FY 22 Public Libraries Survey Bibliostat Connect Instructions

Montana State Library
September 1, 2022

The Montana State Library provides access to Bibliostat Connect to view data from the Public Libraries Survey and compare performance across libraries. If you have questions on using this platform, please contact Rebekah Kamp, Montana State Library Data Coordinator, at rkamp@mt.gov.

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Setup

Go to Bibliostat Connect at https://collectconnect.baker-taylor.com:8880/Login.aspx. If you need your login information, contact Rebekah Kamp at rkamp@mt.gov. The setup screen allows you to choose which data you would like to use and what library you would like to use as the basis for comparison. You can only use one source of data at a time in Bibliostat Connect.

Database

In the database pull-down box of the Select DataSource section, you can choose the source of data you would like to use. You will probably notice the following databases listed in the pull- down box:

FSCS

FSCS stands for the Federal State Cooperative System. It represents the joint efforts of the State Data Coordinator from all 50 states, the National Commission on Libraries and Information Science, the National Center for Education Statistics, and the U.S. Census Bureau to a build a national database that includes a common core of data for all public libraries in the U.S. Some of the important attributes of this database include the ability to examine state and national averages, a rich set of categorical data elements such as legal basis code that can be used to filter on in the peer finder, and its comprehensiveness.

PLA

PLA stands for the Public Library Association. It represents the annual Public Library Data Service's survey of libraries in the United States and Canada and is also

available in printed form from PLA. It is a voluntary survey and usually includes approximately 800 of the largest libraries. The primary benefit of the PLA data is that it is generally the most current of any of the databases and is very popular in the media.

States

Most of the states also make their own annual statistical surveys available via Bibliostat Connect. Each survey is confined to libraries within the state, but generally includes a much larger selection of data elements about the libraries in that state. Data elements from one state survey may not be comparable with similarly named data elements from another and Bibliostat Connect does not allow them to be mixed in the survey. In addition, because of the differing fiscal years in each state, different state surveys may represent different time periods. The FSCS and PLA data should be used to compare libraries across states.

Me Library

The 'Me Library' is the library of comparison. When you select a 'Me Library', Bibliostat Connect will look up the values for that library when you are choosing libraries by peers to provide a helpful point of reference. However, you don't have to choose a Me Library, and if you don't, then you simply won't get the values to use a reference when selecting peer libraries.

The State pull-down box is there to help you narrow your choice of libraries in the Library pull-down box below it. First choose the state that the library of interest is in and then select that library from the pull-down box.

Tip: You can click in the pull-down box and start typing and Bibliostat Connect will jump to first match it finds. Also be aware that sometimes libraries report a different name than they are commonly referred to. If your library does not appear to be listed, think about any other names that the library sometimes goes by and try to find it under one of these alternatives.

Misc. Options

The 'Always show this screen at startup' option allows you to skip the Setup screen and jump directly to the Select Libraries screen right after you login. If you decide to skip the Setup screen, Bibliostat Connect will use the same database and Me Library that you selected the last time you logged in.

Libraries

Selecting the libraries to compare is the first step in using Bibliostat Connect. The large box in the middle of the screen shows the list of the libraries that you have already selected for comparison. Just to the right of it are three buttons ('select by peers', 'select alphabetically', and 'select benchmarks') that will take you to new pages that give you special tools for choosing certain libraries. Just below the selected libraries box are two buttons that allow you delete some or all the libraries you have selected. Finally, to the left of the selected libraries box is a pull- down box that gives you special functions for saving and managing lists of libraries that you have created.

Select by Peers

Selecting libraries by peers is one of the most powerful features of Bibliostat Connect. Using this feature, you can quickly create a list of all libraries that meet criteria that you define. For example, using the FSCS data, you could tell Connect to only show those libraries in Ohio, Pennsylvania, and Indiana that are municipal libraries with a population less than 50,000 and with more than 5 branches.

Selecting libraries by peers is a two-step process. The first step (Peer Finder Setup) allows you to broad criteria using both the statistical data elements and the categorical data elements. The second step (Peer Finder) allows you to fine-tune the list my adjusting your statistical data elements.

To select a data element as a criterion, click the plus sign of the tree control in the box on the left to expand the folder that contains the data element of interest. Next click in the box to the left of the data element's icon. The box will become checked, and the data element will appear in the box on the right, either under statistical data elements or categorical data elements depending on its time.

Several other items will appear with the data element. For example, if you choose Total Circulation as your variable, you will see the name of the library selected as the "Me Library" on the setup page, and the value for that variable in this case Total Circulation.

