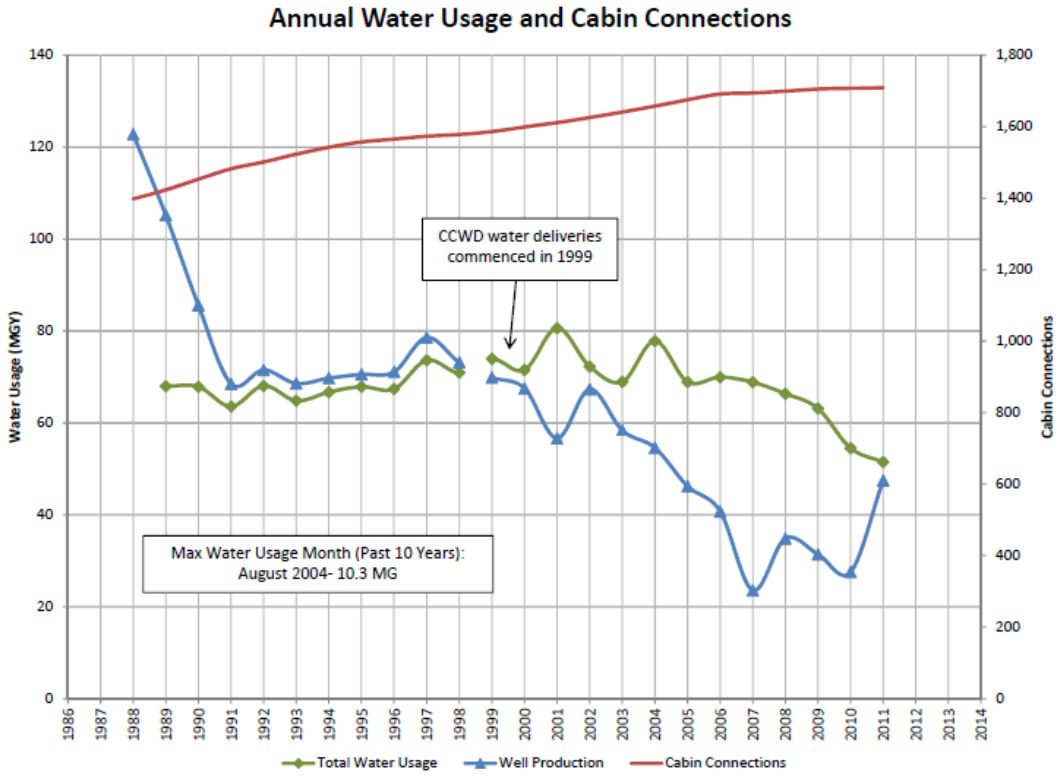
# Preliminary Assessment
# White Pines Wells, Pumps, and Aquifer
June 2, 2012

## Scope

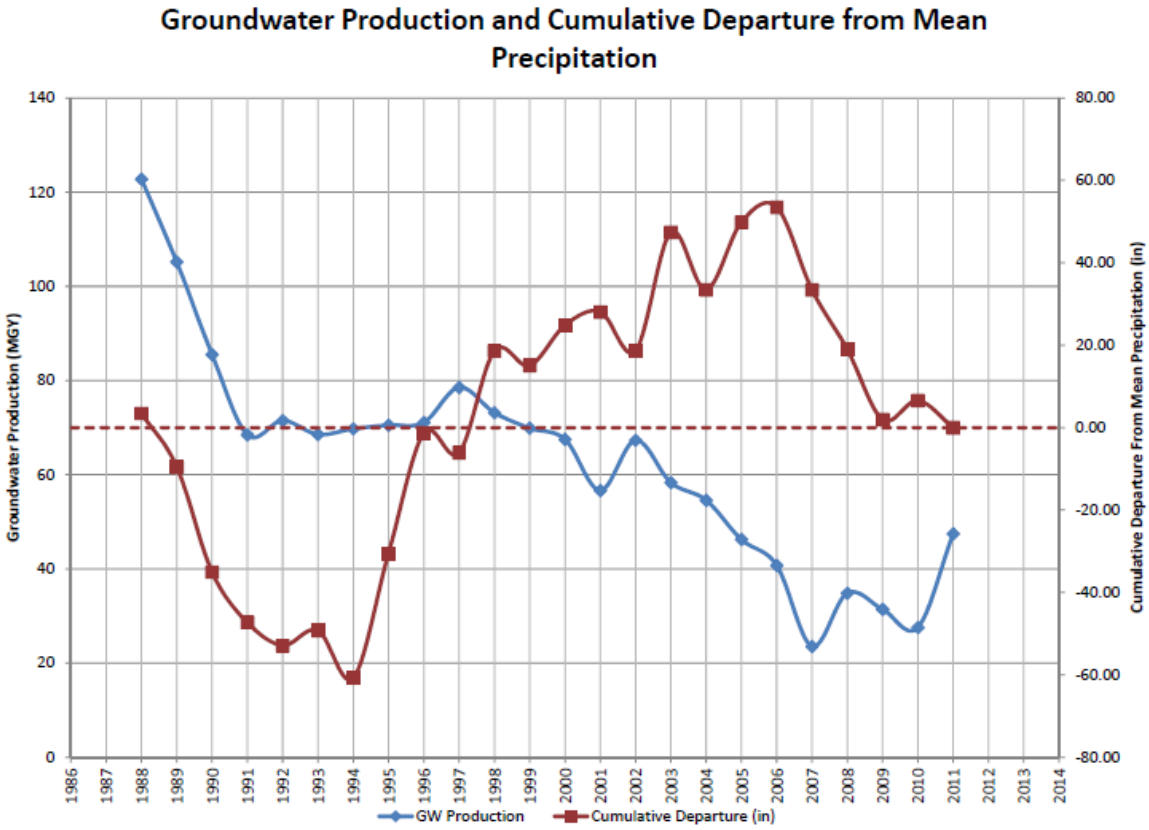
1. Quantify reliability of source capacity from existing well field
2. Quantify deficiencies in source capacity
3. Advise on available options
    a. Short, medium, long range planning

