

Direct State Aid to Public Libraries - Explanation of Calculations

State Aid Factor

Divide the total amount of state aid monies available by the sum of Montana's most recent decennial census population and Montana's total square miles.

$$\text{State Aid Factor} = \text{Total State Aid Dollars} / (\text{Last Montana Census Population} + \text{Montana Square Miles})$$

Total State Aid Dollars	102,830
Last Montana Census Population (2010)	989,415
Montana Square Miles	145,556.297
State Aid Factor = 102,830 / (989,415 + 145,556.297)	= 0.090601

Sample Data

County 1 - Single Library in County

County Population:	63,395
County Square Miles:	3,461.030

	Municipality Population	Square Miles	State Aid Per Capita	State Aid Square Miles	Total State Aid
County 1 - Library	28,190	16.349	5,743.68	313.57	6,057.25

County 2 - Multiple Libraries in County

County Population:	7,691
County Square Miles:	3,586.628

	Municipality Population	Municipality Square Miles	State Aid Per Capita	State Aid Square Miles	Total State Aid
County 2 - Library A	838	0.775	106.62	49.74	156.35
County 2 - Library B	642	1.017	88.86	41.49	130.35
County 2 - Library C	375	0.956	64.67	30.21	94.88
County 2 - Library D	190	0.952	436.67	203.51	640.19

County 3 - Multiple Libraries in County, including Public Library District

County Population:	11,406
County Square Miles:	1,656.700

	Municipality Population	Square Miles	State Aid Per Capita	State Aid Square Miles	Total State Aid
County 3 - Library A	1,183	1.134	517.61	65.57	583.17
County 3 - Library B			515.79	84.53	600.33
County 3 - Library B - School District 1	2,730	174.000			
County 3 - Library B - School District 2	2,963	39.000			

Administrative Rules of Montana

10.102.4003 Direct State Aid to Public Libraries for Per Capita and for Per Square Mile Served

- (1) Definitions used in this section include:
- (a) "Public library" means those libraries as defined in 22-1-303 through 22-1-317, MCA, and in Title 7, MCA.
 - (b) "Population" means those official, final figures from the most recent decennial census of population produced by the U.S. Bureau of the Census.
 - (c) "Leftover population" means the population count remaining in each county after the population counts of each municipality with library service are subtracted.
 - (d) "Additional population" means the population count which is to be credited to each public library based on the proportion of that municipality's population to the total population of the county.
 - (e) "Leftover square miles" means the number of square miles left in each county after the square miles of each municipality with public library service are subtracted from the total number of square miles in the county.
 - (f) "Additional square miles" means the number of square miles credited to each public library, based on the proportion of that municipality's population to the total population of the county.
- (2) The per capita portion of the direct state aid to public libraries will be distributed annually based on the following:
- (a) In counties which have county-wide library service from one public library, or in which only one municipal public library exists, the most recent decennial census figure will be multiplied by the amount of state aid available per capita in each year.

	Service Area Population	State Aid Factor	State Aid Per Capita
County 1	63,395		
County 1 - Library	63,395	0.090601	5,743.68

State Aid Per Capita = Service Area Population * Factor

State Aid Per Capita = 63,395 * 0.090601 = 5,743.68

See: Sample Spreadsheet, County 1, Column I

Tip: All of county's population (63,395) is assigned to the library because there are no other libraries to split it with.

- (b) In each county with more than one municipal public library, the following procedure will be employed:
 - (i) The population counts of all municipalities with public libraries are added together and subtracted from the total county population resulting in the leftover population figure.

	Population
County 2	7,691
County 2 - Library A - Municipality	838
County 2 - Library B - Municipality	642
County 2 - Library C - Municipality	375
County 2 - Library D - Municipality	190
Total of Municipalities	2,045

Leftover Population = County Population - Sum of Municipality Populations

Leftover Population = 7,691 - (838 + 642 + 375 + 190) = 5,646

See: Sample Spreadsheet, County 2, Column E

- (ii) Each year all monies received by these libraries from the county commission are added together; each year each library's total is divided by the total amount received by all the libraries to determine the percentage of money given to each County 2 - Library By the county.

Percentage of Money Given to Each County 2 - Libraries

(As determined by the county.)

