



West Virginia DEPARTMENT OF EDUCATION

How to Access and Use WVEIS Data

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Ways to Access WVEIS Data

- Various WVEIS Report Writers – prerecorded trainings can be accessed on the “WVEIS Finance” Microsoft Stream channel
 - EMS Reports and Report Writers - <https://web.microsoftstream.com/video/23bb0d88-8662-4314-8353-5ca2028af2cf>
 - FMS Reports and Report Writers - <https://web.microsoftstream.com/video/91dad223-955c-46e7-af24-8e6adb4b2faf>
 - PowerPoint presentation for these can be found at: https://wveis.k12.wv.us/wveis2004/documents/reportwriters_000.ppt
- SEQUEL Queries – Most commonly accessed using the ViewPoint dashboard.
 - “What is SEQUEL” training - https://wveis.k12.wv.us/wveis2004/documents/WHATISSEQUEL_000.doc
 - “Changing SEQUEL Queries” training - <https://wveis.k12.wv.us/wveis2004/documents/SEQUEL.ppt>



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WVEIS Report Writers

- Advantages:
 - Once set up, a WVEIS financial report will roll annually so it is available anytime you need it
 - Can be easily tailored as needs change
 - Provides account code descriptions, such as project code and object code definitions
 - Can now be emailed directly from WVEIS to any valid K12 e-mail address
 - Will pull closed data as of a given month
 - Can be as detailed or summarized as you want
- Disadvantages:
 - Can be confusing to set up
 - Doesn't allow you to drill down into the data
 - May not be accessible by all your directors, so they will rely on you to provide the reports



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SEQUEL Reports

- Advantages:
 - Easily extract WVEIS data
 - Easily tailor queries to fit your data needs
 - If it exists in WVEIS, it can be queried
 - FMS year-to-date data
 - EMS contract information
 - EMS deduction history information
 - EMS payroll distribution information
 - FMS accounts payable invoice detail
 - FMS journal entry details
 - EMS employee social security numbers for SSN online verification
 - Once a query is created, it can be run whenever you need updated data
 - Makes Excel pivot tables much easier to generate and/or update
 - Queried data can be used to build journal entries



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SEQUEL Reports

- Disadvantages:
 - Difficult for new users
 - Report setup generally requires you to be “in the weeds” more than WVEIS report writers
 - Query language is not as intuitive to financial users
 - Easy to setup reports incorrectly, so it is important to reconcile results to other sources of the same data (i.e, a WVEIS report)



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What is SEQUEL (SQL)?

- SQL is an acronym that stands for “Structured Query Language.”
- SQL is the standard and most widely used programming language for relational databases.
- SQL can be utilized using any one of three (3) interfaces:
 - SQL – Similar to WVEIS green screen
 - SQL ViewPoint – a graphical, point-and-click, computer software environment
 - SQL Web Interface (SWI) – Web-based interaction, even from tablets



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How do I get ViewPoint on my computer?

- You should always start by asking your WVEIS County Contact for assistance with installing and setting up ViewPoint.
- If your WVEIS County Contact is unable to assist you, ask that they contact the WVDE WVEIS helpdesk.
- ViewPoint requires installation of IBM “i Access”
- Unless you are already familiar with ViewPoint, do not attempt to install it yourself via web downloads.
- Once installed, the ViewPoint icon should be accessible on your desktop:



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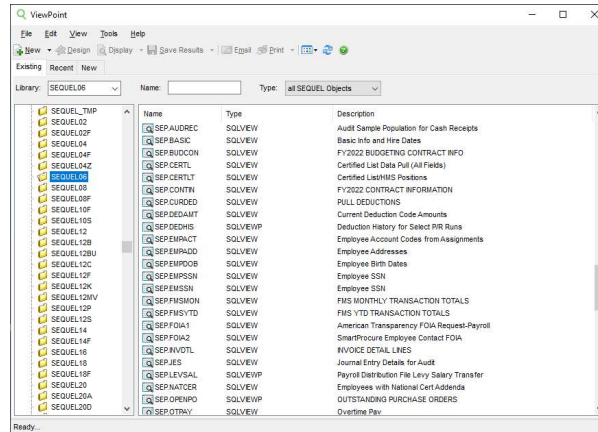
Keys to success

- You must understand that the quality of the query results is limited to the quality of the query, itself.
- Queried data must be pulled from appropriate databases:
 - Correct fiscal year data
 - Correct county/client member file
 - Correct database file (i.e., pull from a budgeting file if you are intending to query proposed budget information)
- Data “joins” must be correct
 - A “join” is parameter within ViewPoint that joins together data from multiple database files using information that exists in all files being joined (i.e., Employee IDs, deduction codes, or check numbers).
 - There are multiple “join” options when adding new databases to a query
- You must have access authority for the file(s) you wish to query.
- Always compare results to WVEIS reports to check accuracy/completeness of the data.

