
Washing			25.63					10.77
Miscellaneous		117.06	6.84		16.74	392.70		16.77
Battery & Electric		51.46	45.07					25.86
Tires		425.27			121.89			6.18
Repairs		497.10	193.11		276.31	422.44	607.35	143.68
Insurance		191.24	211.44		256.69	212.76	169.05	195.30
Tolls: Bridge, Ferry					156.24			
Total - Truck		1,981.61	1,016.85		1,443.66	1,477.87	1,212.24	795.62
Wages		5,136.00	11,612.89		7,440.00	9,567.68	11,760.00	6,697.50
GRAND TOTAL		7,117.61	12,629.74		8,883.66	11,045.55	12,972.24	7,493.12
Cost per mile		.123	.138		.092	.126	.279	.069
Cost per book		.1069	.092		.072	.073	.122	.066

O Mileage estimated - speedometer faulty

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