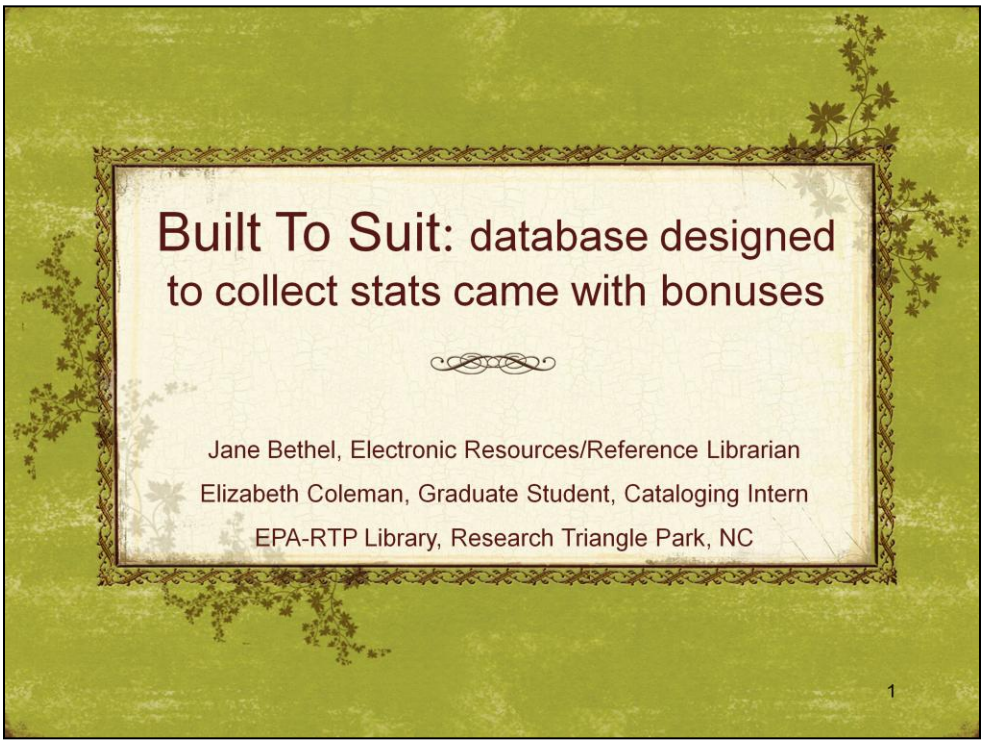


[Jane] How many people have to complete an annual report that is too long, disjointed, and has earned the nickname “TROUBLE?” This presentation is really about two annual reports that needed a better work flow.

The purpose of building a database to suit our own needs was to speed up work flow, use teamwork to generate ideas, and to step up the technology to a database instead of relying on Excel spreadsheets.

We started a year ago when the graduate intern, Laurie Hunter, created a Microsoft Access database. Her undergraduate degree in math and computer science gave her the tools. Elizabeth Coleman, co-presenter, was the second intern who populated the database with journal metadata. Jessica LaBrie is the current intern who is performing serial duties in the database.

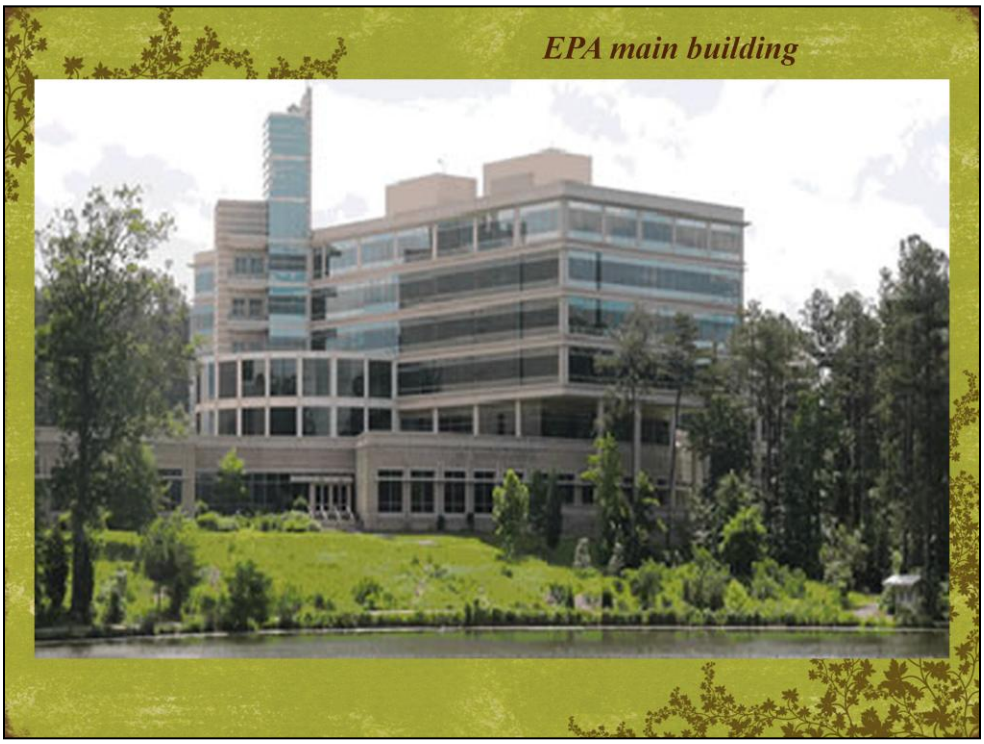
[Elizabeth] Ask people to raise their hand if they use Excel. Ask people to raise hand if they use Access. We used to use Excel to create the annual reports, but now we use Access. Jane and I are not Access experts. There was a lot of trial and error. Overall it has been a success.

[Jane] We are contracted by the University of North Carolina at-Chapel Hill, School of Information and Library Science or SILS, to provide library service to the Environmental Protection Agency at Research Triangle Park, NC.

The EPA-RTP library provides practical, on the job experience, for graduate interns from two area library schools: SILS at UNC-Chapel Hill and SLIS at North Carolina Central University in Durham.

There are eight to ten interns who fill 20 hour per week paid positions. There are six permanent staff members and one part-time member at the EPA-RTP Library.

The interns are valuable and essential assets performing work in serials, cataloging, interlibrary loan, and reference. Elizabeth was the serials intern last year.