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ViewPoint Explorer Window

- Once installed, your ViewPoint explorer window will allow you to access existing queries in your county's (or other counties') SEQUEL library
- I named all my queries with my initials as the first three digits of the query ID (SEP).



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SQL ViewPoint Design View

- Design view allows you to go through a point-and-click process for setting up and/or tailoring a query to fit your specific needs.
- You can access Design View by clicking  to create a new query or by selecting an existing query and clicking .
- Basic information needed in a query:
 - WHAT data do you want
 - WHERE can that data be found

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WHERE is my data located

- “WHERE” is usually the most difficult part of building a new query
- However, green screen menu names will usually give some indication of where your data is kept on the server.

```

5/16/22  FY 22          BOONE COUNTY SCHOOLS          10:38:23  OPADEV005G
FMS          Account Balance & Transaction Detail Lookup  Ref: GNL.601L.01

-          Account Code: _____
Lookup
Index
End

Index: 1
1 = Chart of Accounts.
2 = G.L. Accounts in Budget Control.
3 = G.L. Accounts by Budget Control Account.
  
```



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Adding a Database

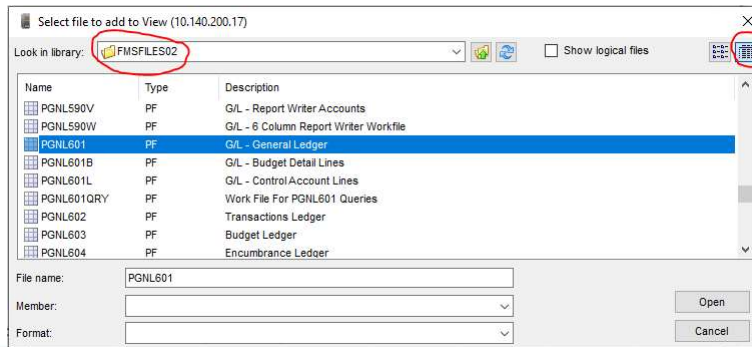
- To add a database to a query, click the “add database” button (🔍).
- Navigate to “ALLUSR” menu (All Users) and find the library file you need for your county number (i.e., if pulling data from FMS for Barbour County, you would look for the library “FMSFILES02”).
- Then navigate to the individual database file where your information is kept (i.e., PGNL601 for general ledger).
- Once the file is selected, you will then select the “file member.”
 - Some file members are specific to an individual fiscal year
 - Others are not date specific (such as history files)
 - For the general ledger example for Barbour, use “WV00222” to view general ledger data from FY2022.
 - File members are usually in the format “WV” followed by 3-digit county number and two-digit fiscal year.



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Adding a Database (Continued)

- Click the “Detail View” button to see the file descriptions.
- You can also manually type a library name over the current one (i.e., change the “F” in “FMSFILES02” to an “E” to get EMS files).



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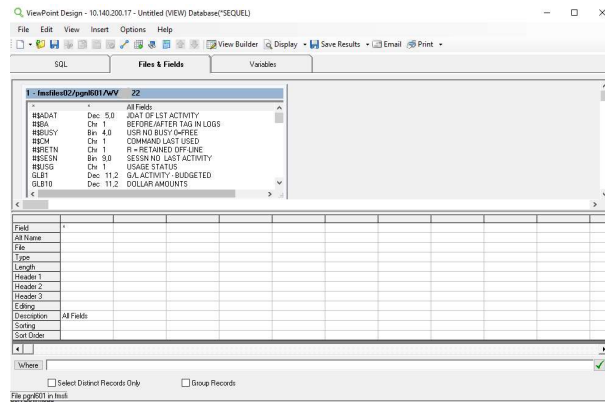
Adding a Database (Continued)

