



Using ArcMap

as

a TAILS extension

Tracking
And
Integrated
Logging
System

A little background

- ◆ ArcMap is the main component of ESRI's ArcGIS suite of geospatial processing programs.
- ◆ Used primarily to view, explore, edit, create and analyze geospatial data.
- ◆ Allows the user to explore datasets, symbolize features, create maps and has many extensions itself.
- ◆ It is the Service/DOI standard GIS (Geographic Information System) software.
- ◆ TAILS data is easily used within ArcMap.

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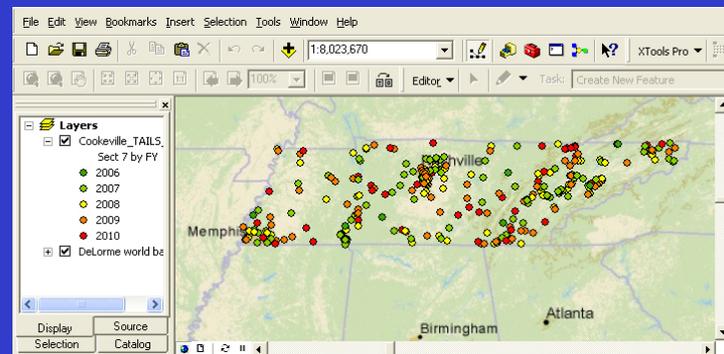
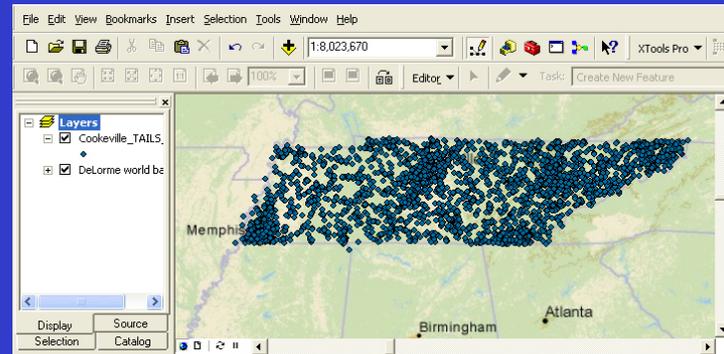
How it's done

- ◆ Actions needed to use TAILS data in ArcMap
 1. Download your base shapefile from TAILS
 2. Download your desired data from TAILS
 3. Join your data to your shapefile in ArcGIS

| ACTIV_TITL | LEAD_OFFIC | ACTIV_CODE | ACTIV_TYPE | FISCAL_YR |
|----------------------------|------------|---------------------|---|-----------|
| ETTP Ponds EE/CA | 42430 | 42430-2010-EC-0001 | Environmental Contaminant Activity | 2010 |
| QORE Proposed Lowe's Store | 42430 | 42430-2010-TA-0001 | Section 7 Consultation | 2010 |
| ... | ... | ... | ... | ... |
| Memphis Cement Company | 42430 | 42430-2010-CPA-0481 | Conservation Planning Assistance Activity | 2010 |

| Activity_Code | Start_Date | Due_Date | Conclusion_Date | Lead_Agency | Lead_Staff | Species |
|---------------------|------------|------------|-----------------|-------------------------|------------------|---|
| 42430-2010-EC-0001 | 10/01/2009 | | 12/29/2009 | EPA | Alexander, Steve | Gray bat (Myotis grisescens) |
| 42430-2010-TA-0001 | 10/01/2009 | 11/01/2009 | 10/10/2010 | --OTHER: CONSULTANT-- | Brines, Wally | Nashville crayfish (Orconectes shoupi) |
| ... | ... | ... | ... | ... | ... | ... |
| 42430-2010-CPA-0481 | 06/05/2010 | 09/05/2009 | | Army Corps of Engineers | Sykes, Robbie | Migratory Birds Trust Resources |

| ACTIV_TITL | LEAD_OFFIC | ACTIV_CODE | ACTIV_TYPE | FISCAL_YR | Activity_Code | Start_Date | Due_Date | Conclusion_Date | Lead_Agency | Lead_Staff | Species |
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| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
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U.S. Fish & Wildlife Service
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Super Bundles Bundles Section 7 CPA Contam HCP Other **Reports** Customize

Categories

- Office Reports
- Ad-Hoc Reports
- Geographic Reports**
- Validation Reports
- Administrative Reports

Performance Reports

- Preview Reports
- Transparency Reports
- A/W Types Mappings

Required Fields

National

- Shapefiles of office and regional activities

Lookup Tables

- Picklists

Reports Home

Geographic Reports

Report on Activities by geographic location (e.g., State, EcoRegion, or USGS Quad). Data in reports is calculated based on Activity point locations (lat/long or UTM) as well as additional items selected from Location picklists.

Geographic Report only show results for records with content. For example, if a County has not been defined for an Activity - then the Activity will NOT appear in the 'Activities by County' Report.

Activities by Congressional District

Activities by County

Activities by EcoRegion

Activities by State

Activities by USGS Quad

Activities by Watershed

Within Coastal Zone and Within Flood Plain Report

Open the ECOS mapper with the following activity points mapped:

- Activities in my office
- Activities in my region

KML of office activities

U.S. Fish & Wildlife Service
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Reports Home

Downloadable shape files

These shape files are compiled every night at roughly 11:30 pm. The general TAILS activity metadata is at <http://ecos.fws.gov/docs/tails/Metadata/tails.htm>

Region 4

- REGIONAL SHAPE FILE
- ARKANSAS ECOLOGICAL SERVICES FIELD OFFICE
- ASHEVILLE ECOLOGICAL SERVICES FIELD OFFICE
- BOQUERON ECOLOGICAL SERVICES FIELD OFFICE
- CHARLESTON ECOLOGICAL SERVICES FIELD OFFICE
- COOKEVILLE ECOLOGICAL SERVICES FIELD OFFICE**
- DANVILLE ECOLOGICAL SERVICES FIELD OFFICE
- GEORGIA ECOLOGICAL SERVICES FIELD OFFICE
- JACKSON ECOLOGICAL SERVICES FIELD OFFICE
- JACKSONVILLE ECOLOGICAL SERVICES FIELD OFFICE
- KENTUCKY ECOLOGICAL SERVICES FIELD OFFICE
- LAFAYETTE ECOLOGICAL SERVICES FIELD OFFICE
- PANAMA CITY ECOLOGICAL SERVICES FIELD OFFICE
- RALEIGH ECOLOGICAL SERVICES FIELD OFFICE
- SOUTH FLORIDA ECOLOGICAL SERVICES FIELD OFFICE

To download, go to Reports:

Geographic Reports:

Shapefile of office and regional activities:

