

# Using ArcGIS in High Volume Map Production: Three Case Studies

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# The Case Studies

## ◆ Walnut Creek

- 70+ maps for their General Plan, each highlighting different data about the city (transportation, landuse, etc...)

## ◆ City of Fairfield

- 3 map books, each 140-195 pages, of their sewer, water and storm systems

## ◆ CSES – Strategic Encroachment Study

- 5 presentation size maps with a unified look and feel and high information density

# CS 1: Walnut Creek

## ◇ Challenge:

- Produce 70+ maps as efficiently as possible

## ◇ Solution:

- Design templates
- Add additional data to customize

## ◇ Technical Tip:

- Use Layer Files
  - Ensure template integrity across multiple users through multiple iterations
  - Speed up production!

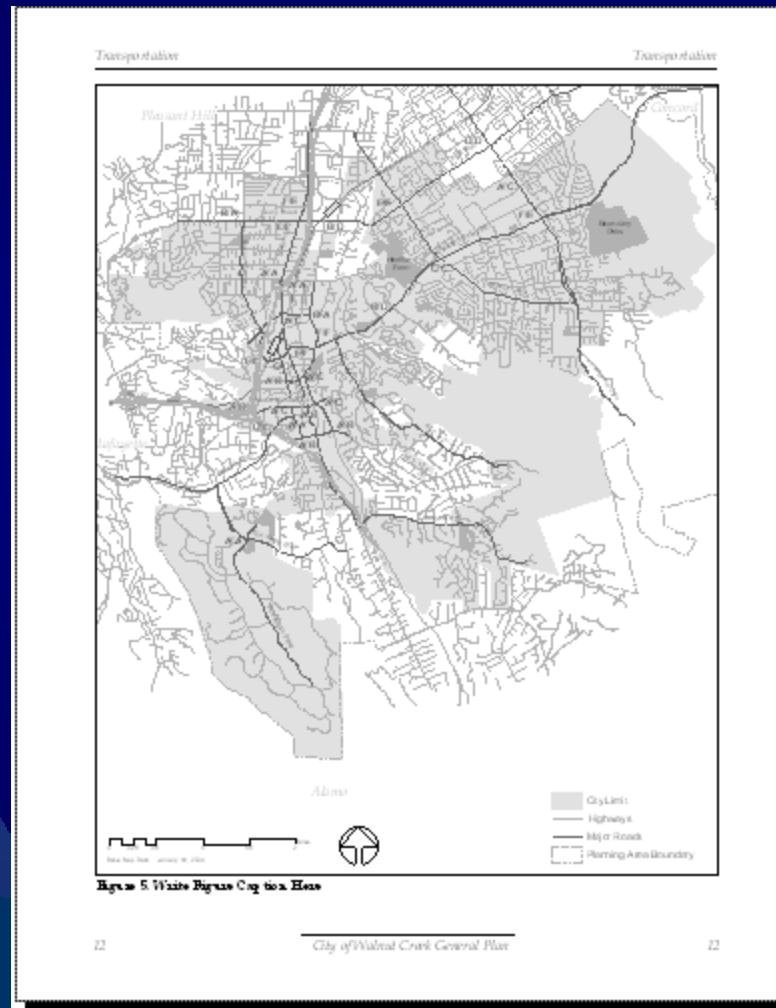
# CS 1: Walnut Creek

## Designing Templates

Base Map Data



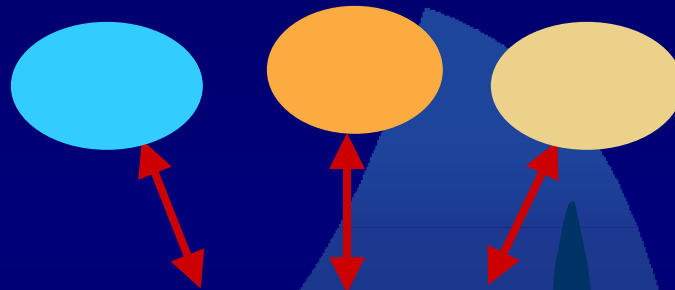
Layout/Marginalia



# CS 1: Walnut Creek

## What are Layer Files? Why Use Them?

Multiple Users



### Layer File

References geographic data stored in a data source and defines how to display it. You can create and manage layers as you would any other type of data.