- Multiple databases can be added to the same query.
 - Requires the use of “joins” in order to tell the system how the database files are related
 - Joins control what happens when a multi-file (join) request is made.
 - There are three types of joins:
 - INNER – “Inner joins” only show records that match all joining criteria.
 - PARTOUT – “Partial outer joins” show primary records and shows missing secondary records with default values (usually blanks and zeros) when the joined record is created.
 - ONLYDFT – “Only default joins” show only the primary records which do not have a matching secondary record.
 - Selecting the correct join type could mean the difference between a complete query and an incomplete query

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Selecting Your Data Fields

- Once the database is added, it can be useful to query the entire file to see what data is available and in what format.
- Click on the “Files & Fields” tab to see the available files and their related data fields that can be selected.
- Use the * option to select all fields.



Selecting Your Data Fields (Continued)

- Click **Display** to view the query results

USAGE STATUS	JDAT OF R - RETAINED LST ACTIVITY/OFFLINE	BEFORE/AFTER TAG IN LOGS	SESSN NO LAST ACTIVITY/COMMAND LAST USED	USER NO BUSY/INTERNAL OFF/REE ACCOUNT NUMBER	INTERNAL ACCOUNT NUMBER	SUB LEDGER ACCOUNT POINTER ID	FINANCIAL STATEMENT CLASSIFICATION	AMOUNT	AMOUNT	AB	
91.281			0 C	0 11000000101001000000000000		308.493		0	1,093,034.60	268,488.10	1,298.
91.281			0 C	0 11000000101001000000000000		308.494		0			
91.281			0 C	0 11000000102001000000000000		308.495		0			
91.281			0 C	0 11000000111001000000000000		308.496		0			
91.281			0 C	0 11000000111001000000000000		308.497		0			
91.281			0 C	0 11000000111210000000000000		308.498		0			
91.344			0 C	0 11000000111210000000000000		308.499		8			
91.344			0 C	0 11000000111221000000000000		308.500		8			
91.344			0 C	0 11000000112230000000000000		308.501		8			
91.281			0 C	0 11000000111262000000000000		308.502		8			
91.281			0 C	0 11000000114001000000000000		308.503		0			
91.281			0 C	0 11000000121001000000000000		308.504		0			
91.281			0 C	0 11000000122001000000000000		308.505		0			
91.281			0 C	0 11000000131001000000000000		308.506		0			
91.281			0 C	0 11000000141001000000000000		308.507		0			
91.281			0 C	0 11000000142001000000000000		308.508		0			
91.281			0 C	0 11000000143001000000000000		308.509		0			
91.281			0 C	0 11000000153001000000000000		308.510		0			
91.281			0 C	0 11000000153010010000000000		308.511		0			
91.281			0 C	0 11000000154001000000000000		308.512		0			
91.281			0 C	0 11000000181001000000000000		308.513		0			
91.281			0 C	0 11000000182001000000000000		308.514		0			
91.281			0 C	0 11000000182001000000000000		308.515		0	918.56	35,345.75	3.
91.281			0 C	0 11000000189001000000000000		308.516		0			
91.281			0 C	0 11000000192001000000000000		308.517		0			



SQL ViewPoint Design View

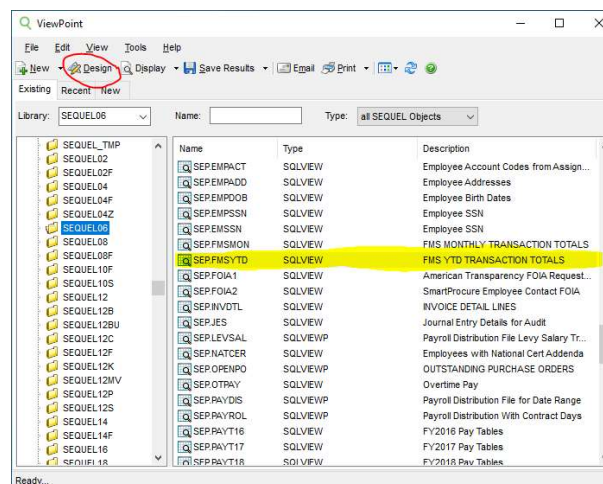
- For this introductory presentation, you will see how to access an existing query and tailor it to your county.
- One of the most helpful queries I used was “SEP.FMSYTD” in the “SEQUEL06” user library.
 - Pulls year-to-date FMS data from WVEIS
 - Beginning budget
 - Current budget
 - Year-to-date transaction balance
 - Current balance of open encumbrances
 - Remaining unencumbered budget balance
 - Account codes in resulting data file are parsed out into individual pieces to easily pivot for various informational needs.
 - Allows user to quickly find account balances at higher levels than the WVEIS account balance lookup.
 - Allows user to quickly set up custom reports.