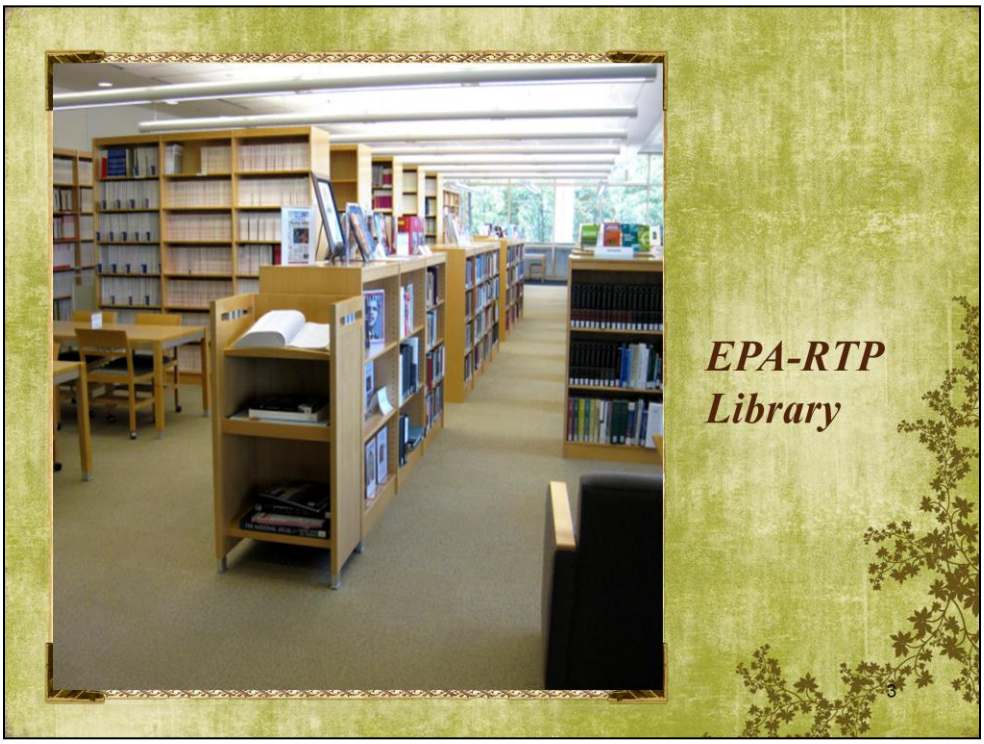


[Jane] The EPA-RTP Library is a government library serving researchers at the Environmental Protection Agency (EPA). The campus is located in the Research Triangle Park adjacent to Interstate 40 and the Durham Freeway.

This research park was created by state and local governments, nearby universities, and local business interests in 1959.

The EPA was established in 1970 to consolidate a variety of federal research, monitoring, standard-setting and enforcement activities to ensure environmental protection.

Part of my job is to process acquisition recommendations for our location and some for all Agency EPA locations.



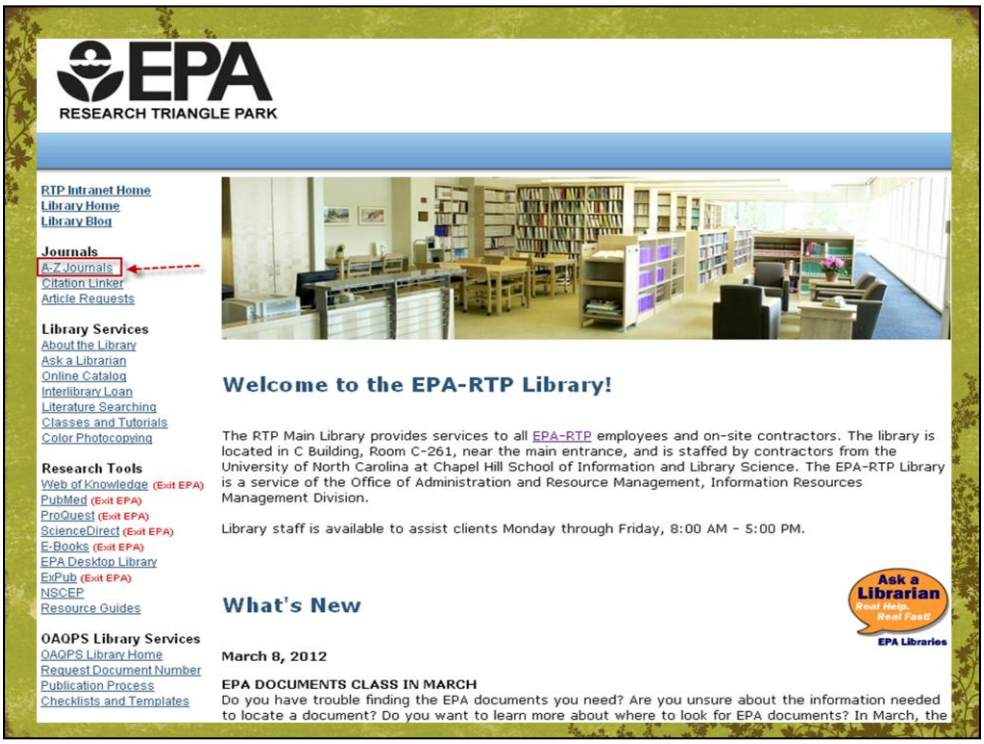
[Elizabeth]

The RTP Library's focus is on air pollution with an emphasis on chemical toxicity and basic sciences. We also have some coverage of business, economics, human resources, and computer-related information.

We house an extensive EPA document collection in print and microfiche. It includes publications from the Office of Air Quality Planning and Standards, and the Office of Research and Development.

We currently receive roughly 20 print journal titles. The majority of subscription renewals (about 2200) changed to electronic-only format by 2008.

Acquisition of the eBook collection along with the majority of databases is managed by EPA Headquarters in Washington, D. C.

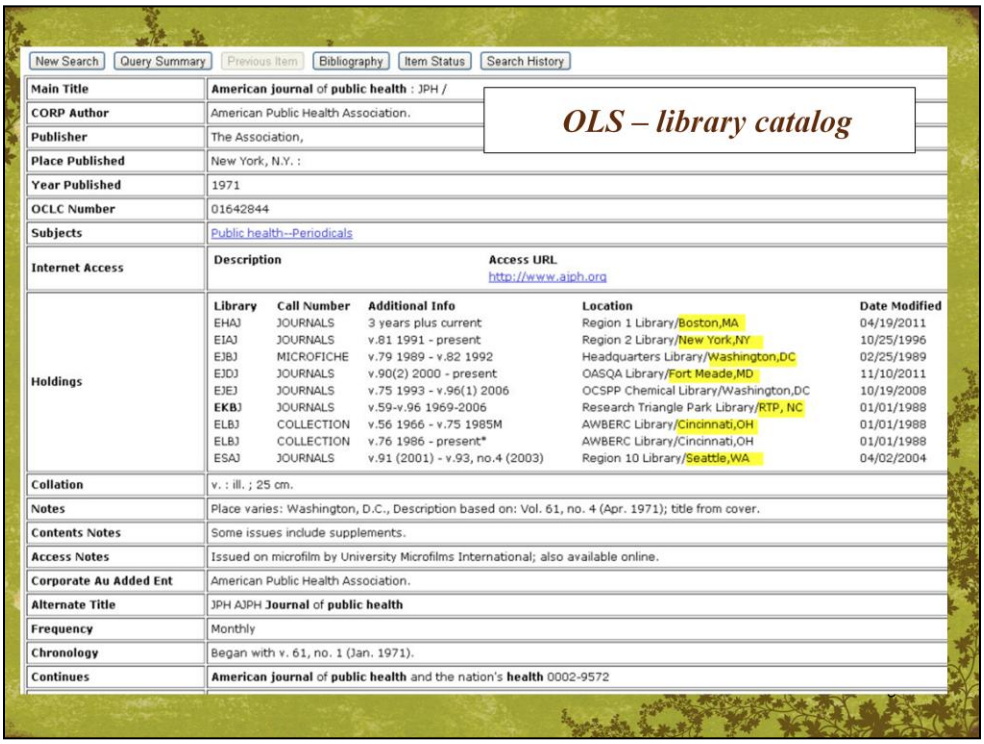


[Elizabeth]

This slide shows our library home page and points to our electronic A-Z list.

The EPA-RTP Library conducts acquisition responsibilities for single-site subscriptions for RTP, single-site subscriptions for the EPA Library in Cincinnati, two-site subscriptions for RTP and Cincinnati, and all EPA Agency sites.

