

Water Issues in Northern Arizona

Statewide Water Resources Advisory Group

May 19, 2006

Ron Doba, City of Flagstaff

Water Issues in Northern Arizona

- Problems/issues
- What are we currently doing?
- Obstacles to progress
- Fixes for the problems

Problems/Issues

- Surface water supplies are undependable
- Uncertainties surrounding more extensive groundwater development
- High water development costs
- Competition for resources
- Growing communities using a limited resource

Problems/Issues

- Public lands are not public water sources
- High cost of housing competes with water development fees
- Dry lot subdivisions
- Exempt wells



Surface Water Supplies are Undependable



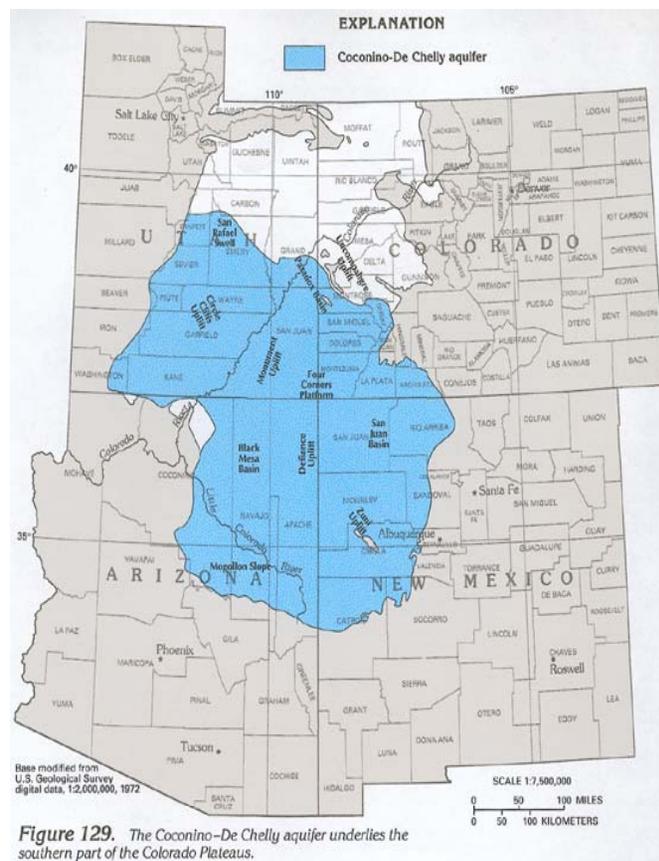
Upper Lake Mary – February
2005



Upper Lake Mary – April
2006

Uncertainties Surrounding More Extensive Groundwater Development

- Threatened & endangered species
- Damage to springs
- Impact on riparian areas
- Unsubstantiated supply