County 2 - Library A	6%
County 2 - Library B	6%
County 2 - Library C	6%
County 2 - Library D	82%

See: Sample Spreadsheet, County 2, Column F

Tip: These percentages are based on how much funding each libraries receives from the county as reported by the county.

- (iii) The leftover population figure is multiplied by the percentage of money each library receives from the county in order to determine the additional population figure which will be credited to each library.

	Leftover Population	Percent of Funding Given by County	Additional Population
County 2 - Library A	5,646	6%	339
County 2 - Library B	5,646	6%	339
County 2 - Library C	5,646	6%	339
County 2 - Library D	5,646	82%	4,630

Additional Population = Leftover Population * Percent of Funding Given by County

County 2 - Library A, B, and C Additional Population = 5,646 * 6% = 339

County 2 - Library D Additional Population = 5,646 * 82% = 4,630

See: Sample Spreadsheet, County 2, Column G

- (iv) The municipal population and additional population figures are added together to determine the total population which will be credited to each library.

	Municipality Population	Additional Population	Service Area Population
County 2 - Library A	838	339	1,177
County 2 - Library B	642	339	981
County 2 - Library C	375	339	714
County 2 - Library D	190	4,630	4,820

Service Area Population = Municipal Population + Additional Population

County 2 - Library A Service Area Population = 838 + 339 = 1,177

County 2 - Library B Service Area Population = 642 + 339 = 981

County 2 - Library C Service Area Population = 375 + 339 = 714

County 2 - Library D Service Area Population = 190 + 4,630 = 4,820

See: Sample Spreadsheet, County 2, Column H

- (v) For each library the total population credited to each library is multiplied by the amount of per capita state aid available in each year to determine the total per capita support.

	Service Area Population	State Aid Factor	State Aid Per Capita
County 2 - Library A	1,177	0.090601	106.62
County 2 - Library B	981	0.090601	88.86
County 2 - Library C	714	0.090601	64.67
County 2 - Library D	4,820	0.090601	436.67

State Aid Per Capita = Service Area Population * Factor

County 2 - Library A Service Area Population = 1,177 * 0.090601 = 106.62

County 2 - Library B Service Area Population = 981 * 0.090601 = 88.86

County 2 - Library C Service Area Population = 714 * 0.090601 = 64.67
 County 2 - Library D Service Area Population = 4,820 * 0.090601 = 436.67
 See: Sample Spreadsheet, County 2, Column I

- (vi) In the case of counties in which no county aid is provided to municipal libraries, the additional population credited to each library is based solely on the ratio of each municipal library's service area population to the total county population.

Tip: When the county does not fund any of the libraries, percentages are determined by dividing each library municipality's population by the total county population.

- (vii) In the case of counties in which only one of two or several municipal libraries receives county aid, the library receiving county aid is credited with the entire county population exclusive of the population present in the service area populations of any other municipal libraries.

Tip: When the county funds only one of its libraries, the funded library is credited with the service population of the entire county

- (viii) The population counts of legally annexed areas, as determined by the latest decennial U.S. census, will be credited to the municipality annexing the area the year following the annexation.

- (3) The per square mile portion of the direct state aid to public libraries will be distributed annually based on the following:
 - (a) In counties which have county-wide library service from one public library, or in which only one municipal public library exists, the total square miles of each county will be multiplied by the amount of state aid available per square mile in each year.

	Square Miles	State Aid Factor	State Aid Square Miles
County 1	3,461.030		
County 1 - Library	3,461.030	0.090601	313.57

See: Sample Spreadsheet, County 1, Column O

- (b) In each county with more than one municipal public library, the following procedure will be employed:
 - (i) The number of square miles of all municipalities with public libraries are added together and subtracted from the total number of square miles in the county to determine the leftover square miles.

	Square Miles
County 2	3,586.628
County 2 - Library A - Municipality	0.775
County 2 - Library B - Municipality	1.017
County 2 - Library C - Municipality	0.956
County 2 - Library D - Municipality	0.952
Total of Municipalities	3.701

Leftover Square Miles = County Square Miles - Sum of Municipality Square Miles

Leftover Square Miles = 3,586.628 - (0.775 + 1.017 + 0.956 + 0.952) = 3,582.927

See: Sample Spreadsheet, County 2, Column K

- (ii) The population counts of all municipalities with public libraries are added together, and each library's population is divided by the total county population to determine the percentage of the county population credited to each library.