Data

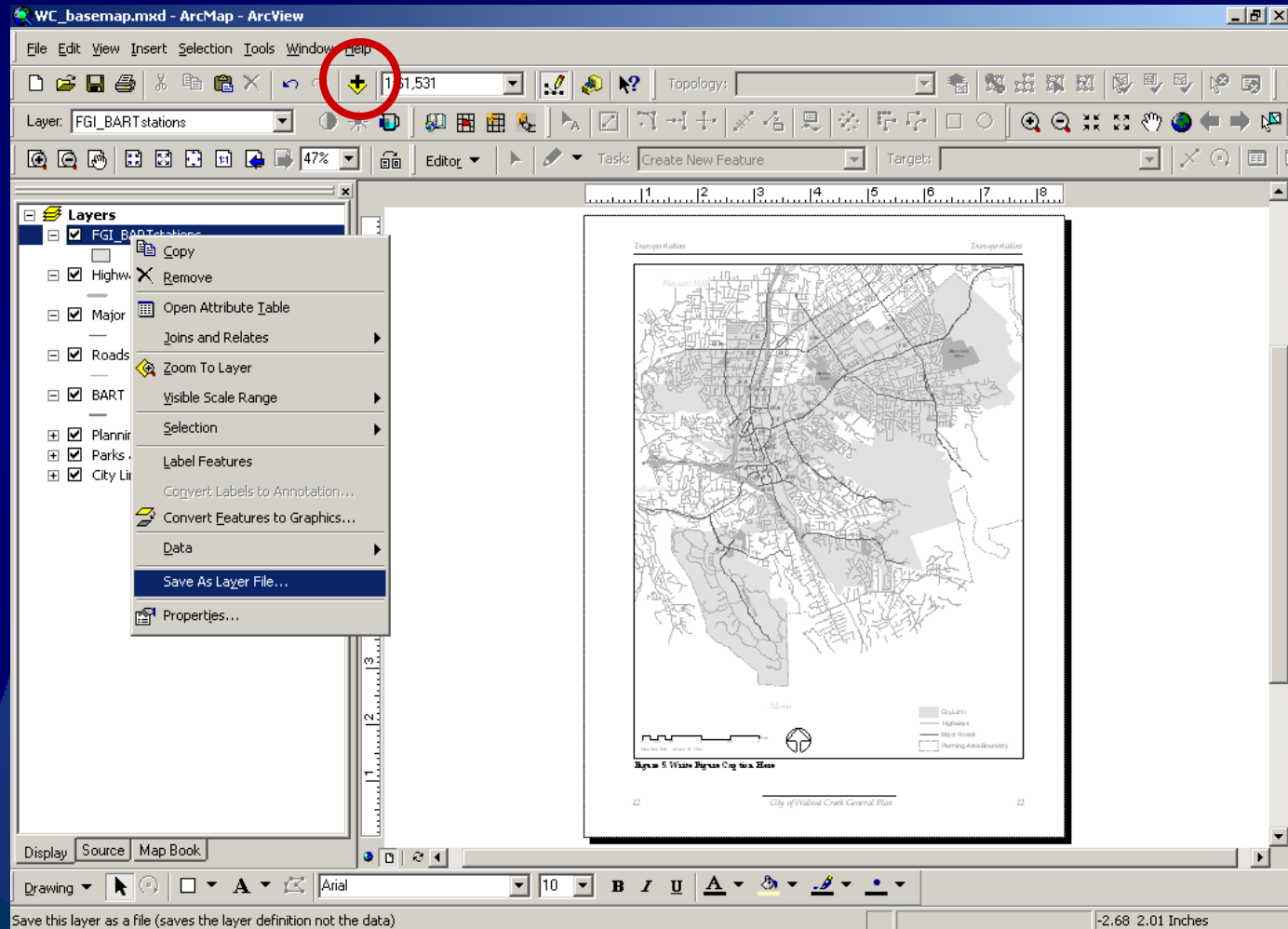
# CS 1: Walnut Creek

## Using Layer Files

- ◆ Layer files create efficiency
  - Users can recreate complex symbology (including queries and classifications) *quickly* and *exactly*
- ◆ Note: The Layer File is not a substitute for the data
  - The layer file is associated with the data that created it. If that data is moved or renamed, you must reset the Data Source to use the layer file.