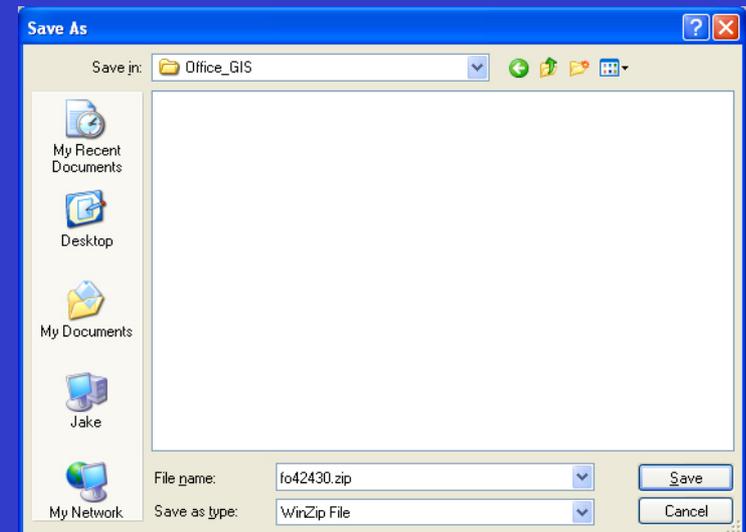
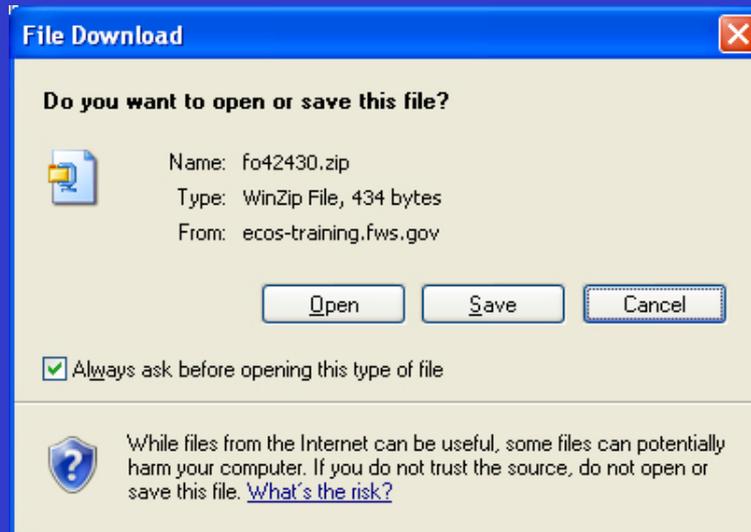
Download your office shapefile

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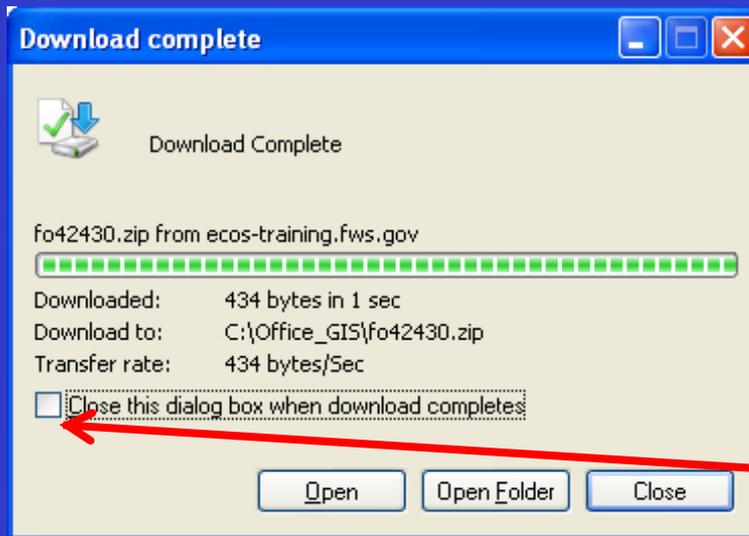
When prompted, Save the zipped file
Zipped files are compressed
Contain all the parts (files) of the shapefile

Locate where you want it
Name it (default is org code)
Click the Save button

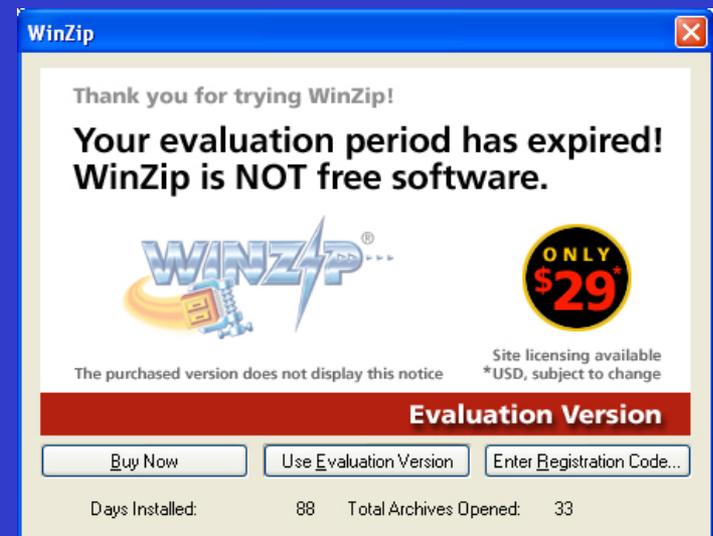
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As file downloads, uncheck this box
Wait for download to complete
Click the Open button



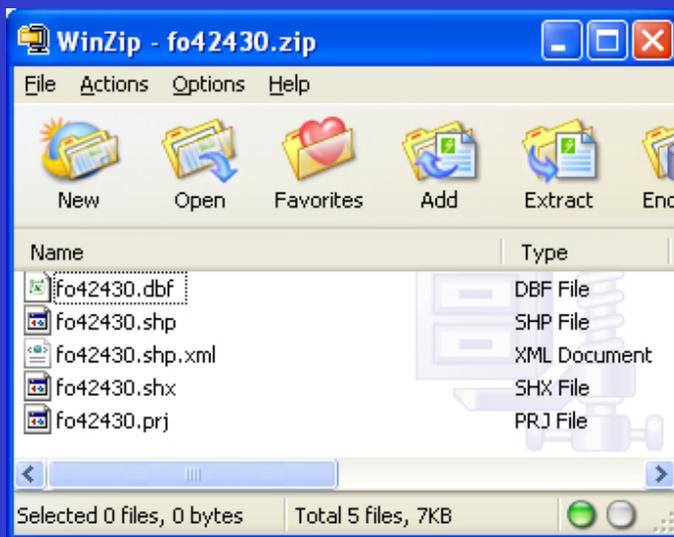
Click “Use Evaluation Version”
Your interface may look different
Built in to newer Windows OS

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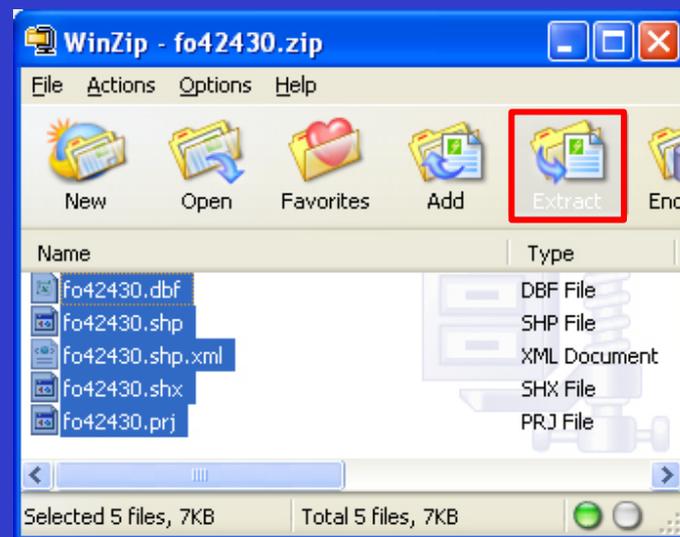
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Peek into .zip file contents
Shapefiles are really multiple files
Same file name, different extensions