Tip: The clarification here per the State Librarian is that this is the Service Area Population.

	Service Area Population	Percent of County Population
County 2	7,691	
County 2 - Library A	1,177	15.30%

County 2 - Library B	981	12.75%
County 2 - Library C	714	9.28%
County 2 - Library D	4,820	62.67%

Percentage of County Service Area Population = Municipality Service Area Population / County Population

County 2- Library A Percentage of County Service Area Population = $1,177 / 7,691 = 15.30$

County 2- Library B Percentage of County Service Area Population = $981 / 7,691 = 12.75$

County 2- Library C Percentage of County Service Area Population = $714 / 7,691 = 9.28$

County 2- Library D Percentage of County Service Area Population = $4,630 / 7,691 = 62.67$

See: *Sample Spreadsheet, County 2, Column L*

- (iii) The leftover square miles figure is multiplied by the percentage of the county population credited to each library in order to determine the additional square miles to be credited to each library.

	Leftover Square Miles	Percent of County Population	Additional Square Miles
County 2 - Library A	3,582.927	15.30%	548.205
County 2 - Library B	3,582.927	12.75%	456.897
County 2 - Library C	3,582.927	9.28%	332.512
County 2 - Library D	3,582.927	62.67%	2,245.314

Additional Square Miles = Leftover Square Miles * Percent of County Population

County 2 - Library A Additional Square Miles = $3,582.927 * 15.30\% = 548.205$

County 2 - Library B Additional Square Miles = $3,582.927 * 12.75\% = 456.897$

County 2 - Library C Additional Square Miles = $3,582.927 * 9.28\% = 332.512$

County 2 - Library D Additional Square Miles = $3,582.927 * 62.67\% = 2,245.314$

See: *Sample Spreadsheet, County 2, Column M*

- (iv) Each municipality's square miles are added to their appropriate additional square miles to determine the total square miles credited to each library.

	Municipality's Square Miles	Additional Square Miles	Service Area Square Miles
County 2 - Library A	0.775	548.208	548.980
County 2 - Library B	1.017	456.897	457.914
County 2 - Library C	0.956	332.512	333.468
County 2 - Library D	0.952	2,245.314	2,246.266

Service Area Square Miles = Municipality's Square Miles + Additional Square Miles

County 2 - Library A Service Area Square Miles = $0.775 + 548.208 = 548.980$

County 2 - Library B Service Area Square Miles = $1.017 + 456.897 = 457.914$

County 2 - Library C Service Area Square Miles = $0.956 + 332.512 = 333.468$

County 2 - Library D Service Area Square Miles = $0.952 + 2,245.314 = 2,246.266$

See: *Sample Spreadsheet, County 2, Column N*

- (v) For each library the total square miles credited to each library is multiplied by the amount of per square mile state aid available in each year to determine the total per capita support.

	Total Square Miles	State Aid Factor	State Aid Square Miles
County 2 - Library A	548.980	0.090601	49.74
County 2 - Library B	457.914	0.090601	41.49
County 2 - Library C	333.468	0.090601	30.21
County 2 - Library D	2,246.266	0.090601	203.51

State Aid Square Miles = Total Square Miles * Factor

County 2 - Library A State Aid Square Miles = 548.980 * 0.090601 = 49.74

County 2 - Library B State Aid Square Miles = 457.914 * 0.090601 = 41.49

County 2 - Library C State Aid Square Miles = 333.468 * 0.090601 = 30.21

County 2 - Library D State Aid Square Miles = 2,246.266 * 0.090601 = 203.51

See: *Sample Spreadsheet, County 2, Column O*

- (4) In the case of library districts which are not defined by municipal or county boundaries, but by boundaries such as school districts, both the per capita and the per square mile state aid will be distributed using the appropriate boundaries and population figures as if they were municipal or county boundaries and counts.

