

# Appendix B

## Setting Up the Coordinate System

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# Appendix B

## Setting up the Coordinate System

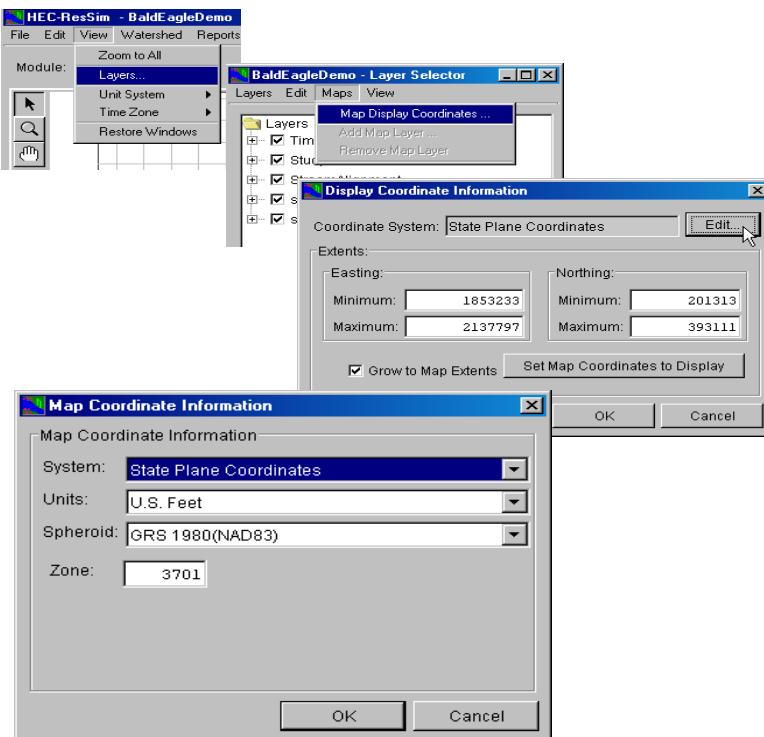
Chapter 3, Section 3.4.3 “Specifying the Geographic Referencing and Coordinate System” explains how to edit the coordinate system of your watershed by accessing the **Map Coordinate Information**. This Appendix provides more detailed information related to setting up the coordinate system for your watershed.

### B.1 Accessing Map Coordinate Information

To access the Map Coordinate Information from any of the three ResSim modules:

1. From the **View** menu in the Main window, select **Layers**.
2. From the **Maps** menu in the Layer Selector dialog box, select **Map Display Coordinates**.
3. In the Display Coordinate Information dialog box, select **Edit**.
4. The **Map Coordinate Information** dialog box will appear where you can set the appropriate coordinate information.

These steps are illustrated in Figure B.1.



**Figure B.1** Steps for Accessing Map Coordinate Information

Table B.1 shows the available options for **System**, **Units**, and **Spheroid**. When you choose specific coordinate systems, not all options are available from the **Spheroid** list. For example, choosing **X-Y** from the **System** list deactivates the **Spheroid** list. Additionally, when **State Plane Coordinates** is selected as the **System**, only **Clarke 1886** and **GRS 1980** are available choices from the **Spheroid** list.

**Table B.1 Available System, Unit and Spheroid Options for Defining Coordinate System**

System	Units	Spheroid
X-Y *	Radians	Clarke 1866
Geographic	U.S. Feet	WGS 72
Universal Transverse Mercator	Meters	GRS 1980
State Plane Coordinates **	Seconds of Arc	WGS 84
Albers Equal-Area Conic	Degrees of Arc	Sphere of Radius 6370997 Meters
Lambert Conformal Conic	International Feet	
Transverse Mercator	State Zone	
Albers Equal-Area Conic (SHG)		

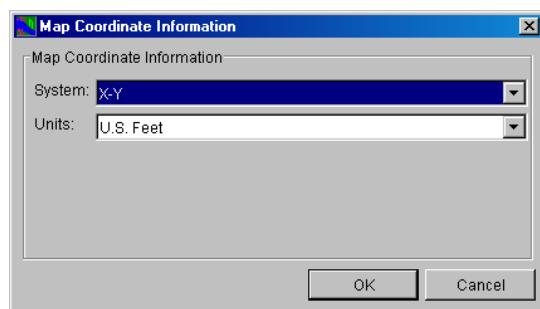
\* X-Y does not allow selection of Spheroid \*\* State Plane Coordinates allows choice of only Clarke 1866 and GRS 1980 from the Spheroid list

## B.2 Coordinate Systems Options

The following sections describe each of the Coordinate Systems that are available from the **Map Coordinate Information** dialog box.

