Graphical Policy Analysis Tool

RiverWare User Group Meeting
February 6 - 7, 2007

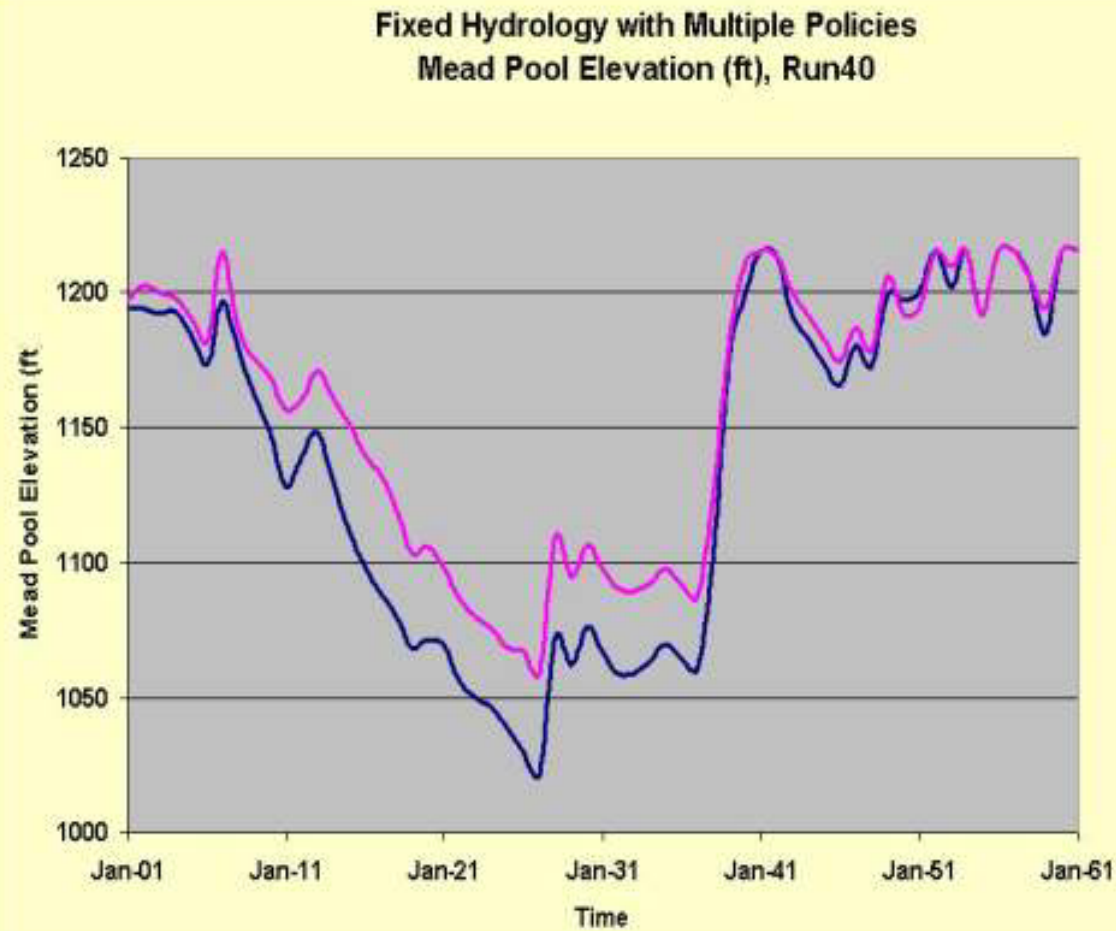Tim Magee and Neil Wilson

Why GPAT?

- RiverWare Output Large, esp.
  - Alternative Hydrologic Scenarios or Histories
  - Alternative policies
- Information from Data
  - Statistics
  - Graphs
  - Dynamic
- Presentations and Documents
  - e.g. Stakeholders meetings and EIS

What is GPAT?