	Calculated Population	Calculated Square Miles
County 3 - Library A	1,183	1.134
County 3 - Library B	5,693	213.000
County 3 - Library B - School District 1	2,730	174.000
County 3 - Library B - School District 2	2,963	39.000

Public Library District Calculated Population = Sum of the Applicable Boundary Populations

County 3- Library B Public Library District Calculated Population = 2,730 + 2,963 = 5,693

See: *Sample Spreadsheet, County 3 - Library B, Column E*

Public Library District Calculated Square Miles = Sum of the Applicable Boundary Square Miles

County 3- Library B Public Library District Calculated Square Miles = 174.000 + 39.000 = 213.000

See: *Sample Spreadsheet, County 3 - Library B, Column K*

Tip: Once the library's population and square miles have been calculated, the same process is used as that shown above.

- (5) In each county which has no public libraries, the State Library will contact the county commission indicating that the county will qualify for per capita and per square mile state aid if the county commission establishes county-wide library service as provided for in state statute, or if the county commission contracts for library services with another county or municipal County 2 - Library As provided for in state statute. If such means are not established within a six-month period following written notice received from the State Library, the state aid which would have gone to the county will be allotted to the federation headquarters library in whose area this county is located for use in federation activities.
- (6) For any questions arising because of this rule, the final arbiter is the State County 2 - Library Commission. (History: 22-1-330 , MCA; IMP , 22-1-327 , MCA; NEW , 1991 MAR p. 2604, Eff. 12/27/91.)

Sample - County 1 - Single Library in County

County Population: 63,395
 County Square Miles: 3,461.030

	Municipality Population	Square Miles	State Aid Per Capita	State Aid Square Miles	Total State Aid
County 1 - Library	28,190	16.349	5,743.68	313.57	6,057.25

State Aid Per Capita

- (1) The entire population of the county is assigned to the County 1 - Library since there are no other libraries to split with. 10.102.4003 2-a (See: *Sample Spreadsheet, County 1, Column H*)

$$\text{County 1 - Library - Service Area Population} = 63,395$$

- (2) The Service Area Population is multiplied by the State Aid Factor to get the State Aid Per Capita. 10.102.4003 2a (See: *Sample Spreadsheet, County 1, Column I*)

$$\begin{array}{r} \text{County 1 - Library - Service Area Population} \\ \text{State Aid Factor} \\ \hline \text{State Aid Per Capita} \end{array} = \begin{array}{r} 63,395 \\ \times 0.090601 \\ \hline 313.57 \end{array}$$

State Aid Square Miles

- (1) The entire square miles of the county is assigned to the County 1 - Library since there are no other libraries to split with. 10.102.4003 3-a (See: *Sample Spreadsheet, County 1, Column K*)

$$\text{County 1 - Library - Service Area Square Miles} = 16.349$$

- (2) The Service Area Square Miles is multiplied by the State Aid Factor to get the State Aid Square Miles. 10.102.4003 3a (See: *Sample Spreadsheet, County 1, Column O*)

$$\begin{array}{r} \text{County 1 - Library - Service Area Square Miles} \\ \text{State Aid Factor} \\ \hline \text{State Aid Square Miles} \end{array} = \begin{array}{r} 63,395 \\ \times 0.090601 \\ \hline 313.57 \end{array}$$

Total State Aid

- (1) The State Aid Per Capita and State Aid Square Miles are added together to get the Total State Aid. (See: *Sample Spreadsheet, County 1, Column P*)

$$\begin{array}{r} \text{State Aid Per Capita} \\ \text{State Aid Square Miles} \\ \hline \text{Total State Aid} \end{array} = \begin{array}{r} 5,743.68 \\ + 313.57 \\ \hline 6,057.25 \end{array}$$

Sample - County 2 - Multiple Libraries in County

County Population: 7,691
 County Square Miles: 3,586.628

	Municipality Population	Municipality Square Miles	State Aid Per Capita	State Aid Square Miles	Total State Aid
County 2 - Library A	838	0.775	106.62	49.74	156.35
County 2 - Library B	642	1.017	88.86	41.49	130.35
County 2 - Library C	375	0.956	64.67	30.21	94.88
County 2 - Library D	190	0.952	436.67	203.51	640.19

State Aid Per Capita

- (1) The Municipal Populations of all of the County 2 libraries are subtracted from the county population to get the county's Leftover Population. 10.102.4003 2-b-i (See: *Sample Spreadsheet, County 2, Column G*)

County 2 Population	7,691
County 2 - Library A	- 838
County 2 - Library B	- 642
County 2 - Library C	- 375
County 2 - Library D	- 190
Leftover Population	5,646