## Summary of Preliminary Findings

1. Historic, current, and projected future water demand



2. Historic and current water production from wells




3. What can be inferred from past usage data

    a. Wells

        i. Operational history

    b. Pumps

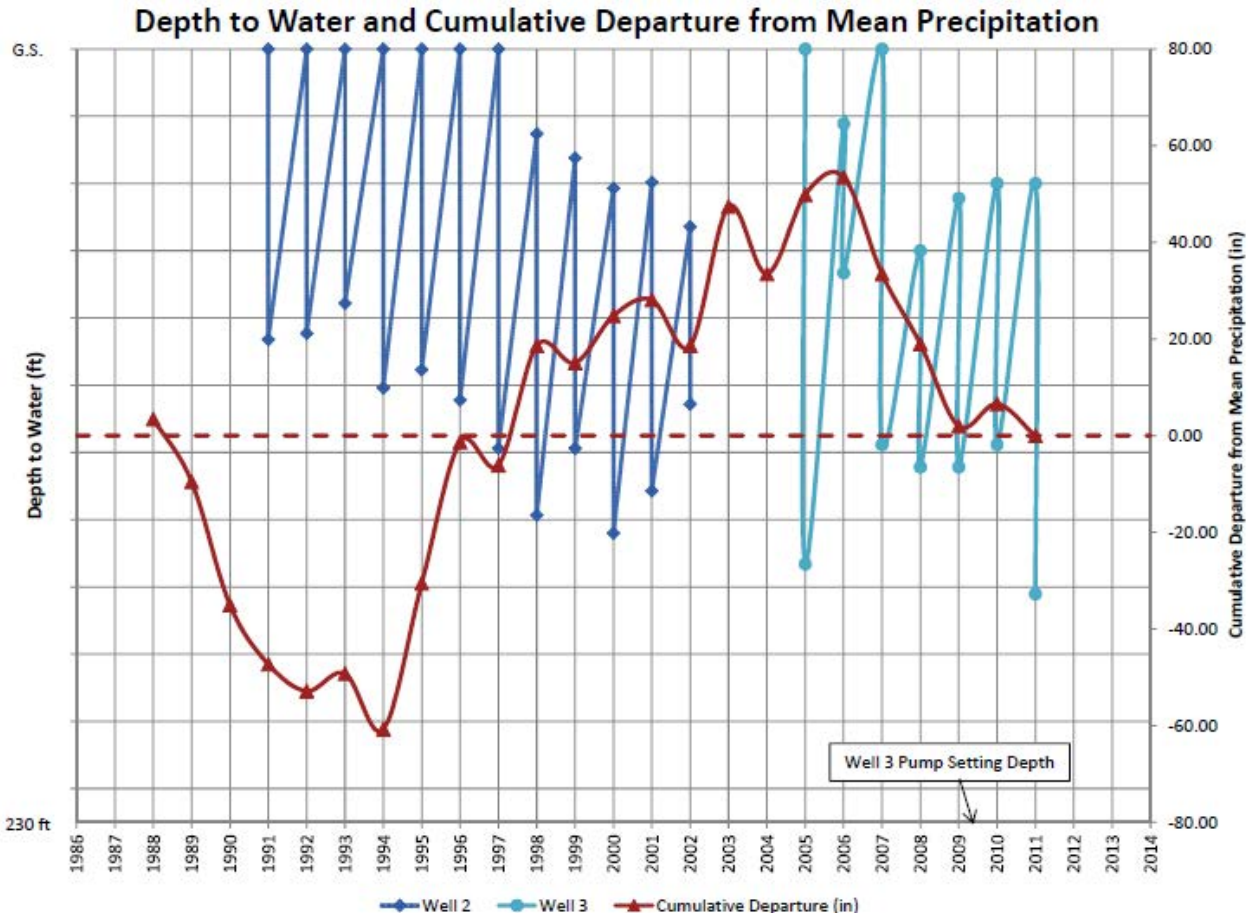
        i. Performance (?)

