

**DEVELOPING AN AGENDA FOR
WATER SUPPLY PLANNING
IN EAST-CENTRAL ILLINOIS**

Regional Water Supply Planning Group
March 9, 2007
Monticello

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Illinois State
WATER
Survey (1869)

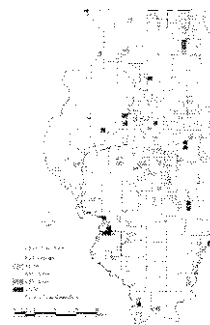


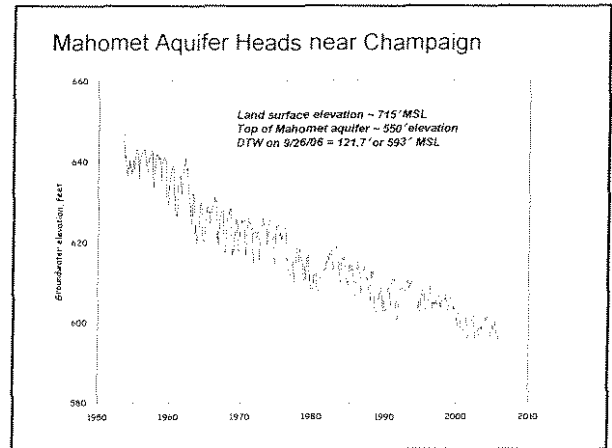
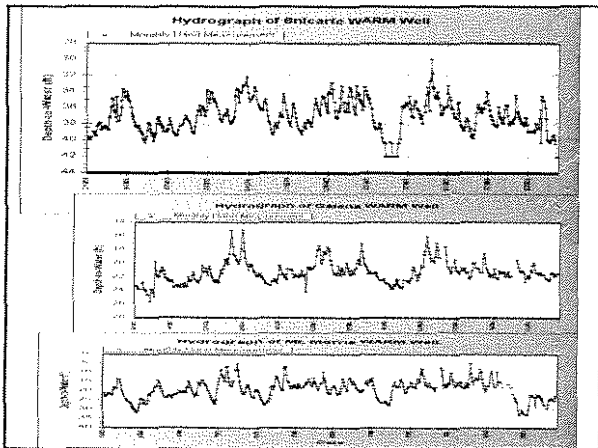
**GOAL OF WATER SUPPLY
PLANNING:
TO PROVIDE
ADEQUATE SUPPLIES
OF
CLEAN WATER
FOR ALL USERS
AT REASONABLE COST**

KEY QUESTIONS:

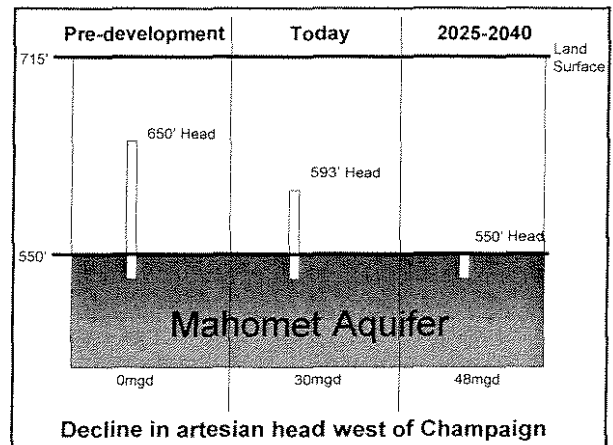
- What are the sustainable yields of the aquifers and rivers?
- What will be the impacts of additional withdrawals on i) existing wells, ii) rivers, streams, wetlands, ecosystems, and iii) aquifers?
- How resistant to drought and possible climate change are water supplies?
- What are the management options – supply and demand?

**Use-to-Yield Ratios
for Sand-and-Gravel Aquifers**





- BACK OF THE ENVELOPE CALCULATIONS
- Current groundwater withdrawals within the cone of depression are about 30mgd.
- For each mgd withdrawn over last 50 years the head has decreased about 2.3 feet at a site west of Champaign.
- Approx. +18mgd (total = 48mgd) can be withdrawn from the cone of depression west of Champaign before head descends to top of the aquifer at this site.
- +1.7% per year = +18mgd (total = 48mgd) in about 32 years.
- Other potential impacts include further dewatering the Glasford aquifer; further changing regional flow in aquifer; reducing flow in rivers; well interference.



PLANNING and MANAGEMENT

TOPICS FOR BRIEFINGS TO RWSPG AND DISCUSSION BY RWSPG?

- 11 ✓ Producing water demand scenarios to 2050
- 2 ✓ What we know about regional water supply and demand today. What are the key issues?
- 4 ✓ Existing laws, regulations and property rights
- 4 ✓ Sustainability of water resources
- 4 ✓ Climate variability and change and potential impacts on water availability
- 4 ✓ Understanding the aquifers
- 4 ✓ Groundwater-surface water interactions and recharge of the aquifers
- 3 ✓ Management Options
 - Increase supply
 - Reduce demand
 - Protect the resources
- 2 ✓ Outreach and education
- 2 ✓ Other? *Surf/Carbonwater activities*
- 1 ✓ *Monitoring*