- (2) The Leftover Population is multiplied by the percentage of funding each library receives from the county to get the Additional Population. (As determined by the county.) 10.102.4003 2-b-ii, 2-b-iii (See: *Sample Spreadsheet, County 2, Column G*)

County 2 - Library A Percentage of Funding	6 %
Leftover Population	x 5,646
County 2 - Library A Additional Population	339

County 2 - Library B Percentage of Funding	6 %
Leftover Population	x 5,646
County 2 - Library B Additional Population	339

County 2 - Library C Percentage of Funding	6 %
Leftover Population	x 5,646
County 2 - Library C Additional Population	339

County 2 - Library D Percentage of Funding	82 %
Leftover Population	x 5,646
County 2 - Library D Additional Population	4,630

- (3) Each library's Municipal Population is added to their Additional Population to get their Service Area Population. 10.102.4003 2-b-iv (See: *Sample Spreadsheet, County 2, Column H*)

County 2 - Library A Municipal Population	838
County 2 - Library A Additional Population	+ <u>339</u>
County 2 - Library A Service Area Population	1,177
County 2 - Library B Municipal Population	642
County 2 - Library B Additional Population	+ <u>339</u>
County 2 - Library B Service Area Population	981
County 2 - Library C Municipal Population	375
County 2 - Library C Additional Population	+ <u>339</u>
County 2 - Library C Service Area Population	714
County 2 - Library D Municipal Population	190
County 2 - Library D Additional Population	+ <u>4,630</u>
County 2 - Library D Service Area Population	4,820

- (4) The Service Area Population for each County 2 library is multiplied by the State Aid Factor to get each library's State Aid Per Capita. 10.102.4003 2-b-v (See: *Sample Spreadsheet, County 2, Column I*)

County 2 - Library A Service Area Population	1,177
County 2 - Library A State Aid Factor	x <u>0.090601</u>
County 2 - Library A State Aid Per Capita	106.62
County 2 - Library B Service Area Population	981
County 2 - Library B State Aid Factor	x <u>0.090601</u>
County 2 - Library B State Aid Per Capita	88.86
County 2 - Library C Service Area Population	714
County 2 - Library C State Aid Factor	x <u>0.090601</u>
County 2 - Library C State Aid Per Capita	64.67
County 2 - Library D Service Area Population	4,820
County 2 - Library D State Aid Factor	x <u>0.090601</u>
County 2 - Library D State Aid Per Capita	436.67

State Aid Square Miles

- (1) The Municipal Square Miles of all of the County 2 libraries are subtracted from the county square miles to get the county's Leftover Square Miles. 10.102.4003 3-b-i (See: *Sample Spreadsheet, County 2, Column M*)

County 2 Square Miles	3,586.628
County 2 - Library A	- 0.775
County 2 - Library B	- 1.017
County 2 - Library C	- 0.956
County 2 - Library D	- <u>0.952</u>
Leftover Square Miles	3,582.927

- (2) Each library's Service Area Population is divided by the total county population to get their Percentage of County Population. 10.102.4003 3-b-ii (See: *Sample Spreadsheet, County 2, Column L*)

County 2 - Library A Service Area Population	1,177
County 2 Population	/ <u>7,691</u>
County 2 - Library A Percentage of County Population	15.30 %

County 2 - Library B Service Area Population	981
County 2 Population	/ <u>7,691</u>
County 2 - Library B Percentage of County Population	12.75 %

County 2 - Library C Service Area Population	714
County 2 Population	/ <u>7,691</u>
County 2 - Library C Percentage of County Population	9.28 %

County 2 - Library D Service Area Population	4,630
County 2 Population	/ <u>7,691</u>
County 2 - Library D Percentage of County Population	62.67 %

- (3) The Leftover Square Miles is multiplied by each library's Percentage of County Population to get their Additional Square Miles. (As determined by the county.) 10.102.4003 3-b-ii, 3-b-iii (See: *Sample Spreadsheet, County 2, Column M*)

County 2 - Library A Percentage County Square Miles	15.30 %
Leftover Square Miles	x <u>3,582.927</u>
County 2 - Library A Additional Square Miles	548.205

County 2 - Library B Percentage County Square Miles	12.75 %
Leftover Square Miles	x <u>3,582.927</u>
County 2 - Library B Additional Square Miles	456.897

