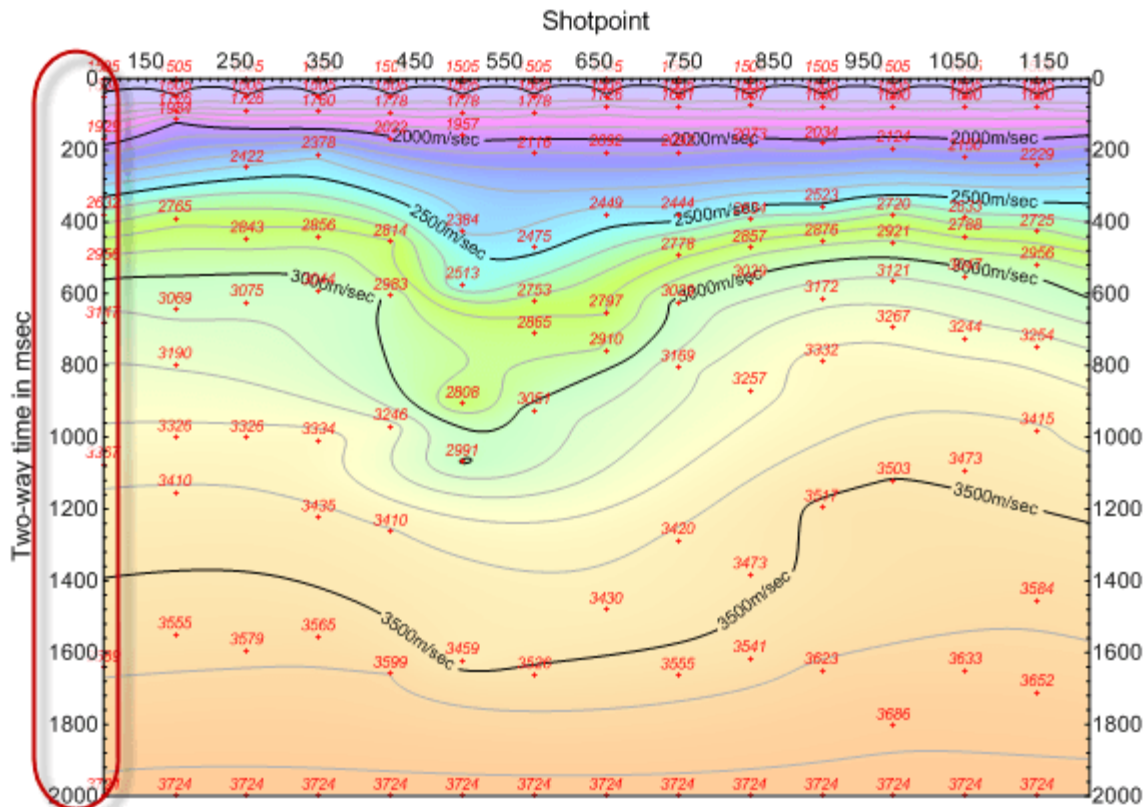


## What's New in Surfer 12?

We have compiled a list of some of the top new features in Surfer 12. This list is only a small sampling of the new features added to Surfer 12.