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SEP.FMSYTD

- Access SEP.FMSYTD by navigating to the SEQUEL06 file library and finding the “SEP.FMSYTD” SEQUEL object, then select it and click “Design” to open Design View.



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SEP.FMSYTD

- Select the “SQL” tab at the top and scroll down to the bottom of the sequel language to see the “FROM” expression.
- To tailor this query to your county, simply change the “FROM” expression to agree with your county’s file location and member name.
 - Boone’s “FROM” expression: fmsfiles\ [] /pgnl601(wv [] &fyr)
 - Barbour’s “FROM” expression: fmsfiles\ [] /pgnl601(wv [] &fyr)
 - The “&fyr” variable will prompt you for the 2-digit fiscal year, so no manual changes are needed from year to year.
- File locations will typically end with your county’s two-digit code.
- File members will typically include “WV” followed by your county’s three-digit county code and the two-digit fiscal year.
 - If a file member ends with “00” it is usually a history file.



SEP.FMSYTD

```

ViewPoint Design - 10.140.200.17\SQL\EL06\SEP.FMSYTD (VIEW) Database\SQL
File Edit View Insert Options Help
SQL Files & Fields Variables
SELECT WDATA(qlkey) COLHDG('INTERNAL', 'ACCOUNT NUMBER',
CAT(SST(qlkey, pgn#01, 1, 2), 'SST(qlkey, pgn#01, 3, 5), 'SST(qlkey, pgn#01, 8, 5), 'SST(qlkey, pgn#01,
13, 3), 000 0000 0000 00 N')
NAME(ACCT#OBJ) COLHDG('ACCOUNT', 'NUMBER', 'TO OBJ LEVEL',
CAT(SST(qlkey, pgn#01, 1, 2), 'SST(qlkey, pgn#01, 3, 5), 'SST(qlkey, pgn#01, 8, 5), 'SST(qlkey, pgn#01,
13, 3), 'SST(qlkey, pgn#01, 16, 3), 0000 0000 00 N')
NAME(ACCT#LOC) COLHDG('ACCOUNT', 'NUMBER', 'TO LOC LEVEL',
CAT(SST(qlkey, pgn#01, 1, 2), 'SST(qlkey, pgn#01, 3, 5), 'SST(qlkey, pgn#01, 8, 5), 'SST(qlkey, pgn#01,
13, 3), 'SST(qlkey, pgn#01, 16, 3), 'SST(qlkey, pgn#01, 19, 4), 'SST(qlkey, pgn#01, 23, 4), 'SST
(qlkey, pgn#01, 27, 2), N')
NAME(FUNACT) COLHDG('FULL', 'ACCOUNT', 'NUMBER',
SST(qlkey, 1, 2) NAME(Fun) COLHDG('FUND'), SST(qlkey, 3, 5) NAME(Project) COLHDG('PROJECT'),
SST(qlkey, 3, 2) NAME(Project2) COLHDG('FIRST 2', 'DIGITS OF', 'PROJECT'),
CAT(SST(qlkey, 3, 2), 'Y', SST(qlkey, 6, 2)) NAME(Fun#Prj) COLHDG('FORMATTED', 'PROJECT'),
SST(qlkey, 8, 5) NAME(Prj) COLHDG('PROGRAM'),
SST(qlkey, 8, 1) NAME(Prj) COLHDG('PROGRAM'), SST(qlkey, 8, 4) NAME(Fun#4) COLHDG('FUNCTION'),
SST(qlkey, 9, 2) NAME(Fun#2) COLHDG('FIRST 2', 'DIGITS OF', 'FUNCTION'),
SST(qlkey, 13, 3) NAME(OBJ) COLHDG('OBJECT'),
SST(qlkey, 13, 2) NAME(OBJ2) COLHDG('FIRST 2', 'DIGITS OF', 'OBJECT'),
SST(qlkey, 13, 1) NAME(OBJ1) COLHDG('FIRST', 'DIGIT OF', 'OBJECT'),
SST(qlkey, 16, 3) NAME(LOC) COLHDG('LOCATION'),
SST(qlkey, 19, 4) NAME(Con) COLHDG('COST', 'CENTER'),
SST(qlkey, 23, 4) NAME(SUBJ) COLHDG('SUBJECT'),