County 2 - Library C Percentage County Square Miles	9.28 %
Leftover Square Miles	x <u>3,582.927</u>
County 2 - Library C Additional Square Miles	332.512

County 2 - Library D Percentage County Square Miles	62.67 %
Leftover Square Miles	x <u>3,582.927</u>
County 2 - Library D Additional Square Miles	2,245.314

(4) Each library's Municipal Square Miles is added to their Additional Square Miles to get their Service Area Square Miles. 10.102.4003 3-b-iv (See: *Sample Spreadsheet, County 2, Column N*)

County 2 - Library A Municipal Square Miles	0.775
County 2 - Library A Additional Square Miles	+ <u>548.208</u>
County 2 - Library A Service Area Square Miles	548.980

County 2 - Library B Municipal Square Miles	1.017
County 2 - Library B Additional Square Miles	+ <u>456.897</u>
County 2 - Library B Service Area Square Miles	457.914

County 2 - Library C Municipal Square Miles	0.956
County 2 - Library C Additional Square Miles	+ <u>332.512</u>
County 2 - Library C Service Area Square Miles	333.468

County 2 - Library D Municipal Square Miles	0.952
County 2 - Library D Additional Square Miles	+ <u>2,245.314</u>
County 2 - Library D Service Area Square Miles	2,246.266

(5) The Service Area Square Miles for each County 2 library is multiplied by the State Aid Factor to get each library's State Aid Square Miles. 10.102.4003 3-b-v (See: *Sample Spreadsheet, County 2, Column O*)

County 2 - Library A Service Area Square Miles	548.980
County 2 - Library A State Aid Factor	x <u>0.090601</u>
County 2 - Library A State Aid Square Miles	49.74

County 2 - Library B Service Area Square Miles	457.914
County 2 - Library B State Aid Factor	x <u>0.090601</u>
County 2 - Library B State Aid Square Miles	41.49

County 2 - Library C Service Area Square Miles	333.468
County 2 - Library C State Aid Factor	x <u>0.090601</u>
County 2 - Library C State Aid Square Miles	30.21

County 2 - Library D Service Area Square Miles	2,246.266
County 2 - Library D State Aid Factor	x <u>0.090601</u>
County 2 - Library D State Aid Square Miles	203.51

Total State Aid

- (1) Each library's State Aid Per Capita and State Aid Square Miles are added together to get the Total State Aid. (See: *Sample Spreadsheet, County 2, Column P*)

County 2 - Library A State Aid Per Capita	106.62
County 2 - Library A State Aid Square Miles	+ <u>49.74</u>
County 2 - Library A Total State Aid	156.35

County 2 - Library B State Aid Per Capita	88.86
County 2 - Library B State Aid Square Miles	+ <u>41.49</u>
County 2 - Library B Total State Aid	130.35

County 2 - Library C State Aid Per Capita	64.67
County 2 - Library C State Aid Square Miles	+ <u>30.21</u>
County 2 - Library C Total State Aid	94.88

County 2 - Library D State Aid Per Capita	436.67
County 2 - Library D State Aid Square Miles	+ <u>23.51</u>
County 2 - Library D Total State Aid	640.19

Sample - County 3 - Multiple Libraries in County, Including Public Library District

County 3 - Multiple Libraries in County, including Public Library District

County Population: 11,406
 County Square Miles: 1,656.700

	Municipality/ School District Population	Square Miles	State Aid Per Capita	State Aid Square Miles	Total State Aid
County 3 - Library A	1,183	1.134	517.61	65.57	583.17
County 3 - Library B			515.79	84.53	600.33
County 3 - Library B - School District 1	2,730	174.000			
County 3 - Library B - School District 2	2,963	39.000			

State Aid Per Capita

- (1) The boundaries of Public Library Districts are used to determine their "Municipal Population" using data from the last decennial census. 10.102.4003 4 (See: Sample Spreadsheet, County 2, Column E)

County 3 - Library B - School District 1 Population	2,730
County 3 - Library B - School District 2 Population	+ 2,963
County 3 - Library B Municipal Population	5,693

- (2) The Municipal Populations of all of the County 3 libraries are subtracted from the county population to get the county's Leftover Population. 10.102.4003 2-b-i (See: Sample Spreadsheet, County 2, Column G)