### Reverse X or Y Axis Direction

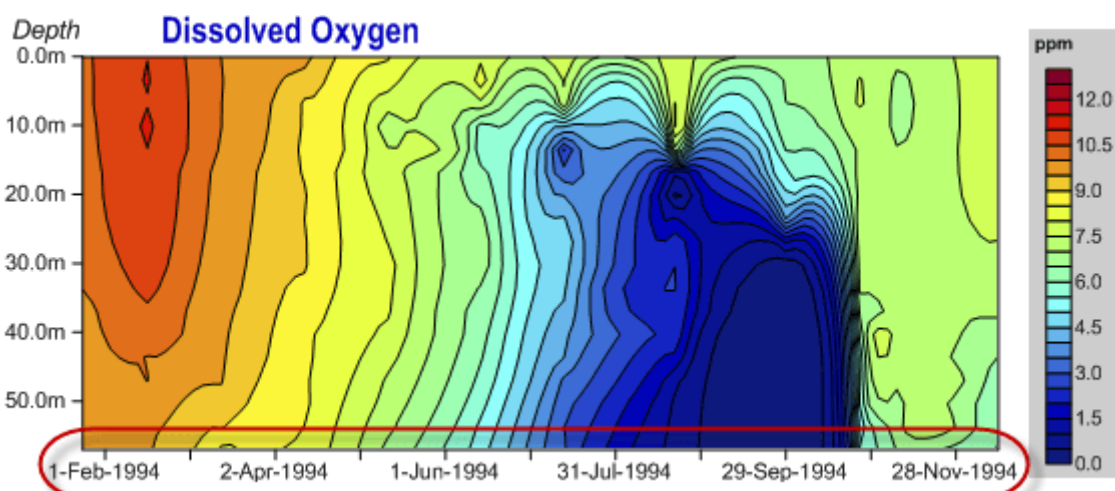
Reverse the direction of the X or Y axis with a simple click of a button! It is easy to show descending data, such as depth data, in the correct orientation without modifying your data.



Reverse an axis to show the data in descending orientation! This is especially useful for displaying depth, two-way time, or other data values on the that increase downwards (on the Y axis) or to the left (on the X axis).

### Use Data in Date/Time Format

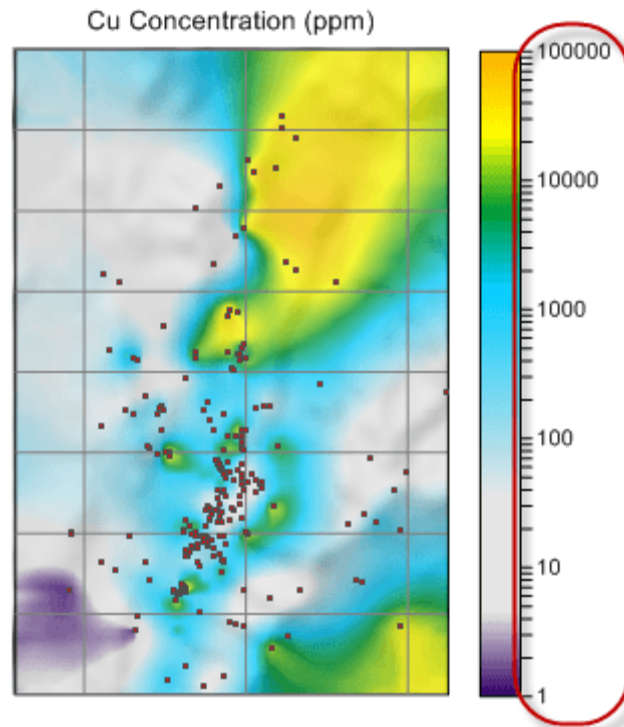
Visualize your data with respect to time! Surfer 12 supports dates and times as valid data. This means you can use dates and times as a data variable for gridding, for creating post maps, and you can format data in the worksheet or text labels in multiple date and time formats.



Use dates and times in a data file as a variable when gridding, and format the axis tick labels in one of many date and time formats!