These sound like they would operate like consortial purchases but we do not receive checks from Cincinnati or Headquarters. Instead the EPA funding division, the Office of Research and Development, has scientists in all locations that are part of the research and development arm of the EPA whose work helps improve the quality of air, water, soil, and the way we use resources.



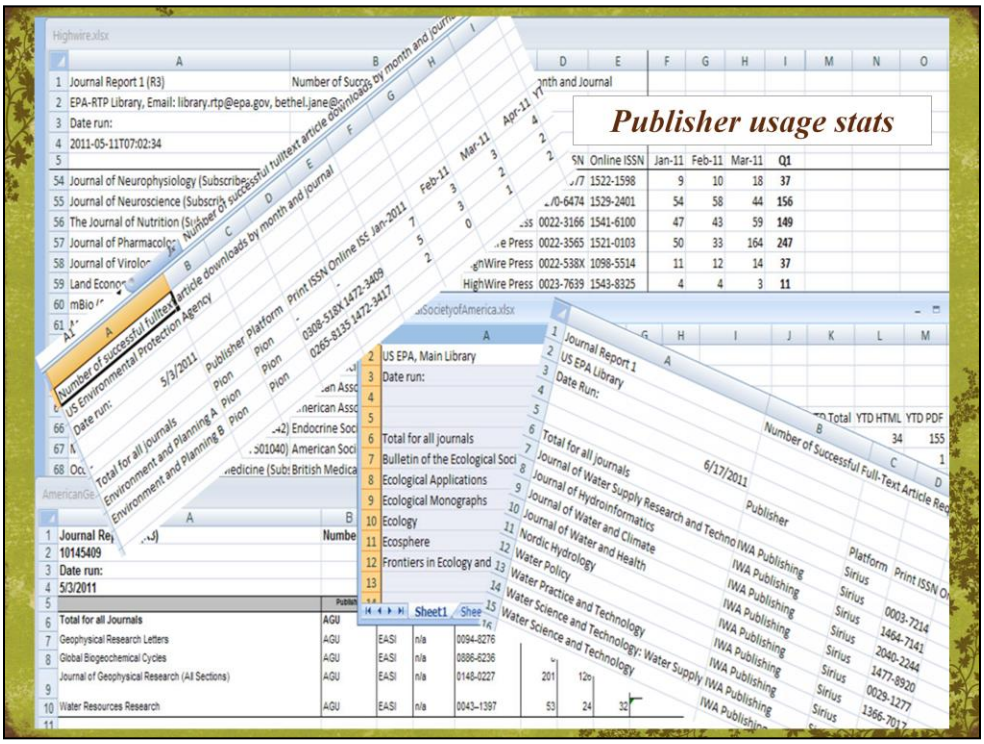
[Jane]

This image shows one record in our catalog. I have highlighted cities and states that show some of the other EPA library locations.

The EPA libraries across the country have separate funding divisions. There are 26 libraries. Three are repository libraries, five special libraries, ten regional libraries and eight research laboratory libraries. The three special libraries are a chemical library, legislative reference library and a law library.

We use a homegrown catalog built a few decades ago which we call the OLS. It does have a circulation and serials module, but there is not a cataloging module.

This catalog provides holding data of our monographs, EPA documents, EPA microfiche, and print journals. You will see an URL for an electronic journal but it is not a consistent practice. This catalog is getting an update at the present time.



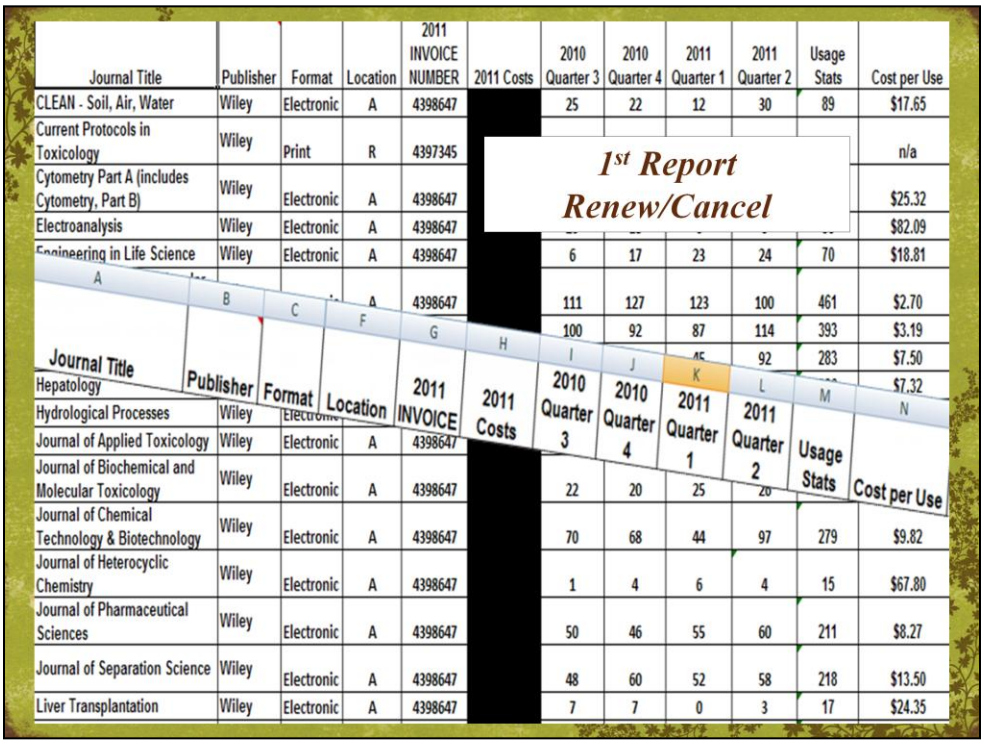
[Elizabeth]

The idea of a customized database began after the second year of a lengthy process to collect usage statistics. We do have a Serials Solutions link resolver and knowledge base, but we do not have the COUNTER product that works with SUSHI. COUNTER automatically harvests usage statistics of electronic resources through a web service. *We* have to do this manually.

Roughly fifteen days after each quarter we marshal in usage statistics from about 33 content hosts or publisher websites. Often we have to weed through publisher's aggregated lists of their titles selecting just our subscriptions.

The old process was to download the stats then enter the full text counts on a report template. Last year we needed to collocate the titles from the first report into the second report.

Now our usage counts are entered into our Built to Suit database and we can merely create a query to pull data as necessary. The process is expected to be neat and simple. Fingers crossed!