County 3 Population	11,406
County 3 - Library A	- 1,183
County 3 - Library B	- 5,693
Leftover Population	4,530

- (3) The Leftover Population is multiplied by the percentage of funding each library receives from the county to get the Additional Population. (As determined by the county.) 10.102.4003 2-b-ii, 2-b-iii (See: Sample Spreadsheet, County 2, Column G)

County 3 - Library A Percentage of Funding	100 %
Leftover Population	x 4,530
County 3 - Library A Additional Population	4,530

County 3 - Library B Percentage of Funding (no library district funding)	0 %
Leftover Population	x 4,530
County 3 - Library B Additional Population	0

- (4) Each library's Municipal Population is added to their Additional Population to get their Service Area Population. 10.102.4003 2-b-iv (See: Sample Spreadsheet, County 2, Column H)

County 3 - Library A Municipal Population	1,183
County 3 - Library A Additional Population	+ 4,530
County 3 - Library A Service Area Population	5,713

County 3 - Library B Municipal Population	5,693
County 3 - Library B Additional Population	+ <u>0</u>
County 3 - Library B Service Area Population	5,693

- (5) The Service Area Population for each County 3 library is multiplied by the State Aid Factor to get each library's State Aid Per Capita. 10.102.4003 2-b-v (See: *Sample Spreadsheet, County 2, Column I*)

County 3 - Library A Service Area Population	5,713
County 3 - Library A State Aid Factor	x <u>0.090601</u>
County 3 - Library A State Aid Per Capita	517.61

County 3 - Library B Service Area Population	5,693
County 3 - Library B State Aid Factor	x <u>0.090601</u>
County 3 - Library B State Aid Per Capita	515.79

State Aid Square Miles

- (1) The boundaries of Public Library Districts are used to determine their "Municipal Square Miles" using data from the last decennial census. 10.102.4003 4 (See: *Sample Spreadsheet, County 2, Column K*)

County 3 - Library B - School District 1 Square Miles	174.000
County 3 - Library B - School District 2 Square Miles	+ <u>39.000</u>
County 3 - Library B Municipal Square Miles	213.000

- (2) The Municipal Square Miles of all of the County 3 libraries are subtracted from the county square miles to get the county's Leftover Square Miles. 10.102.4003 3-b-i (See: *Sample Spreadsheet, County 2, Column M*)

County 3 Square Miles	1,656.700
County 3 - Library A	- 1.134
County 3 - Library B	- <u>213.000</u>
Leftover Square Miles	1,442.566

- (3) Each library's Service Area Population is divided by the total county population to get their Percentage of County Population. 10.102.4003 3-b-ii (See: *Sample Spreadsheet, County 2, Column L*)

County 3 - Library A Service Area Population	5,713
County 3 Population	/ <u>11,406</u>
County 3 - Library A Percentage of County Population	50.09 %

County 3 - Library B Service Area Population	5,693
County 3 Population	/ <u>11,406</u>
County 3 - Library B Percentage of County Population	49.91 %

- (4) The Leftover Square Miles is multiplied by each library's Percentage of County Population to get their Additional Square Miles. (As determined by the county.) 10.102.4003 3-b-ii, 3-b-iii (See: *Sample Spreadsheet, County 2, Column M*)

County 3 - Library A Percentage County Square Miles	50.09 %
Leftover Square Miles	x <u>1,442.566</u>
County 3 - Library A Additional Square Miles	722.548
County 3 - Library B Percentage County Square Miles	49.91 %
Leftover Square Miles	x <u>1,442.556</u>
County 3 - Library B Additional Square Miles	722.018

- (5) Each library's Municipal Square Miles is added to their Additional Square Miles to get their Service Area Square Miles. 10.102.4003 3-b-iv (See: *Sample Spreadsheet, County 2, Column N*)

County 3 - Library A Municipal Square Miles	1.134
County 3 - Library A Additional Square Miles	+ <u>722.548</u>
County 3 - Library A Service Area Square Miles	723.682
County 3 - Library B Municipal Square Miles	213.00
County 3 - Library B Additional Square Miles	+ <u>720.018</u>
County 3 - Library B Service Area Square Miles	933.018