## Grid and Display Maps with Logarithmic Z Scale

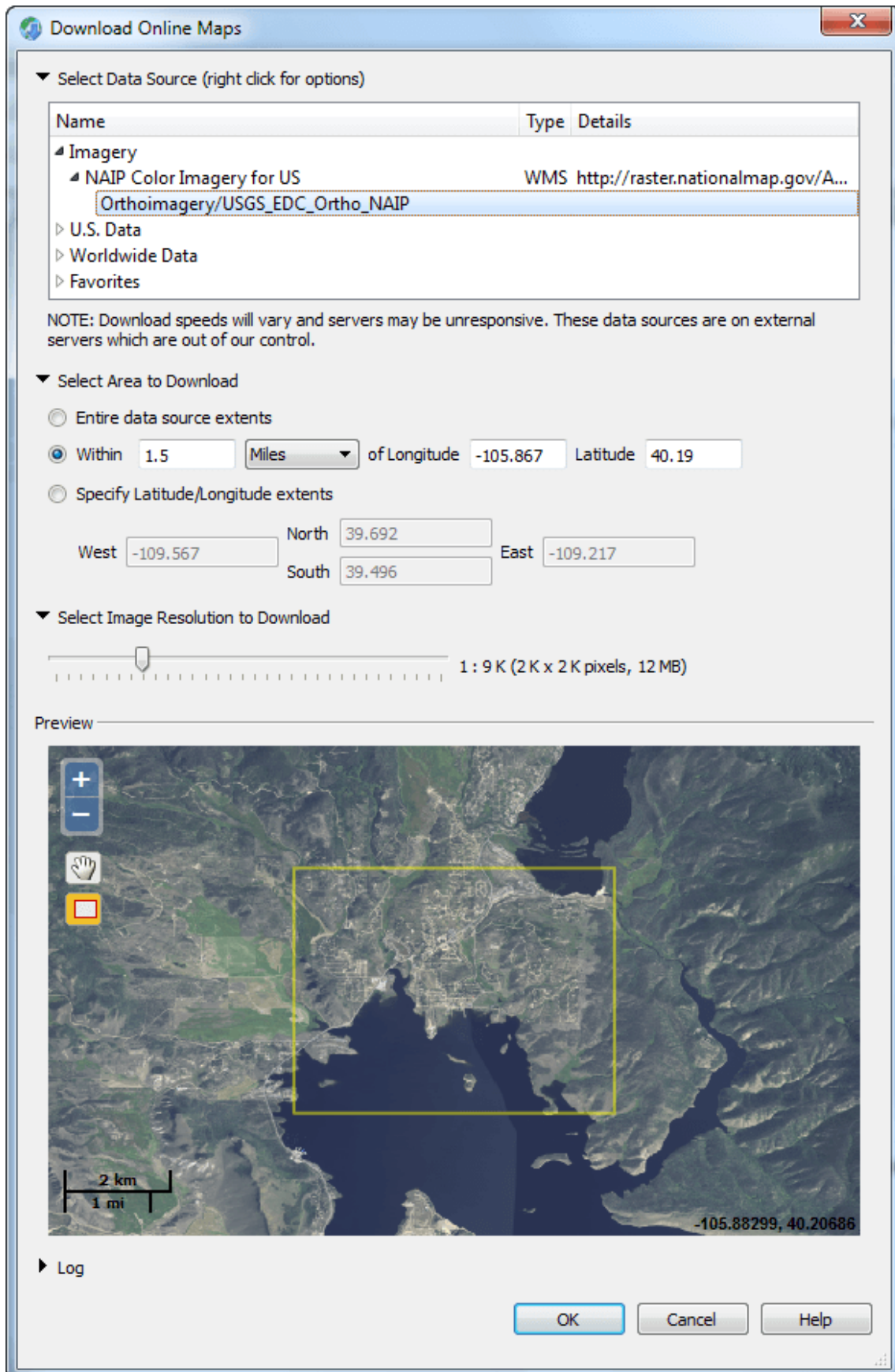
Effectively display Z data that range over several orders of magnitude! You can grid data taking the log of the Z value prior to gridding, choose to have logarithmically scaled contour levels, or have logarithmic scaling applied to the color scale. This is extremely useful when your data file has extreme data ranges, such as concentration data where the Z values can span multiple orders of magnitude (i.e.  $>1$  to  $<20000$ ).