### B.2.1 X-Y System

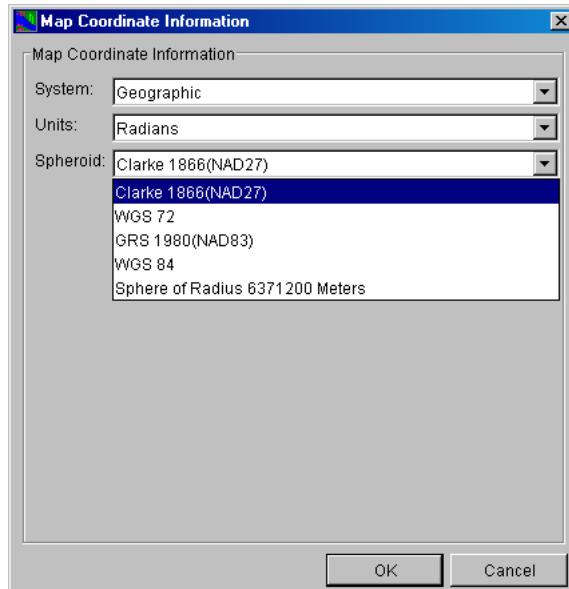
When you choose **X-Y** for the coordinate system (Figure B.2), you need only make a selection for **Units** (U.S. Feet, Meters, or International Feet).



**Figure B.2 Map Coordinate Information, X-Y System**

## B.2.2 Geographic System

The **Geographic** coordinate system (Figure B.3) requires that you specify both **Units** (Radians, Seconds of Arc, or Degrees of Arc) and **Spheroid** (see list in Figure B.3).

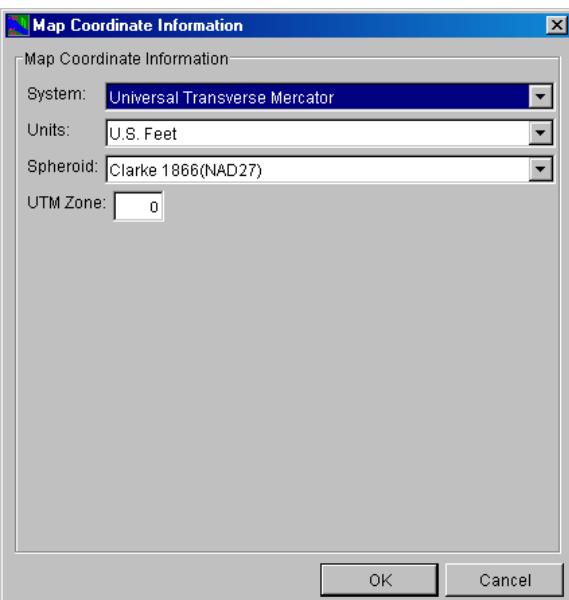


**Figure B.3 Map Coordinate Information, Geographic System**

## B.2.3 Universal Transverse Mercator System

The **Universal Transverse Mercator** coordinate system (Figure B.4) requires you to specify both **Units** (U.S. Feet, Meters, or International Feet) and **Spheroid** (same list as shown in Figure B.3).

Additionally, you need to type in the **UTM Zone**.

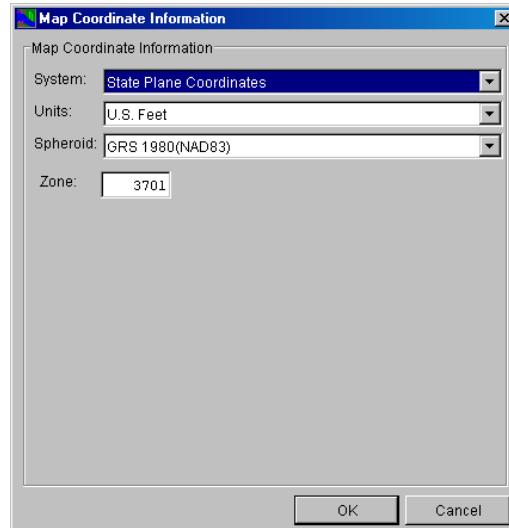


**Figure B.4 Map Coordinate Information, Universal Transverse Mercator System**

## B.2.4 State Plane Coordinates System

When you choose the **State Plane Coordinates** system (Figure B.5), you must select **Units** (U.S. Feet Meters, or International Feet) and **Spheroid**. The options for Spheroid are limited to Clarke 1866(NAD27) and GRS 1980(NAD83).

You also must type in a **Zone**.