Journal Title	Publisher	Format	Location	2011 INVOICE NUMBER	2011 Costs	2010 Quarter 3	2010 Quarter 4	2011 Quarter 1	2011 Quarter 2	Usage Stats	Cost per Use
CLEAN - Soil, Air, Water	Wiley	Electronic	A	4398647		25	22	12	30	89	$17.65
Current Protocols in Toxicology	Wiley	Print	R	4397345							n/a
Cytometry Part A (includes Cytometry, Part B)	Wiley	Electronic	A	4398647							$25.32
Electroanalysis	Wiley	Electronic	A	4398647							$82.09
Engineering in Life Science	Wiley	Electronic	A	4398647		6	17	23	24	70	$18.81
Hepatology				4398647		111	127	123	100	461	$2.70
Hydrological Processes	Wiley	Electronic	A	4398647		100	92	87	114	393	$3.19
Journal of Applied Toxicology	Wiley	Electronic	A	4398647					92	283	$7.50
Journal of Biochemical and Molecular Toxicology	Wiley	Electronic	A	4398647		22	20	25	26		$7.32
Journal of Chemical Technology & Biotechnology	Wiley	Electronic	A	4398647		70	68	44	97	279	$9.82
Journal of Heterocyclic Chemistry	Wiley	Electronic	A	4398647		1	4	6	4	15	$67.80
Journal of Pharmaceutical Sciences	Wiley	Electronic	A	4398647		50	46	55	60	211	$8.27
Journal of Separation Science	Wiley	Electronic	A	4398647		48	60	52	58	218	$13.50
Liver Transplantation	Wiley	Electronic	A	4398647		7	7	0	3	17	$24.35

[Jane]

The graduate intern is checking for statistics every day during the last week of July in order to finalize the report.

There are two different reports due at the end of July each year. This image shows data populated with annual cost and cost per use (CPU) in addition to statistical use counts.

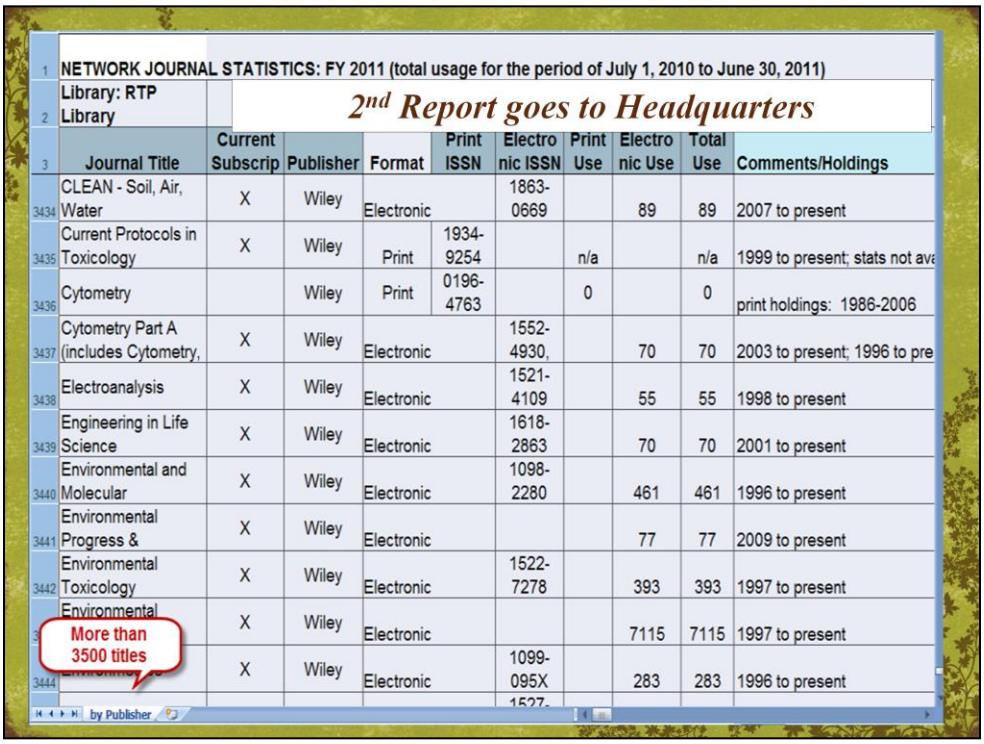
Often times the invoice number is needed. Past procedure was to find it online at the agent's site and then locate it in the binder. It would be efficient if the invoice number was on the same database page as the journal title, the publisher, the ISSN number, that year's subscription cost, the type of service (one-site, two-site, or All agency-site), and the package pricing attribute information.

The image you see here is the first report that is used by two Federal Library Managers to recommend renewal or cancellation.

The first report does not need the individual usage counts from the 1600+ Big Package.

As long as the total CPU for the Big Package shows cost effectiveness, it is expected to renew.

The Serials Department examines the individual download usage within the Big Package and assesses value by title name.



NETWORK JOURNAL STATISTICS: FY 2011 (total usage for the period of July 1, 2010 to June 30, 2011)

Library: RTP Library

2nd Report goes to Headquarters

	Journal Title	Current Subscrip	Publisher	Format	Print ISSN	Electronic ISSN	Print Use	Electronic Use	Total Use	Comments/Holdings
3434	CLEAN - Soil, Air, Water	X	Wiley	Electronic		1863-0669		89	89	2007 to present
3435	Current Protocols in Toxicology	X	Wiley	Print	1934-9254		n/a		n/a	1999 to present; stats not ava
3436	Cytometry		Wiley	Print	0196-4763		0		0	print holdings: 1986-2006
3437	Cytometry Part A (includes Cytometry,	X	Wiley	Electronic		1552-4930,		70	70	2003 to present; 1996 to pre
3438	Electroanalysis	X	Wiley	Electronic		1521-4109		55	55	1998 to present
3439	Engineering in Life Science	X	Wiley	Electronic		1618-2863		70	70	2001 to present
3440	Environmental and Molecular	X	Wiley	Electronic		1098-2280		461	461	1996 to present
3441	Environmental Progress &	X	Wiley	Electronic				77	77	2009 to present
3442	Environmental Toxicology	X	Wiley	Electronic		1522-7278		393	393	1997 to present
	Environmental	X	Wiley	Electronic				7115	7115	1997 to present
3444		X	Wiley	Electronic		1099-095X		283	283	1996 to present

More than 3500 titles

by Publisher

[Jane] This slide shows the second report; the one that contains more than 3500 titles yet only has nine columns of data. It has our non-current print journal use and every electronic title also, even from the Big Package of more than1600 titles.

This report becomes subsumed into an aggregated list of all EPA library holdings. There is no cost data, but this gives Headquarters an measure of return on investment for the initial purchase. It proves that print has value year after year.

Last year we entered the individual stats onto the report template. It requires close attention to detail and double checking the data entry for accuracy. Any database, of course, will allow you to make a query and export all the data into a spreadsheet.

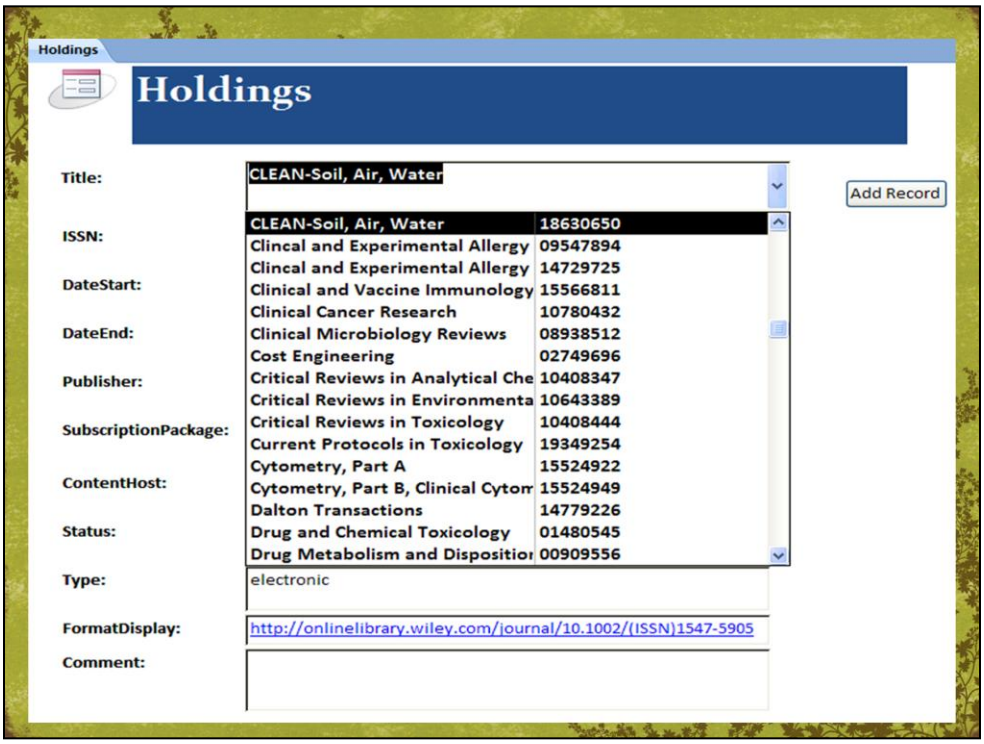
We needed a way to shorten the process. A solution was found to use technology to our advantage. This turned out to be a huge bonus. We'll show how this looks later on in the presentation.

