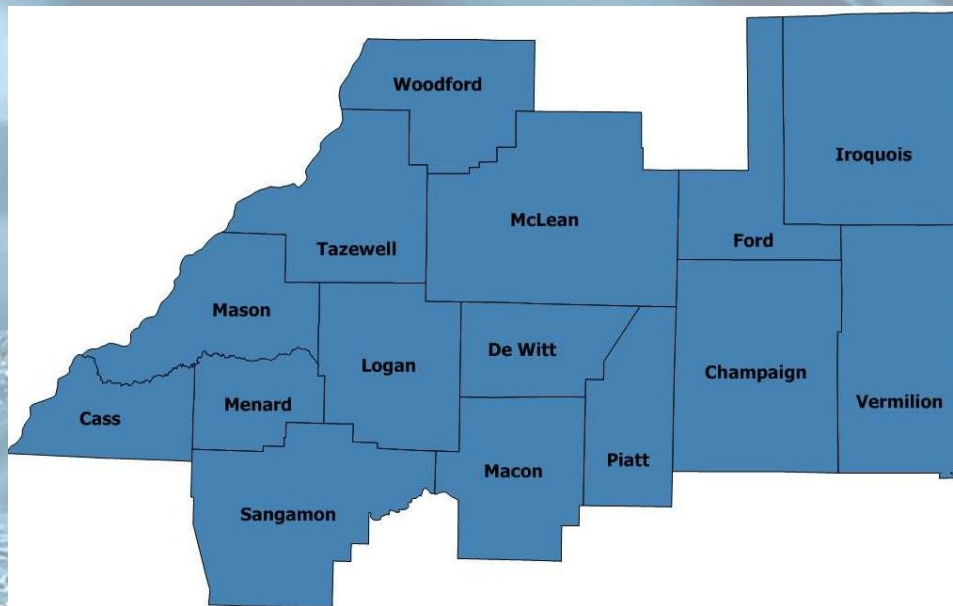


Methodology

Water Demand Scenarios to 2050 for 15-County East Central Illinois Region



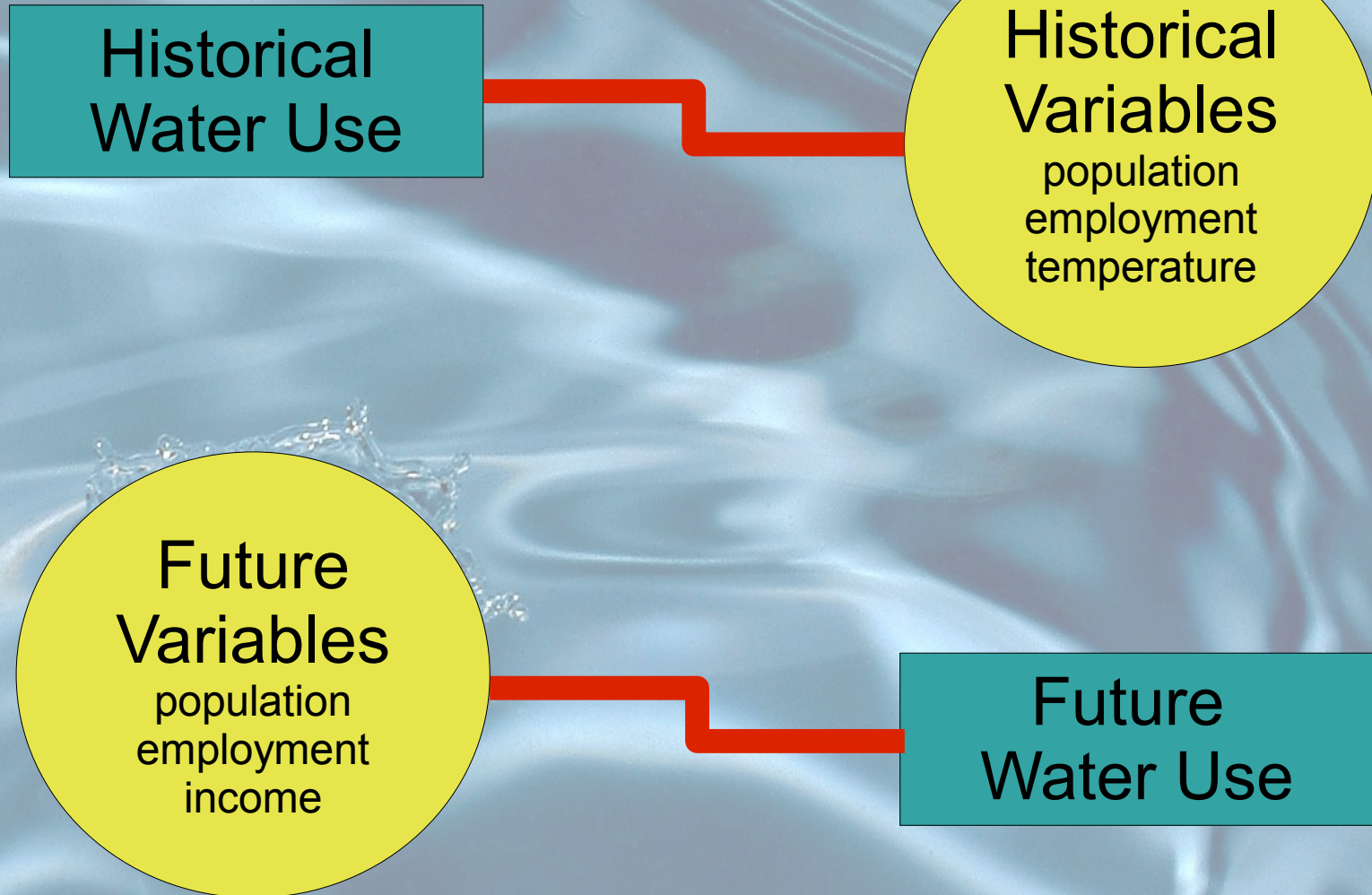
Prepared for:
East Central Regional Water Supply
Planning Committee
June 29, 2007