This information is provided simply as reference, and your criteria do not have to include the "Me Library's" value. If you did not select a "Me Library" at the setup screen, instead of a Library Name you will see: "No me Library selected or no value

available". This will also appear if you have selected a "Me Library", but there was no data for the variable that you selected.

If you selected a statistical data element, you will also see two input boxes side by side: the one on the left for the minimum value and the one of the right for the maximum value. Here are a couple of things to keep in mind:

Both boxes must contain data. If you don't want to set a maximum value, then type in something huge like 10,000,000. Conversely if you don't want a minimum value then type in 0.

You must choose at least one statistical data element, but you don't have to choose any categorical data elements.

Remember the purpose of this feature is to narrow the query. If your range is too large, you could get back a list with thousands of libraries. Connect is not very fast when it must pack around that many libraries. And in most cases, more than 20 libraries is often unwieldy and not very useful anyway.

When you've selected all the data elements you would like to use as criteria and entered the minimum and maximum values for each, you are ready to proceed to viewing the list and fine- tuning it. Click the next button to continue.

Select by Alpha
If you already know the libraries you would like to compare, this option allows you to choose libraries by name.

Select Benchmarks
Benchmarks are statistical calculations based on groups of libraries that you define. An example of a benchmark could be the Average of the state of Texas. It could also be the average of the top circulating libraries. You can plot benchmarks on the graph just like you can real libraries.

Saved Lists
Saved lists are lists of libraries that you know you will want to reuse. If you frequently compare your library with the same libraries, you should create a list with those libraries in it.

Load List

The Load List option takes you to the Saved Lists page, which lists all the lists you have previously saved. You can select one, click Load and the libraries in that list will be added to the existing list of selected libraries.

Save List/Save List As

This option allows you to save the list of libraries that are currently selected for use later.   You will be prompted to give your list a name. We suggest the name be descriptive so that you can remember what libraries are in the list.

Delete List

This option allows you to delete a list of libraries that you have previously created.

Note: You can only select up to 15 libraries for comparison at a time. If you select more than 15, you will get a message on the results page letting you know that Connect cannot process your request.

Peer Finder

The Peer Finder allows you to interact real time with the results of the criteria you setup in the step before. There are two parts. On the left is the list of the libraries based on the criteria you entered, sorted alphabetically. If the "Me" Library chosen at the setup screen is in the list of libraries, it will display in red. You also will see a column of data for each of the statistical data elements you selected as criteria. If the entire title of the column is not visible, it can be expanded by clicking on its border and dragging it to the left or right. At the bottom, you will see the number of libraries your query generated. Remember, that for most purposes, more than 15 or 20 libraries are difficult to analyze and between 5 and 6 is usually optimal. Don't feel like you must have 300 libraries because it's tough for Connect to meaningfully display them and it's tough for you meaningfully analyze them.

On the right is a gray area with a minimum box (left side) and a maximum box (right side) for each of the statistical data elements you selected before. You can change the minimum or maximum value by typing directly in the minimum or maximum box and click the "Refine" icon. You will see the list of libraries shrink (or grow) as you make these changes.

You may expand your selection above or below the values you entered in the Peer Finder setup. There is no need to go back to the Peer Finder Setup to change your

range. If you wish to add or change variables, then, click the back button, add or delete a variable, and click next to return to the Peer Finder.

If no libraries appear in the Peer Finder, it usually means that no libraries met your criteria. Change your minimum and/or maximum value and click "Refine" or go back to the Peer Finder Setup screen and expand your criteria.

At this point in the software, many users think they're through. There's a "Graph It" button between the next and back buttons that will take the libraries and the data elements from the Peer Finder and drop them on a graph for you. However, in most cases the data elements just selected were used only for defining a small group of comparison libraries; they aren't necessarily the data elements you wanted to know about each library. For example, you could have used Population and Income to define a group of libraries, but you're interested at looking at staffing. By clicking the next button, you will take the list of libraries created in Peer Finder and return you to the main Select Libraries screen. The list you just created with Peer Finder will appear in the Selected Libraries box.

In the Peer Finder ActiveX control, although you can highlight libraries, the Peer Finder uses all the libraries in the list. It won't select only the ones you've highlighted.

Select Variables

The Select Data Elements screen allows you to quickly locate the data elements of interest. There are three main sections to this screen: Available data elements, selected data elements,and years.

Available data elements

The data elements available to you are organized in folders in a tree control. By clicking on the plus sign, you can expand a folder and view the data elements in that folder.

To select a data element, simply click the check box between the data element's icon and its name. You will see that data element appear in the Selected Data Elements box on the top right. To remove a data element, simply uncheck the box and it will be removed from the Selected Data Elements box.

