

## 01\_ExcelNavigation

- Configure Excel—Stop autosave, clear default directory, trusted locations, show developer tab in ribbon.
- Keyboard navigation and blocks of data, function keys, F2, F4, F8, F9, F11, and heavily used keyboard shortcuts such as, **Ctrl+1**.
- Status bar –Quick sampling functions—01\_PRISM\_4.0km.NV.xlsx.
- Paste special—Values, math, transpose—02\_NamedRanges.xlsx.
- Named ranges and [data validation](#)—02\_NamedRanges.xlsx.

## 02\_Plotting

- Create stacked bar and lines—01\_BarLine.xlsx.
- Bar charts differentiate positive & negative—02\_Departure.xlsx.
- XY Adding elements to charts –  
Copy-paste, Direct entry in formula bar—03\_XYmap.xlsx.
- Specify labels from ranges—04\_FC\_isotope\_PAIRS.xlsx.
- Adding custom symbols to series by pasting—05\_sir2012-5196\_app3.xlsm.
- Digitize data with chart—06\_Digitize\_from\_Picture-in-a-Chart.xlsx.
- Compute perimeter and area of polygon—07\_XY\_Perimeter+Area.xlsx.

## 03\_Text+Logic\_Functions

- Introduce [LEFT](#), [VALUE](#), [LEN](#), [FIND](#), [MID](#), [RIGHT](#), [IF](#), and [ISNUMBER](#) functions— 01\_TextManipulate.xlsx.
- Introduce [SUBSTITUTE](#), [TEXT](#), and [HYPERLINK](#) functions—  
01\_TextManipulate.xlsx.
- If statements and logic— 02\_IFplus.xlsx.
- Create scatter plot and categorize data — 03\_TransmissivityDV3.xlsx.
- Error handling with IF statements— 04\_ErrorHandling.xlsx

#### 04\_ConditionalFormatting

- Shade PRISM with generic flood—01\_PRISM\_4.0km.NV.xlsx.
- Controlled shading of PRISM—01\_PRISM\_4.0km.NV.xlsx.
- Introduce [INT](#) and [MOD](#) functions—02\_CHV\_StandardizedLOG.xlsm.
- Build standardized log with [remove duplicates](#), [conditional formatting](#), [MROUND](#), and [VLOOKUP](#) function—02\_CHV\_StandardizedLOG.xlsm.
- Apply functions in a scrap workbook to avoid stray named ranges.

#### 05\_IF-Histograms

- Create Google Earth cover of [PRISM](#) output for Nevada—01\_ARRAY\_PRISM\_4.0km.NV.xlsx & KMLmakeARRAY.GridPoly.v2.xlsm.
- Dynamically subsample [PRISM](#) output with [OFFSET](#) and [MATCH](#) functions—01\_ARRAY\_PRISM\_4.0km.NV.xlsx.
- Build histogram and sum cumulative precipitation volumes with [COUNTIF](#) and [SUMIF](#) functions—01\_ARRAY\_PRISM\_4.0km.NV.xlsx.

#### 06\_ReducingDATA

- Translate 3-column data to a table—Use [remove duplicates](#), [MATCH](#), and [OFFSET](#) functions—01\_3columnQW.xlsx.
- Parse stream flow data with [text to columns](#)—02\_MuddyR\_finish.xlsx.
- Reduce data with [pivot tables](#)—02\_MuddyR\_finish.xlsx.
- Dynamically reduce with [MATCH](#) and [OFFSET](#) functions—02\_MuddyR\_finish.xlsx.

#### 07\_Regression

- Analyze specific conductance-chloride from Death Valley—Regress in chart and duplicate with equations—01\_linearQW.xlsx.
- Analyze log-transformed specific capacity-transmissivity relations and demonstrate limitations of regression equations—02\_Example\_T-SC-DeathValley+OtherSCeqs.xlsx.

## 08\_Solver

- Explain weighted sum-of-squares objective functions and parameter transforms necessary for using the [Solver](#) add-in— 00\_ParameterEstimation+SOLVER.pptx.
- 2-parameter Theis example—01\_Theis\_Solution+Sensitivity.xlsm.
- 3-parameter Theis with image well for [analyzing aquifer test](#)— 02\_TheisStream.xlsm.
- Estimate A, B, and C for a velocity index-stage relation— 03\_Velocity-Stage-Relation.xlsm.
- Differences between regularization with zones and prior information— 04\_RegularizeParameters-Compare.xlsm.

## 09\_AdvancedCharts

- Shaded area for pumping with [INT](#) and [MOD](#) functions— 01\_ShadedXY.xlsx.
- Map features with XY chart, add XY locator, and sample map area from Google Earth—Example\_SS-ModelDiagnostics.