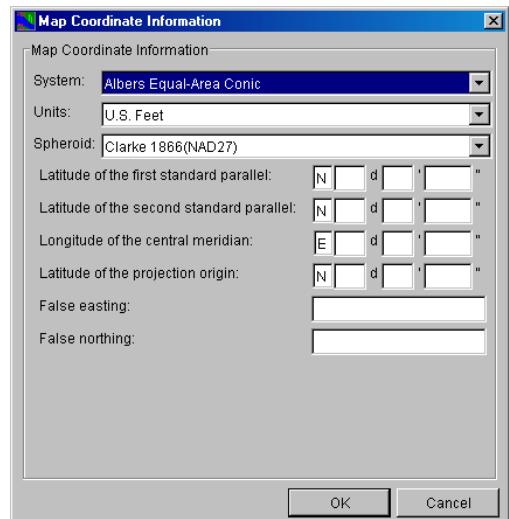
**Figure B.5 Map Coordinate Information, State Plane Coordinates System**

## B.2.5 Albers Equal-Area Conic System

The **Albers Equal-Area Conic** coordinate system (Figure B.6) requires a selection for both **Units** (U.S. Feet, Meters, or International Feet) and **Spheroid** (same list as shown in Figure B.3).

Additional required information includes: **Latitude of the first standard parallel**; **Latitude of the second standard parallel**; **Longitude of the central meridian**; **Latitude of the projection origin**; **False easting**, and **False northing**.

When specifying latitudes, use **N** or **S**. For longitudes, use **E** or **W**. You may either type these into the fields, or use the **SPACEBAR** on your keyboard to toggle between the acceptable entries (after placing your cursor in the first box of either the latitude or longitude field).



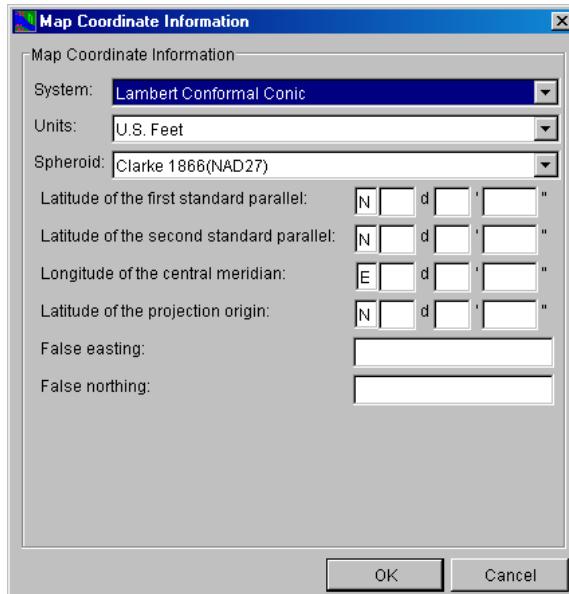
**Figure B.6 Map Coordinate Information, Albers Equal-Area Conic System**

## B.2.6 Lambert Conformal Conic System

The **Lambert Conformal Conic** coordinate system (Figure B.7) requires a selection for both **Units** (U.S. Feet, Meters, or International Feet) and **Spheroid** (same list as shown in Figure B.3).

Additional required information includes: **Latitude of the first standard parallel**; **Latitude of the second standard parallel**; **Longitude of the central meridian**; **Latitude of the projection origin**; **False easting**; and **False northing**.

When specifying latitudes, use **N** or **S**. For longitudes, use **E** or **W**. You may either type these into the fields, or use the SPACEBAR on your keyboard to toggle between the acceptable entries (after placing your cursor in the first box of either the latitude or longitude field).



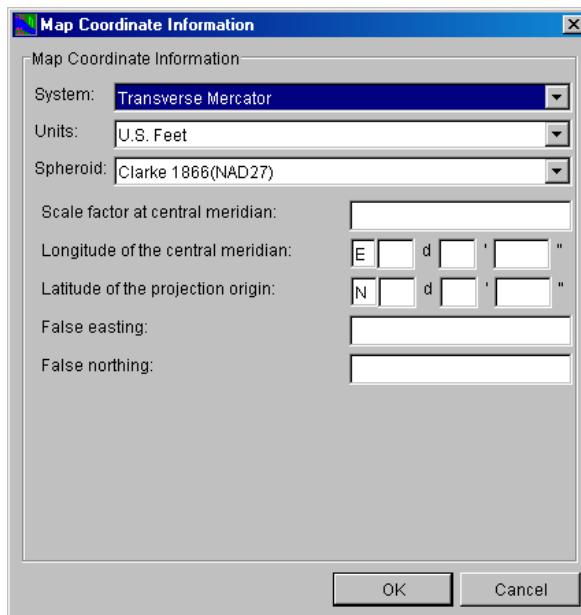
**Figure B.7 Map Coordinate Information, Lambert Conformal Conic System**

## B.2.7 Transverse Mercator System

For the **Transverse Mercator** coordinate system (Figure B.8), you must choose both the **Units** (U.S. Feet, Meters, or International Feet) and **Spheroid** (same list as shown in Figure B.3).

