Appendix J: GeoDatabase based Shake Maps

J.1 Introduction

J.1.1 Purpose

The goal of the document is to show how the USGS Shake Maps (based on shp files) could be converted into GeoDatabase based Shake Maps.

J.1.2 Scope

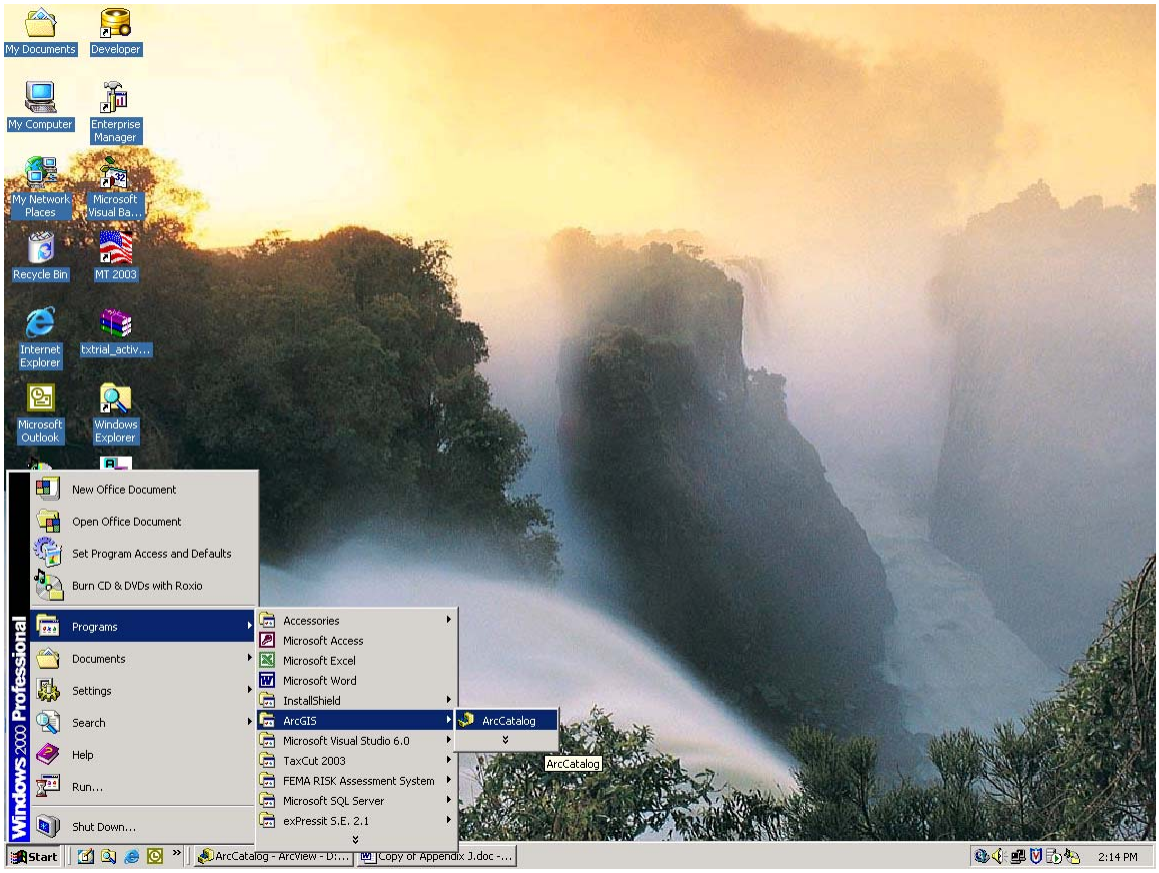
This document describes how SHP file based Shake Maps could be converted into GeoDatabase based Shake Maps in a step by step way. The focus is entirely on what is important to make the new GeoDatabases work with HAZUS-MH. This document should not be used as a resource for converting SHP files to GeoDatabases.

J.2 Prerequisites

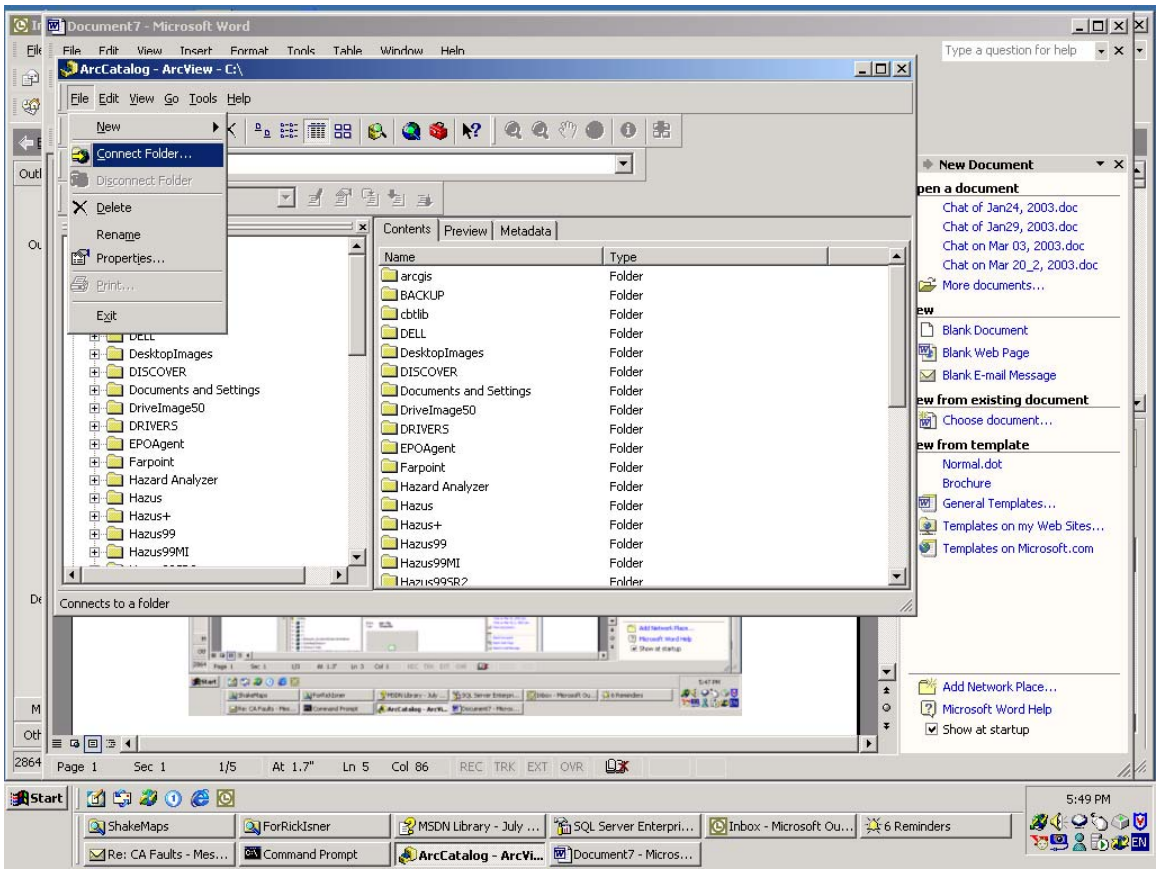
ArcGIS 9.0 (ArcMap and ArcCatalog) should be installed on the computer.