SST(qlkey, 27, 2) NAME(Exp) COLHDG('EXPANSION'), gbrag EDTCDE(O)
GLBNOW PGNL601+GLBEEG PGNL601+GLB1 PGNL601+GLB2 PGNL601+GLB3 PGNL601+GLB4 PGNL601
+GLB5 PGNL601+GLB6 PGNL601+GLB7 PGNL601+GLB8 PGNL601+GLB9 PGNL601+GLB10 PGNL601
+GLB11 PGNL601+GLB12 PGNL601+GLB13 PGNL601+GLB14 PGNL601
COLHDG('CURRENT', 'BUDGET', 'EDTCDE(N)
GLTBEG PGNL601+GLTNOW PGNL601+GLT1 PGNL601+GLT2 PGNL601+GLT3 PGNL601+GLT4 PGNL601
+GLT5 PGNL601+GLT6 PGNL601+GLT7 PGNL601+GLT8 PGNL601+GLT9 PGNL601+GLT10 PGNL601+GLT11 PGNL601
+GLT12 PGNL601+GLT13 PGNL601+GLT14 PGNL601
COLHDG('YTD', 'TRANSACTIONS', 'EDTCDE(N)
GLENOW PGNL601+GLEBEG PGNL601+GLE1 PGNL601+GLE2 PGNL601+GLE3 PGNL601+GLE4 PGNL601
+GLE5 PGNL601+GLE6 PGNL601+GLE7 PGNL601+GLE8 PGNL601+GLE9 PGNL601+GLE10 PGNL601+GLE11 PGNL601
+GLE12 PGNL601+GLE13 PGNL601+GLE14 PGNL601
COLHDG('REMARKS', 'BUDGET', 'BALANCE', 'EDTCDE(N)
CAT(SST(qlkey, pgn#01, 1, 2), 'SST(qlkey, pgn#01, 3, 5), 'SST(qlkey, pgn#01, 8, 5), 'SST(qlkey, pgn#01,
13, 3), 'SST(qlkey, pgn#01, 16, 3), '
COLHDG('ACCOUNT', 'NUMBER', 'TO LOC LEVEL',
FROM fmsfiles\ [ ] /pgnl601(wv [ ] &fyr)

```



SEP.FMSYTD

Property	Value
Variable Name	&FYR
Type	Expr
Length	2
Prompt Text	Fiscal Year
Default	SQL(SST(CHAR((YEAR(CURRENT DATE+6 MONTH))), 3,2))
Integrity Test	
Omit Leading Text	
Omit Trailing Text	
Extended Help	
Design Value	23

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Saving The Tailored Query

- Once you have changed the query's "FROM" expression to your own county's information, you'll want to save it in your own county's SEQUEL library.
- You should change the SEQUEL object name to your own unique title that you can find again when you need it (change "SEP" in the name to your own initials).
- Be careful not to save over the original Query. Typically, you will not be able to write over another county's queries since you won't have permissions for those file locations. However, it is best to play it safe and save the file in your own library as soon as you enter "Design View" mode.

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Saving Query Results

- Once the query is created and saved, you can run or “Display” the results by either:
 - Double-clicking the query name,
 - Single-clicking the query then clicking **Display** in the top menu bar,
 - Right-clicking the query then selecting “Display Results,” or
 - Clicking **Display** within Design View
- Once the query results are displayed, click “File” in the top left corner of the window and then select “Save Results As...”
 - Change file “Save as type” to desired format, such as Microsoft Excel 2007
 - Select the location on your computer or network where you want the file to be saved
 - Change “File Name” if desired
- **DO NOT use the “Export to Excel” option in the “File” menu to save.**