# CS 1: Walnut Creek Using Layer Files

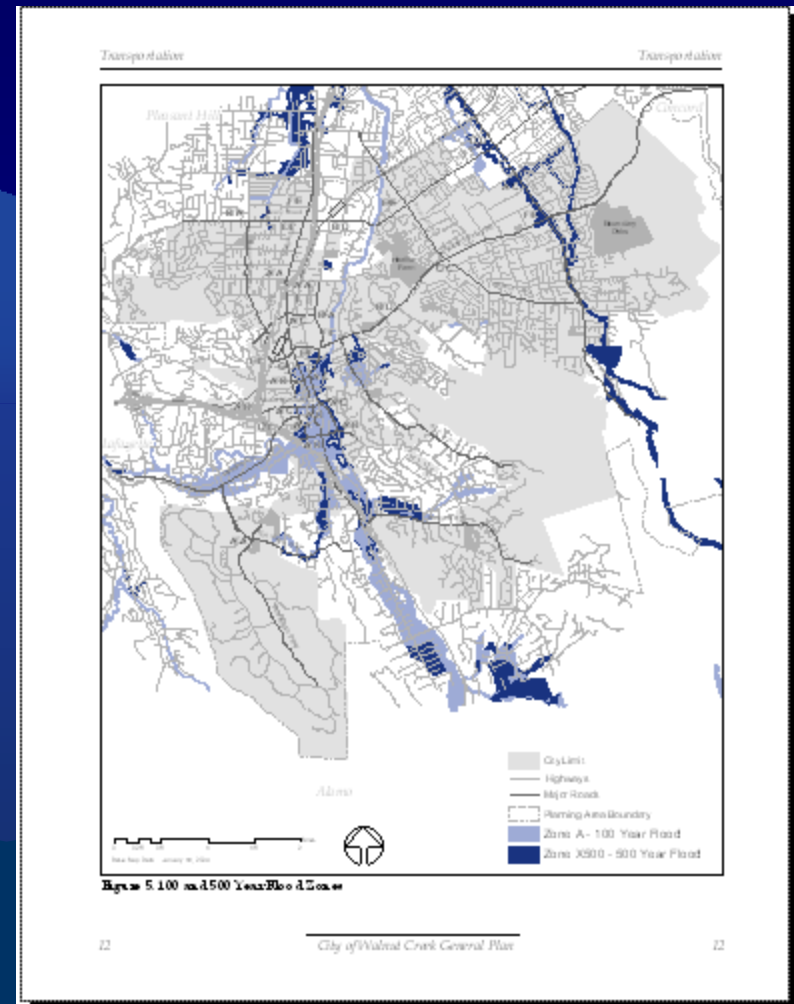
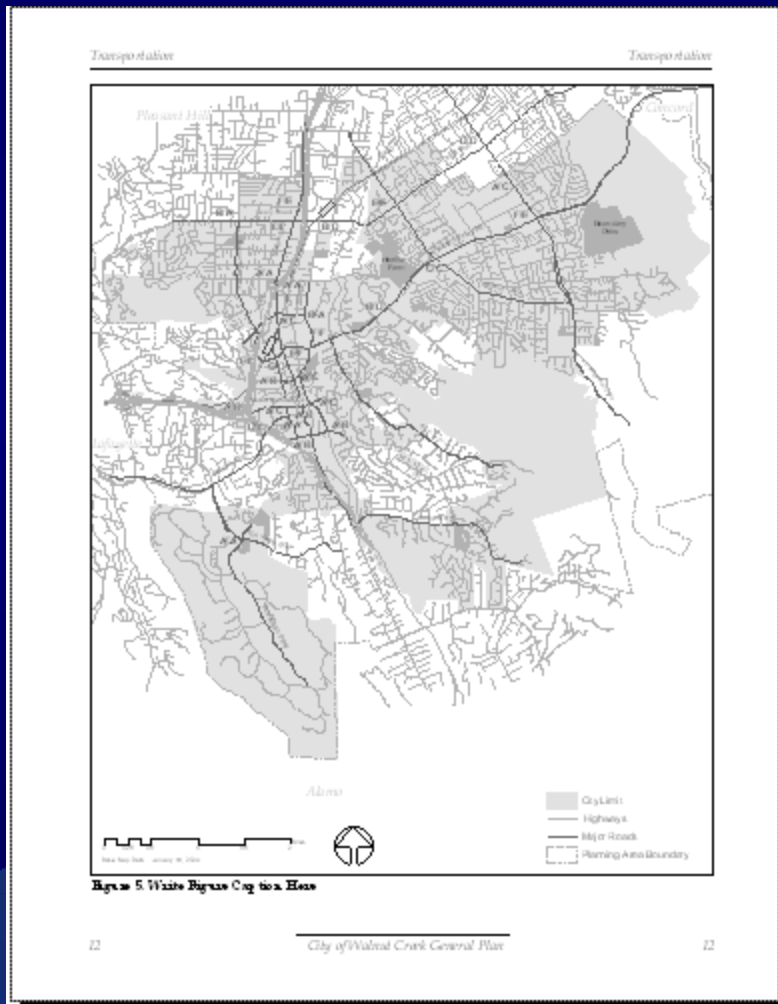
→  
Add a Layer File  
as you Would  
Add Data