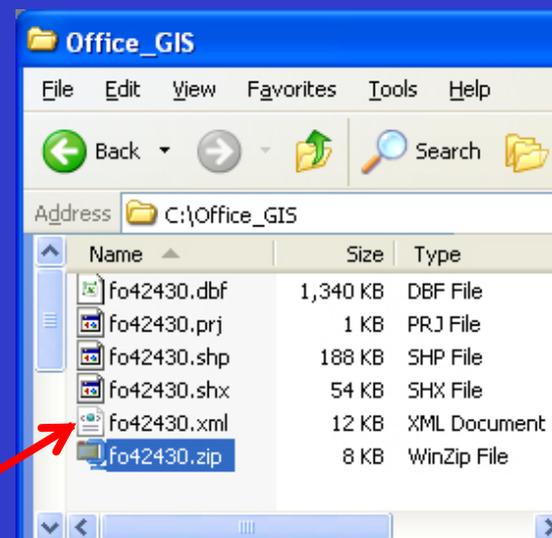
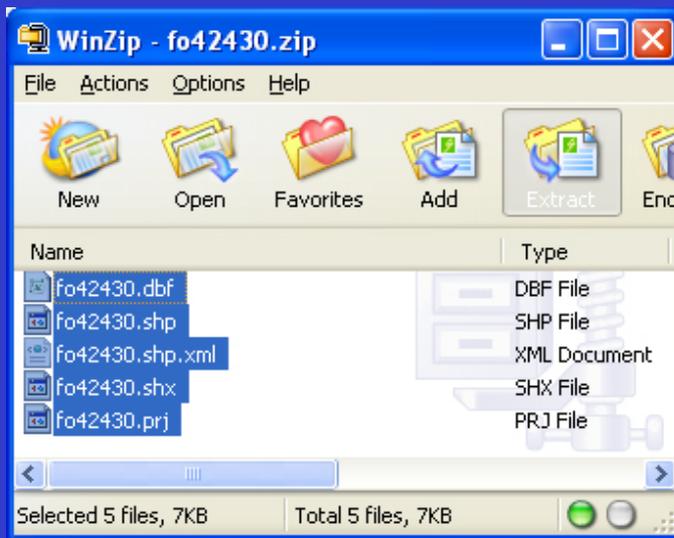


Select them all
Or select none (same as all)
Click the "Extract" button

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Note file extensions

Once extracted, .shp.xml will change

Becomes simply .xml

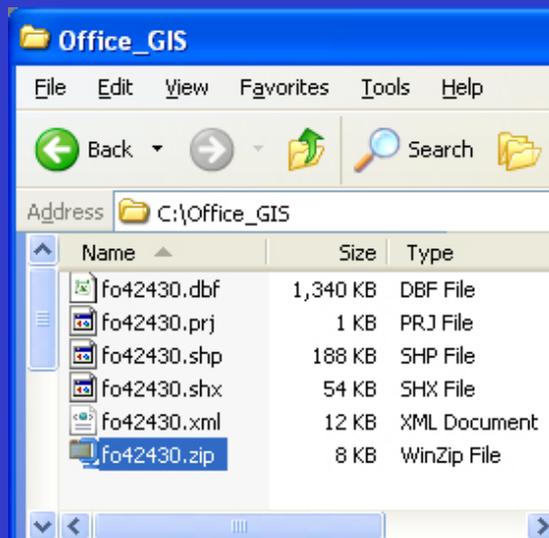
Extracted, looks something like this

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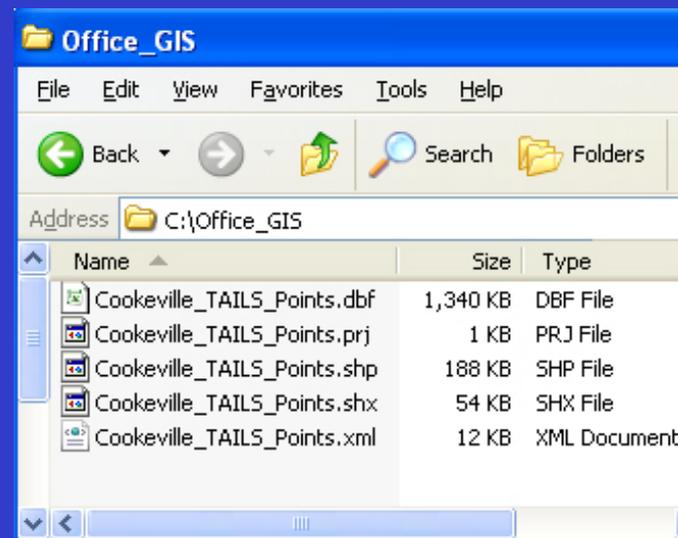
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Delete the .zip file (if desired)



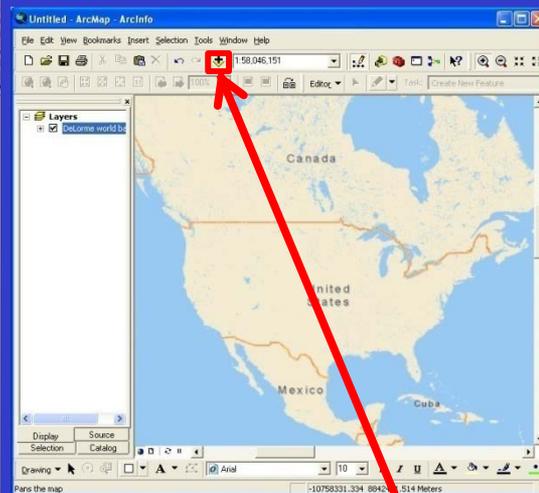
Rename shapefile (if desired)

If so, must rename each file the same
Keeping file extensions unaltered

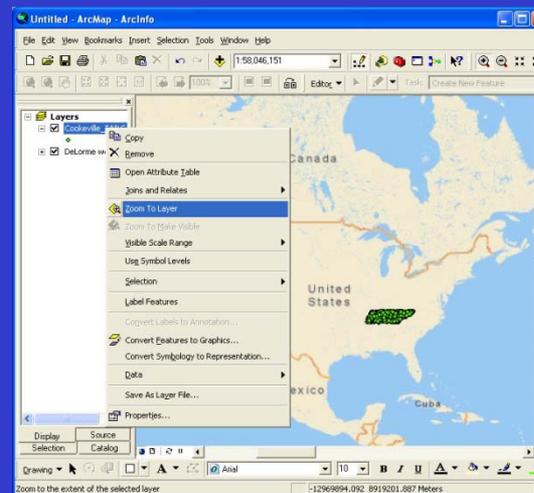
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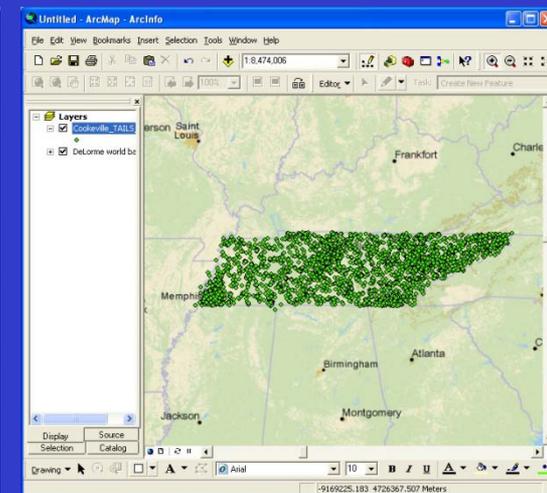
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Open ArcMap
Click on Add Data 
Navigate to and Select
your shapefile