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Results in Excel

FULL ACCOUNT NUMBER	FUND	PROJECT	DIGITS OF PROJECT	FORMATTED PROJECT	PROG/FUNCT	IN	PROGRA	FUNCTION	DIGITS OF FUNCTION	OBJECT	OBJECT	DIGITS OF OBJECT	FIRST DIGIT OF OBJECT	LOCATION	COST CENTER	SUBJECT	EXPANSION	BEGINNING BUDGET
11.00000.00101.001.0001.0000.00.N	11	00000	00	00V00	00101	0	0101	01	001	00	0	0	0	000	0001	0000	00	.00
11.00000.00121.001.0000.0000.00.N	11	00000	00	00V00	00121	0	0121	01	001	00	0	0	0	000	0000	0000	00	.00
11.00000.00122.001.0000.0000.00.N	11	00000	00	00V00	00122	0	0122	01	001	00	0	0	0	000	0000	0000	00	.00
11.00000.00142.001.0000.0000.00.N	11	00000	00	00V00	00142	0	0142	01	001	00	0	0	0	000	0000	0000	00	.00
11.00000.00143.001.0000.0000.00.N	11	00000	00	00V00	00143	0	0143	01	001	00	0	0	0	000	0000	0000	00	.00
11.00000.00153.001.0000.0000.00.N	11	00000	00	00V00	00153	0	0153	01	001	00	0	0	0	000	0000	0000	00	.00
11.00000.00183.001.0000.0000.00.N	11	00000	00	00V00	00183	0	0183	01	001	00	0	0	0	000	0000	0000	00	.00
11.00000.00189.001.0000.0000.00.N	11	00000	00	00V00	00189	0	0189	01	001	00	0	0	0	000	0000	0000	00	.00
11.00000.00195.001.0000.0000.00.N	11	00000	00	00V00	00195	0	0195	01	001	00	0	0	0	000	0000	0000	00	.00
11.00000.00411.004.0000.0000.00.N	11	00000	00	00V00	00411	0	0411	04	004	00	0	0	0	000	0000	0000	00	.00
11.00000.00421.004.0000.0000.00.N	11	00000	00	00V00	00421	0	0421	04	004	00	0	0	0	000	0000	0000	00	.00
11.00000.00422.004.0000.0000.00.N	11	00000	00	00V00	00422	0	0422	04	004	00	0	0	0	000	0000	0000	00	.00
11.00000.00422.211.0000.0000.00.N	11	00000	00	00V00	00422	0	0422	04	211	21	2	2	2	000	0000	0000	00	.00
11.00000.00422.212.0000.0000.00.N	11	00000	00	00V00	00422	0	0422	04	212	21	2	2	2	000	0000	0000	00	.00



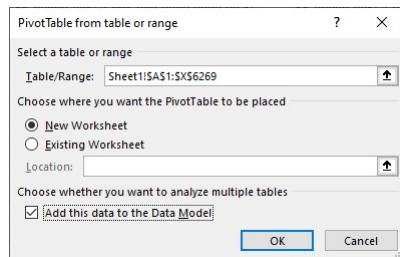
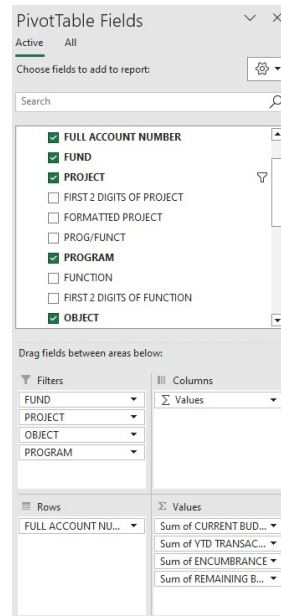
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Demonstration of SEQUEL Budget Monitoring

- Using the “SEP.FMSYTD” query, we can quickly create a budget monitoring report.
 - Open the file you saved from the displayed query results and select all data (ctrl + A)
 - In the “Ribbon” click “Insert,” then select “Pivot Table” 
 - In the “PivotTable from table or range” window, click the “New Worksheet” option to generate the pivot table window as a separate worksheet within the workbook.
 - You may choose the “Add this data to the Data Model” option. That option gives you the ability to pivot for a “distinct count” of information. This may be helpful when pivoting payroll data to get a distinct count of employees.
 - Set up the pivot table fields you want to view.