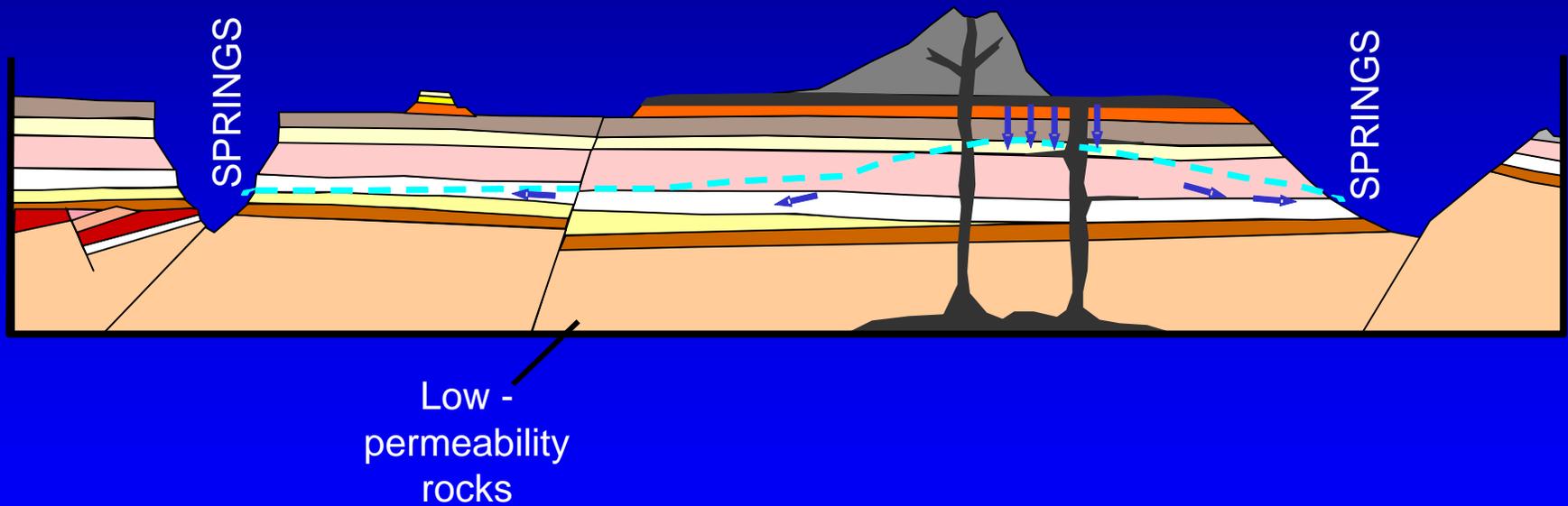


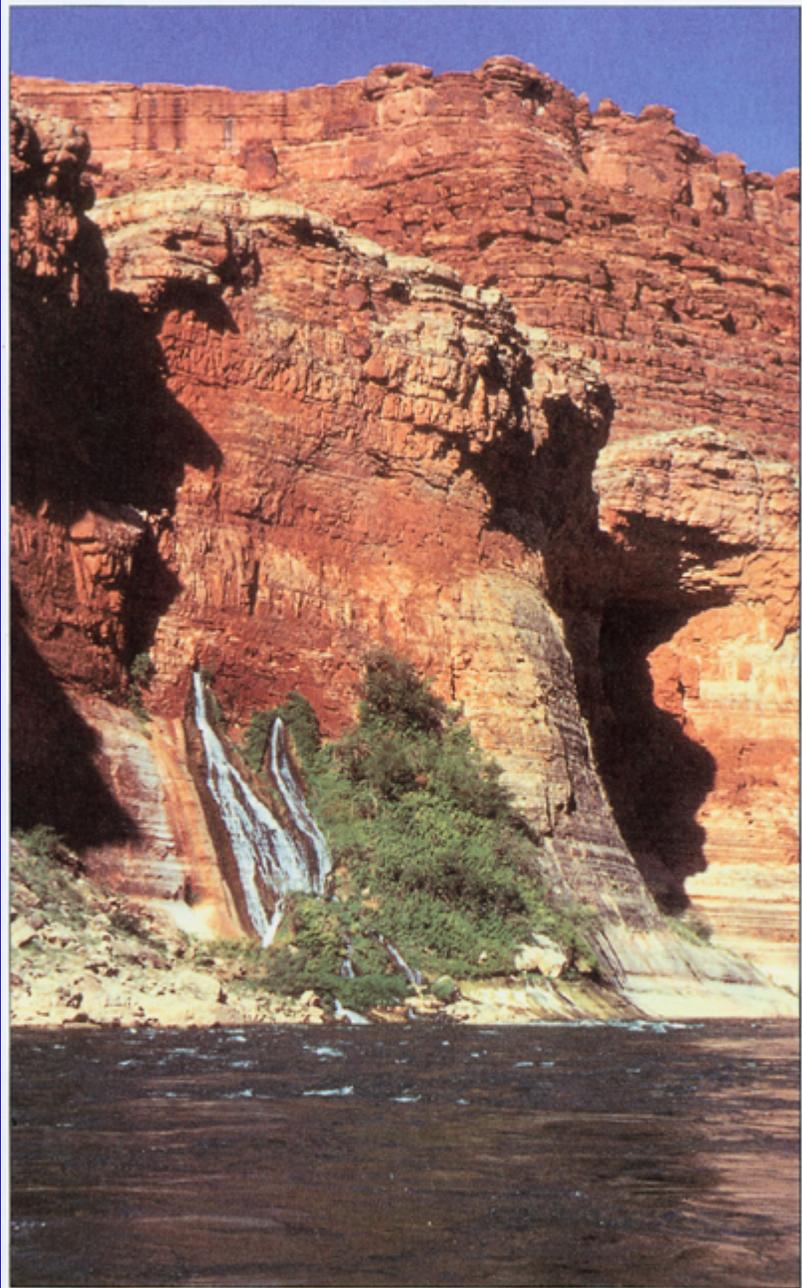
Flow system conceptual model: Coconino Plateau

