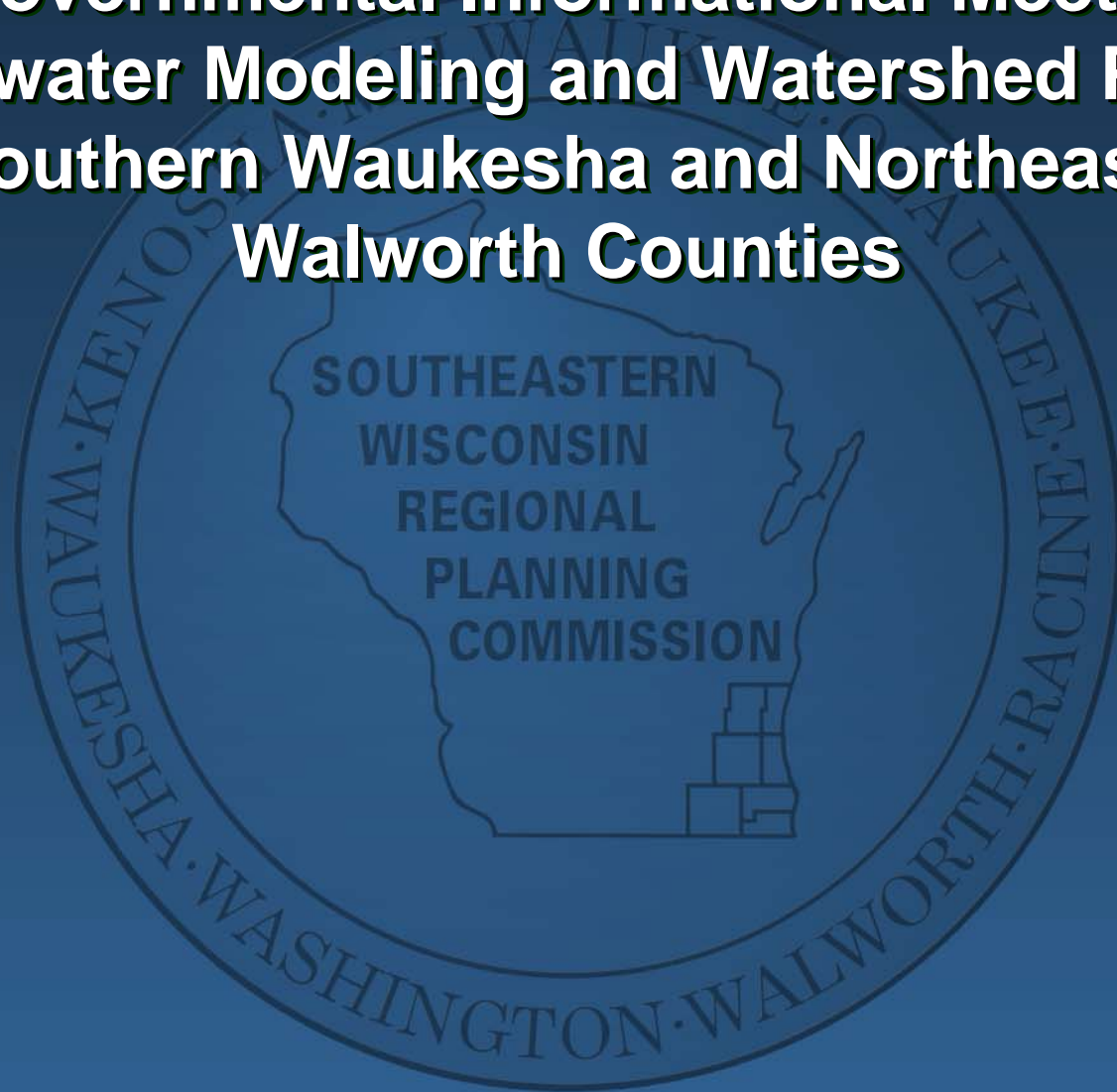


Intergovernmental Informational Meeting on Groundwater Modeling and Watershed Planning in Southern Waukesha and Northeastern Walworth Counties



August 22, 2007



Presentation Overview

- SEWRPC Troy Bedrock Valley Groundwater Modeling Program
- University of Wisconsin Madison Groundwater Modeling Program
- Upper Mukwonago River Basin Protection Plan
- Questions & Comments

Study Area for Groundwater Model Development in Southern Waukesha and Northern Walworth Counties