Additional required information includes: **Scale factor at central meridian**; **Longitude of the central meridian**; **Latitude of the projection origin**; **False easting**; and **False northing**.

When specifying latitudes, use **N** or **S**. For longitudes, use **E** or **W**. You may either type these into the fields, or use the SPACEBAR on your keyboard to toggle between the acceptable entries (after placing your cursor in the first box of either the latitude or longitude field).

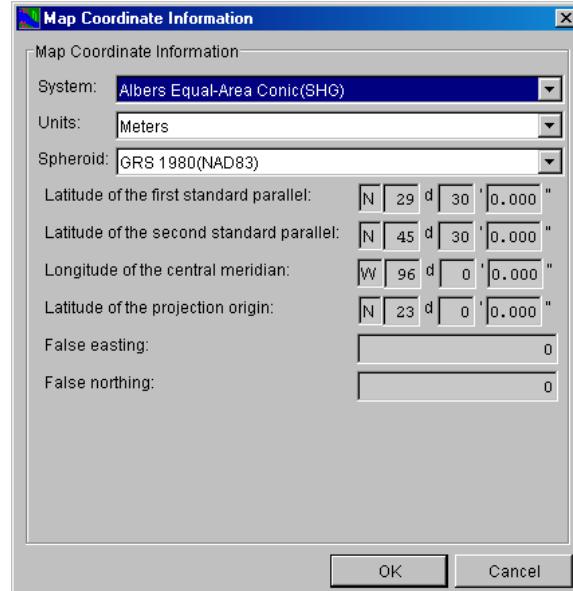


**Figure B.8 Map Coordinate Information, Transverse Mercator System**

## B.2.8 Albers Equal-Area Conic (SHG) System

The SHG version of the **Albers Equal-Area Conic (SHG)** coordinate system (Figure B.9) provides a set of default parameters. You only need to make a selection for **Spheroid** (the same list as shown in Figure B.3).

You need not change the default parameters for **Units**, the **Latitude of the first standard parallel**, the **Latitude of the second standard parallel**, the **Longitude of the central meridian**, the **Latitude of the projection origin**, the **False easting**, or the **False northing**.

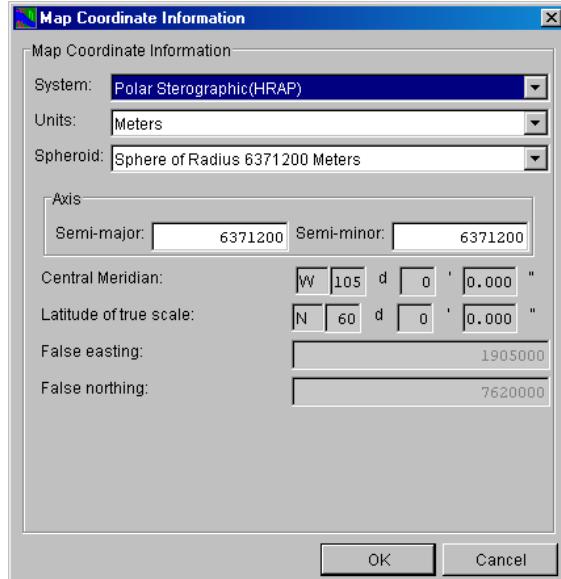


**Figure B.9 Map Coordinate Information, Albers Equal-Area Conic (SHG) System**

## B.2.9 Polar Stereographic (HRAP) System

The Polar Stereographic (HRAP) coordinate system (Figure B.10) requires that you specify both the **Units** (U.S. Feet, Meters, or International Feet) and **Spheroid** (same list as shown in Figure B.3).

Additional information required includes the **Axis (Semi-major and Semi-minor)**, the **Central Meridian**, the **Latitude of true scale**, **False easting**, and **False northing**.



**Figure B.10 Map Coordinate Information, Polar Stereographic (HRAP) System**

When specifying **Central Meridian**, use **E** or **W**. For the **Latitude of true scale**, use **N** or **S**. You may either type these into the fields, or use the SPACEBAR on your keyboard to toggle between the acceptable entries (after placing your cursor in the first box of either the Central Meridian or Latitude field).