J.3 Creating GeoDatabase based Shake Maps

1) Launch ArcCatalog from the Start menu.

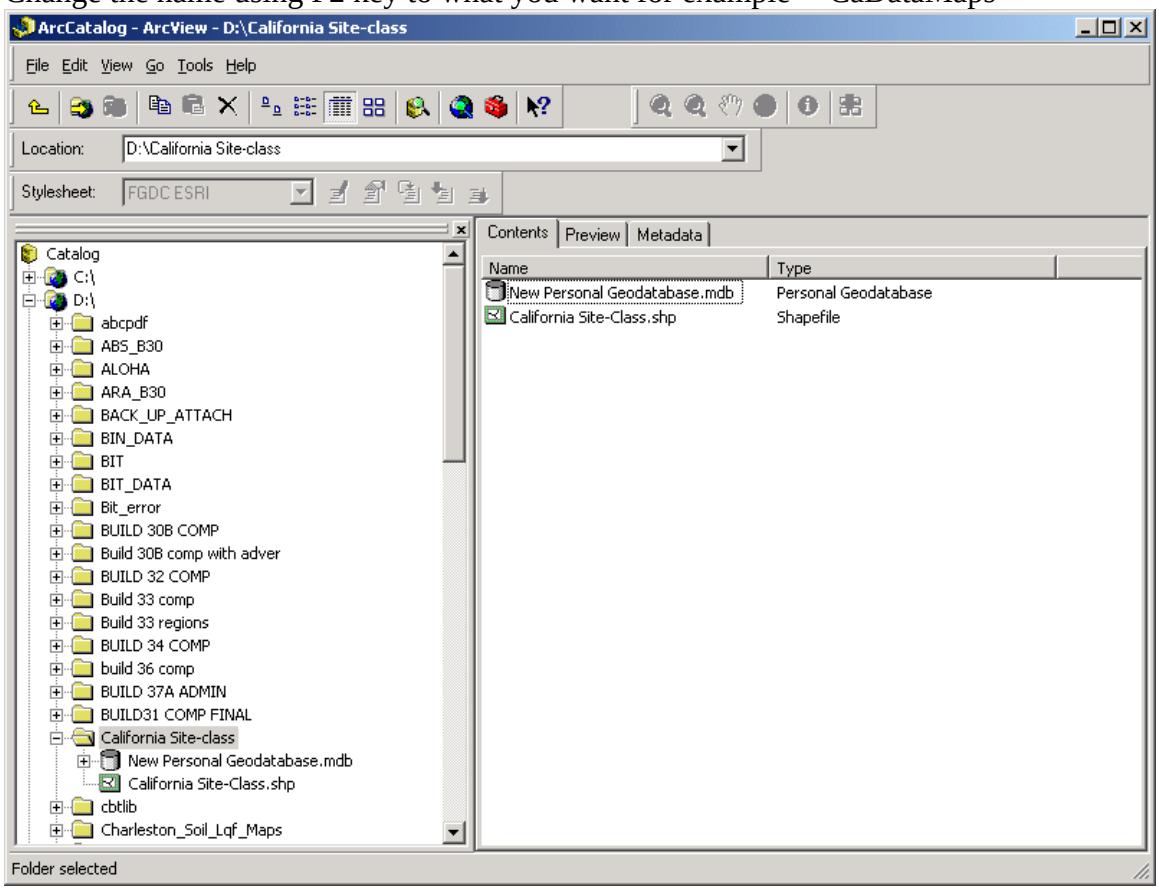


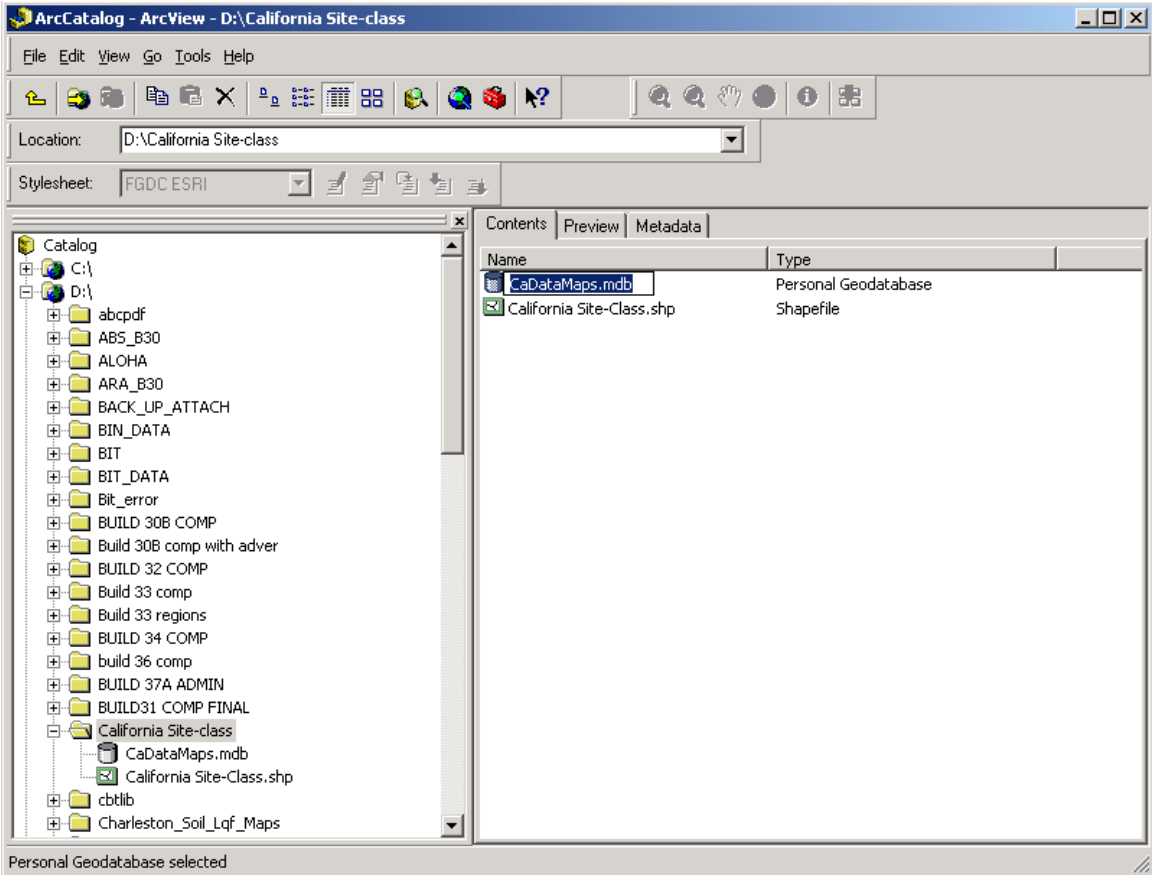
2) Click on the folder where the new Geo-Database is to be created. In case the folder is not available in ArcCatalog click on **File>Connect Folder** menu and select the folder where the Geo-Database is to be created. Once OK button is pressed on that dialog the folder will be visible in ArcCatalog