Select layer in TOC
Right-click on layer name
Select Zoom to Layer (if desired)



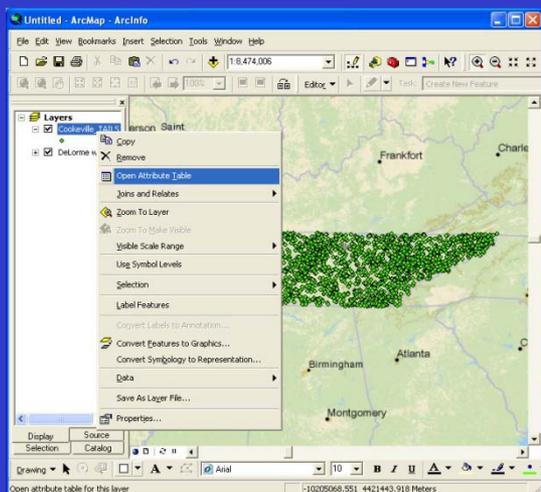
TAILS points in ArcMap

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Select layer in TOC
Right-click on layer
Select “Open Attribute Table”



Note shapefile attribute table has
Minimal attributes
10 character header limit
ACTIV_CODE (Activity Code)

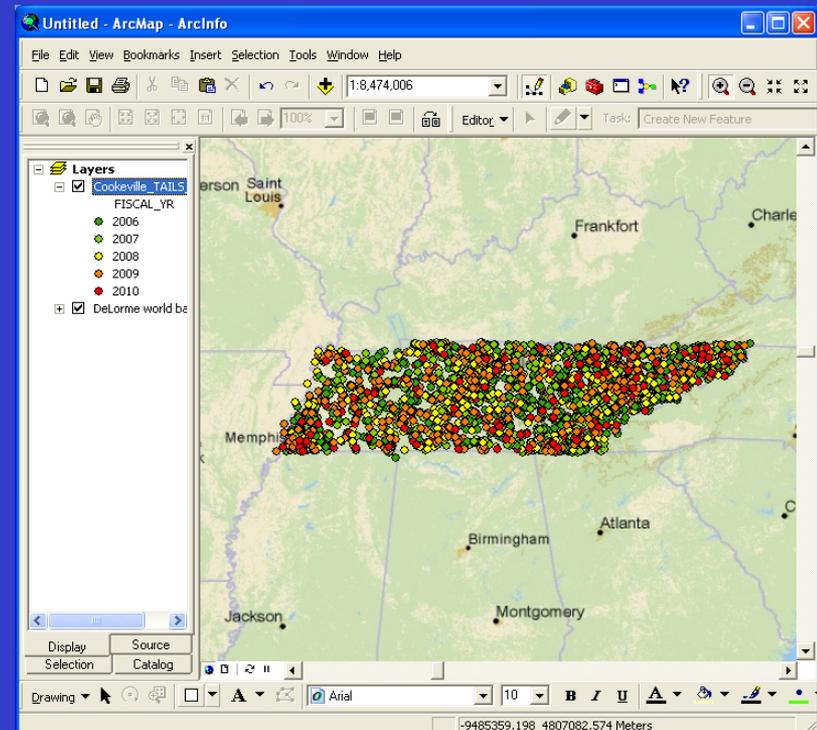
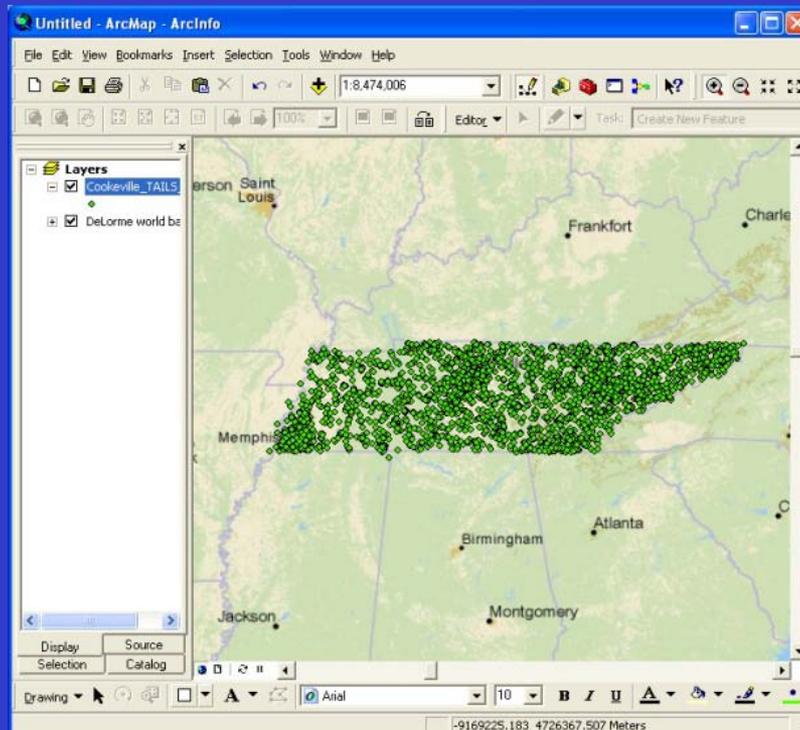
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Run any TAILS Office or Ad-Hoc Report
Review the Report results in TAILS
Export using the “ArcMap” option

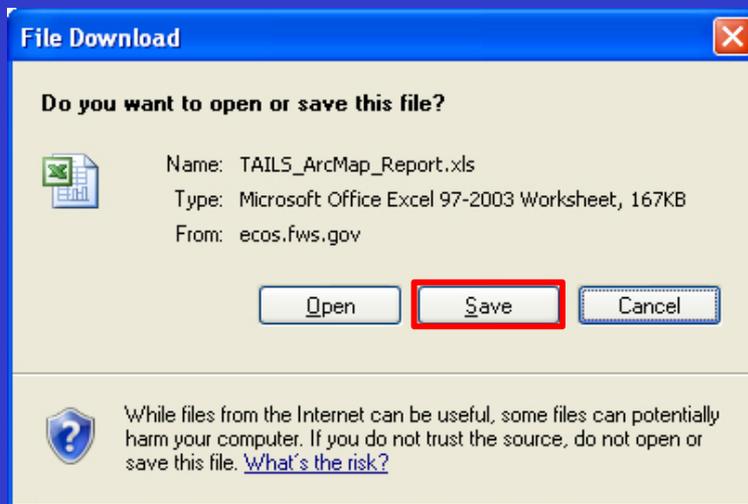
Export options:  CSV |  Excel |  PDF |  ArcMap

