Abstract:
Passage of the Clean Water Legacy Act (CWLA), has launched the largest effort ever taken in Minnesota to restore impaired waters and protect water resources at risk of impairment; (impairment is defined as not meeting state water quality standards). Further, the passage of the 2008 November referendum that increased Minnesota sales tax to fund the CWLA has made it possible to move forward in a time of general fund budget short-falls. The Minnesota Pollution Control Agency (MPCA) is charged with the development of MWRAPS in concert with other state agency activities. The presentation will discuss some TMDL history that lead to the passage of the CWLA and policy behind the watershed approach. Key decisions have made to use a combination of various modeling techniques coupled with integrated watershed monitoring (IWM). There are several component pieces of the MWRAPS architecture that are challenging; some provisional ideas on how to assess and manage across temporal and spatial scales could be a topic for post-presentation discussion. The concept of functional process zones developed by Thorp and others (2006) in their landmark paper Riverine Ecosystem Synthesis is presented as the basis for the development of priority management zones (PMZs) that have the potential to target implementation funding with a hopefully concordant resource response, assuming we have developed reasonable understanding of the watershed system dynamics.

Short bio:
Joe Magner received degrees from the University of Wisconsin and Minnesota; he is a licensed professional hydrologist (WI), a licensed professional soil scientist (MN) and an American Institute of Hydrology registered professional hydrogeologist. Dr. Magner is the principal research scientist for the research & development of the MWRAPS with over 31 years at the MPCA and a research professor in the Department of Bioproducts & Biosystems Engineering.