*Visualize the very low and very high values by gridding the log of the data and using a logarithmically scaled colormap.*

## Download Free Online Maps

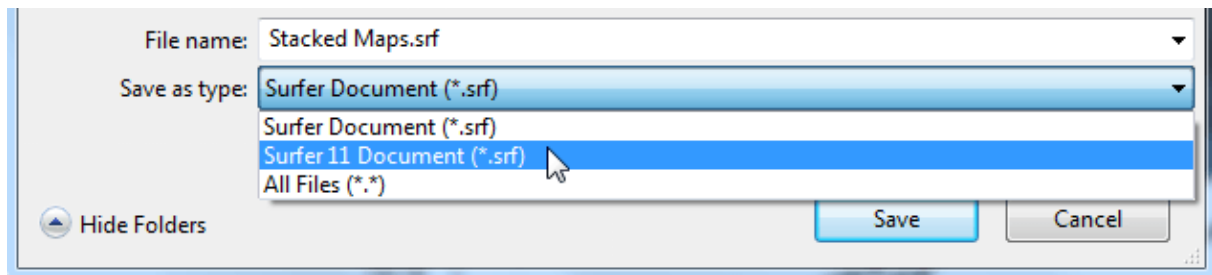
More information is now at your fingertips. Download image layers from hundreds of free online Web Map Services (WMS) through Surfer's new, integrated WMS browser. Connect to online data sources, pick the layers of interest you want to download, and Surfer seamlessly downloads and imports the images into your projects.



Surfer's new integrated WMS browser efficiently locates and downloads high resolution images to use as base layers.

## Save SRF files in Surfer 11 Format

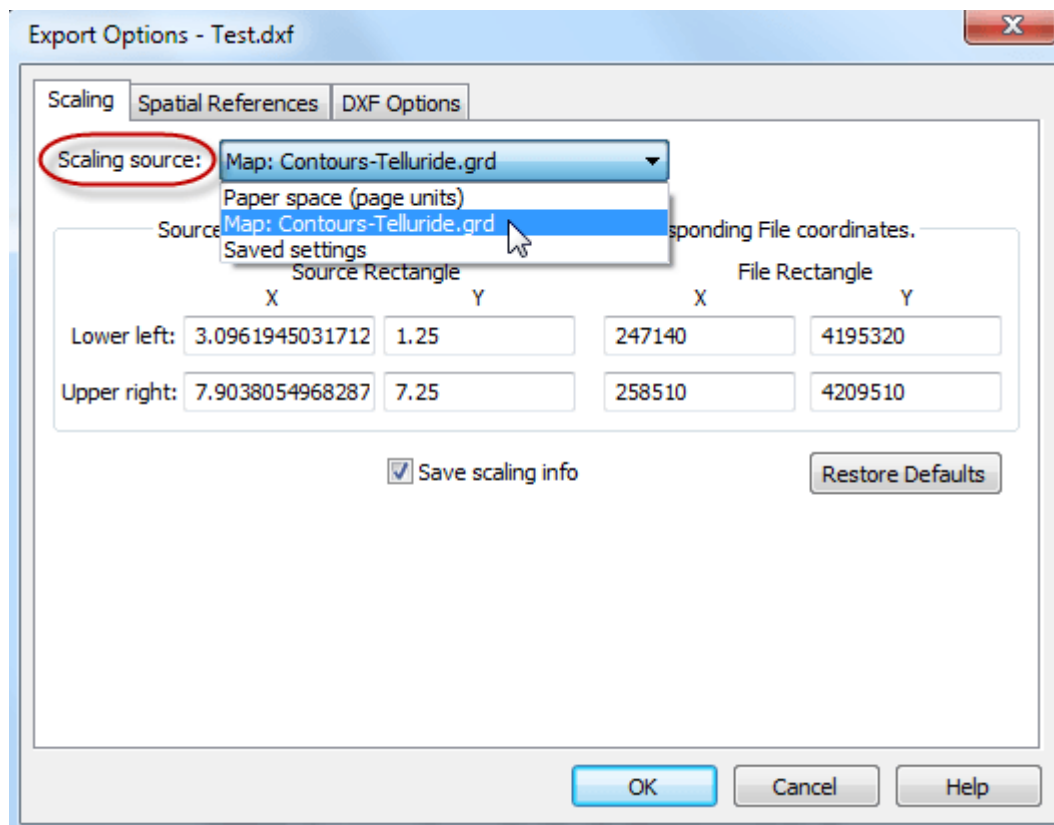
Be compatible with your colleagues! If you have Surfer 12 and they have not upgraded yet, you can still share your project with them by saving it in Surfer 11 format so they can open it.