- (6) The Service Area Square Miles for each County 3 library is multiplied by the State Aid Factor to get each library's State Aid Square Miles. 10.102.4003 3-b-v (See: *Sample Spreadsheet, County 2, Column O*)

County 3 - Library A Service Area Square Miles	723.682
County 3 - Library A State Aid Factor	x <u>0.090601</u>
County 3 - Library A State Aid Square Miles	65.57
County 3 - Library B Service Area Square Miles	933.018
County 3 - Library B State Aid Factor	x <u>0.090601</u>
County 3 - Library B State Aid Square Miles	84.53

Total State Aid

- (1) Each library's State Aid Per Capita and State Aid Square Miles are added together to get the Total State Aid. (See: *Sample Spreadsheet, County 2, Column P*)

County 3 - Library A State Aid Per Capita	517.61
County 3 - Library A State Aid Square Miles	+ <u>65.57</u>
County 3 - Library A Total State Aid	583.17
County 3 - Library B State Aid Per Capita	515.79
County 3 - Library B State Aid Square Miles	+ <u>84.53</u>
County 3 - Library B Total State Aid	600.33

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
			State Aid Per Capita						State Aid Per Square Miles						Total State Aid
			Input Population	Calculated Pop	Calculated Pop	Additional Pop	Service Area Pop	factor 0.090601 State Aid Per Capita	Input Sq Miles	Calculated Sq Miles	% of Co. Srv Pop	Additional Sq Miles	Service Area Sq Miles	factor 0.090601 State Aid Per Sq Mi	amount 102,830 Total State Aid
Grand Total			989,415	560,724	428,691	989,415	89,642.39	145,556.297	8,035.888	137,520.409	145,556.297	13,187.61	102,830.00		
County 1			63,395	28,190	100.00%	35,205	5,743.68	3,461.030	16,349	100.00%	3,444.681	313.57	6,057.25		
County 1 - Library				28,190	100.00%	35,205	5,743.68	3,461.030	16,349	100.00%	3,444.681	313.57	6,057.25		
County 1 - Library - Municipality			28,190	28,190	100.00%	35,205	5,743.68	16,349	16,349	100.00%	3,444.681	313.57	6,057.25		
County 2			7,691	2,045	100.00%	5,646	696.82	3,586.628	3,701	100.00%	3,582.927	324.95	1,021.77		
County 2 - Library A				838	6.00%	339	106.62	0.775	0.775	15.30%	548.205	49.74	156.35		
County 2 - Library A - Municipality			838	838	6.00%	339	106.62	0.775	0.775	15.30%	548.205	49.74	156.35		
County 2 - Library B			642	642	6.00%	339	88.86	1.017	1.017	12.75%	456.897	41.49	130.35		
County 2 - Library B - Municipality			642	642	6.00%	339	88.86	1.017	1.017	12.75%	456.897	41.49	130.35		
County 2 - Library C			375	375	6.00%	339	64.67	0.956	0.956	9.28%	332.512	30.21	94.88		
County 2 - Library C - Municipality			375	375	6.00%	339	64.67	0.956	0.956	9.28%	332.512	30.21	94.88		
County 2 - Library D			190	190	82.00%	4,630	436.67	1,656.700	214,134	100.00%	1,442,566	150.10	1,183.50		
County 2 - Library D - Municipality			190	190	82.00%	4,630	436.67	1,656.700	214,134	100.00%	1,442,566	150.10	1,183.50		
County 3			11,406	6,876	100.00%	4,530	1,033.40	1,656.700	214,134	100.00%	1,442,566	150.10	1,183.50		
County 3 - Library A				1,183	100.00%	4,530	517.61	1,134	1,134	50.09%	722,548	65.57	583.17		
County 3 - Library A - Municipality			1,183	1,183	100.00%	4,530	517.61	1,134	1,134	50.09%	722,548	65.57	583.17		
County 3 - Library B			5,693	5,693	0	0	515.79	213,000	174,000	49.91%	720,018	84.53	600.33		
County 3 - Library B - School District 1			2,730	2,730	0.00%	0	515.79	174,000	174,000	49.91%	720,018	84.53	600.33		
County 3 - Library B - School District 2			2,963	2,963	0.00%	0	515.79	39,000	39,000	49.91%	720,018	84.53	600.33		