Note that all of these reports have a column with data for **Activity Code**
Activity Codes are used as the unique identifiers for Activities
They are the basis for performing the data attribute Join in ArcMap
Activity Code will be the Primary Key (linking data) for the Join

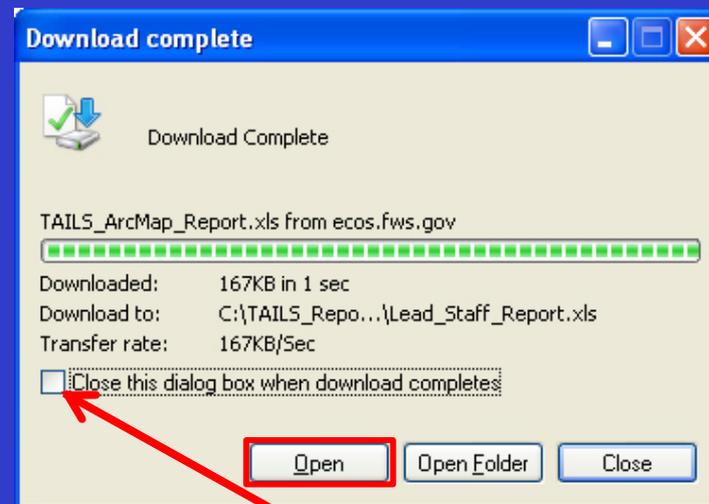
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When prompted, select Save
Name and Locate the file as desired



Uncheck here, while downloading
When prompted, select Open
If you missed the chance to uncheck
Locate and Open file

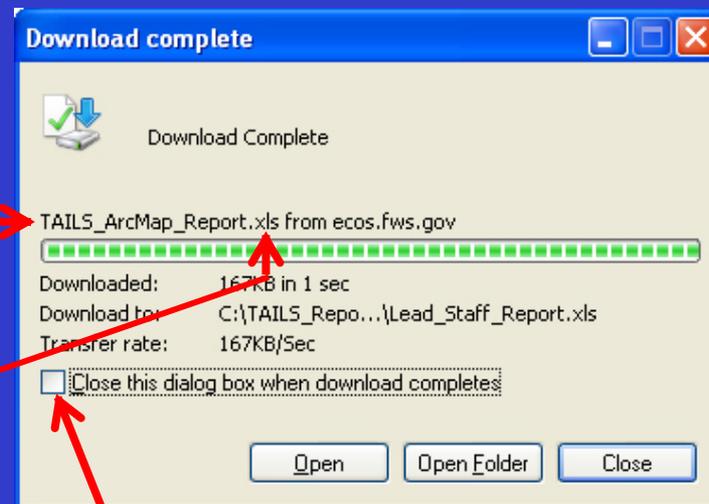
Special Notes and Tricks

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Note that no matter what you named it
It's still "TAILS_ArcMap_Report"
in this dialog box.

Don't worry – it was saved as named.

Note that it says it's MS Excel (.xls)
It's actually a text file (tricked ya)
But, we'll fix that next.

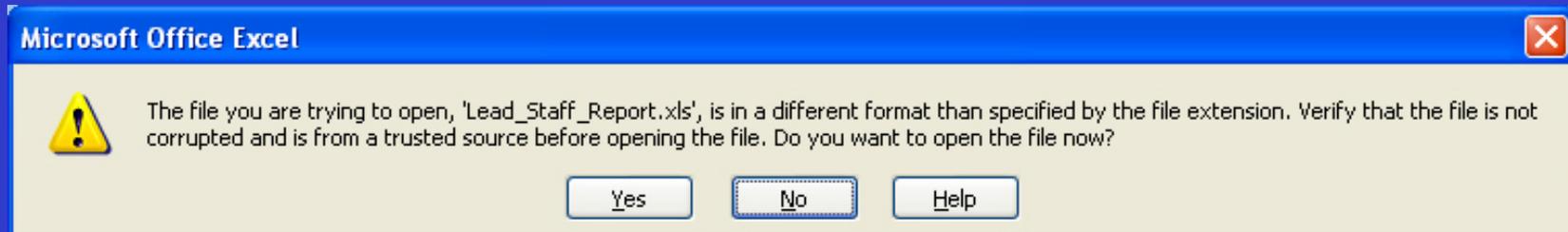


Good news! Once you set this to unchecked, it will stay that way.
When unchecked, you can just click Open when download is complete.
Your chance to uncheck it can come and go fast,
so download a large file if only to get this unchecked.

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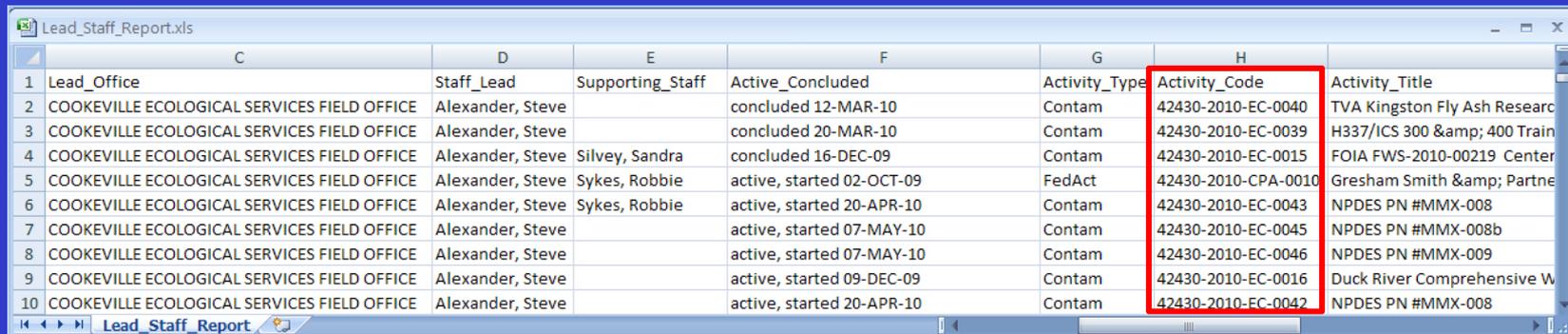
When you first open this ArcMap file in MS Excel, you'll get this warning. Excel has recognized that it's a text file disguised as an Excel file. Click "Yes" to verify that the file is not corrupt (tricky yes, corrupt no).