*Save in Surfer 12 or Surfer 11 SRF format! Share SRF files saved in Surfer 11 SRF format with other users still using Surfer 11.*

## Export Map and Drawn Objects in One Step

Save time! Exporting map and non-map objects just got a lot easier. No more complicated two-step export process. Now, simply specify the map as the scaling source when exporting your entire project to a vector or georeferenced image file— it's that easy!

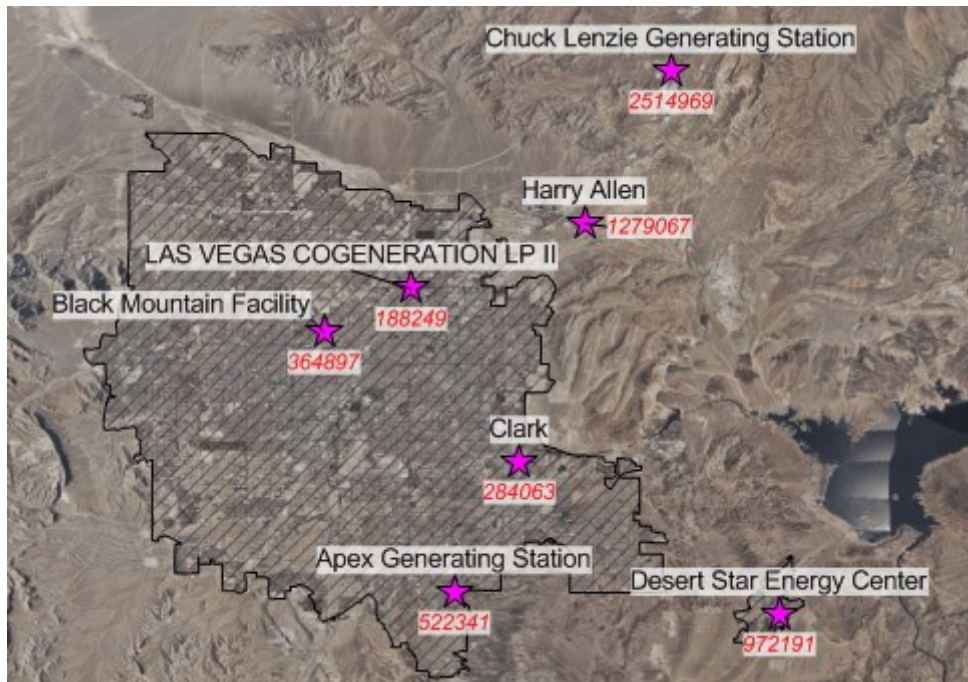


*Select the map to use as the scaling source during export!*

## Take Advantage of the Post Map and Classed Post Map Enhancements

Create your post maps the way you want them! Many new enhancements have been made to post and classed post maps so that you can create the map you envision. Add multiple labels to points, connect the points with a line, and use the symbol color as the label font color, just to name a few.