[Elizabeth] We started slowly. When we visualized a tool that could store our journal information; it was a database.

A former intern began to build the database, but before it was completed her internship came to an end. And my internship began.

When I first started the serials rotation at the EPA-RTP Library, it was crunch time. The fiscal year was coming to a close and two quarters worth of statistics needed to be gathered and made readable for reports. At the time, the database was built but still empty, so I was working in Excel. Although gathering the data was not a problem, getting it into the proper format for the various reports proved to be more of a challenge. Things got lost in the shuffle, and at the last minute, I was scrambling to make the deadline. Clearly, a more efficient streamlined way was needed.

I had little experience with Access so I began just toying around with it to see how it worked and to discover what it could do. But I quickly realized, “Whoa! We need to create a backup before I accidently erase everything.” Jane and I decided the best idea would be to simply make a copy which would leave the original intact as our solid foundation should we need the seminal information. And believe me, we are *very* glad that copy was made, because that following week I somehow managed to yes, erase everything. That copy saved the day!

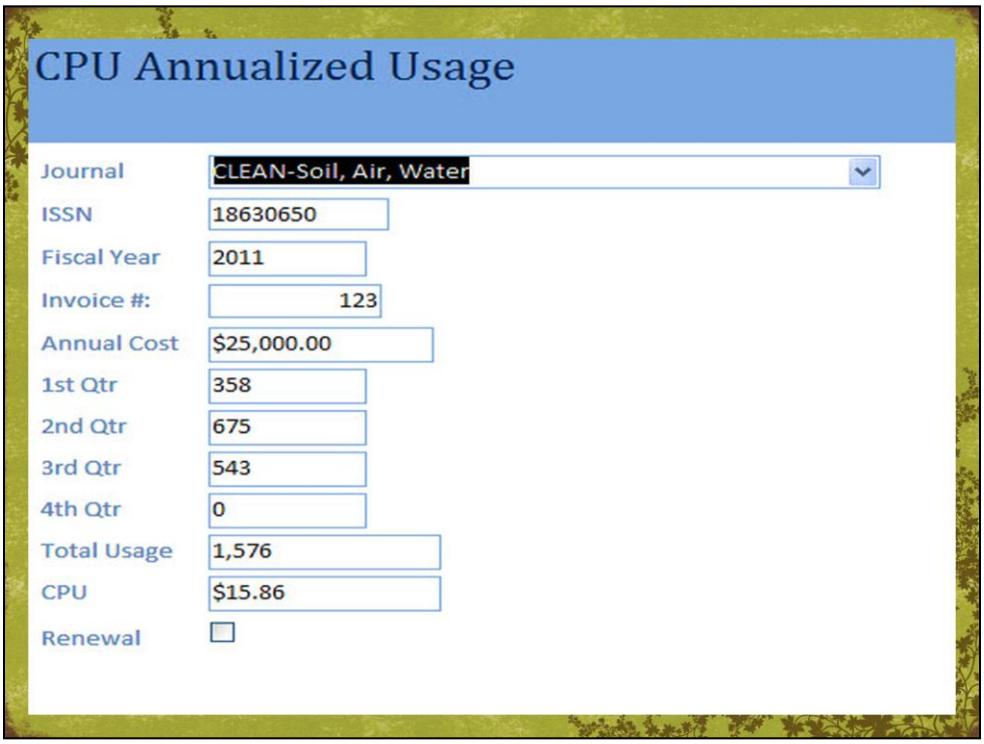


[Elizabeth] The next thing to do was populate the database. The previous intern had made a form for our holdings data with the ISSN and journal title available by drop down menu. I now manually added the needed additional information, which includes date and location of the holdings, publisher, content host, subscription package, and a comments box for anything else.

This information was coming from EBSCONET, Serials Solutions, and our own notes about the journals. Gathering all this data in one place made it easier to both find specific tidbits about a title and to see the overall information about the journals in a single subscription package.

Once the holdings form was populated using the dropdown menu, I determined that it would be better to import that information into a new form where the journal titles and ISSN would remain static. The drop-down menu allowed the title and ISSN to change, but all the other fields would remain the same, meaning data could easily be grouped incorrectly. Given the number of people who would be using the database through the years, continuing to use the drop-down menu just seemed like a disaster waiting to happen.

As we continued using the database, more tweaks were made and we expect even more in the future. Now that the database it populated it really is easy to make changes. Each serials intern can make changes based on their personal preferences.



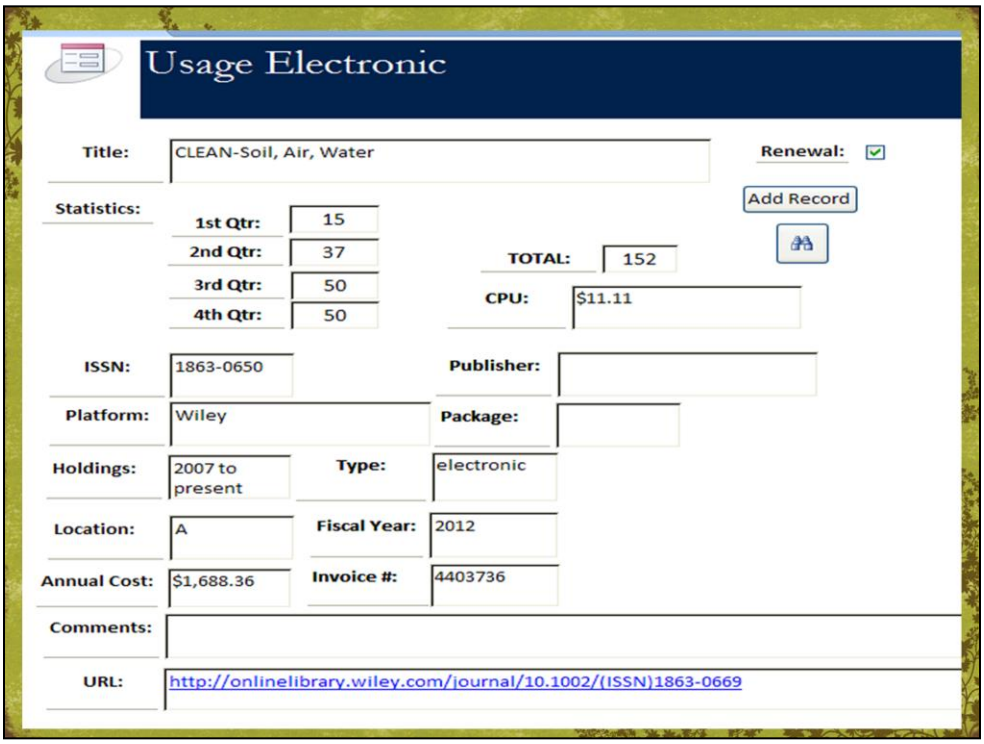
[Jane] This was the early CPU form to collect usage statistics by quarter.