→  
Save As Layer File

# CS 1: Walnut Creek

## Customize Easily with Additional Data



# CS 2: City of Fairfield

## ◇ Challenge:

- Create 3 map books of with 140-195 pages each as efficiently as possible

## ◇ Solution:

- Use Map Book Generator

## ◇ Technical Tip:

- Download Map Book Generator from [www.esri.com](http://www.esri.com)



# CS 2: City of Fairfield Map Book Generator

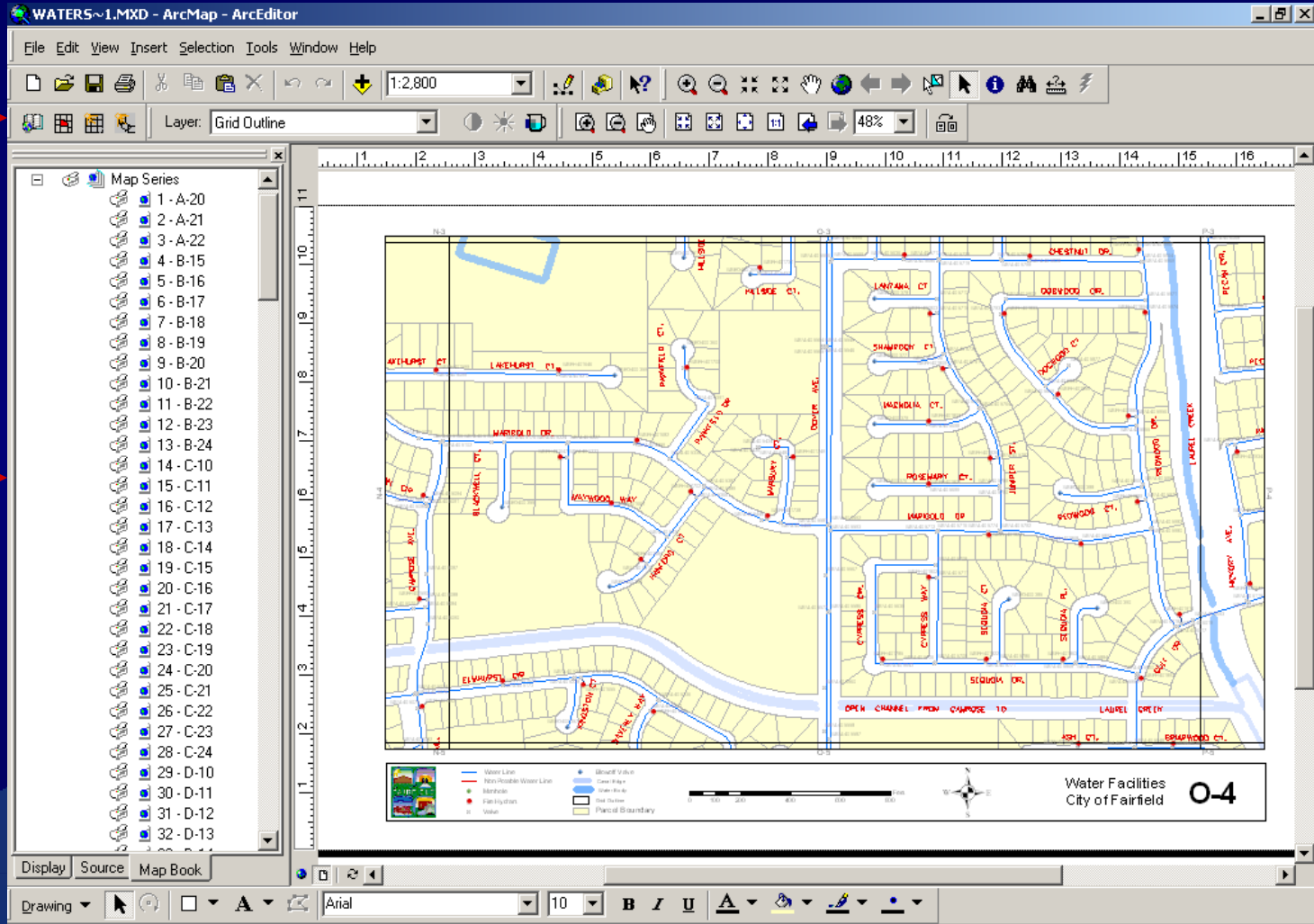
Toolbar



Map Series



MapBook Tab



# CS 2: City of Fairfield

## Map Book Generator

The screenshot shows the 'Map Series Properties' dialog box with the 'Index Settings' tab selected. The dialog has three tabs: 'Index Settings', 'Tile Settings', and 'Options'. The 'Index Settings' tab contains the following text: 'The Map Series uses one of the data frames in the layout as the Detail Data Frame. This data is shown at a different extent on each page. The extents or tiles are defined by one of the polygon layers in the data frame.' Below this text are three dropdown menus. The first is labeled 'Choose the detail data frame:' and has 'Water Facilities' selected. The second is labeled 'Index Layer:' and has 'Grid Outline' selected. The third is labeled 'This field specifies the page name' and has 'GRIDID' selected. At the bottom right of the dialog are 'OK' and 'Cancel' buttons. A red arrow points from the text 'Choose Data Frame' to the first dropdown menu. Another red arrow points from the text 'Choose Grid Layer' to the second dropdown menu.

**Map Series Properties**

**Index Settings** | Tile Settings | Options

The Map Series uses one of the data frames in the layout as the Detail Data Frame. This data is shown at a different extent on each page. The extents or tiles are defined by one of the polygon layers in the data frame.