The icons next to the data elements simply indicate what kind of data element it is. The icon of two people indicates a statistical date element, while the icon of two people in a box indicates a categorical data element.

Selected data elements

The Selected Data Elements box shows the list of data elements you have selected.

Note on selecting data elements: When selecting data elements, you should be judicious about selecting the same kind of elements. For example, if you selected Total Expenditures and Total Expenditures per Capita, these two data elements will not display well together on a chart. Total Expenditures will return values in the hundreds of thousands or millions, while Expenditures per Capita will return values less than 20 in many cases. On the graph, it will appear as if there are no values for Total Expenditures per Capita.

Years

The years box shows a list of all the years of data that are available for the data set you are using. You can select multiple years of data to show trending on any data element.

There is one limitation on trending. Connect gives you the ability to show multiple libraries, multiple data elements, and multiple years. However, you can only choose any two of these at a time. That means that if you want to show multiple libraries and multiple data elements, you can only choose one year. If you want to show multiple data elements and multiple years, you can only choose one library.

Also note that the list of available data elements only reflects the data elements available in the most recent year of data for the data set. Elements that used to be collected are not available; elements that used to be combined but are now separate will show up as blanks in prior years.

The next button will take you to the format page to determine how you want to display your results.

Format

The Format screen allows you to setup how you want your results displayed.

Type of output

You can have your results displayed in either an HTML table or an attractive, interactive graph. If you have selected many libraries and/or data elements, the table display will probably be more useful.

Sort by

This option allows you to specify how to sort the results. You can sort by any of the data elements you selected in ascending or descending order. If you leave this option to 'None', then the results will be sorted alphabetically by library name.

Tip: If you want to sort by a particular data element but not display it on the graph, you should first select it from the Select Data Elements screen, specify that you want to sort by that data element on the Format Screen, and proceed to the graph. On the graph, you can click the magnifying glass and then select only the portion of the graph that displays the data element you want. You may also have to adjust the y-axis max values.

Group by

The Group By option controls how the results are organized into columns and rows, whether displayed in a table or on a graph. If you group by libraries, then libraries will be placed in rows and data elements will be used as columns. If you group by data elements, the data elements are placed in rows and the libraries in the columns.

If you are using a graph, it is usually better to group by data elements. This is the default. However, if you are using a table, grouping by libraries is usually better.

Data Type

Bibliostat Connect can display 4 types of data. Only one type of data can be displayed at a time.

Regular

Regular data is what you normally expect to see. It is the actual values reported by the libraries.

Rank

Rank data shows what rank the regular value for that library is within that data element within the data set. Thus, a library that reports the same circulation data to

their state (then up to FSCS) and to PLDS, would rank differently on circulation in each of these data sets because the number of libraries in each set is different.

Percentile

Percentile data is a broader way of expressing rank, but essentially expresses the same idea of position within a group. On large data sets like FSCS, percentile is often more meaningful than rank. For example, it is more meaningful to know that a library is in the 74th percentile on collection expenditures than that it is ranked 2,238. However, on smaller data sets of less than 500 libraries and especially less than 100 libraries, rank is usually a better number.

Standardized

Although standardized data is for stat gurus, it is still a very useful type of data. Standardized data tells how many standard deviations away from the average a particular value is.

A simple example will help clarify standardized data. 5 libraries spend an average of $100,000 on collections annually. One of them spends $75,000. Is that low? It depends on what the range of expenditures is among the 5 libraries. Compare these two scenarios:

	Scenario 1	*Scenario 2*
Library A	$150,000	$400,000
Library B	$125,000	$5,000
Library C	$100,000	$10,000
Library D	$75,000	$75,000
Library E	$50,000	$10,000

Both scenarios average $100,000. However, in Scenario 1 Library D spends the less than most of the other libraries. In Scenario 2, Library D is spending significantly more than the other libraries, but Library A's huge expenditures skew the average significantly. The standardized data in each of these scenarios would look like this:

<div align="center">

Scenario 1　　　　*Scenario 2*

</div>

Library A	1.41	1.97
Library B	-.71	-.62
Library C	0	-.59
Library D	-.71	-.16
Library E	-1.41	-.59

In Scenario 2, Library A is almost 2 standard deviations away from the mean. By definition of standard deviation (see illustration below), 2/3 of all libraries will fall within 1 (plus or minus) of the mean. 95% of all libraries will fall within 2 of the mean. Any library will a value outside of 2, is very exceptional.

Library A in Scenario 2 is still inside the red portion of the bell curve on the right, but just barely. In Scenario 1, Library C is right on the average line between the two yellow sections.