Notice the CPU box on this slide that uses the Annual Cost divided by the total usage. It does the math after the 4th quarter has an entry and a dollar figure is listed in the Annual Cost box. This is not the real cost of this title. It is for demonstration purposes only.

Collecting stats in this manner seems less like a monotonous job. There is not the chance that your cursor is sitting in a cell within a spreadsheet other than the one you intended. There are many good reasons to use the power of Excel spreadsheets, but a database appears more useful than a spreadsheet for our purposes. This form allows stats to be entered one title at a time.

It is easier not to confuse similarly named titles like Journal of analytical toxicology and Journal of applied toxicology that would be lined up one on top of the other in a spreadsheet. There is more white space and we felt the information architecture is easier on the eyes than entering data into a busy long and wide spreadsheet.

After collecting stats for the first quarter, Elizabeth realized that if the quarter boxes were placed at the top near the title the process would run more smoothly.



[Jane]

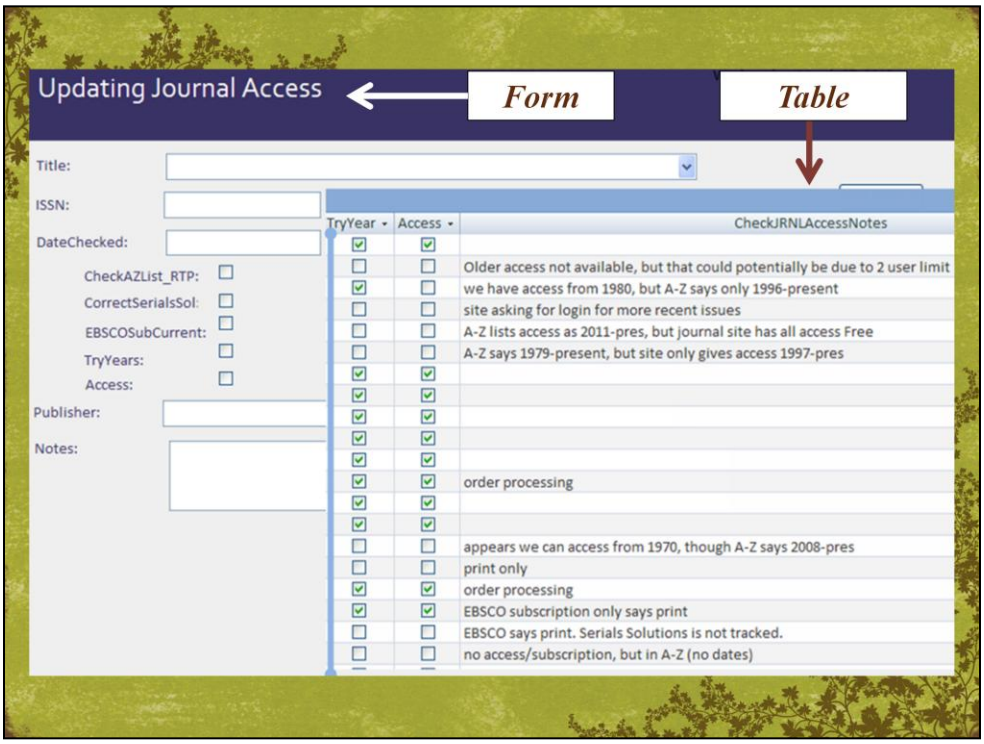
The previous two forms have morphed into this design that Elizabeth created for collecting statistics. It now houses metadata we want for creating the two annual reports with their different parameters.

Having all of this information in one spot is convenient when I need to glean information such as how many locations have access to this title.

After the subscription agent sent me the finalized invoices I used this form or a filtered table (when there was a large set by publisher) to enter cost, invoice number, and to check the renewal box. The purpose was to verify orders had been places all the titles we expected to renew.

Some subscriptions are ordered as a package from the subscription agent. That invoice might list the package price and an additional license fee, usually 30% of a journal's cost which has to be divided up by title. So how do I determine the cost of individual titles to calculate a CPU? I receive the quotes from publisher as an email attachment or is merely listed within the message. That really constitutes one more additional location where vital data has to be collected.

We expect to be able to generate the annual reports during the last days of July without the anxiety of waiting for last minute entries.



[Elizabeth]

We have often talked about how we could proactively ascertain if electronic access was working properly or not. The Built to Suit database affords us a method to verify. We feel this would be a helpful way to see if service was lost and to guide us in determining if the resolution would be with the subscription agent, the link resolver, or some other thing.

[USE POINTER TO SHOW TABLE]

This is the table that stores the information gathered from checking access for each title on a quarterly basis.

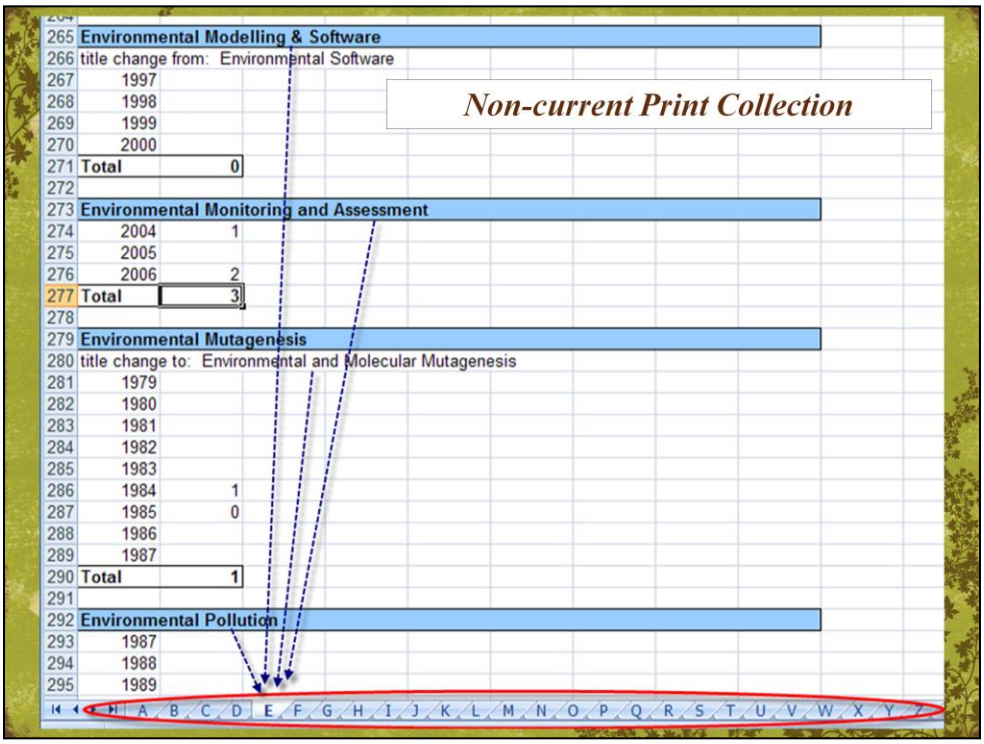
[USE POINTER TO SHOW FORM]

This form was devised as a means to see if we had access in our A-Z list, if the holdings range was correct in our link resolver, and to see if an order was present with the subscription agent. It also gives us a way to leave notes.

