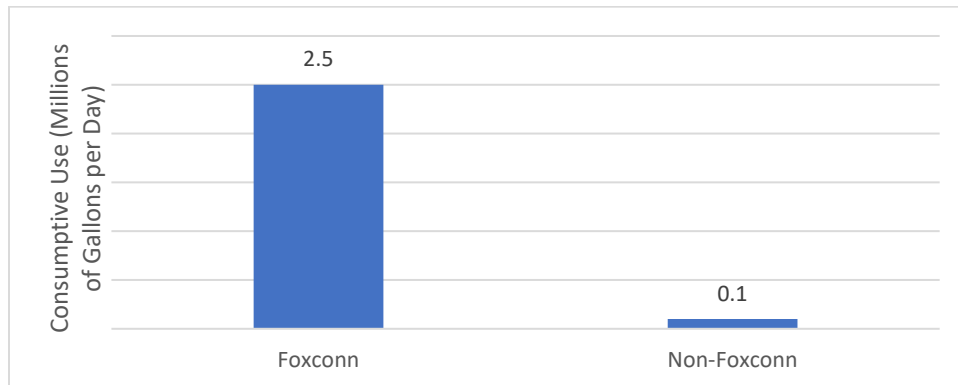


To: Adam Freihoefer, Wisconsin Department of Natural Resources
From: Andrew Behm, Ruekert and Mielke
Date: April 3, 2018
Re: Consumptive use coefficient

In its application for a diversion, the Racine Water Utility (Racine) forecast a diversion volume of 7.0 million gallons per day (mgd). Foxconn would comprise 5.8 mgd of that volume. The diversion volume attributable to all other customers would use 1.2 mgd. Foxconn would consumptively use 2.5 mgd, out of 2.7 mgd of consumptive use for the overall diversion.

Racine forecast that, out of a 1.2 mgd diversion volume, non-Foxconn customers consumptively use 0.1 mgd. Racine based this consumptive use forecast on a 12-percent consumptive-use coefficient from US Geological Survey research. Figure One graphically compares the Foxconn and non-Foxconn portions of consumptive use.

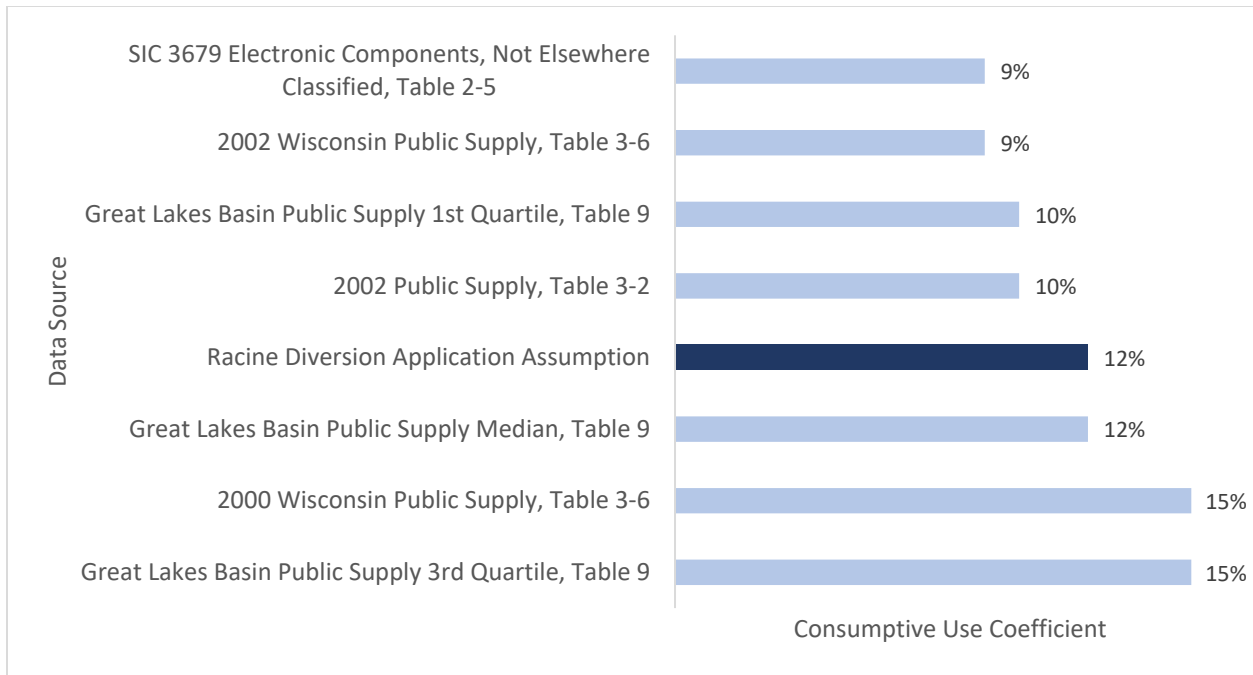
Figure One: Consumptive Use by Purpose



The numbers do not sum due to rounding.

In US Geological Survey Scientific Investigations Report 2007-5197, "Consumptive Water-Use Coefficients for the Great Lakes Basin and Climatically Similar Areas", Kimberly Shaffer and Donna Runkle calculate consumptive-use coefficients for various water uses and geographical areas. Figure Two shows relevant coefficients from the study. Racine used a 12-percent coefficient to forecast consumptive use, which lies at the middle of this range.

Figure Two: Comparison of Relevant Consumptive-Use Coefficients



Standard industrial classification code 3679 includes liquid crystal display manufacturing (see https://www.osha.gov/pls/imis/sic_manual.display?id=834&tab=description).

Figure Two uses public-supply coefficients for consistency with the definition of public supply on page 17 of Shaffer and Runkle 2007. “The USGS defines public-supply water use as water withdrawn by private and public water suppliers and delivered to customers who, in turn, use the water for purposes such as domestic, commercial, thermoelectric power, industrial, and public water use.”