One of the best applications of standardized data is comparing two data types that normally are not comparable together. For example, you could look at Collection Expenditures and Collection Expenditures per Capita on the same chart to see if a particular library stands out on either of these measures and how far they stand out. Thus, standardized data can help you quickly identify areas where a library stands out from others.

Other Options

The other options that appear on the right side of the format screen allow you to customize certain aspects of the graph. They do not apply if you are working with a table. All of them can be changed on the graph itself and are provided here only for convenience.

Click the next button to proceed to the results.

Graph

The graph is a powerful ActiveX control that allows you tremendous flexibility in how your data appears. You can change colors, add labels, change fonts, etc. directly from your browser.

There is a gray toolbar along the top of the graph (each of the buttons is explained in the paragraphs below). You will also notice that the legend is in a separate window that floats so that you can move it out of your way and have maximum space for the graph itself. Whenever you hold your mouse still over a bar on the chart, a tool tip will appear listing the library name, the data element, and the value. In addition, you can right click on the graph to get context sensitive features.

One thing to note is that the tool tips for the chart, reflect the same decimal precision as the y- axis. Hence, values like Circulation per Capita may appear rounded to the nearest integer. To change the decimal precision, right click on the y-axis. Choose properties. Choose the scale tab. Locate the decimal option and increase it from 0 to 1 or 2. Click OK or Apply to make the change.

Toolbar Buttons

Open Chart

This feature allows you to open a chart that you previously saved. You can also open a template that saves your favorite formatting options so you can quickly apply them to a new chart.

Finally, the chart can read comma delimited text files so you can use your own data in the chart. Generally, however, it will be easier for you to use Microsoft Excel to create charts of your custom data.

Save Chart

You have several options when you save a chart. You can save the chart and the data that you currently have displayed on the screen as a ChartFX file that can later be read by Bibliostat Connect. You can also only save the formatting that you have applied to the chart into a template. You can save the data behind the chart as a comma delimited text file that can be read by Microsoft Excel and other programs. You can save the graph as a picture in one of two formats, Metafile (.emf) or Bitmap (.bmp). Both picture file formats are very common and can be read by most programs such as Microsoft Word and Microsoft Power Point. The difference is that Metafiles are resolution independent so you can resize them without losing image quality.

Copy to clipboard

Like saving, you can copy the graph to the clipboard in one of several formats. The Bitmap and Metafile are both pictures of the graph as it appears on your screen. The

Metafile is resolution independent, so it will resize without becoming pixilated and losing quality. If you choose to copy text to the clipboard, it will paste nicely into Microsoft Excel so you could further manipulate it. The OLE object feature is currently not supported from the browser.

Gallery

The gallery lets you choose from many different chart types. You can choose bar, pie, line, radar, scatter, bubble, etc. Many of these don't make a lot of sense for the typical data you'll find in Connect, but you're welcome to use any of them if you really want to. You will also find a gallery option when you right click on a bar or a point on the chart. This context sensitive option allows you to change just that one bar or point into a different type of chart, so that you can mix bar and line charts, for example.

Color

The color options don't work from the toolbar. However, by right clicking on any bar or on the legend, you will find a color option that will allow you to change the color of that property.

Vertical Grid

The vertical grid will turn on vertical grid lines on the chart. These are helpful for line charts.

Horizontal Grid

The horizontal grid is turned on by default. It displays faint gray horizontal grid lines to help see you the value of a bar.

Legend Box

The legend box is turned on by default. If you can't see the legend, click this button to turn it off. Then click it again to turn it back on. The legend will now come back to the top. You can right click on the legend to fix its position on the graph, or you can keep it floating.

Data Editor

The data editor displays a grid below the chart with the values displayed on the chart. We have disabled the ability to edit the data in the editor because you can't change values in Bibliostat Connect. If for some reason you feel you need to edit your data, copy it as text to Excel and make your changes there.

Properties

Clicking this button pulls up a window that allows you to change properties on the graph. You can change just about anything you want. It's just a matter of clicking around to find the exact property you want to change.

2D/3D

This button turns the 3D view on and off.

Rotate

You can rotate the chart to whatever position looks the best (but we think the default looks pretty good.) You can also adjust the depth and shadows of the bars.

Z-clustered

When you click this button, the bars are lined up behind one another. By enabling this feature and turning off the 3D view, you can create the equivalent of a stacked bar chart.

Zoom

The zoom feature allows you to enlarge certain parts of the graph. After you click the Zoom button, move your cursor down to the chart and click and hold. The cursor changes to a magnifying glass. Drag the cursor and you will see a rectangle. When you let go, the chart will zoom to the area that was inside the rectangle. This feature is especially useful if you want to zoom in on one data element. The areas not in the chart are still there, you just must scroll over to them to see them. To return to the full view, just unclick the Zoom button.