Outline

- Projection method
- Water-use sectors
- Study Areas
- Historical data collection
- Projected demand drivers and variables
- Outreach
- Water-use scenarios



Method



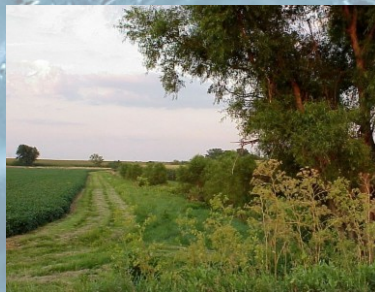
Water-use Sectors

1. Public supply (PWS)



2. Commercial & industrial (C&I)

3. Self-supplied domestic

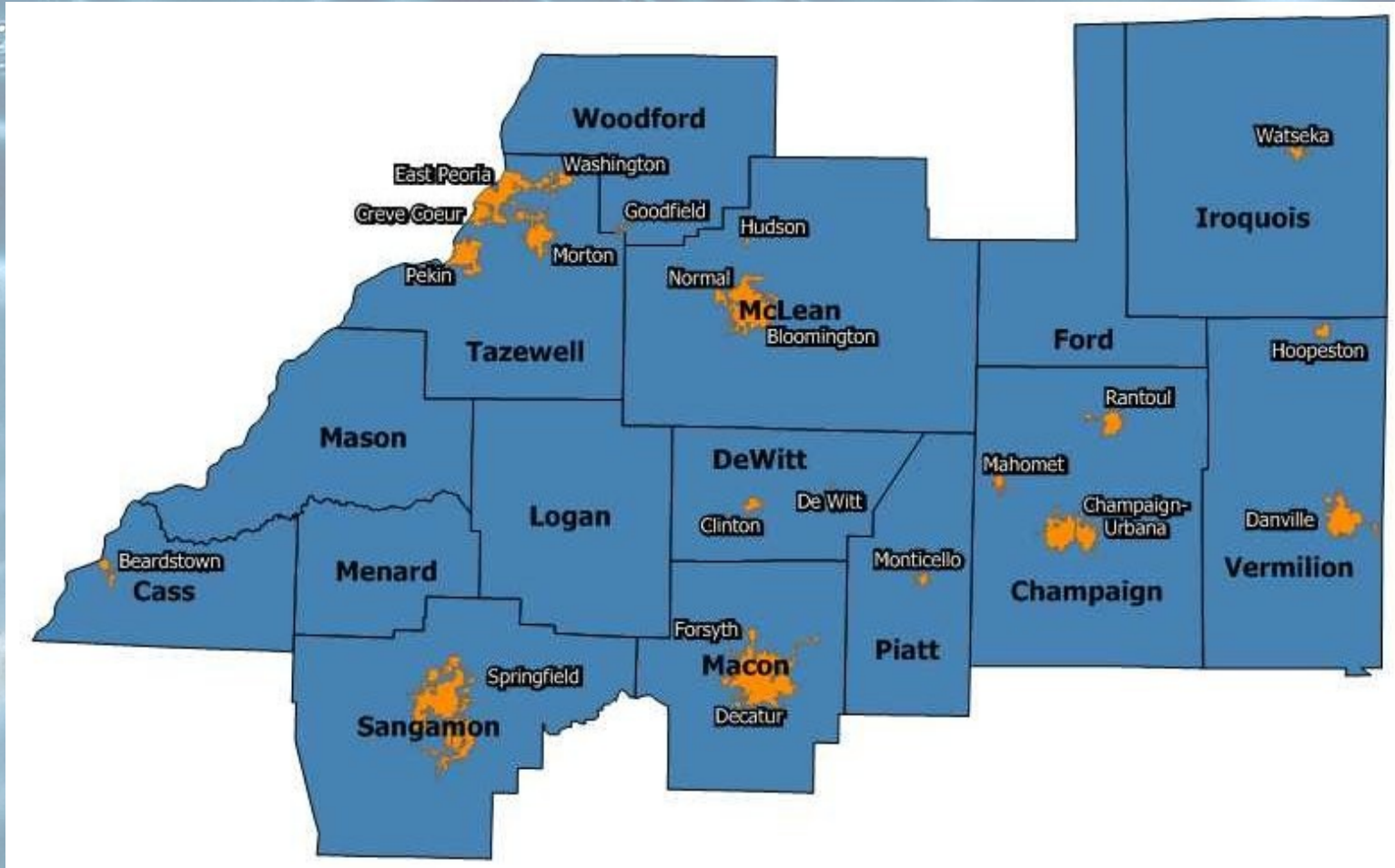


4. Irrigation & agriculture

5. Power generation



Study Areas



Public Water Supply

- Approach - Multiple regression
- Historical Data - ISWS
- Driver - Population
- Explanatory Variables
 - Employment
 - Income
 - Single family housing
 - Price of water
 - Temperature & Precipitation



Commercial and Industrial



- Approach – Multiple regression
- Historical Data - ISWS
- Driver - Employment
- Variables
 - Temperature
 - Cooling degree days
 - Fraction of employment in high-use sectors

Irrigation and Agriculture

- Approach – Per irrigated acre unit-use
- Driver - Irrigated acres
- Variables
 - Biofuel capacity
 - Temperature
 - Precipitation
 - Drought index



Thermoelectric Power Generation

- Approach – Power generation unit-use
- Historical Data - ISWS
- Driver - Unit of power generation
- Variables
 - Type of generation
 - Type of cooling system
 - Temperature



Self-supplied Domestic

- Approach – Per capita unit-use
- Driver – Unserved population
- Variables
 - Median income