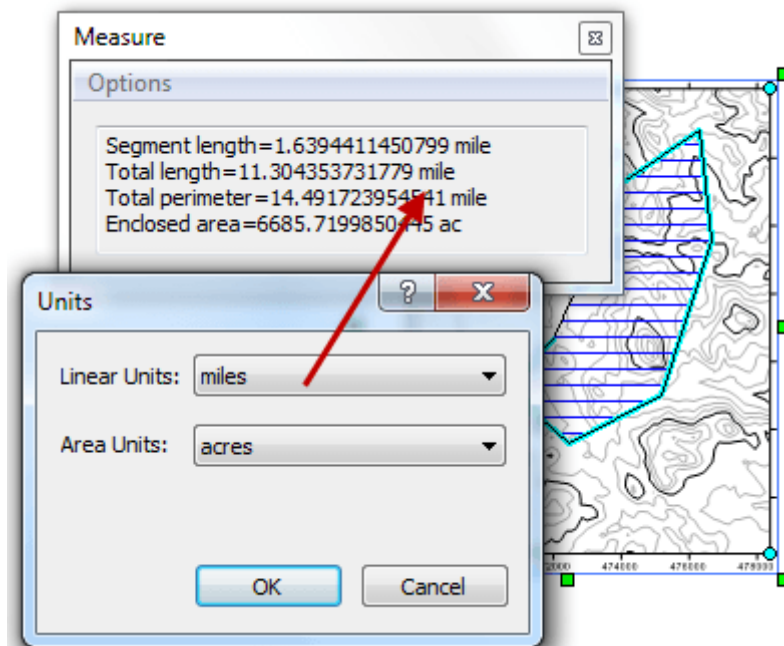
Post maps also offer the ability to color the symbols using a column in the data file of either numeric values (and you can choose a color gradient to apply to the data range) or discrete color names. Classed post maps offer the option to apply a color gradient to the symbols, apply a gradational size to the symbols, and set the symbol properties for all symbols at once.



*Add multiple sets of labels to the points in a post map!*

### Change Units of Measure

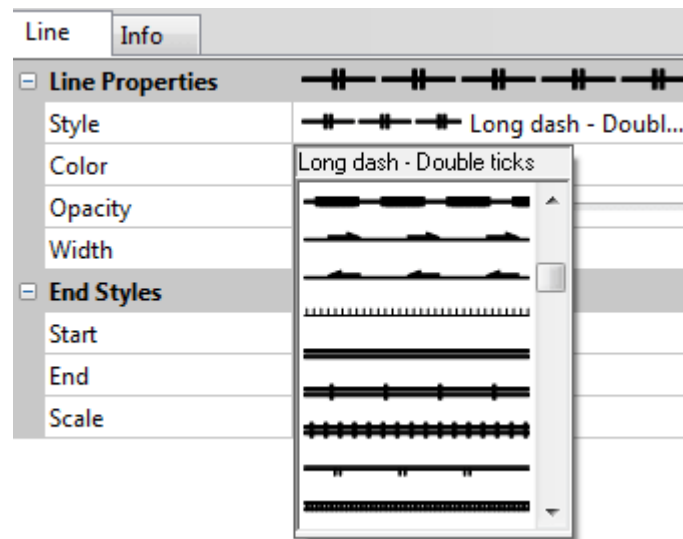
Get the data you need in the units you want. When measuring lengths and areas on a projected map, you can easily change the units of measure! For example, if your map is in UTM meters, you can measure an area and report the perimeter length in feet and the area in square miles!