Choose the detail data frame:  
Water Facilities

Index Layer:  
Choose the index layer:  
Grid Outline

This field specifies the page name  
GRIDID

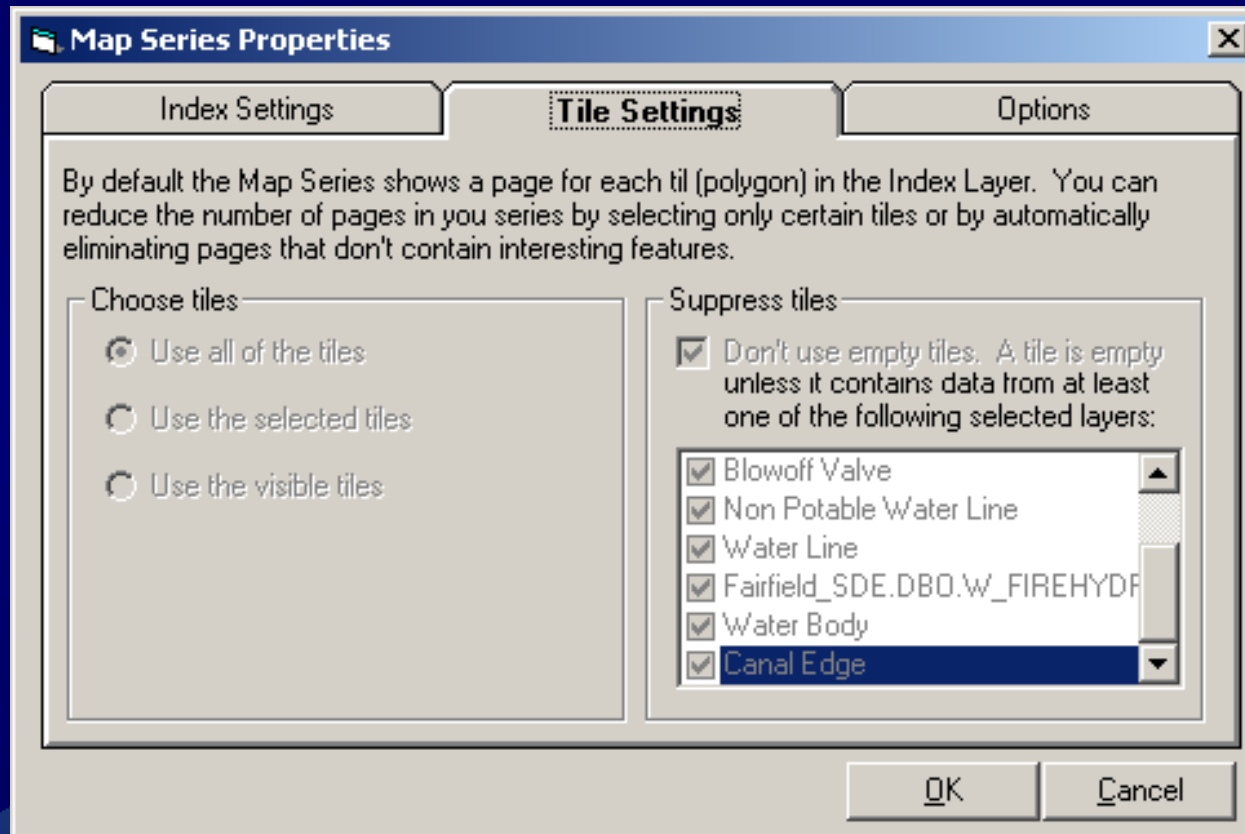
OK Cancel

Choose  
Data Frame

Choose  
Grid Layer

# CS 2: City of Fairfield

## Map Book Generator



Choose  
Pages to Include  
by Feature



# CS 2: City of Fairfield Map Book Generator

**Map Series Properties**

Index Settings    Tile Settings    **Options**

The Map Series provides several different options for fitting a tile to the data frame.

**Extent**

- Variable - Fit the tiles to the data frame  
Margin:
- Fixed - Always draw at this scale:  
1:
- Data driven - The scale for each tile is specified in this index layer field:

**Options**

- Rotate data using value from this field:
- Clip data to the outline of the tile
- Label neighboring tiles?