GENERALIZED DEPTH TO BEDROCK IN THE SOUTHEASTERN WISCONSIN REGION

FEET BELOW LAND SURFACE

0-100

100-200

200-300

300-400

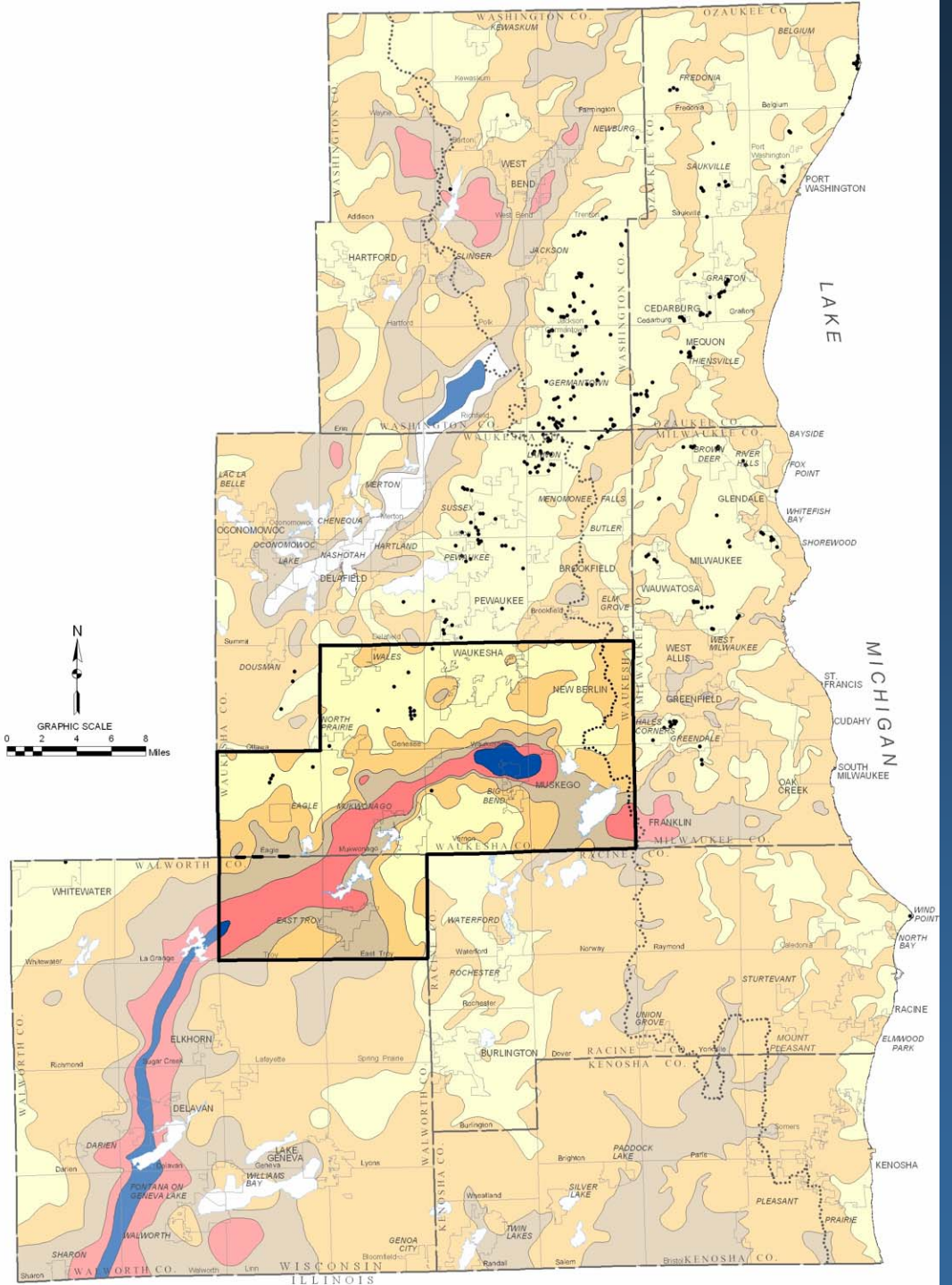
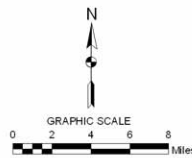
OVER 400