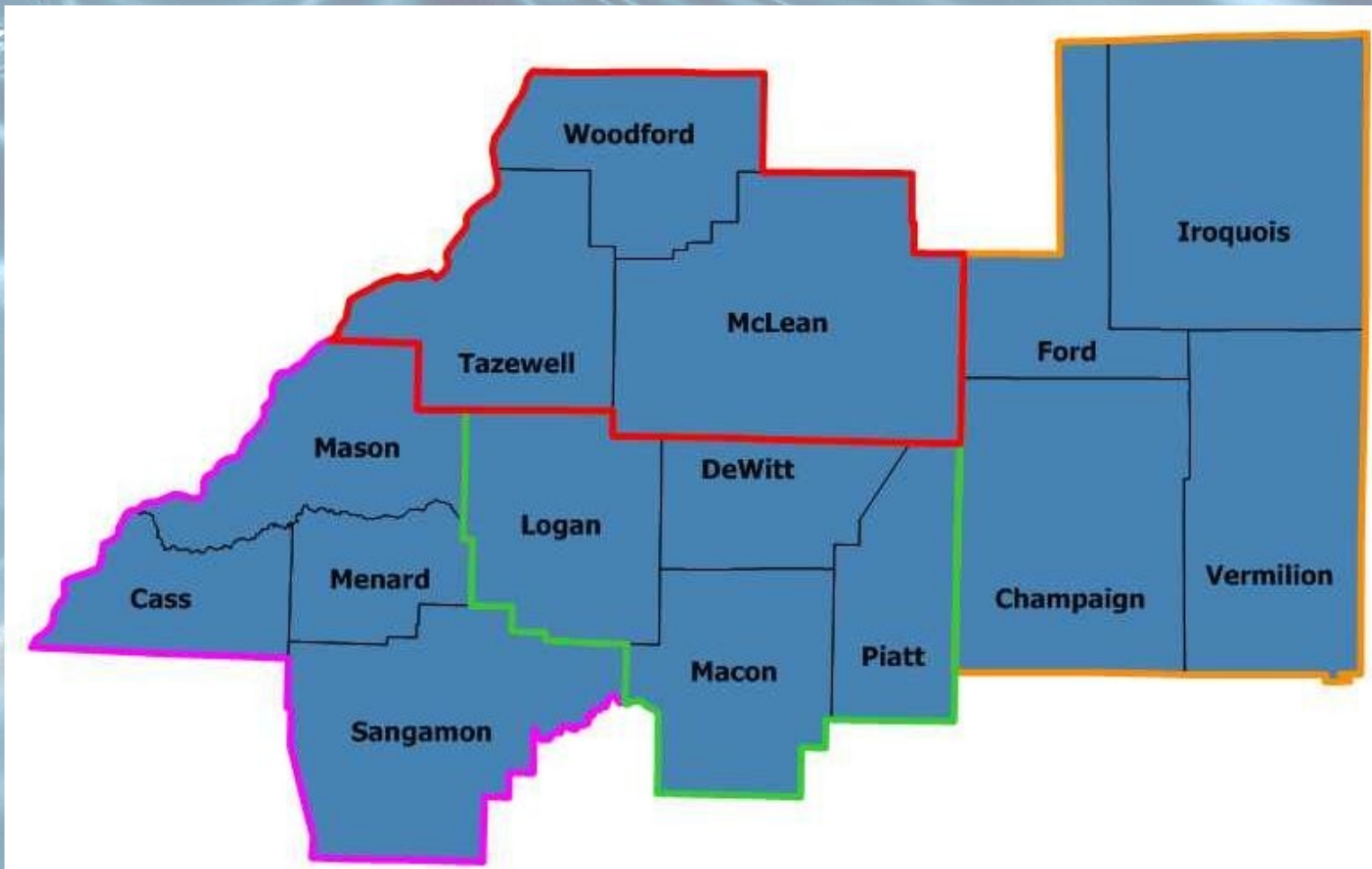


Outreach and Communication

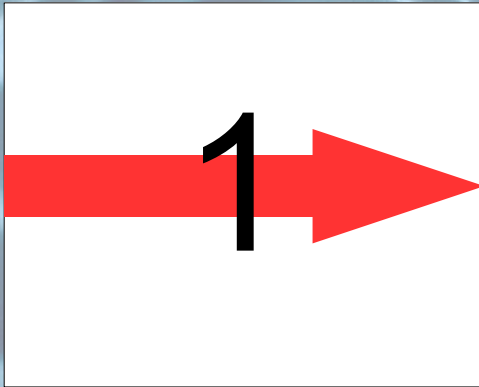
- Historical data and projected explanatory variable values will be presented to stakeholders
- Input and data will be incorporated into the water-use relationships



Multi-county Meetings

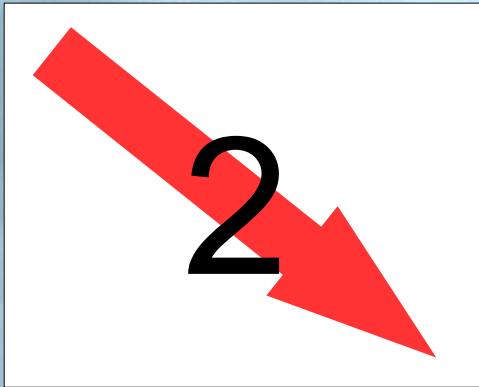


Water Demand Scenarios



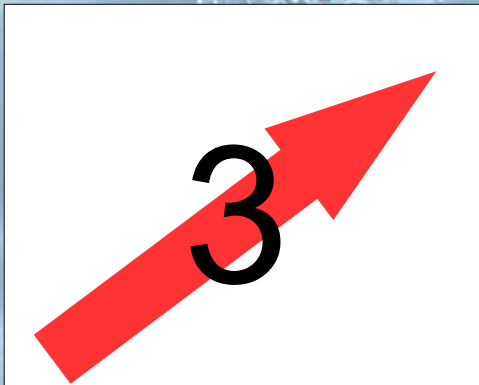
1) **Current trends / Baseline**

- recent **trends** continue
- includes known **proposed** increases



2) **Less resource intensive**

- **smart growth** occurs
- demand variables shift to **less water** use
- more water **conservation**
- industrial water use **decreases**