Print Preview

This option allows you to setup the margins, page orientation, etc. prior to printing your chart. There is a force colors options that will force the graph to print in grey scale, if you are printing to a black and white printer. If you don't have this option selected, the chart will fill in with textures when printing to a black and white printer.

Print

This one obviously prints the chart. The chart will always print to your default printer. At the present time, you can't tell it to print to a different printer.

Tools

The tools button turns off and on different tool bars. The Values legend is the legend to the each of the groups of bars on the bar chart. The Series legend is the legend to

each different colored bar. The Toolbar, Pattern Bar, and Palette Bar can all be turned off or on. If you turn off the Toolbar and want to get it turned back on, right click on the graph and click on the Toolbar option.

Benchmarks

Although benchmarks can be graphed like real libraries, they are not actual libraries. They are statistical calculations based on precise groups of libraries. For example, a benchmark may consist of the average of all libraries in each state. It may also consist of the average of the largest libraries, such as the Average of the 99th Percentile for Population of the Legal Service Area.

When you choose benchmarks from the Select Benchmarks screen, you are not yet choosing the data elements for that benchmark. You are simply specifying how you want to identify the libraries to include in the benchmark. The actual data elements are selected on the data elements screen in a later step.

The first step is to choose a data element from the tree control on the left. If you choose a statistical data element, the box on the right will populate with all the possible benchmarks based on that data element. You will see 114 possibilities. 100 percentiles, 10 deciles, and 4 quartiles. Percentiles are represented as Average of 88-89% for Population of the Legal Service Area with the lower bound (88) being the actual percentile. Deciles are represented as Average of 80-90% for Population of the Legal Service Area and are inclusive of the lower bound (libraries in the 80th percentile) but not of the upper bound (libraries in the 90th percentile). Quartiles are represented as Average of 75-100% for Population of the Legal Service Area. Like Deciles, Quartiles are inclusive of the lower bound but not the upper bound.

If you choose a categorical data element, you will see a benchmark for each value in the data set. For example, if you choose Legal Basis Code in the FSCS data set, you will see 9 benchmarks for each of the possibly legal basis codes found in the data.

You can select the mathematical method to calculate the benchmark—average, median, or sum. The average method will average all the values for the data element that you select later for all the libraries included in the benchmark. For example, you choose the state benchmarks of Average for New York, New Jersey, Ohio, and Florida, and in the select Data Elements screen later, you choose % of Income from Local Government. The graph will average the % of Income from Local Government for all the libraries in each of the 4 states and display those results.

The median method will find the middle value for the libraries in the benchmark. Medians are helpful because they are not skewed by extreme values in the dataset.

The sum method will total all the values of the selected data elements for the libraries in the benchmark. In the case of a ratio data element, such as Collection Expenditures per Capita, the sum method will first sum the numerator and the denominator and then divide them to return the result.

To select a benchmark from the list of available benchmarks, simply click on it. To select more than one, hold down the CTRL button on your keyboard while you click. After selecting your benchmarks, click the Next button to return to the Select Libraries screen.

Note: Unlike real libraries, which are stored in the database, benchmarks are calculated on the fly depending on what you select. It takes more time to look up the appropriate values for the libraries and then perform the benchmark calculation. Consequently, graphs and tables will take much longer to generate when you have included benchmarks, and the more you include, the longer it will take. In some cases, it can take more than 45 seconds to pull up a graph with several benchmarks and several data elements. Also note that Average benchmarks are faster than Median benchmarks which are faster than Sum benchmarks.

Select Alphabetically

If you already know the names of the libraries you want to compare yourself to, this is where you want to be. The Select State pull-down box lists all the states that are available in the current database (the one you selected earlier in the Setup screen). When you click on a state, all the libraries in that state are displayed in the Libraries box in the center of the screen.

To select a library simply click on it. To select more than one library, hold down the CTRL button on your keyboard while you click. After you have selected all the libraries you want, click the Accept Highlighted Libraries button. You will be returned to the Select Libraries screen and the libraries you selected will be listed in the Selected Libraries box.

If you want to select libraries from multiple states, you will need to go through the process above for each state that you want to pick from. If you know that you will frequently use these same libraries, save them in a list so that you can conveniently load the list instead of manually picking them each time you want to use them.

Note: If you can't find the library you want in the list, there are two probable reasons. First, the library may report under one name and be commonly referred to as another. See if the library is listed under a different name. Second, the library did not contribute data to the database. For example, the PLDS survey is voluntary and not all libraries participate.