c. Aquifer

i. Water level data and apparent yield

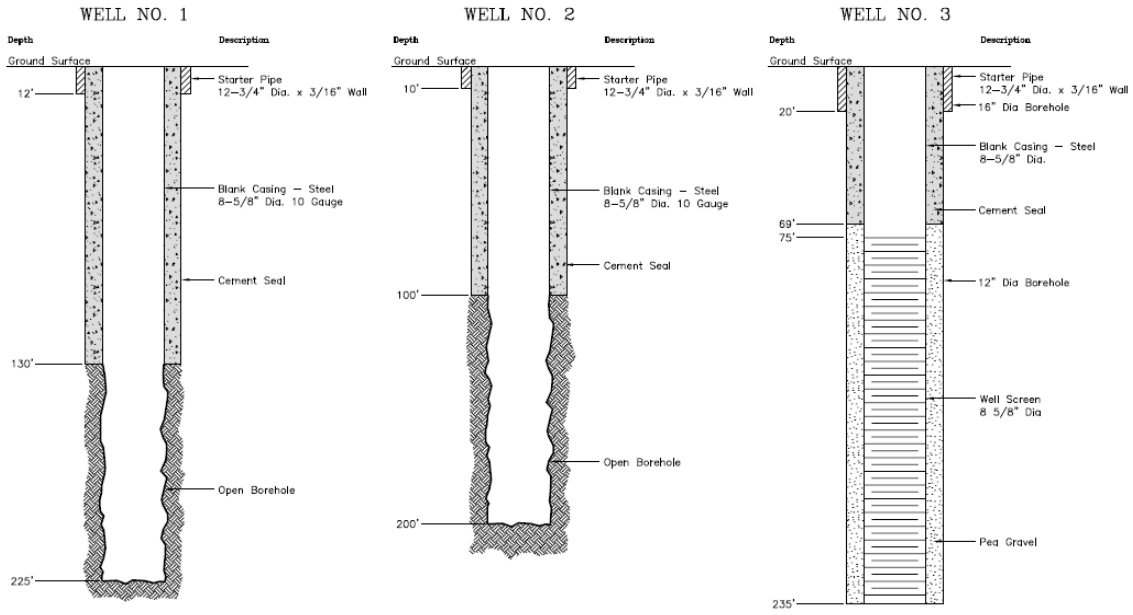
ii. Effects of hydrology (climate)

iii. Hydrogeologic setting



4. Wells and required capacity

    a. Age/condition/method of construction




    b. Current status and needs to improve reliability

        i. System requirements

            1. Meet maximum day demand from sources

            2. Tentative: 2005 Max Day (419,000 gal = 290 gpm)

        ii. Well 3 can pump Max Day, but no back-up if it is out of service

        iii. State requires ability to meet Max Day with largest well out of service

        iv. Short range options

            1. Well 1 deepening and rehabilitation

            2. Well 2 rehabilitation (remove fill)

v. Medium to long range options

1. Replacement

a. White Pines Lake

b. Other sites

# Available Options

1. Considerations for improvements to existing well field
    a. Permitting
    b. Historical basis for predicting future performance
    c. Utilities
    d. Control
2. Considerations for offsite exploration and development
    a. Need to assess permitting feasibility for new sites under State regulations
    b. Historical data available?
    c. Can utilities be readily connected?
    d. Ownership and control zone
3. Other sources of supply

# Concluding Remarks and Other Work

1. Risks and limitations of existing well field and other sites
2. Aquifer testing
    a. Verify conceptualization of aquifer as a basis for medium- to long-range use of White Pines well field