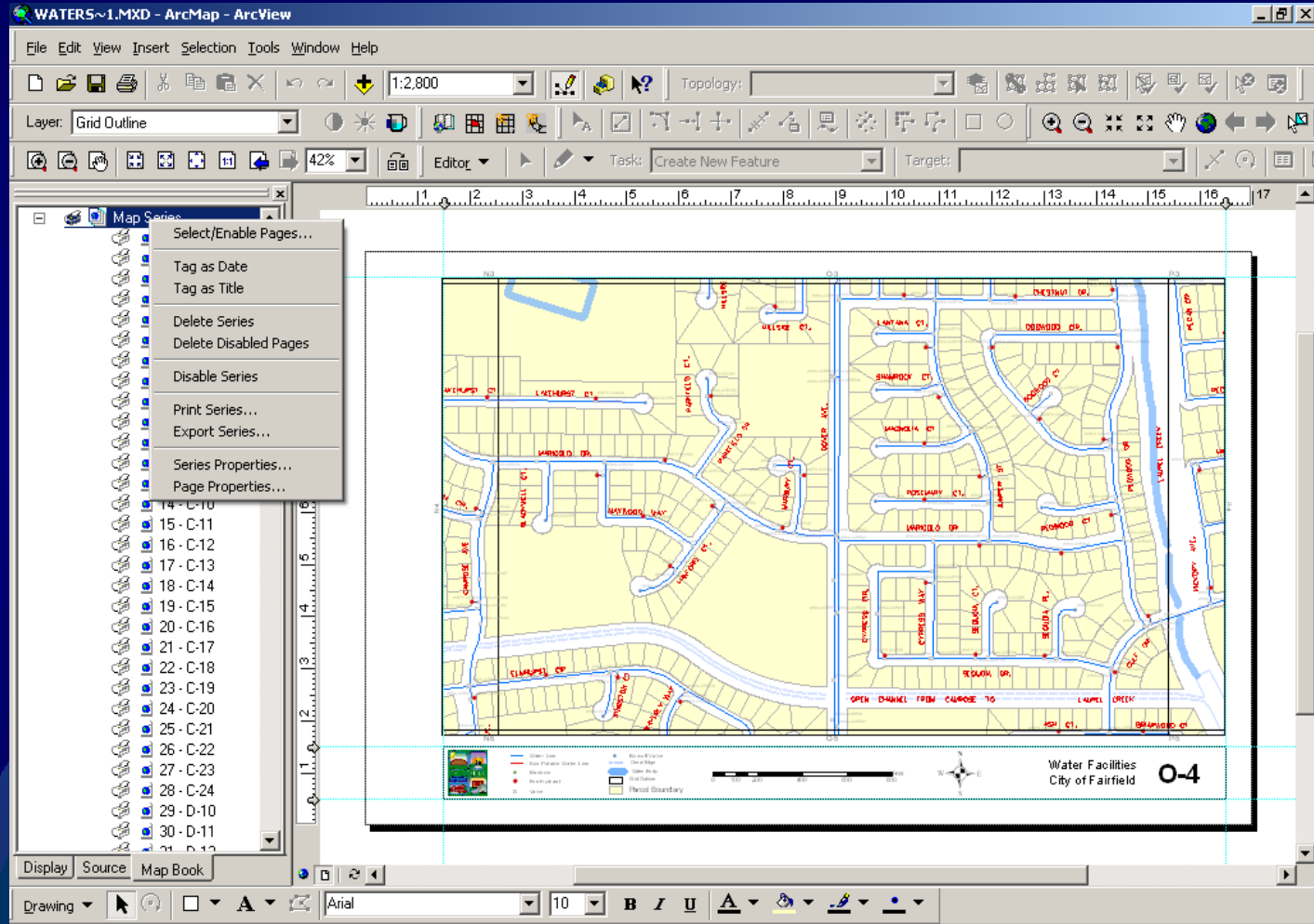
Set Margins



Label  
Neighboring  
Tiles



# CS 2: City of Fairfield Map Book Generator



Edit Page  
Elements after  
Series Creation

