Corporate Water Gauge™ FAQs

As of May 15, 2012

Q: What is the Corporate Water Gauge? Is it a product, a piece of software, a service?

A: The Corporate Water Gauge™ (CWG) is a context-based water metric that consists of (1) a spreadsheet-based measure of water use that compares the water consumption of an organization or facility with an allocation of available renewable supplies, (2) a GIS technique for measuring and allocating renewable water supplies in watersheds, and (3) a consulting service for teaching and/or assisting with the use of the whole package. Perpetual, non-exclusive licenses to keep and use the CWG (i.e., the spreadsheet-based water metric) are granted to clients who first contract with us to help them use it at one or more sites, or be trained on how to use it themselves (minimum fees apply in either case). After that, our clients are free to keep and use the CWG as they see fit, with or without our assistance [Note that in the latter case, clients must provide their own GIS and spreadsheet systems]. In sum, our primary deliverables at the conclusion of initial consulting and/or training engagements consist of: (1) a spreadsheet file which embodies the CWG metric (populated with site data, if applicable), (2) sample or actual graphical depictions of watershed areas [see Figures 1a, 1b and 1c on last page], (3) sample or actual GIS shapefiles: watershed data, census data, and precipitation data, and (4) a general methodology for using the CWG.

Q: The Corporate Water Gauge is a context-based metric. What is a context-based metric and how does it differ from other indicators of sustainability?

A: A context-based metric is a type of measurement model, or template, for expressing the sustainability performance of an organization (i.e., a general specification for organizational sustainability metrics) that takes the form of numerical quotients. Denominators express norms, standards or thresholds for what an organization's impacts should or should not be on social and/or environmental resources in the world in order to be sustainable (based on the state of the resources involved and the demands of others who rely on them). Numerators, in turn, express what an organization's impacts on the same resources actually are. Disparities between numerators and denominators (i.e., less than or greater than quotients of 1.0) indicate variances in sustainability performance, accordingly.

Many other sustainability metrics are numerator-only in form. They report impacts on social or environmental conditions in the world, but fail to do so relative to a norm, standard or threshold for what such impacts ought to be in order to be sustainable. They might tell us, for example, how much water a company has used at a particular facility in the past year, while failing to report such use against relevant background conditions. Thus, unlike sustainability quotients, numerator-only metrics are context-free. Full-quotient metrics, by contrast, put impacts in context. In that regard, they are context-based and are much more meaningful and informative.

Q: Can you briefly explain the four pieces of information that go into calculating scores when using the Corporate Water Gauge?

A: The main ingredients are (1) organization/facility name and location, (2) precipitation volumes in related watersheds, (3) facility-related water sources

and sinks and their respective volumes, and (4) facility size in terms of workforce and/or economic measures.

Q: What is the final product? A single value? A series of values for different geographic areas (local sustainability, regional, global)? A report?

A: Sustainability quotients produce sustainability scores that can be plotted on a sustainability performance scale. In the case of the CWG, any score of less than or equal to 1.0 signifies sustainable performance (i.e., net water consumption is no greater than a company's proportionate share of available renewable supplies). Efficiency measures are also reported relative to whatever normalization variables might apply.

Q: How does GIS come into play in calculating and communicating results of a water use analysis?

A: GIS plays a vital role in our method, but no more than the underlying quotient does. Indeed, the metric, which is embodied in a spreadsheet, takes data produced by GIS and computes the sustainability score for a given facility. The computation it makes is complex, and is based on cutting-edge sustainability theory and practice, and international standards for measuring and reporting the sustainability of corporate water use. GIS allows us to compute and allocate available water supplies in the watersheds of interest to a specific facility, and also to allocate available supplies on a per capita basis, on an economic basis, on a spatial basis, and so forth. To do this, we use a standard configuration of ArcGIS and a specific mix of datasets.

Q: What sort of organizations are target users for the Corporate Water Gauge?

A: Any organization with one or more sites that uses water resources and is faced with the need to measure, manage and/or report such use can benefit from this tool. Corporate sustainability managers, plant or facility managers, environmental managers, or anyone charged with managing and/or reporting corporate water use in any way should consider using it. ***While other tools might do a reasonably good job of measuring water use, per se, the CWG takes measurement to the next level by comparing such use to available renewable supplies, as allocated to individual facilities.*** Thus, the CWG provides a *true sustainability* measure of water use. Corporate sustainability managers familiar with the Global Reporting Initiative (GRI) will also find the CWG particularly relevant, since GRI calls for measurements *in context!*

For more information about the Corporate Water Gauge™, contact Mark W. McElroy, Ph.D., Executive Director, Center for Sustainable Organizations, Thetford Center, VT mmcelroy@vermontel.net, or (802) 785-2293.

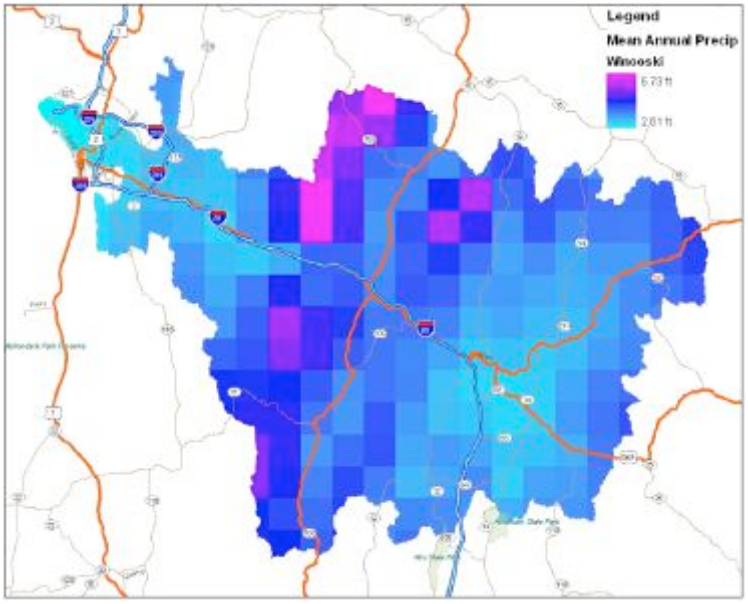

Figure 1a - GIS functionality is used to determine precipitation levels within watersheds at specific sites of interest.

Figure 1b - GIS functionality is also used in combination with census data to determine human populations per watershed.

Figure 1c - GIS functionality is then used to determine per capita levels of available renewable water resources per watershed, and/or available resources per level of economic activity – again at the facility/watershed level of analysis.