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Demonstration (Continued)

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Demonstration (Continued)

	A	B	C	D	E
1	FUND	All			
2	PROJECT	02310			
3	OBJECT	All			
4	PROGRAM	All			
5					
		Sum of	Sum of YTD	Sum of	Sum of
6	Row Labels	CURRENT	TRANSACTIONS	ENCUMBRANCE	REMAINING
		BUDGET			BUDGET
7	61.02310.03211.009.000.0000.0000.00.N	(97,550.00)	(48,890.00)	-	(48,660.00)
8	61.02310.22142.611.001.0000.0000.00.N	-	3,597.32	100.00	(3,697.32)
9	61.02310.22212.611.002.0000.0000.00.N	-	2,274.80	242.00	(2,516.80)
10	61.02310.76371.847.001.0000.0000.00.N	97,550.00	-	-	97,550.00
11	Grand Total	-	(43,017.88)	342.00	42,675.88



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Demonstration (Continued)

- If you wanted to show functions over budget, I can add "First 2 Digits of Function" as a "row" of data and then collapse the entire data to that level.

	A	B	C	D	E
FUND	All				
PROJECT	02310				
OBJECT	(Multiple Items)	Objects 100-999			
PROGRAM	All				
		Sum of	Sum of	Sum of	Sum of
		CURRENT	YTD	ENCUMBRANCE	REMAINING
		BUDGET	TRANSACTIONS		BUDGET
21		-	3,597.32	100.00	(3,697.32)
22		-	2,274.80	242.00	(2,516.80)
63		97,550.00	-	-	97,550.00
Grand Total		97,550.00	5,872.12	342.00	91,335.88

PivotTable Fields

Active: All

Choose fields to add to report:

Search:

- FULL ACCOUNT NUMBER
- FUND
- PROJECT
- FIRST 2 DIGITS OF PROJECT
- FORMATTED PROJECT
- PROG/FUNCT
- PROGRAM
- FUNCTION
- FIRST 2 DIGITS OF FUNCTION
- OBJECT

Drag fields between areas below:

Filters: FUND, PROJECT, OBJECT, PROGRAM

Columns: Values

Rows: FIRST 2 DIGITS OF FU..., FULL ACCOUNT NU...

Values: Sum of CURRENT BUD..., Sum of YTD TRANSA..., Sum of ENCUMBRANCE..., Sum of REMAINING B...



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Demonstration (Continued)

- If you wanted to build a budget transfer to correct the budget overage, you can double-click on the over-budget item to see what accounts make up that total. Use the full account numbers and amounts to build your entry.

Range[FULL ACCOUNT NUMBER]	Range[CURRENT]	Range[YTD TRAN]	Range[REMAINING BUDG]
61.02310.22142.611.001.0000.0000.00.N	-	3,597.32	(3,697.32)
61.02310.22212.611.002.0000.0000.00.N	-	2,274.80	(2,516.80)
61.02310.76371.847.001.0000.0000.00.N	97,550.00	-	97,550.00



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Demonstration (Continued)

- Since the accounts are over budget, a debit is needed to increase the budget.
- We can use the balance sitting in the “reserve for special projects” to cover the amounts overspent (for the credit side of the entry).
- Copy/paste the full account numbers from the pivot detail and the amounts into your budget revision template.
- Once the budget entry is built and balanced, you can upload the entry into WVEIS, review it, and post it within minutes.
- **Always be sure to discuss budget transfers with program directors to ensure those transfers are needed. You may end up moving budget to cover an UNALLOWABLE expense that was posted to the project in error.**



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Demonstration (Continued)

- This process can be used to upload and post:
 - AJs
 - Correct incorrectly posted accounts payable invoices
 - Correct incorrectly posted payroll and deductions (requires a different query since payroll data is not recorded in detail within FMS/GNL601)
 - BJs
 - Transfer available budgets to cover overspending
 - Transfer reserves for special projects to appropriate accounts to match approved GPS budgets
 - Supplement in new grant funds
 - Supplement collections when annual budget has been exceeded prior to year-end
- **Remember: Over budget doesn't always mean more budget needed!**
- This process improves efficiency of posting large journal entries. It may not be as useful for small entries that hit just a few accounts.



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Questions?

Thank you!

sepauley@k12.wv.us

304-558-2691



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