Grand
Canyon

San Francisco
Peaks

Verde
Valley



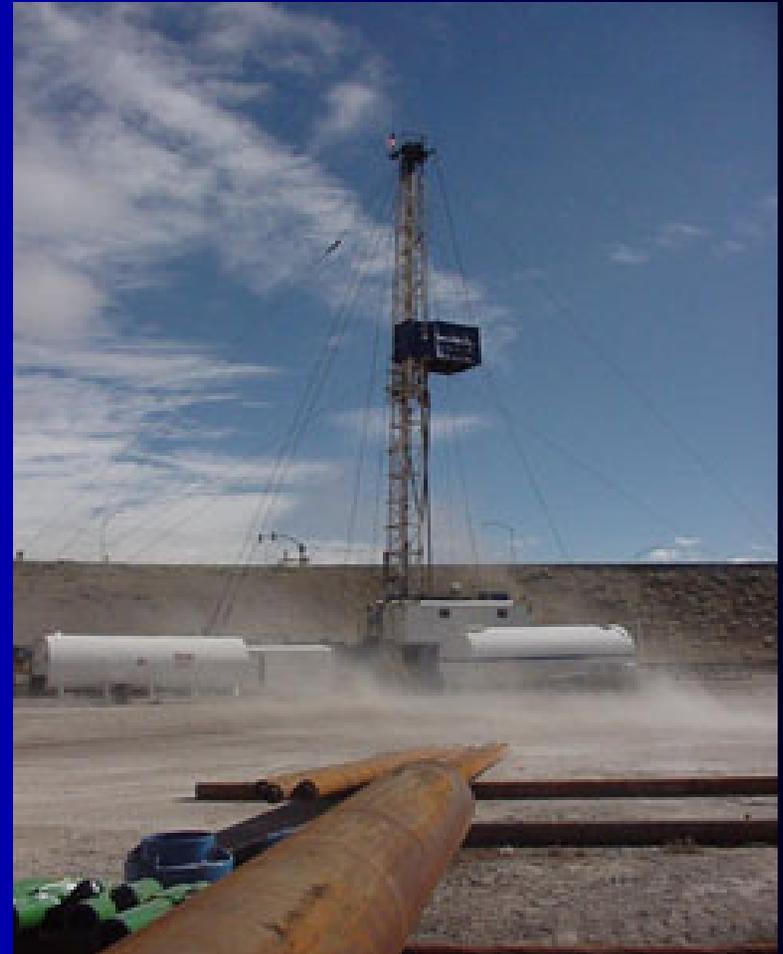


R.D. MacNish, U.S. Geological Survey

Figure 133. Ground water discharges from springs in the Redwall Limestone and cascades into the Colorado River at Vasey's Paradise in the Grand Canyon.

High Water Development Costs

- Geophysical work: \$60,000 - \$200,000
- Land: \$100,000 - \$200,000
- Drilling: \$800,000 - \$1,500,000
- Equipping: \$700,000 - \$1,000,000
- Capacity: 200 gpm?



Competition for Resources



- Cities and towns don't want to share their water wealth with others that compete for their economic "drivers"
- Environmental demands to restore and maintain riparian areas

Exempt Wells

- ≤ 35 gallons per minute
- Non-irrigation use (domestic)
- Arizona Republic (2005) says over half of Yavapai Counties 21,000 wells were unmonitored



Growing Communities Using a Limited Resource

- *Flagstaff*

–2005 = 8,200 AF

–2025 = 11,500 AF

–2050 = 16,000 AF



Public Lands are not Public Water Sources

- State Land Department considers water development and mineral mining one in the same
- Forest Service discourages water development projects on FS land