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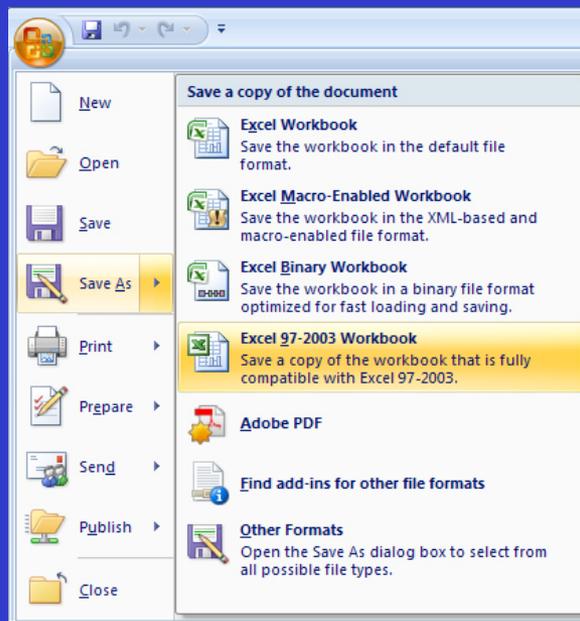
| | C | D | E | F | G | H | |
|----|---|------------------|------------------|---------------------------|---------------|---------------------|-------------------------------|
| 1 | Lead_Office | Staff_Lead | Supporting_Staff | Active_Concluded | Activity_Type | Activity_Code | Activity_Title |
| 2 | COOKEVILLE ECOLOGICAL SERVICES FIELD OFFICE | Alexander, Steve | | concluded 12-MAR-10 | Contam | 42430-2010-EC-0040 | TVA Kingston Fly Ash Research |
| 3 | COOKEVILLE ECOLOGICAL SERVICES FIELD OFFICE | Alexander, Steve | | concluded 20-MAR-10 | Contam | 42430-2010-EC-0039 | H337/ICS 300 & 400 Train |
| 4 | COOKEVILLE ECOLOGICAL SERVICES FIELD OFFICE | Alexander, Steve | Silvey, Sandra | concluded 16-DEC-09 | Contam | 42430-2010-EC-0015 | FOIA FWS-2010-00219 Center |
| 5 | COOKEVILLE ECOLOGICAL SERVICES FIELD OFFICE | Alexander, Steve | Sykes, Robbie | active, started 02-OCT-09 | FedAct | 42430-2010-CPA-0010 | Gresham Smith & Partners |
| 6 | COOKEVILLE ECOLOGICAL SERVICES FIELD OFFICE | Alexander, Steve | Sykes, Robbie | active, started 20-APR-10 | Contam | 42430-2010-EC-0043 | NPDES PN #MMX-008 |
| 7 | COOKEVILLE ECOLOGICAL SERVICES FIELD OFFICE | Alexander, Steve | | active, started 07-MAY-10 | Contam | 42430-2010-EC-0045 | NPDES PN #MMX-008b |
| 8 | COOKEVILLE ECOLOGICAL SERVICES FIELD OFFICE | Alexander, Steve | | active, started 07-MAY-10 | Contam | 42430-2010-EC-0046 | NPDES PN #MMX-009 |
| 9 | COOKEVILLE ECOLOGICAL SERVICES FIELD OFFICE | Alexander, Steve | | active, started 09-DEC-09 | Contam | 42430-2010-EC-0016 | Duck River Comprehensive W |
| 10 | COOKEVILLE ECOLOGICAL SERVICES FIELD OFFICE | Alexander, Steve | | active, started 20-APR-10 | Contam | 42430-2010-EC-0042 | NPDES PN #MMX-008 |

Note that Headers use underscores (not spaces) – required in ArcMap.
Note that our Primary Key (**Activity_Code**) is included as a column.
We have all manner of other data we can Join to the shapefile.
Once in ArcMap, we can use / symbolize these data.
Now, save as a true MS Excel file via “Save as”.

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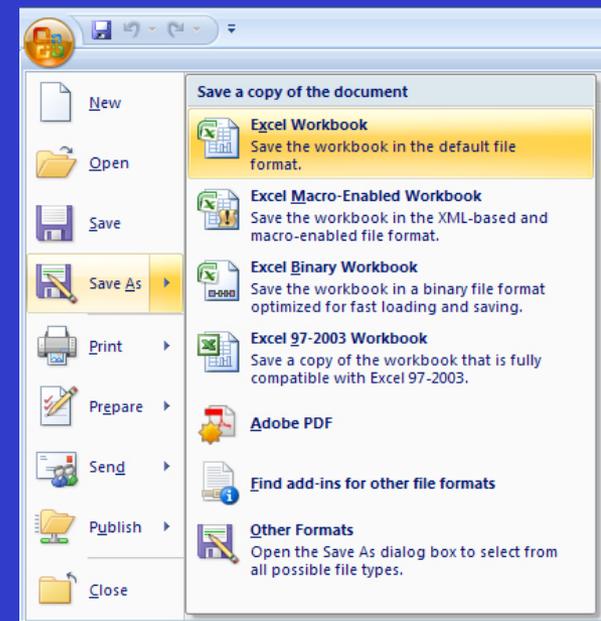
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Save as MS Excel 97-2003

Filename.xls



Save as MS Excel (2007)

Filename.xlsx

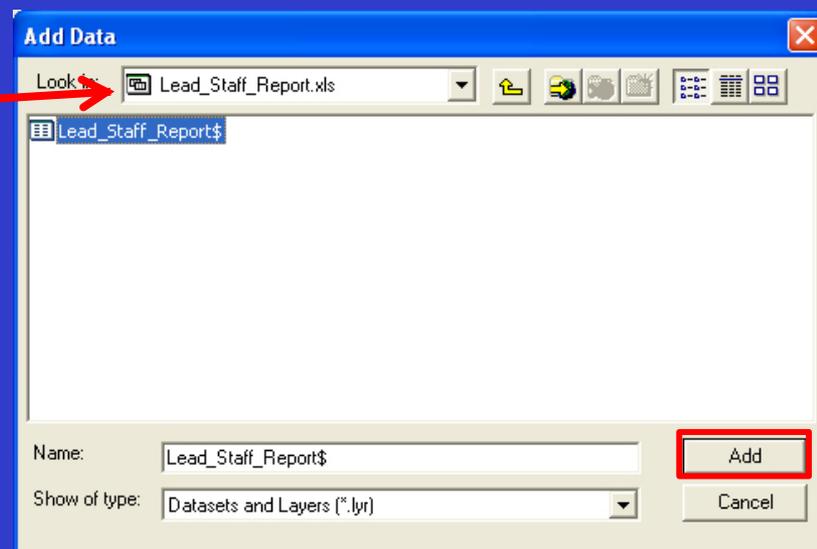
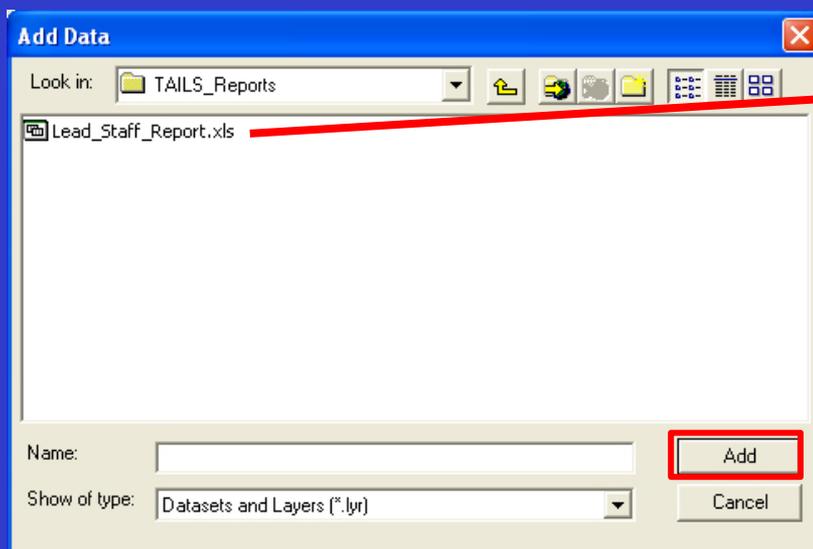
Now it's truly Excel