3) Select the Folder in TOC of the Arc catalog where the Geo-Database is to be created (the one added in the above step), Click on **File>New>Personal GeoDatabase** menu to create the new personal geodatabase.
By default the name appears as “New Personal Geodatabse”

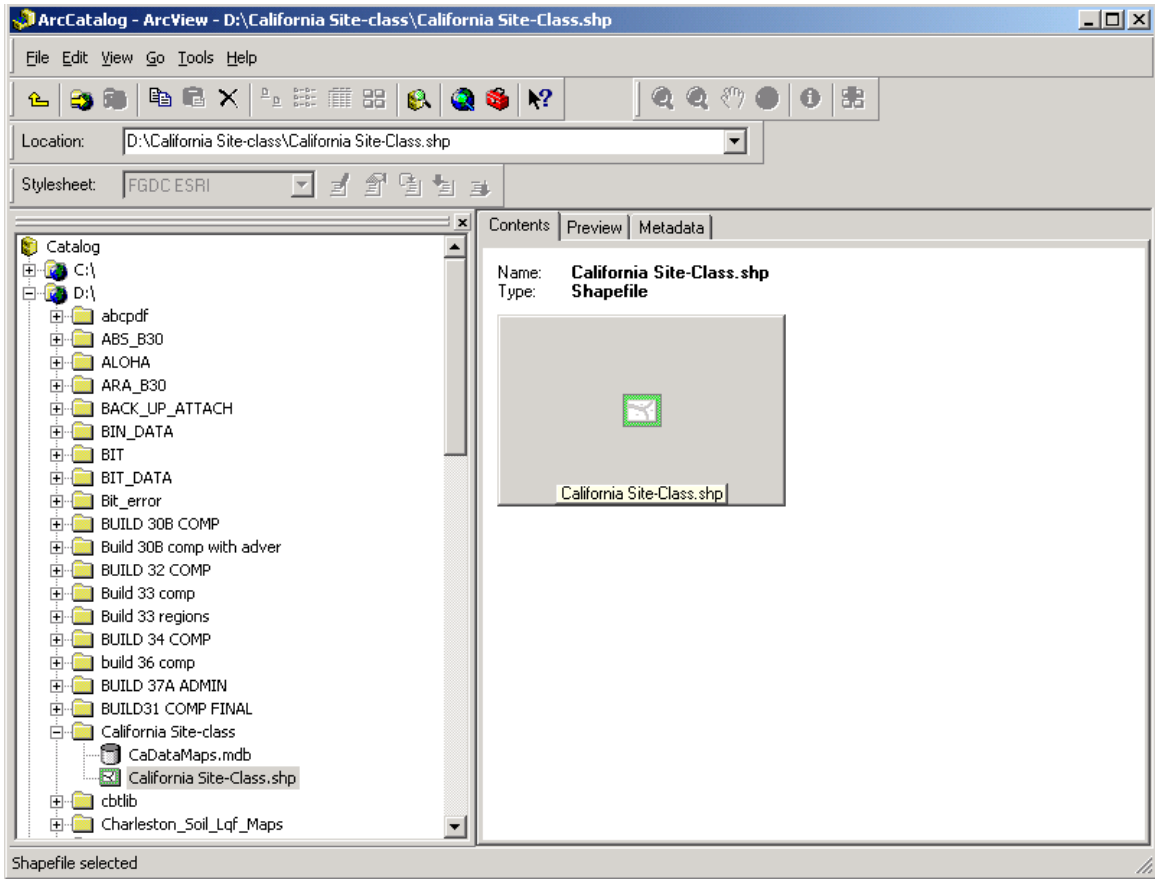
Change the name using F2 key to what you want for example “CaDataMaps”



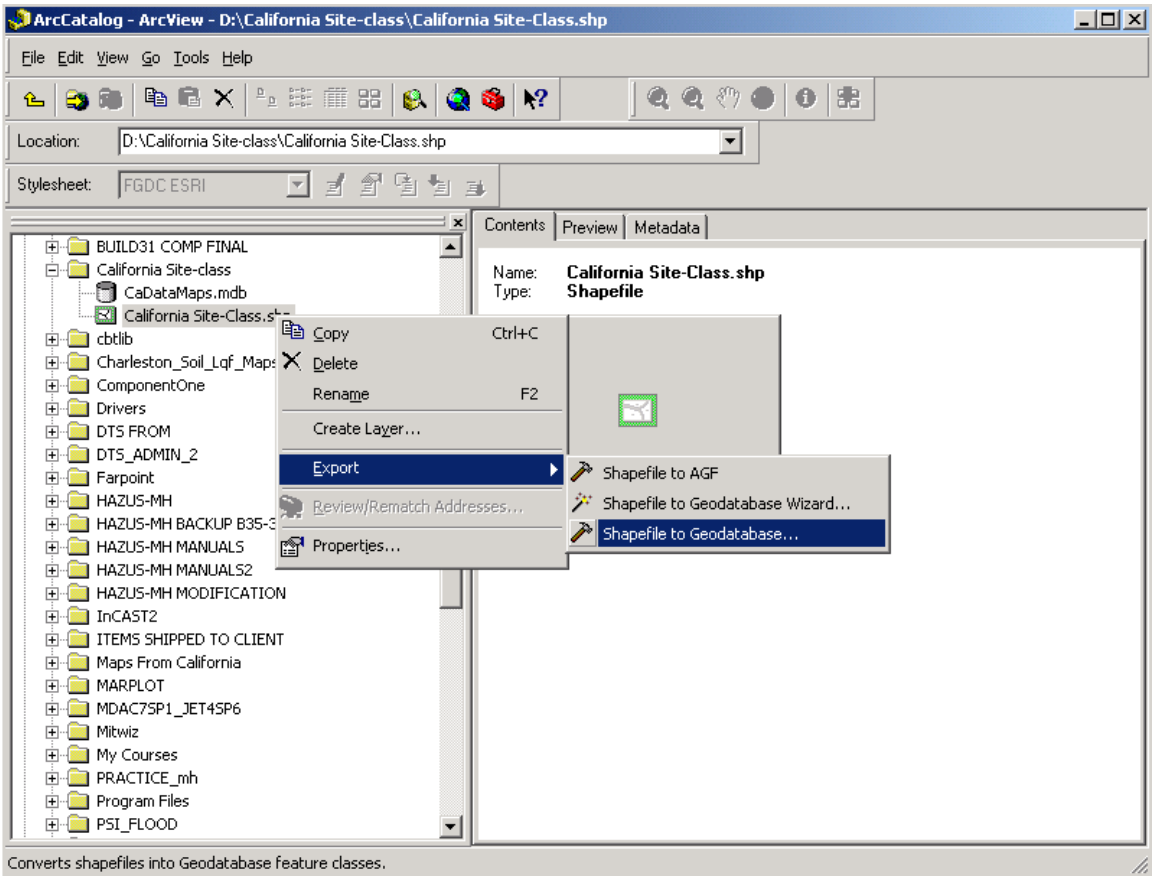

ArcCatalog - ArcView - D:\California Site-class
File Edit View Go Tools Help
Location: D:\California Site-class
Stylesheet: FGDC ESRI
Catalog
C:\
D:\
abcpdf
ABS_B30
ALOHA
ARA_B30
BACK_UP_ATTACH
BIN_DATA
BIT
BIT_DATA
Bit_error
BUILD 30B COMP
Build 30B comp with adver
BUILD 32 COMP
Build 33 comp
Build 33 regions
BUILD 34 COMP
build 36 comp
BUILD 37A ADMIN
BUILD31 COMP FINAL
California Site-class
CaDataMaps.mdb
California Site-Class.shp
cbtlib
Charleston_Soil_Lqf_Maps
Contents
Preview
Metadata
Name
Type
CaDataMaps.mdb
Personal Geodatabase
California Site-Class.shp
Shapefile
Personal Geodatabase selected

4) Select the folder where the shake maps are located in ArcCatalog's TOC. In the folder is not available in the TOC click on **File>Connect Folder** menu and select the folder where the shake maps are located, press the OK button and the folder will be visible in ArcCatalog's TOC.