High Cost of Housing Competes with Water Development Fees

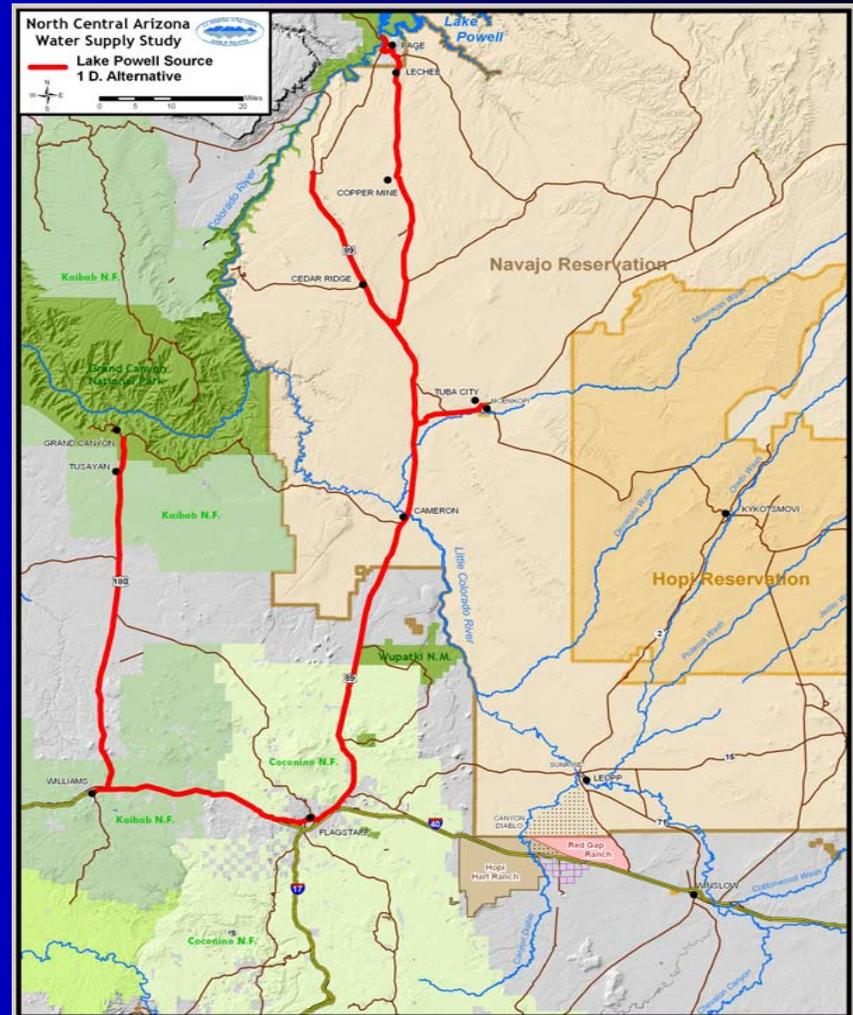


What Are We Currently Doing?

- Forming partnerships
- Buying land
- Continuing to develop existing supplies

Partnerships

- Coconino Plateau Water Advisory Committee
 - BOR completing appraisal level study



Buying Land

- Prescott & Prescott Valley, Big Chino Project
- Flagstaff, Red Gap Ranch Project



Development of Existing Supplies



- Flagstaff's C-aquifer development
- William's R-aquifer development

Obstacles to Progress

- Attitudes
- Funding for large water importation projects
- Rising construction costs
- Availability of water
- Drought

Attitudes

- Stop developing water and growth will stop
- Why conserve water when we continue to allow growth?



Funding for Large Water Projects



- Small communities need large loans for long time periods to afford large projects

Rising Construction Costs

- City of Flagstaff's Reclaimed plant upgrade project price increased 36% in one year



Availability of Water

- Does Arizona have enough water to meet the needs of its projected growth?



Drought



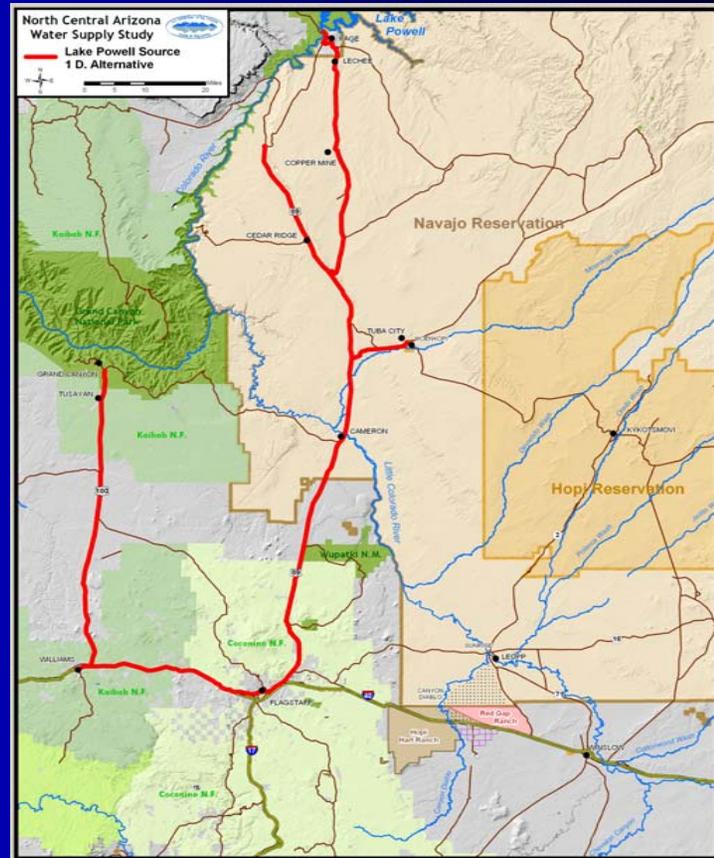
- 14 of 15 Counties in Arizona were recently designated by the USDA as Primary Drought Disaster Areas

Fixes to the Problems

- Regionalization
- Funding support for Statewide planning
- Long-term loans
- Statewide water conservation mandates
- State Water Authority

Regionalization

- Incentives for water suppliers to work together
 - Water is coveted as a resource for development... Cities want to grow and improve their economy



Funding Support for Statewide Planning

- Should growth pay for growth?
- Support ADWR if we want ADWR to help water suppliers
- State Water Resource impact fee (say \$250 per single family dwelling unit)

Long-Term Loans

- Small water suppliers cannot afford projects that cost millions of dollars



Statewide Water Conservation Mandates



- Some people use water conservation as a reason to oppose growth – conservation is not wasting water

State Water Authority



- Every city and town is managed by one water supplier
- Better planning
- Economy of scale
- Fair playing field