*Change the linear and area units reported by the Measure tool.*

### Use one of the New Line Styles

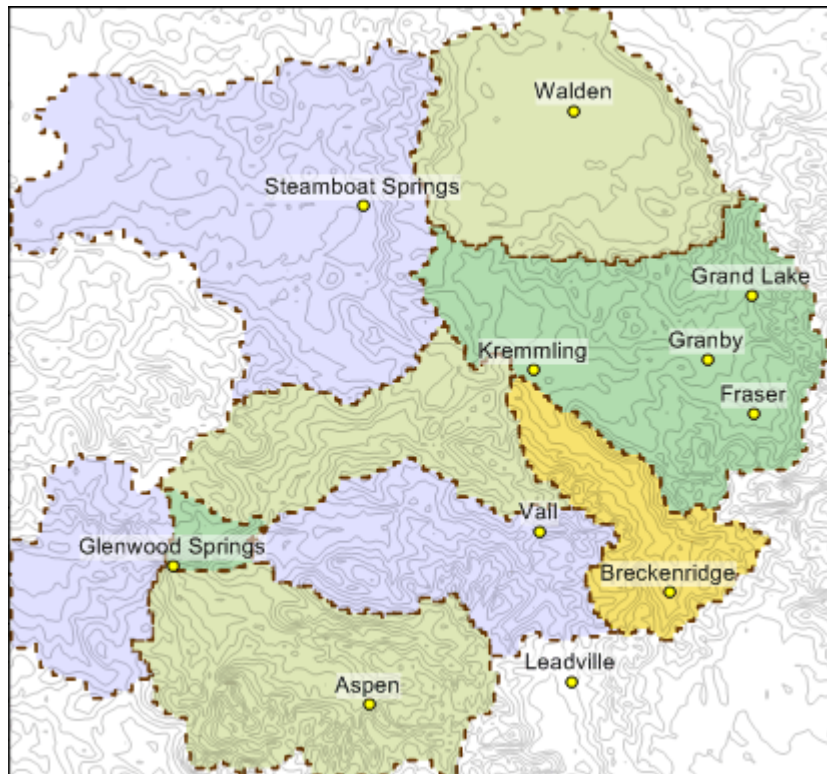
Customize your map! Surfer 12 includes over 160 new line styles to help you customize your map to its fullest potential.



*Choose one of the new line styles available!*

### Change Watershed Basin Line Properties

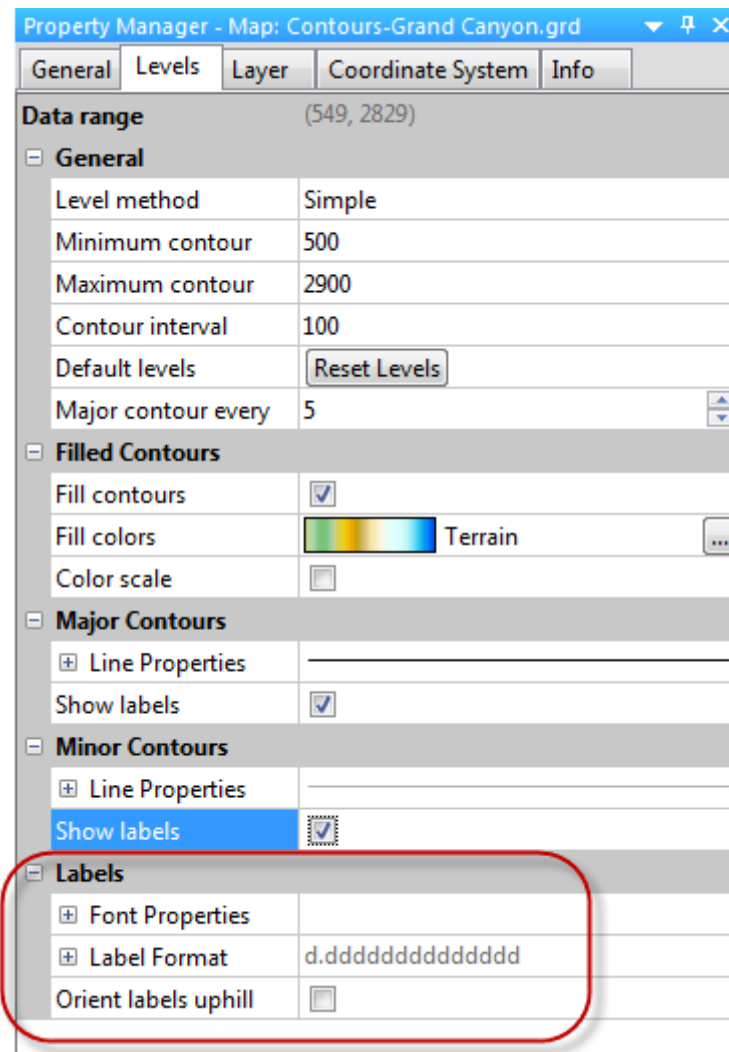
See your basin boundaries better. Change the line properties and make the lines thicker, a different color, or a different style.