# CS 3: CSES

## ◇ Challenge:

- Incorporate extensive research
- Create unified look and feel across maps

## ◇ Solution:

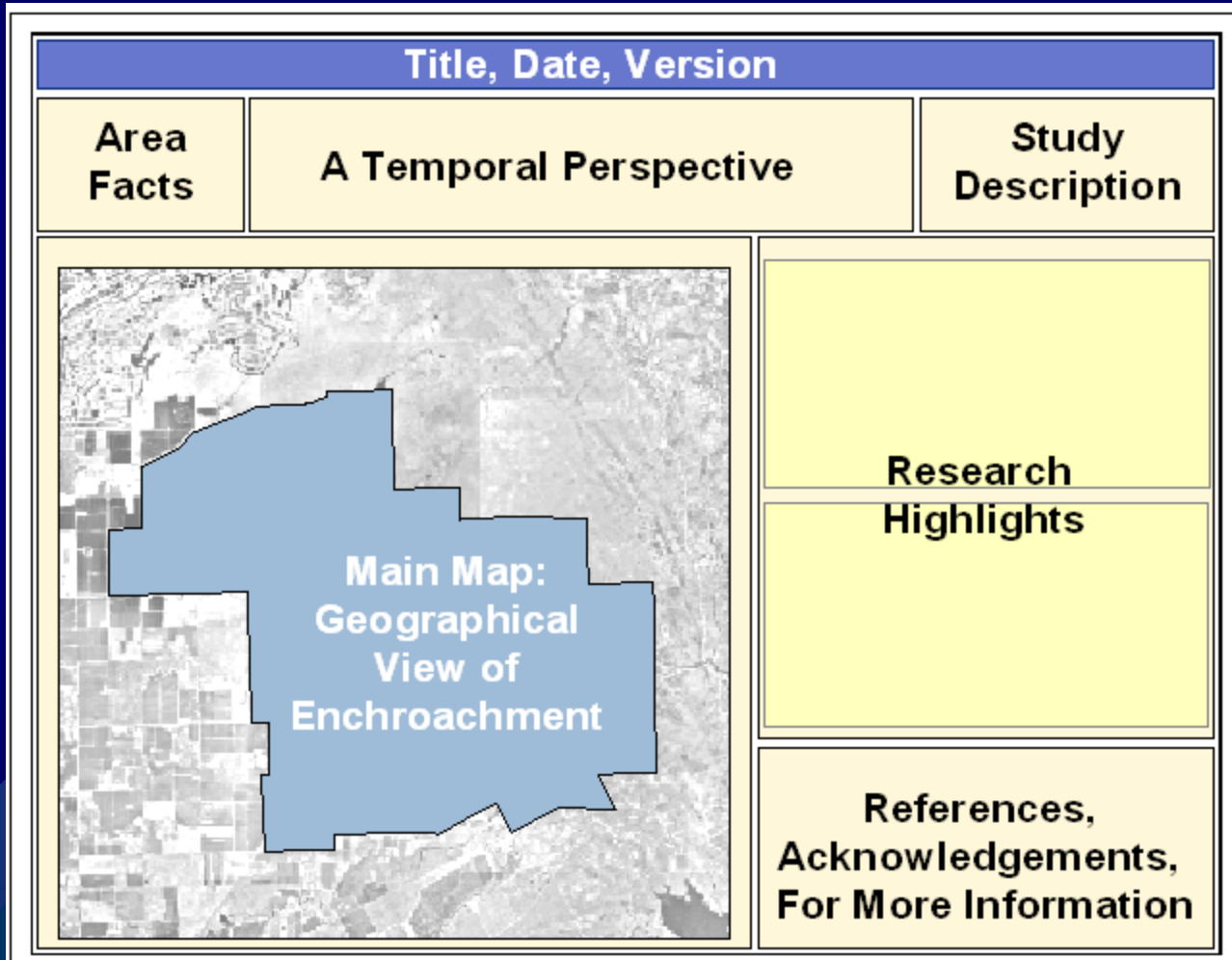
- Design template
- Customize with individual area research