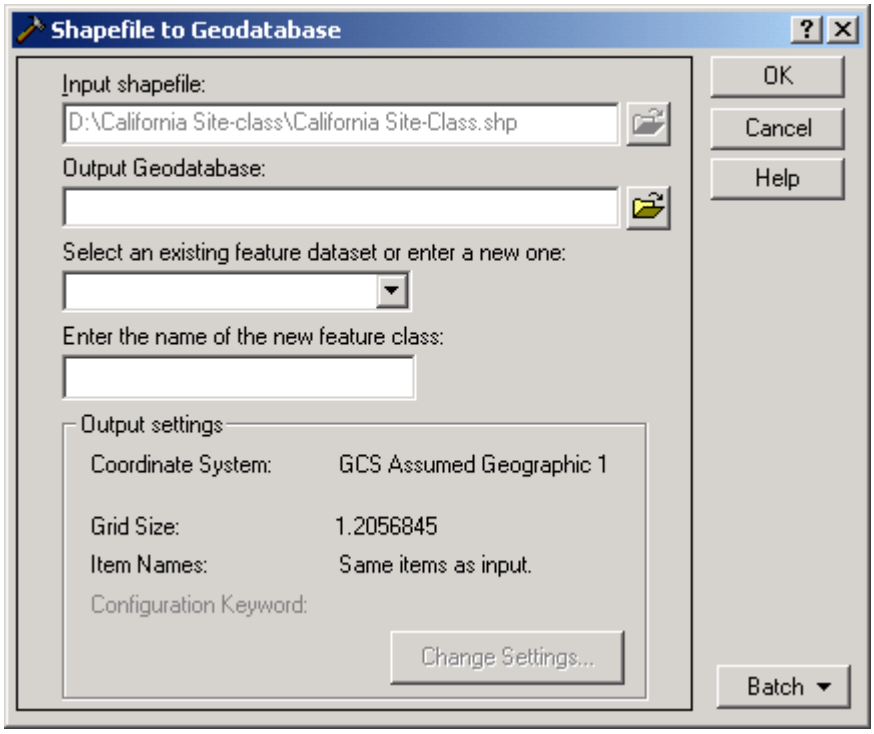
5) Select the Shape file which is to be exported under the connected folder in TOC as shown



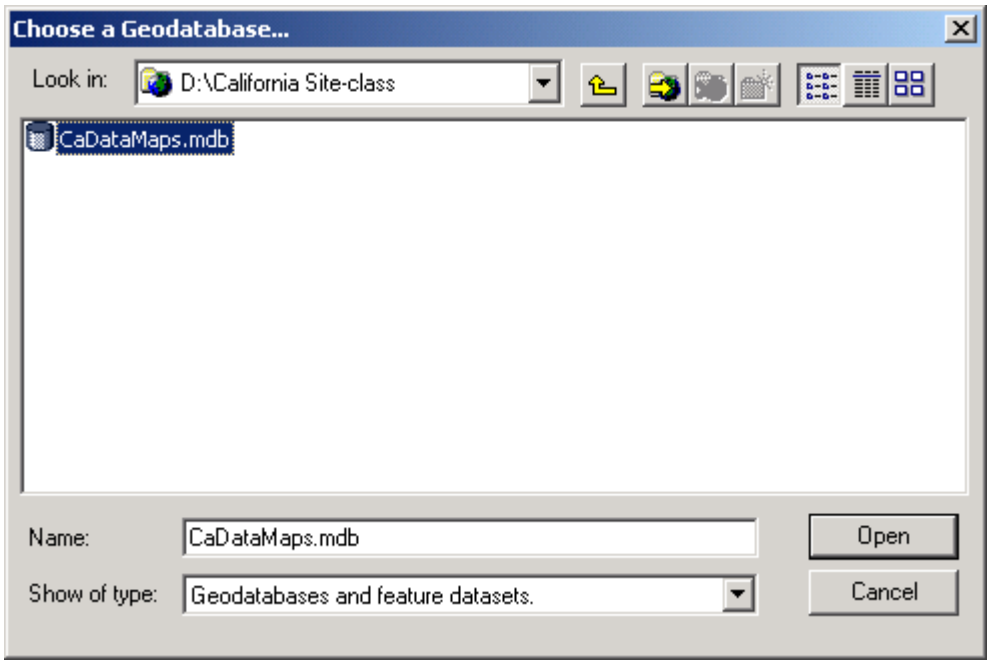
6) Right click and select third option under Export (shape file to geo database) as shown



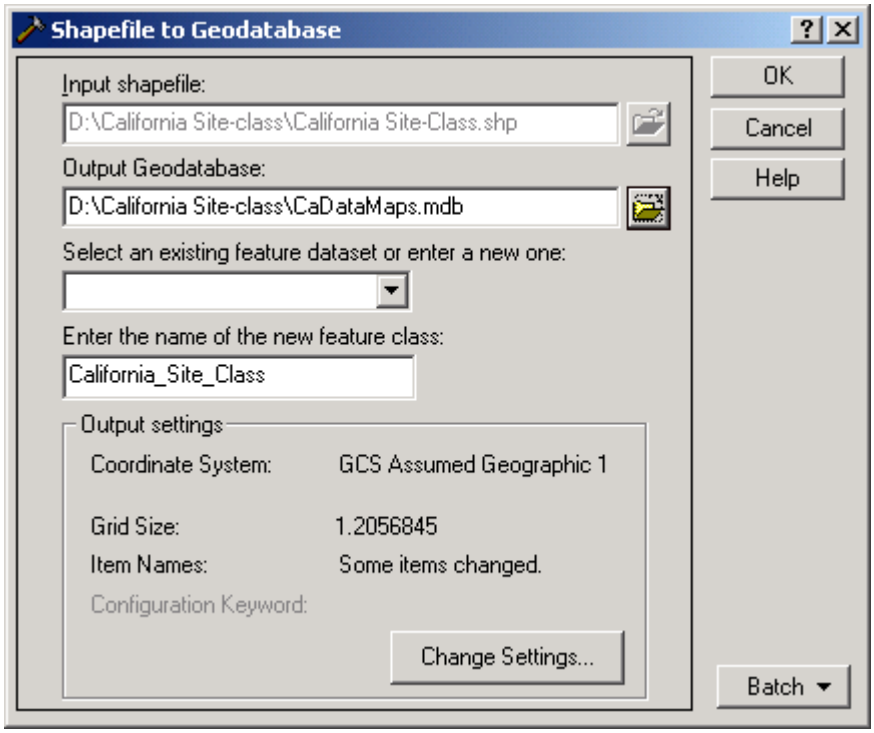
7) The Export option will show the following dialog



8) Click on the browse button for the Out put Geo data base and select the geo database created in step 3.