- ➢ **Excel Add-in written in VBA**
  - Download from the RiverWare web site
- ➢ **Inputs are Excel Workbooks**
  - Dimensions are Slots, Time, Runs, and Policies
  - Variety of orientations
- ➢ **Outputs are Charts and Worksheets in a Workbook**
  - Typical Chart: several statistical time series
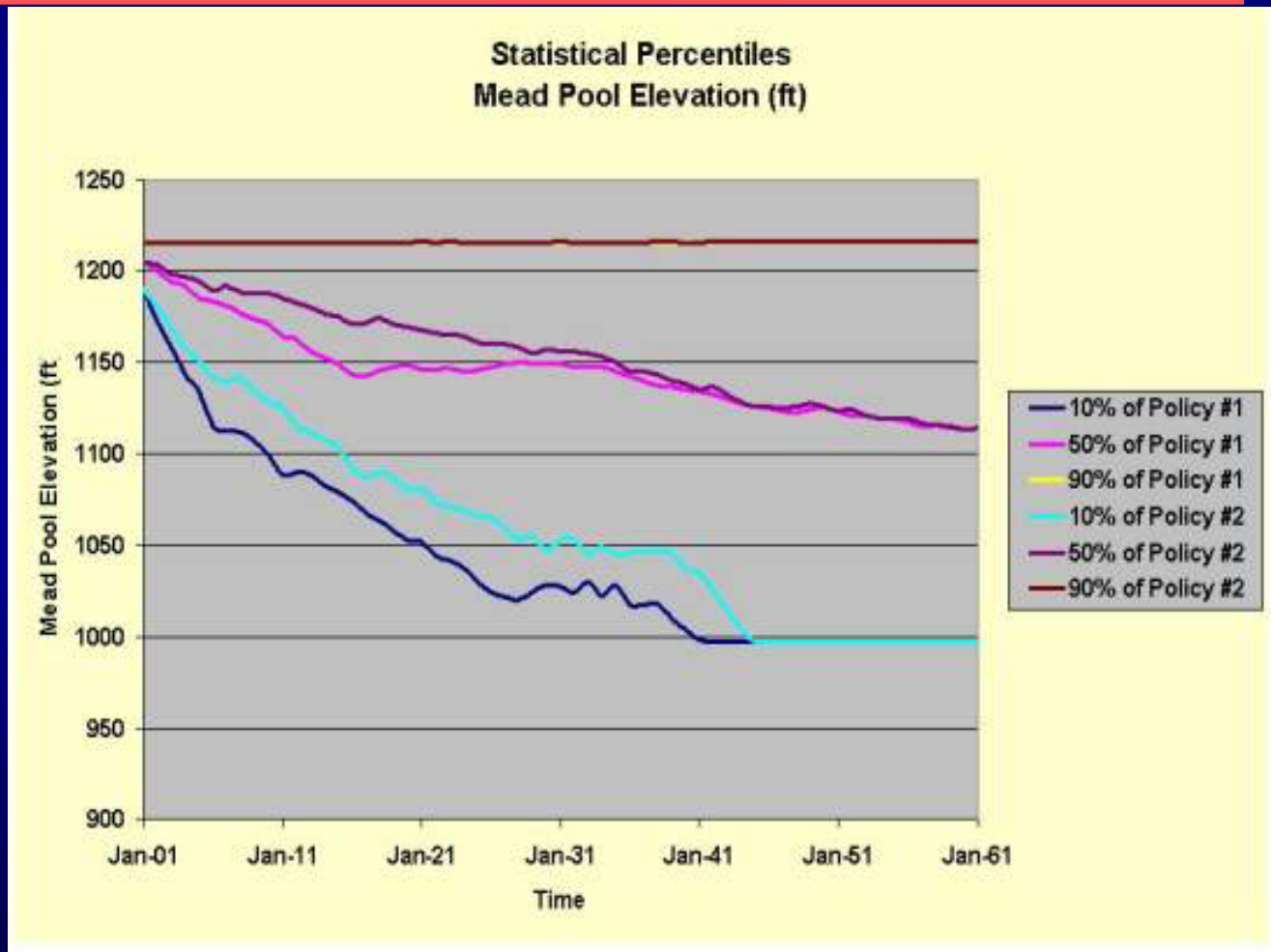 - Present directly or paste into documents