## ◇ Technical Tip:

- Export maps to Adobe Illustrator

# CS 3: CSES

## The Template Focuses the Message

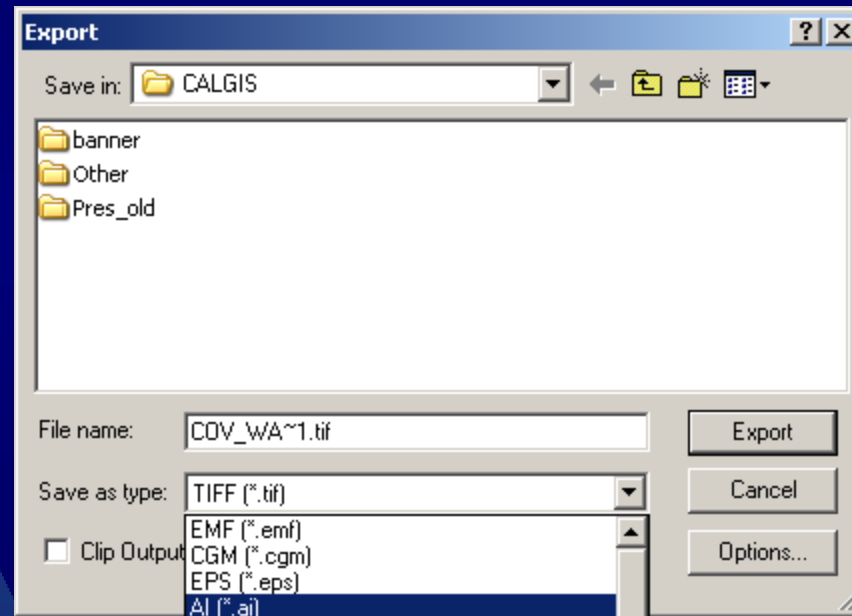




# CS 3: CSES

## Export Map to Adobe Illustrator

◆ File → Export Map



# The Case Studies Revisited

- ◆ Walnut Creek
  - Create templates – layout and base map data
  - Use Layer Files to ensure template integrity
  
- ◆ City of Fairfield
  - Use Map Book Generator tool to increase efficiency
  
- ◆ CSES – Strategic Encroachment Study
  - Create templates for a unified presentation of research findings and to cope with high information density

# Thanks!

Questions?