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In ArcMap, Select Add Data 
Double-click MS Excel file or
Select file and click “Add”

Now select the Excel worksheet
Double-click worksheet name or
Select worksheet and click “Add”

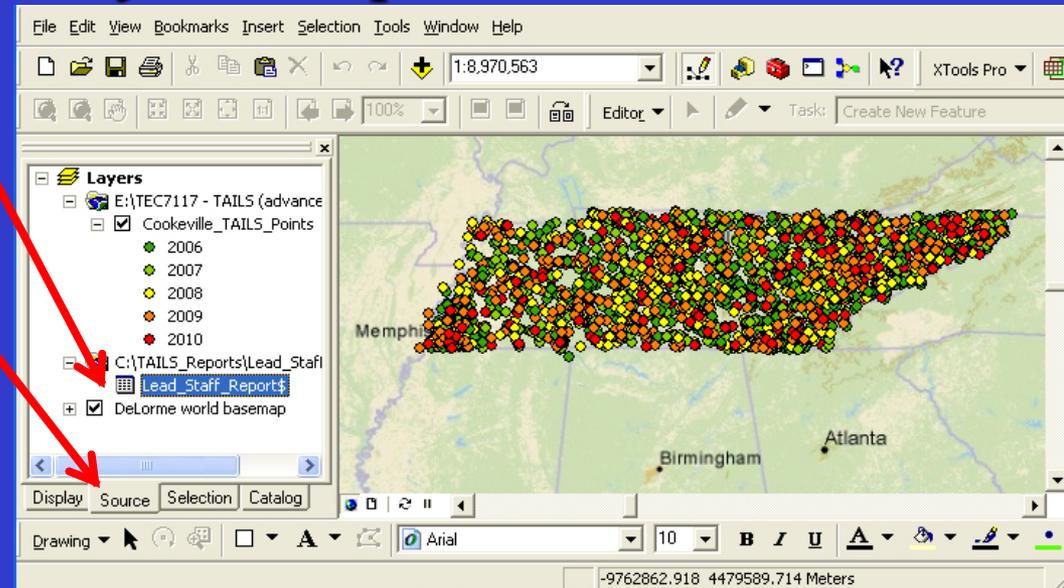
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Data added to ArcMap
Toggles to "Source"



In this example, we exported and added Lead Staff for FY 2010 only

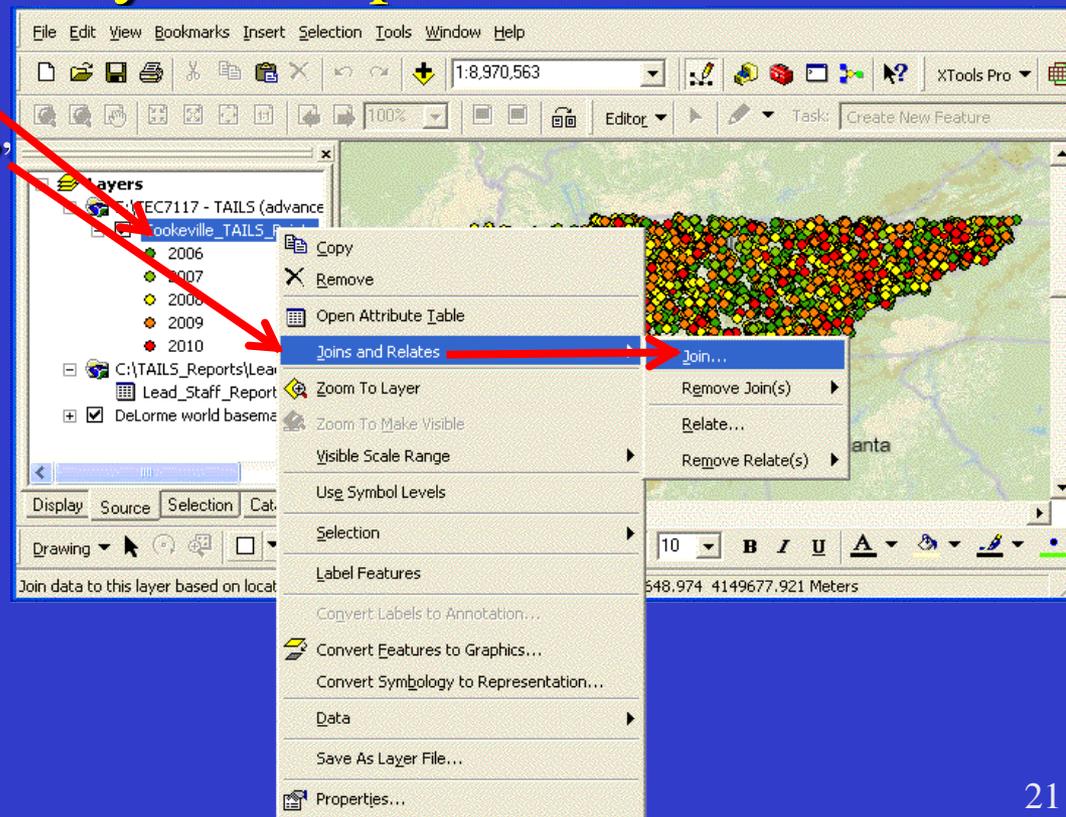
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Right-click on Shapefile
Select "Joins and Relates"
Select "Join"
Release mouse button



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Select the type of Join to perform

(Join attributes from a table)

Select shapefile field the Join will be based on

(ACTIV_CODE)

Select the table to join to the shapefile

(Your Excel worksheet)

Select field in the table to base join on

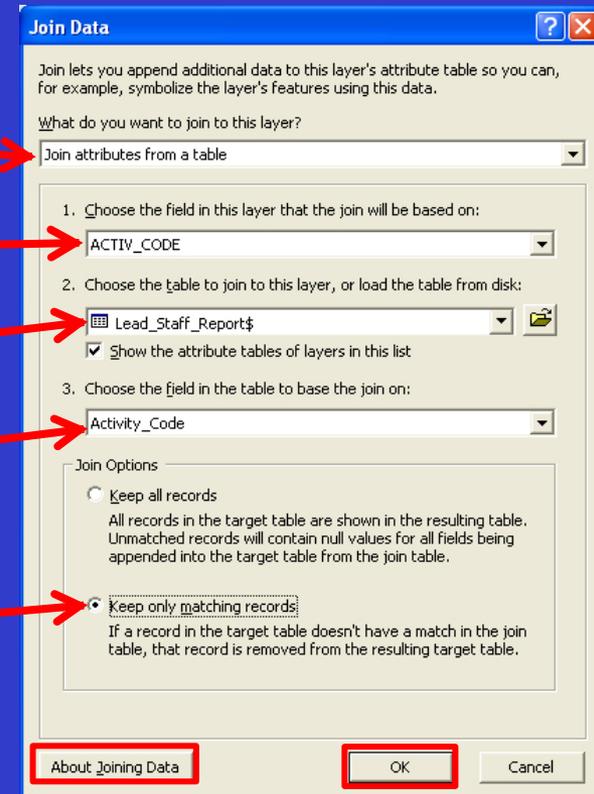
(Activity_Code)