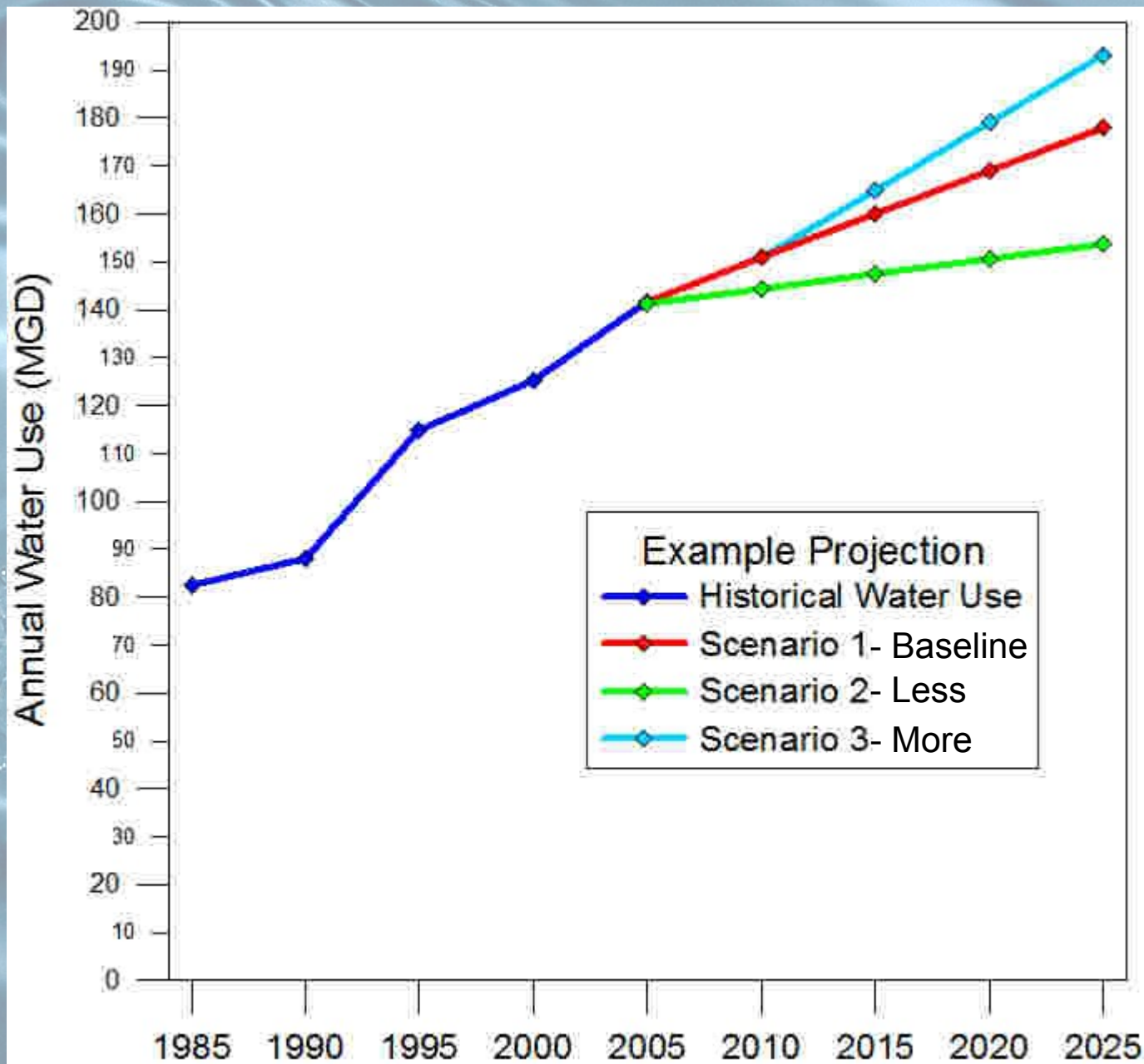


3) **More resource intensive**

- add **ethanol plants**
- demand variables shift to **more water** use
- **less** water conservation

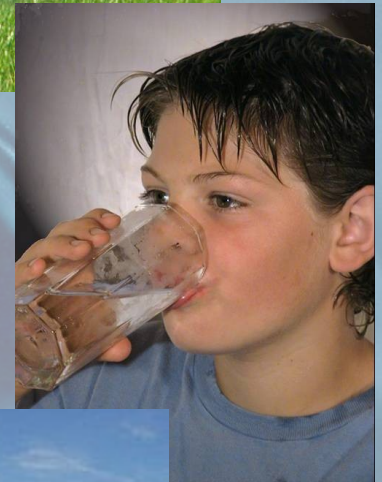


Water Demand Scenarios



Water Demand Scenarios

- **Future water use**
 - geographical area
 - water-use sector
 - water sources
 - withdrawal points
- **Seasonality** – PWS peak day and peak season
- **Sensitivity analysis** – climate change



Final Report

- Draft report provided one (1) month before project termination
- Final report submitted May 1, 2008