Compare Traces

> Compare traces under different policies

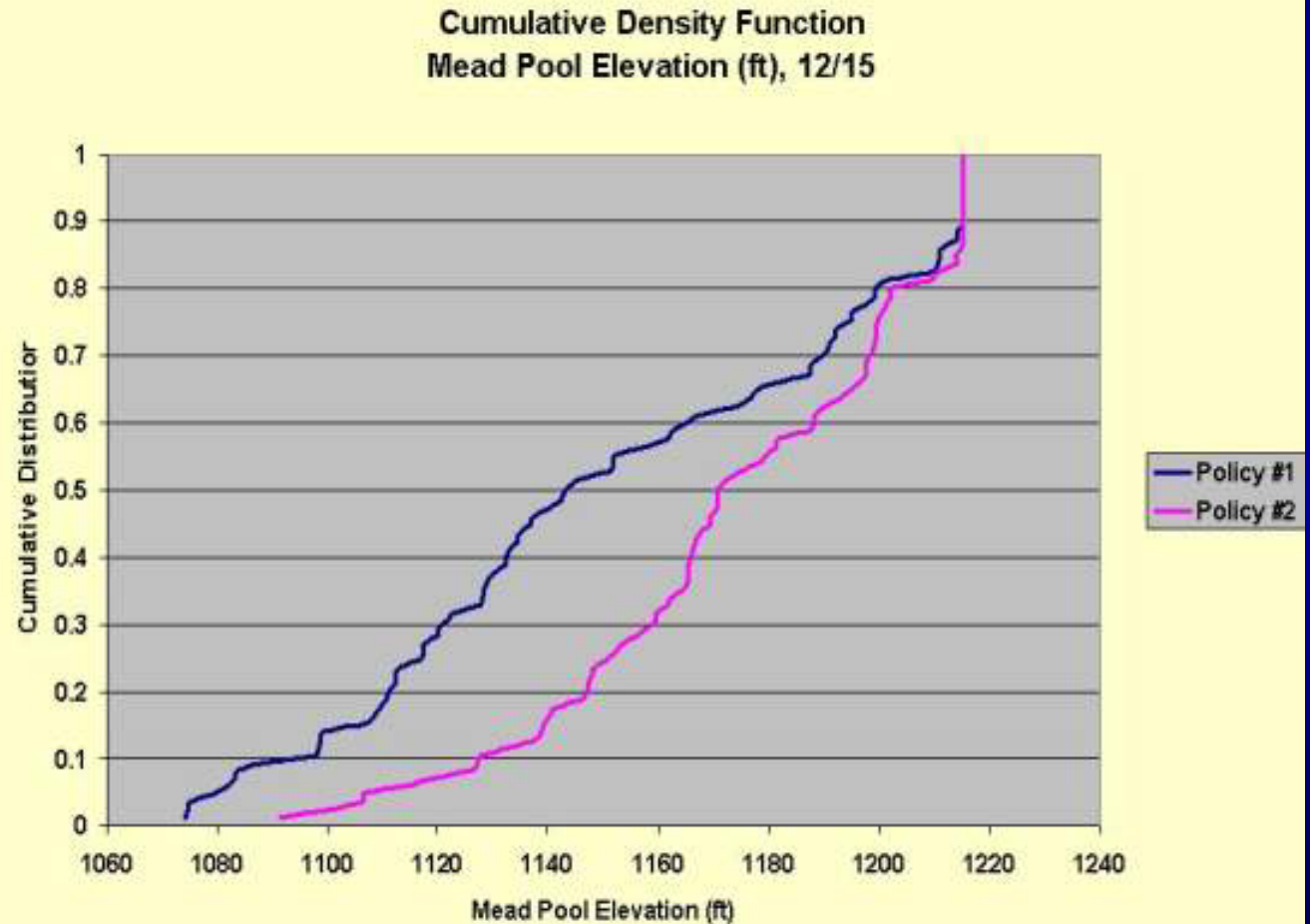**Fixed Hydrology with Multiple Policies**
Mead Pool Elevation (ft), Run40

Simple Statistics

- ➢ Minimum
- ➢ Maximum
- ➢ Mean
- ➢ Std. Dev.
- ➢ Median
- ➢ Percentiles
  - ▪ Alternative Methods