This is really two screen shots from our database. The form we use is called Updating Journal Access. After the form is filled out the results can be seen outlined in light blue below.

Here is the process. We first type in the title to our A-Z list link resolver and note the holding range. We then check the latest issue by clicking on the html link and confirm that one research article does load. Next we click on the oldest issue and check that the PDF does download completely (once the only thing that downloaded was the abstract so it is important to verify a complete full text download). If all is correct, we click the TryYears box and the Access box.

If the holding ranges do not match what we have listed, then the subscription holding range is checked at EBSCONET. EBSCONET will tell us if there is indeed a current subscription (or old subscription with perpetual rights possibly). If holding ranges need adjustment we make the corrections in Serials Solutions (our ERM and link resolver).



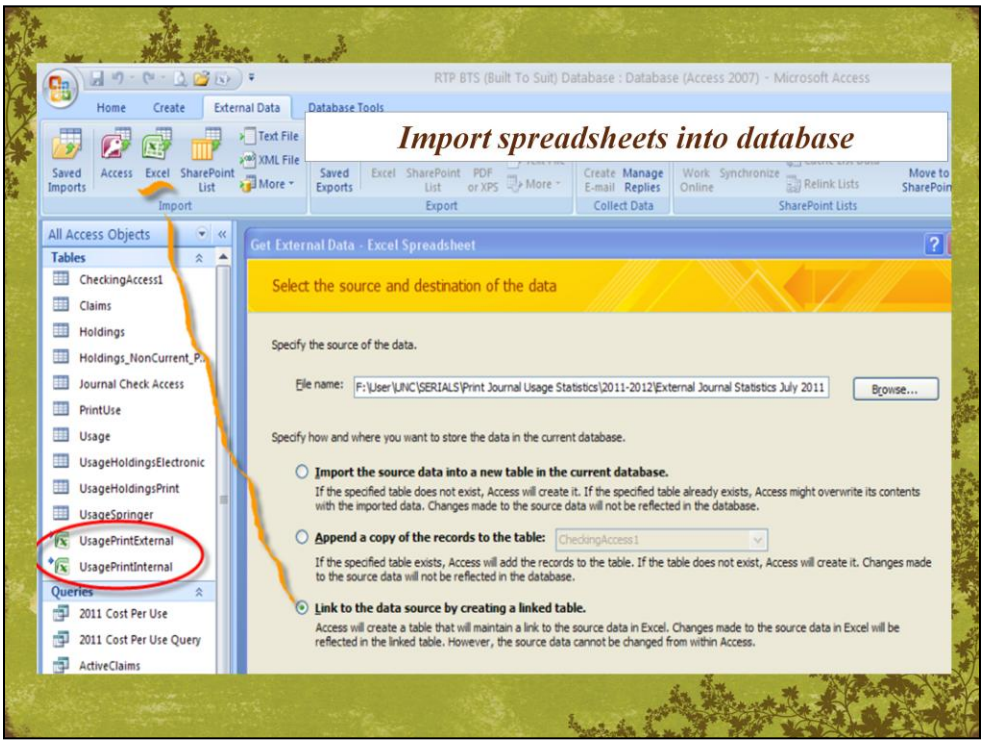
[Elizabeth]

As mentioned earlier when discussing the annual reports, we said we would show you how the process has changed.

One of the lengthy tasks last year was to itemize each individual print journal title in our collection. We need to record the number of article copies we loan externally and internally. These counts are part of the second report submitted to Headquarters annually.

See how this spreadsheet is organized by letters of the alphabet on the bottom. This is an efficient way to add usage on a daily basis. However, the job of aggregating the large amount of titles and use counts for the report was time consuming and susceptible to human error.

Here is another area where we explored the functionality and features of Access. The next two slide show the coolest time saver of all.

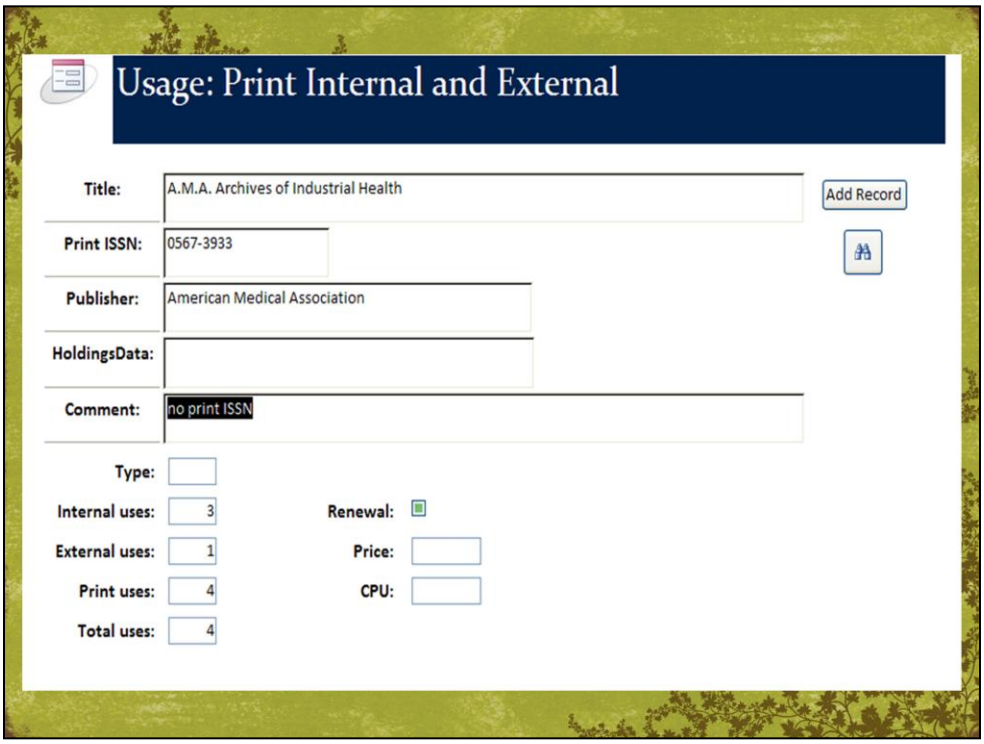


[Jane]

I started a dialog with interns and others who had experience with MS Access or SQL. Some had just completed a database class. I took one in 2008 and had used Access in previous jobs. I knew enough to know what features a database can have, about its power and functionality. We brainstormed about how to import our non-current print collection usage statistics. I asked them to read about importing options and experiment with a BACKUP copy of the database!

Jessica, the current intern, discovered a functionality that will be the biggest time saver. In the ribbons on the Access menu, select External Data, then find the Import from Excel section. Click on the radio button Link to the data source by creating a linked table.