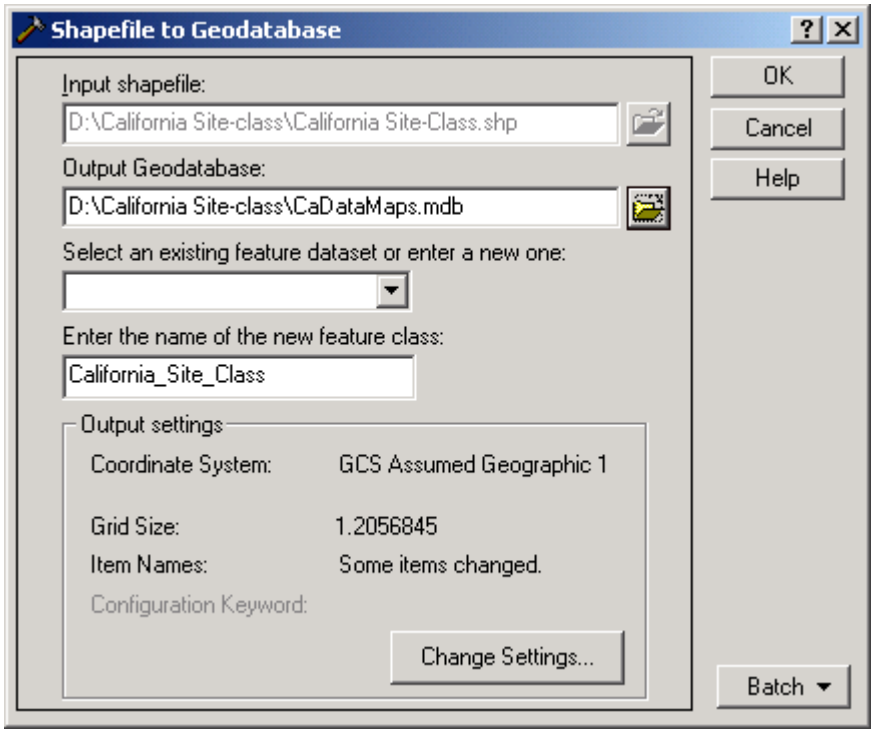


Clicking Open button will launch the following dialog:

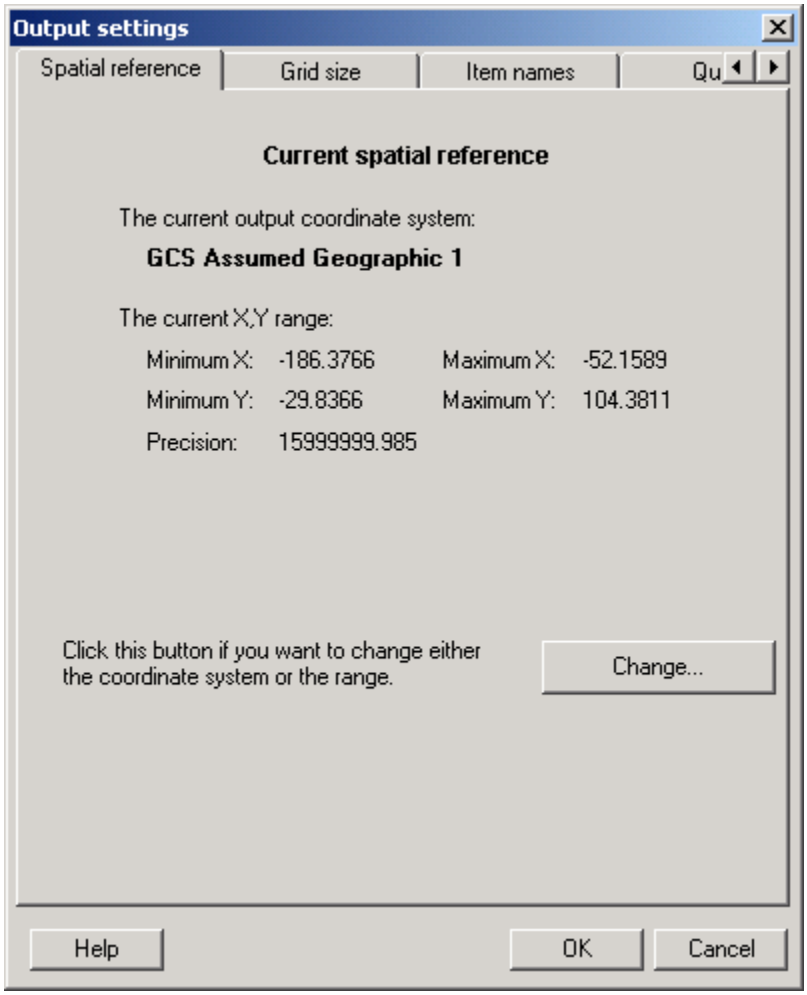


Leave the third option "*Select an existing feature dataset…*" empty

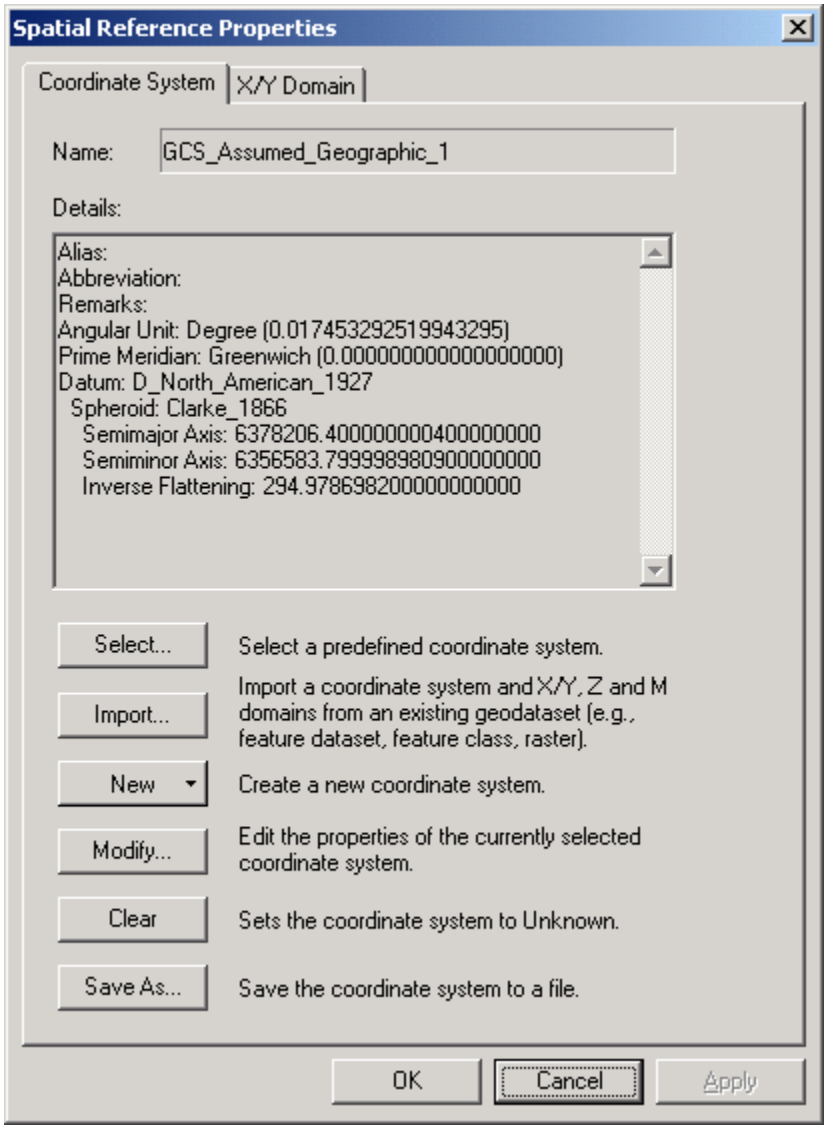
To change the name of the Out put feature class modify the edit box under "*Select an existing feature dataset…*". For example name has been changed to California_Site_Class_Hazus