Statistical Percentiles
Mead Pool Elevation (ft)

Legend:
- 10% of Policy #1
- 50% of Policy #1
- 90% of Policy #1
- 10% of Policy #2
- 50% of Policy #2
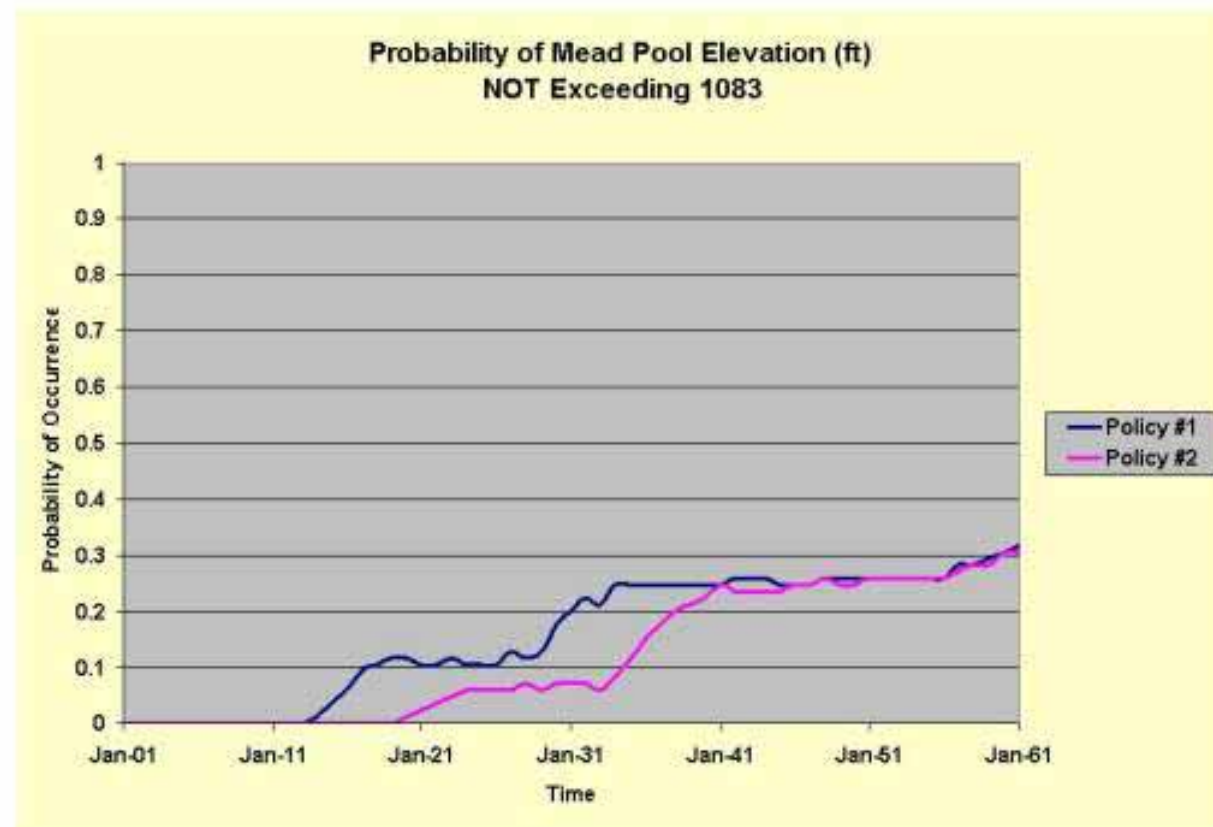- 90% of Policy #2

Distributions

Histogram

CDF

- One date
- All time
- Annual peak
- Maximum for a given duration

Probability of Events

> Binary events

> Exceedance

> Occurrence in a range

> Compound Events

Potential Enhancements

- ➢ More format control
  - Titles
  - Axes Titles and Scales
- ➢ Save and load graph formatting preferences
- ➢ CDF: Plot only every nth point
- ➢ Histogram for all distribution graphs (#3)
- ➢ Allow plotting of multiple runs with different numbers of traces
- ➢ Allow time steps as columns
- ➢ Others?