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*Running Dry? Developing an Intuitive Water Planning Interface*

Everything we do and use involves water. As our population expands, so does our need for water, increasing the need for intuitive tools. I have created a tool with advanced features to help city planners and decision makers simplify complex water planning processes.

I completely rewrote the previous year's interface using MSO shapes to create a schematic view of the water system, dynamic data editing, graphical summary output, and the ability to use the preferred language and units. I learned KML in order to use Google Earth to plot the location of objects in the water system, allowing the tool to handle distance and altitude difference calculations automatically, simplifying the user data entry requirements. The use of Google Earth also provides a visual reference of each of the components, such as treatment plants, reservoirs, and city sectors.

City planners and decision makers need to evaluate scenarios. Do we have the capacity to add the proposed brewery, or new subdivision? How big will my northern feeder pipe need to be in five years? Granular input and graphical output makes these questions easy to model.

The tool's platform is extensible, enabling the addition of historical data, seasonal data, and cost information. This will provide additional evaluation scenarios. Of critical importance is where water comes from, and upper basin modeling provides entirely new functionality as a future enhancement.

Water is essential to our survival. Tools to assist with infrastructure design and delivery are increasingly important, fueling my interest in addressing this need.