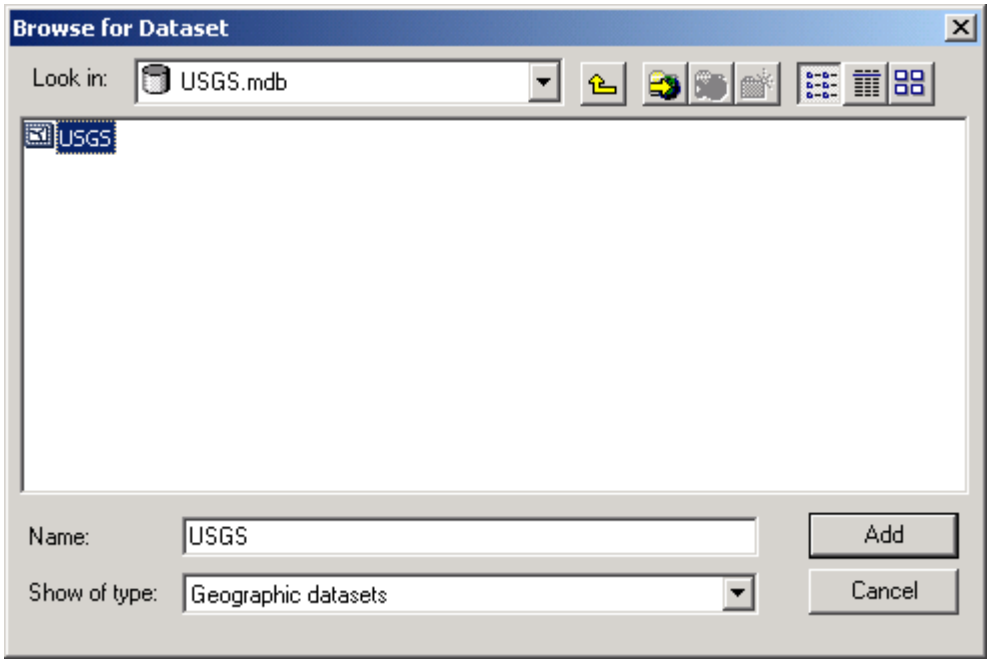
9) Now Click the Change Settings button, it shows setting options as follows:



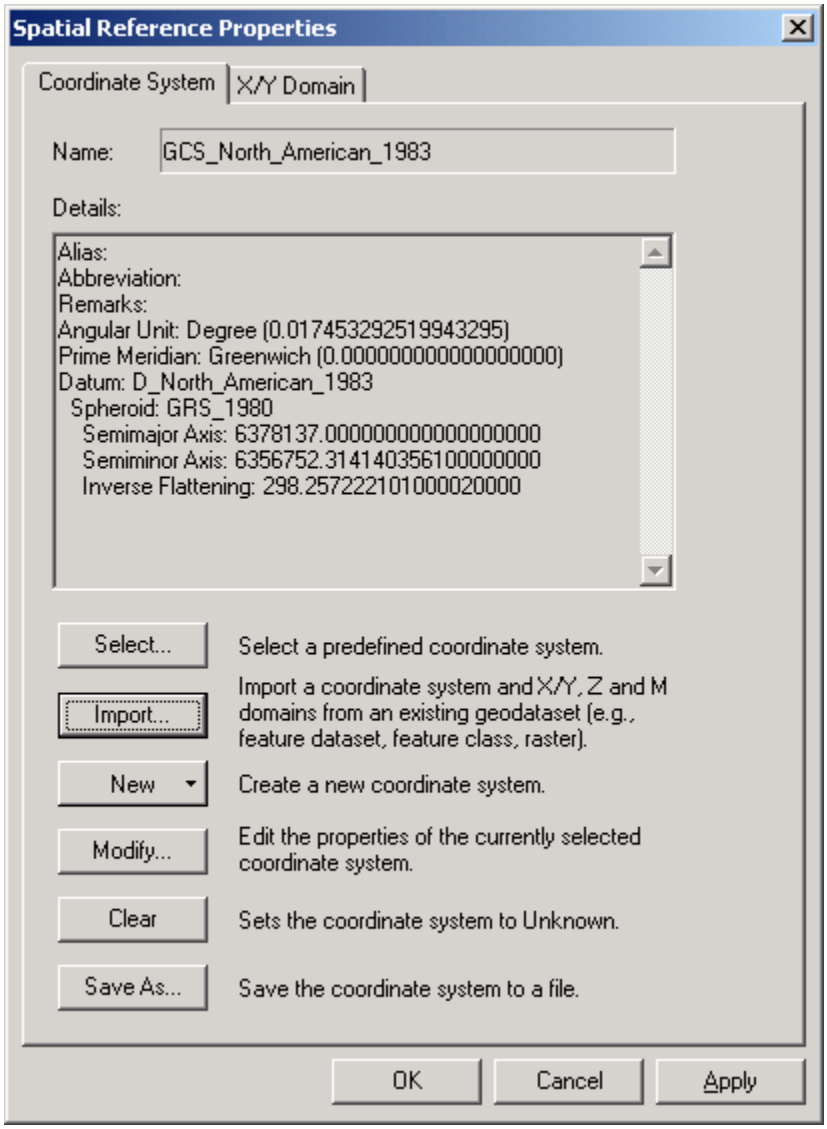
10) Click Change button on the Spatial Reference Tab