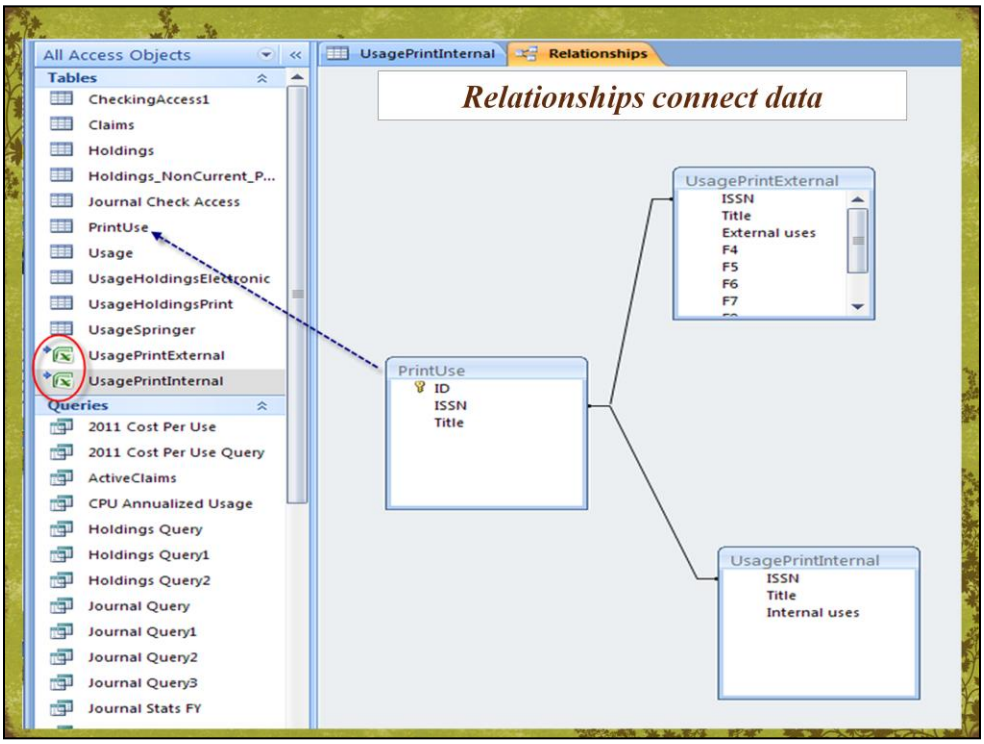
This import option gave us the ability to automate the information. Jessica gave me the critical details - as long as we keep the spreadsheet in the same folder on the same drive with the same name, the database table will continue to be updated.



[Jane]

She designed this form so that we can look at the individual print titles in our collection. The is part of the large set of titles sent to Headquarters that totals more than 3500. Of course, only current print subscriptions would have price information.

Notice the binocular icon? It is a search box. The renewal check box is for the few print subscriptions we have.



[Elizabeth]

A relationship was created to tie the spreadsheets with journal titles. This slide shows how the imported spreadsheets titled UsagePrintExternal and UsagePrintInternal create a relationship with the PrintUse table. A query can later be made to bring usage data from both spreadsheets together.

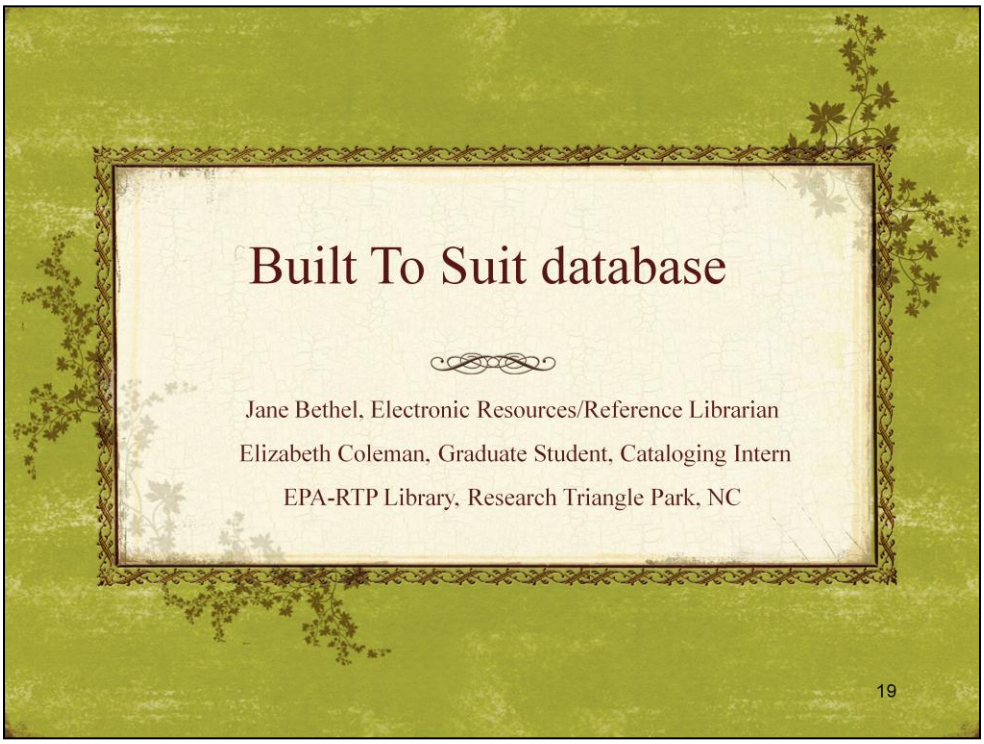
Title	ISSN	Location	Type	Annual Cost	Total Usage	CPU	Comments	Publisher
Accounts of Chemical Research	0001-48	R & C	electronic	########	158	$20.01		
Aerosol Science and Technology	0278-68	A	electronic	########	557	$2.18		
AGU Digital Library		R & C	electronic	########	725	$1.31	a collection of titles from AGU: Paleoceanography, Radio Science, Reviews of Geophysics, Space Weather, Tectonics	
AIChE Journal	0001-15	A	electronic	########	143	$16.19		
American Journal of Agricultural Economic	0002-90	A	electronic	########	57	$14.80		
American Journal of Clinical Nutrition	0002-91	R & C	electronic	######	287	$3.17		American Society fo
American Journal of Epidemiology	0002-92	A	electronic	########	1447	$4.76	Reviews	
American Journal of Industrial Medicine	0271-35	A	electronic	########	499	$12.10		
American Journal of Physiology-Cell Physi	0363-61	R & C	electronic					American Physiolog
American Journal of Physiology-Consolidated ed		R & C		########			license fee	
American Journal of Physiology-Endocrinc	0193-18	R & C	electronic					American Physiolog

[Elizabeth]

Another feature of Access is that reports can be generated easily. Shown here is a slide of a how the report can be formatted for the 1st report, the one to renew or cancel journals.

The process of building a database, entering data, and modifying its functionality has been worthwhile. In addition to having a tool to easily export for the annual reports, we have found other bonus work flows.

We can now proactively check on electronic access at least four times a year and more often if there is a special need. Also we shortened the work time by about 40 hours to collocate data for one of the annual reports.



[Jane]

I feel very fortunate to have the talents of graduate interns. These colleagues of mine often are able to apply skills learned in their classroom directly for practical application on the job.

The database will allow us to

1. Speed up report making
2. Collaborate and learn from others
3. Pushed us to step up the technology tools and complete our goal.

We were able to build a database to suit our needs and we think you could too. We hope you learned something from our presentation today. Thank you for your time. Now we will entertain questions.