*Make your watershed basins more visible by changing the basin line properties!*

## Format Contour Labels

Quickly and easily change contour label properties so your map looks its best! Set the contour map label font and format properties in the Property Manager when using the Simple level method.



*Set the contour label font and format properties easily in the Property Manager!*

## Edit Your Boundaries

Surfer's giving you more flexibility than ever to edit your boundaries to look their best. New geoprocessing tools allow you to simplify polylines and polygons to remove extraneous bends or vertices while preserving essential shape, or smooth them to improve aesthetic or cartographic quality.

## Blank the Grid around a Buffered Convex Hull

Include all your data points in the grid. Blank the grid outside the convex hull of the data, but add a buffer inside or outside the convex hull to be sure all data points and areas around them are within the gridded boundary.

## Save Z Values of Contour Lines When Export

Export all your data! Export a contour map to MIF, SHP, GSB, GSI, BLN or BNA file formats and the Z values are stored as metadata. In addition, when exporting a contour map to KML file, the Z values of the contours are saved as the Object ID for the polyline objects.

## Visualize Increased Resolution for Image Maps

See all the details of your image map. The number of colors used to display images maps has been significantly increased from 256 colors to up to 16 million colors, allowing smaller color variations to be discernible.

### Use Larger Grids

Create and load grids with up to 2 billion grid nodes! Your computer will run out of memory before you can find a grid that is too large to load in Surfer.

### Choose from More Paper Sizes

Work more efficiently! Larger paper sizes were added to the list of predefined sizes under Page Setup. You no longer have to manually customize larger sizes like A0, A1 or A2.

### Utilize Increased File Compatibility

Take advantage of the newly available or enhanced import and export formats!

Import formats:	Export formats:
AutoCAD DXF (as data)	Z value is saved as metadata to MIF/MID, SHP/DBF, GSB, GSI, BLN, BNA with File
Excel Spreadsheet, XLSM	Export
PDF, GeoPDF	KML/KMZ Export:
SEG-P1 (as data or base map)	Export contours to KML, and Z value is the Object ID for each line in the KML
JPEG2000	Export each layer in map to its own folder in the KML/KMZ
NetCDF grids	Export one GIF for the same symbol
SRTM HGT grids	Transparent GIF
Multi-tiled ADF grids	Transparent PNG
compressed Geosoft grids	GeoPDF
	JPEG2000
	SEG-P1
	NetCDF grids
	SVG

### Select a Newly Added Coordinate System, Datum or Ellipsoid

Coordinate Systems	Datums	Ellipsoid
Australia New South Wales ISG (Integrated Survey Grid), 7 new zones	IRENET95	NWS-84
Australian grid, 37 new coordinate systems were added	Lisbon 1937 (Lisbon Meridian)	Sphere
Europe UTM zone 29N using European 1950 - Port./Spain datum	NWS-84	
Hartebeesthoek / Lo, 10 new zones	Posiciones Geodesicas Argentinas 1994 (WGS84 base)	
Idaho Transverse Mercator 1927 (IDTM27)	Posiciones Geodesicas Argentinas 1998 (WGS84 base)	
Idaho Transverse Mercator 1983 (IDTM83)	SVY21 (WGS84 base)	
Irish Transverse Mercator (ITM)	SWEREF99	
NZGD2000, 28 new circuits		
Portuguese National Grid, Greenwich Meridian		
Portuguese National Grid, Lisbon Meridian		
Portuguese National Grid, Lisbon Meridian (zero easting/northing)		
POSGAR94, 7 new zones		
POSGAR98, 7 new zones		



SVY21

SWEREF99 TM

SWEREF99, 12 new local zones

SWEREF99/RT90, 6 new emulation zones