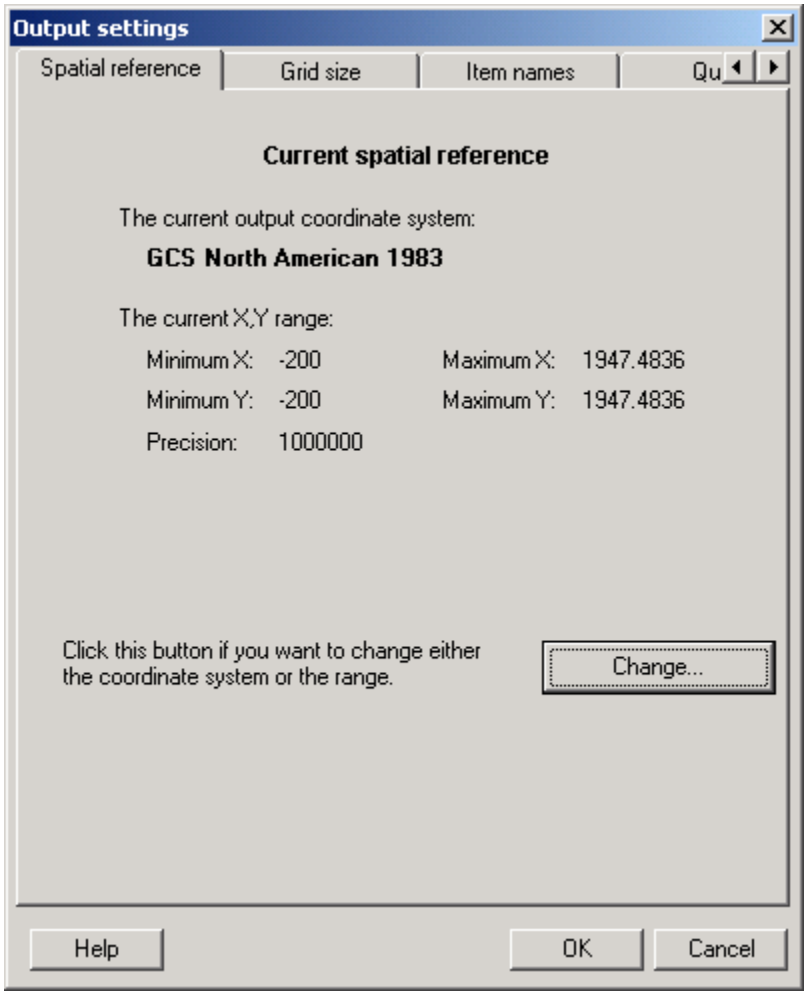
11) Click on Import Button and Browse to <HAZUS-MH>\DATA folder and select "USGS.MDB" and then select USGS feature class.
NOTE: <HAZUS-MH> represents the folder where HAZUS-MH is installed.



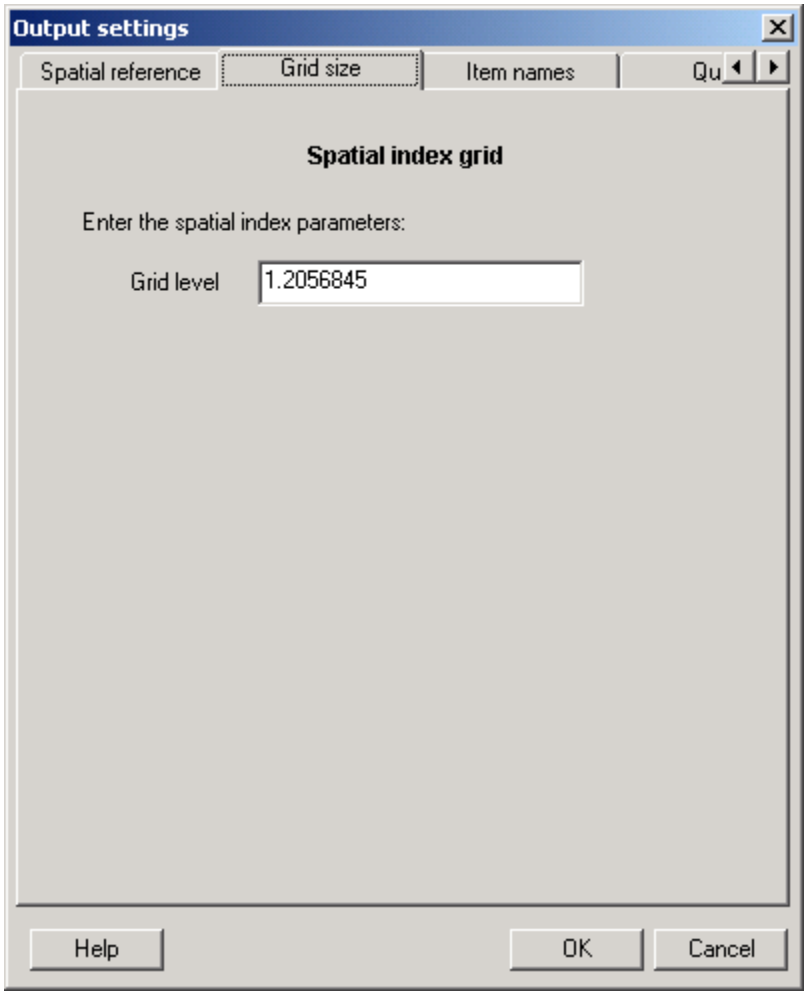
12) Click Add button and the new Settings will be reflected as follows:



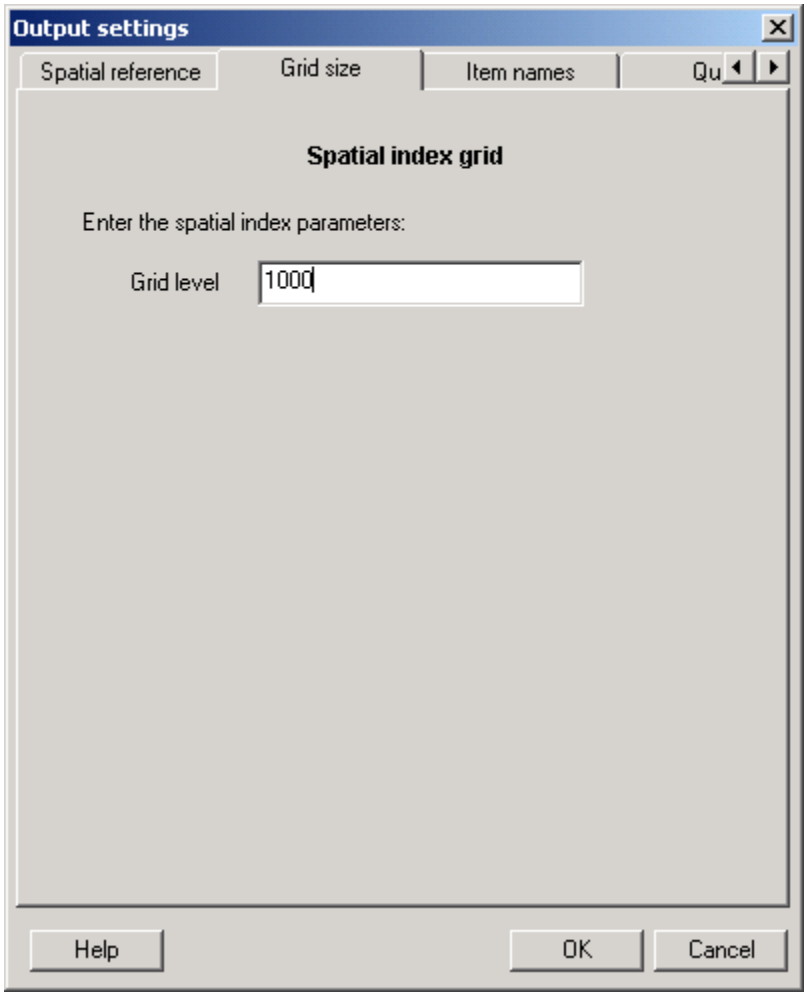
13) Click Apply and then OK and new Spatial reference Tab will be displayed as follows:



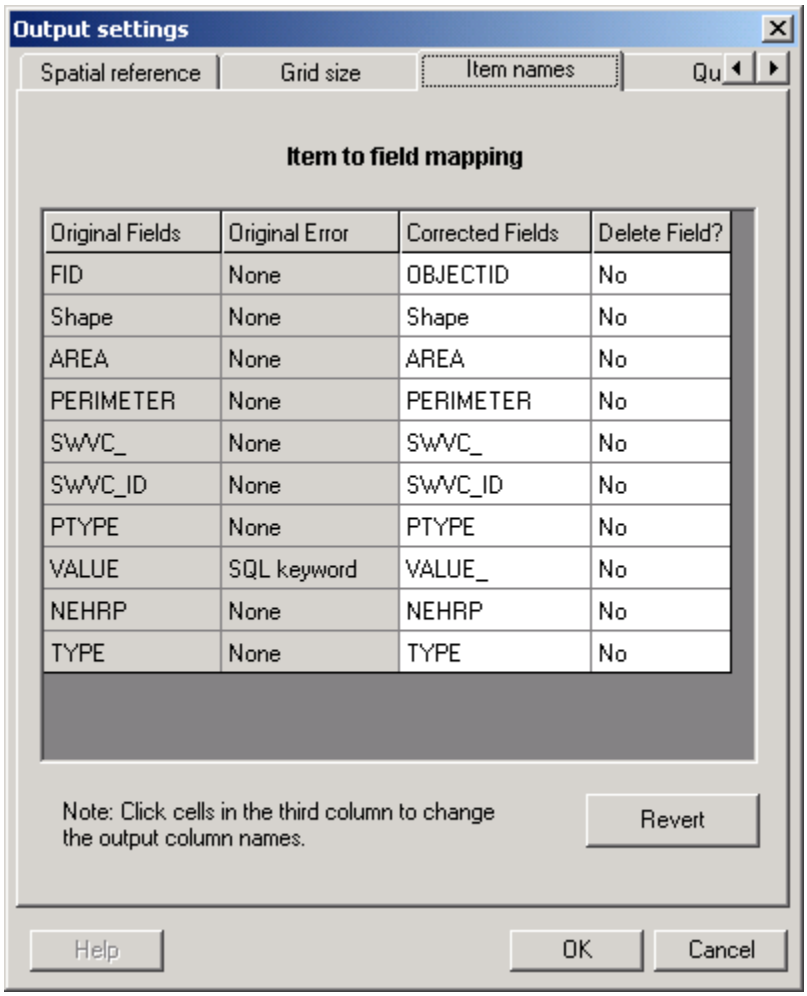
14) Now Click on the “GRID SIZE” tab, it will show the original Grid Size



Change Grid Level to 1000 as shown below:


Output settings
Spatial reference
Grid size
Item names
Qu
Spatial index grid
Enter the spatial index parameters:
Grid level
1000
Help
OK
Cancel

15) DON'T CLICK OK, instead Click on "Item Names" Tab which has the details of all the columns in the source feature class or shape file.



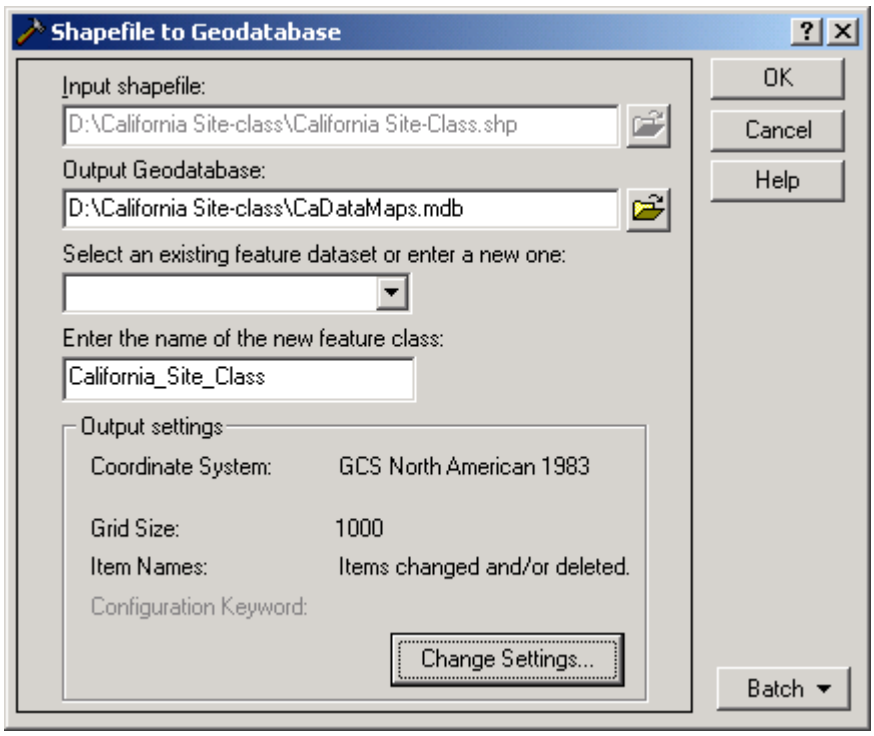
16) Now change the Setting under *Delete Field* column to YES for all fields other than FID (Object Id), Shape and field that has shaking values.

The following table summarizes the name of the field that has the shaking values, its data type and the range of values that HAZUS-MH expects. These should be used in the *Corrected Fields* column in the above dialog for all the shake maps.

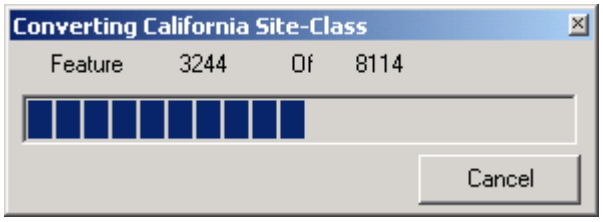
S. N	Type of Map	Correct Field Name	Field Type	Valid Values
1	All user defined Scenario Maps (Shake Maps)	ParamValue	Decimal	Values must be Greater than 0

So in our example the ***NEHRP*** field is the field that has the shaking values, so the *Corrected Field* corresponding to the *Original Field* NEHRP will be modified to **ParamValue (Decimal data type)** that is expected by HAZUS-MH for user defined ground shaking maps.

17) Now Click OK and on next screen which is same as



Click OK, it will show the progress bar while exporting



Once the Progress bar disappears, Export is over and the map has been successfully converted for use with HAZUS-MH..