SURFACE WATER

REPORTED OUTCROPS

SUBCONTINENTAL DIVIDE

GROUNDWATER MODEL STUDY AREA BOUNDARY



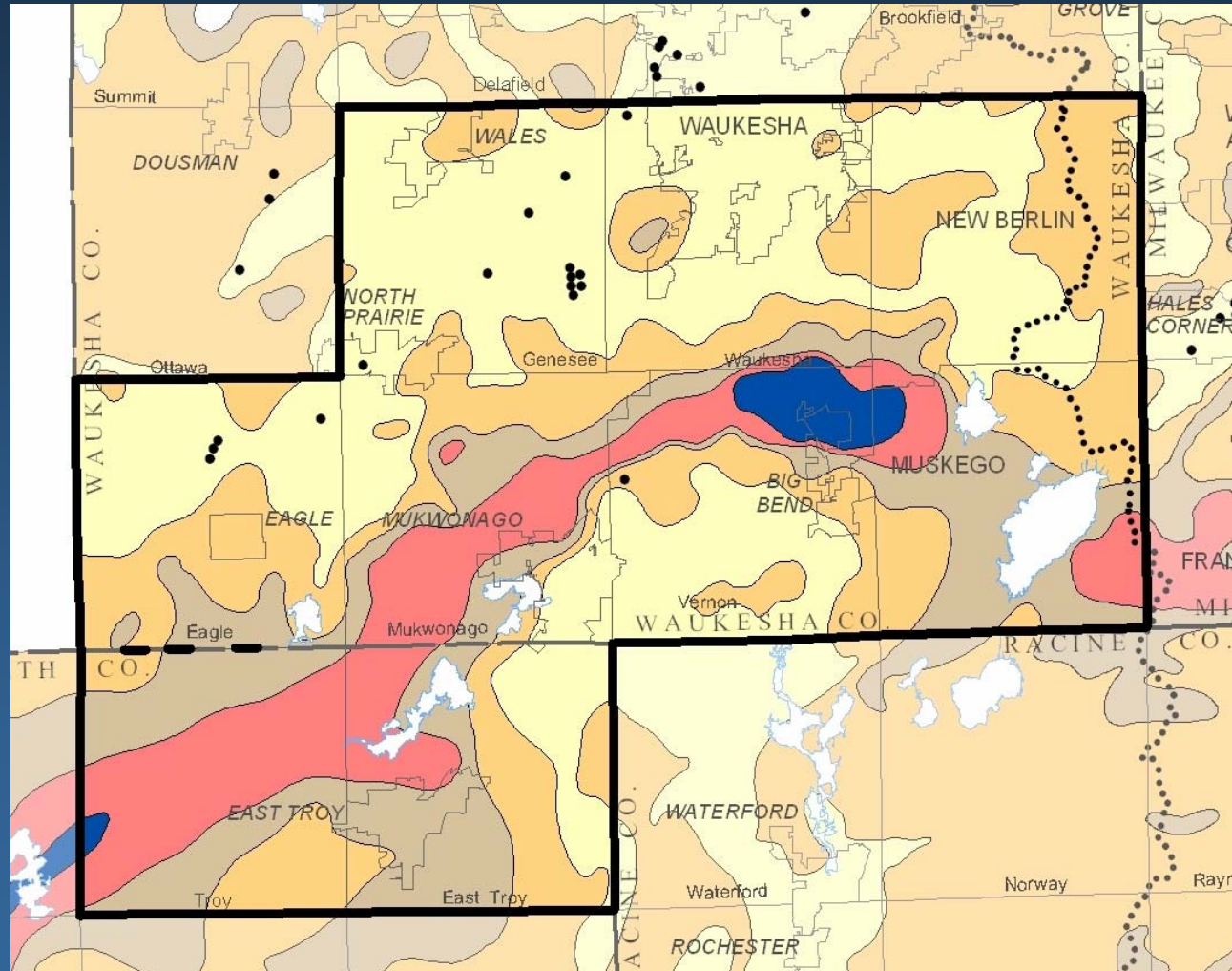
Study Area for Groundwater Model Development in Southern Waukesha and Northern Walworth Counties

GENERALIZED DEPTH TO BEDROCK IN THE SOUTHEASTERN WISCONSIN REGION

FEET BELOW LAND SURFACE



- SURFACE WATER
- REPORTED OUTCROPS
- SUBCONTINENTAL DIVIDE
- GROUNDWATER MODEL STUDY AREA BOUNDARY





Troy Bedrock Valley Groundwater Model Development

➤ Model Purpose

- Develop model suitable for local water system planning and related environmental analyses
 - Groundwater withdrawal
 - Surface water impacts
- Technically sound and consistent means for conducting analyses for
 - Well head protection area delineation
 - Prediction of long and short-term groundwater levels
 - Optimization of water supply facility operations
 - Estimation of surface water impacts from groundwater pumping operations



Troy Bedrock Valley Groundwater Model Development

➤ Model Methodology

- Use SEWRPC Regional model as framework
- Review and integrate appropriate data and information from related studies
- Add detail
 - Add layers and cells
 - Input available local data from test borings and surveys
- Technical work will be done by consultant (Ruekert & Mielke) under SEWRPC staff oversight with review by USGS and WGNHS
- Project cost of \$44,000 split by cities of Muskego and Waukesha, and villages of East Troy and Mukwonago