Select Join Option

(Keep only matching records)

Click OK

To learn more, click on “About Joining Data”

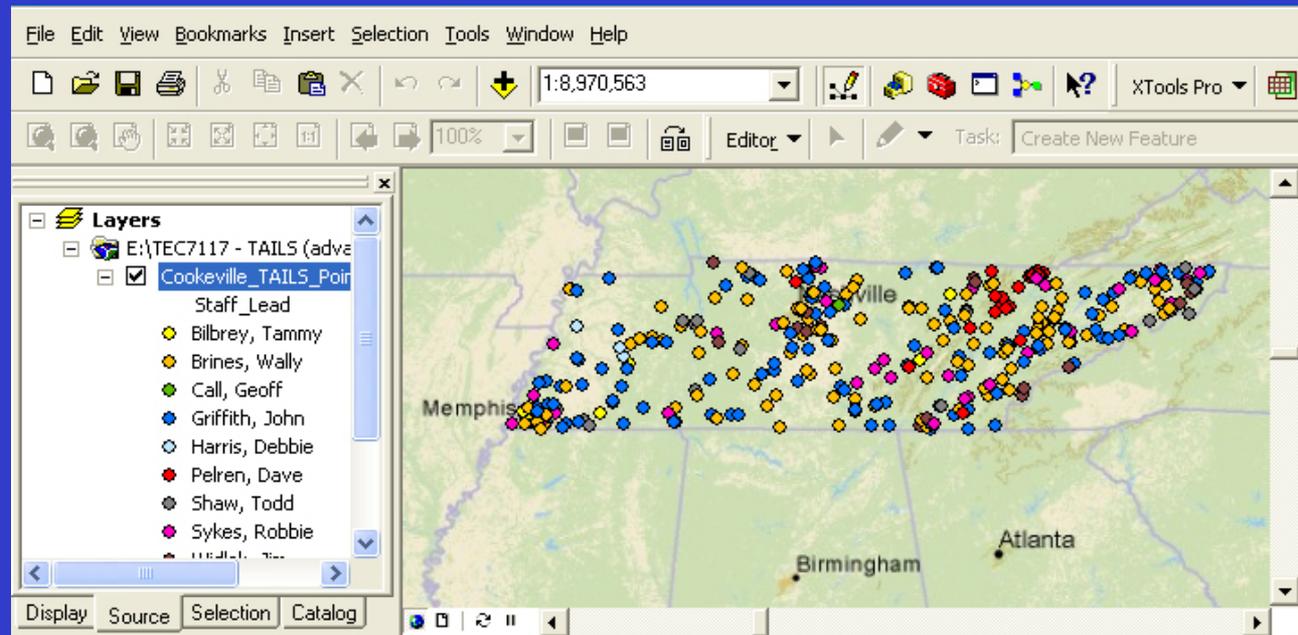


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Symbolize based on new Joined data (in this example, Staff_Lead 2010)



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Minimal attributes of a TAILS shapefile

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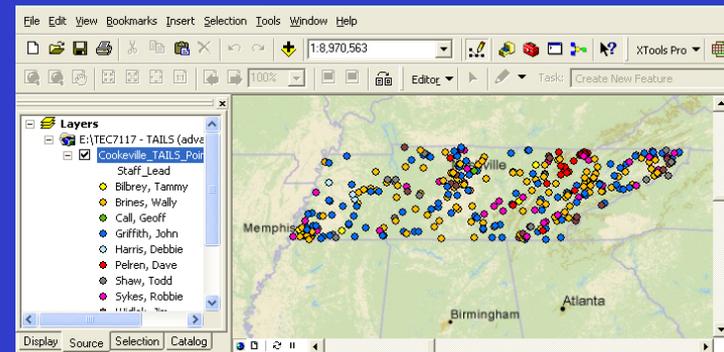
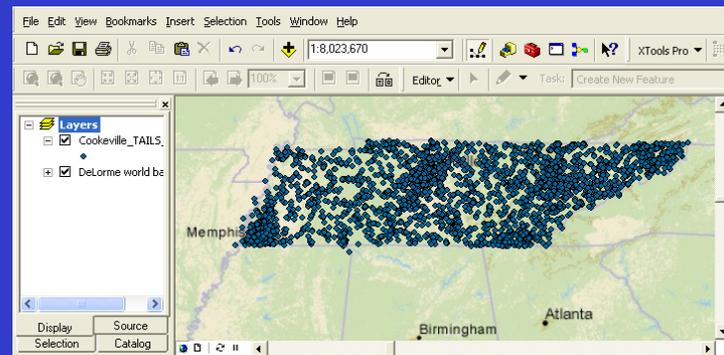
Additional data from a TAILS Report

| Activity_Code | Start_Date | Due_Date | Conclusion_Date | Lead_Agency | Lead_Staff | Species |
|---------------------|------------|------------|-----------------|-------------------------|------------------|---|
| 42430-2010-EC-0001 | 10/01/2009 | | 12/29/2009 | EPA | Alexander, Steve | Gray bat (Myotis grisescens) |
| 42430-2010-TA-0001 | 10/01/2009 | 11/01/2009 | 10/10/2010 | --OTHER: CONSULTANT-- | Brines, Wally | Nashville crayfish (Orconectes shoupi) |
| ... | ... | ... | ... | ... | ... | ... |
| 42430-2010-CPA-0481 | 06/05/2010 | 09/05/2009 | | Army Corps of Engineers | Sykes, Robbie | Migratory Birds Trust Resources |

Joined attribute table

| ACTIV_TITL | LEAD_OFFIC | ACTIV_CODE | ACTIV_TYPE | FISCAL_YR | Activity_Code | Start_Date | Due_Date | Conclusion_Date | Lead_Agency | Lead_Staff | Species |
|----------------------------|------------|---------------------|---|-----------|---------------------|------------|------------|-----------------|-------------------------|------------------|---|
| ETTP Ponds EE/CA | 42430 | 42430-2010-EC-0001 | Environmental Contaminant Activity | 2010 | 42430-2010-EC-0001 | 10/01/2009 | | 12/29/2009 | EPA | Alexander, Steve | Gray bat (Myotis grisescens) |
| QORE Proposed Lowe's Store | 42430 | 42430-2010-TA-0001 | Section 7 Consultation | 2010 | 42430-2010-TA-0001 | 10/01/2009 | 11/01/2009 | 10/10/2010 | --OTHER: CONSULTANT-- | Brines, Wally | Nashville crayfish (Orconectes shoupi) |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Memphis Cement Company | 42430 | 42430-2010-CPA-0481 | Conservation Planning Assistance Activity | 2010 | 42430-2010-CPA-0481 | 06/05/2010 | 09/05/2009 | | Army Corps of Engineers | Sykes, Robbie | Migratory Birds Trust Resources |

More data = more mapping fun !



Tracking
And
Integrated
Logging
System



Using ArcMap

as

a TAILS extension

Tracking
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Integrated
Logging
System