TOWN OF PAYSON

RURAL ARIZONA WATER SUPPLIES

MANAGING WATER RESOURCES IN A WATER CHALLENGED AREA

Rural Watershed Initiative Workshop
July 12th, 2007

TOWN OF PAYSON

WATER RESOURCES CHALLENGES IN PAYSON

- **PAYSON WATER SUPPLY FROM OVER 40 IN-TOWN AND 1 OUT OF TOWN GROUNDWATER WELLS**
- **FRACTURED GRANITE BEDROCK AQUIFER ALLOWS MOSTLY LOW YIELD WELLS**
  - **However, the well field can produce, within "SAFE YIELD", up to 2,681 ac/ft-yr of potable water (enough for about 22,000 residents)**
  - **This is not easy and requires progressive "Hands On" management**
- **GROWTH COUPLED WITH DROUGHT THAT PRESSURES OUR LIMITED EXISTING WATER SUPPLIES**
- **STATE LAWS ARE NOT CONDUCIVE TO GROWTH MANAGEMENT VIS A VIS AVAILABLE WATER SUPPLY**
- **CONFLICT WITH DOWNSTREAM WATER RIGHT HOLDERS**
- **PRODUCING MORE WATER OFTEN LEADS TO CONFLICT WITH OTHERS**
- **PERCEPTION THAT PAYSON IS "RUNNING OUT OF WATER"**
  - **Myth that "Payson is drying up" is brought on by lack of water management in unincorporated communities <u>outside of Payson</u>. Payson is OK and has a plan!**

TOWN OF PAYSON

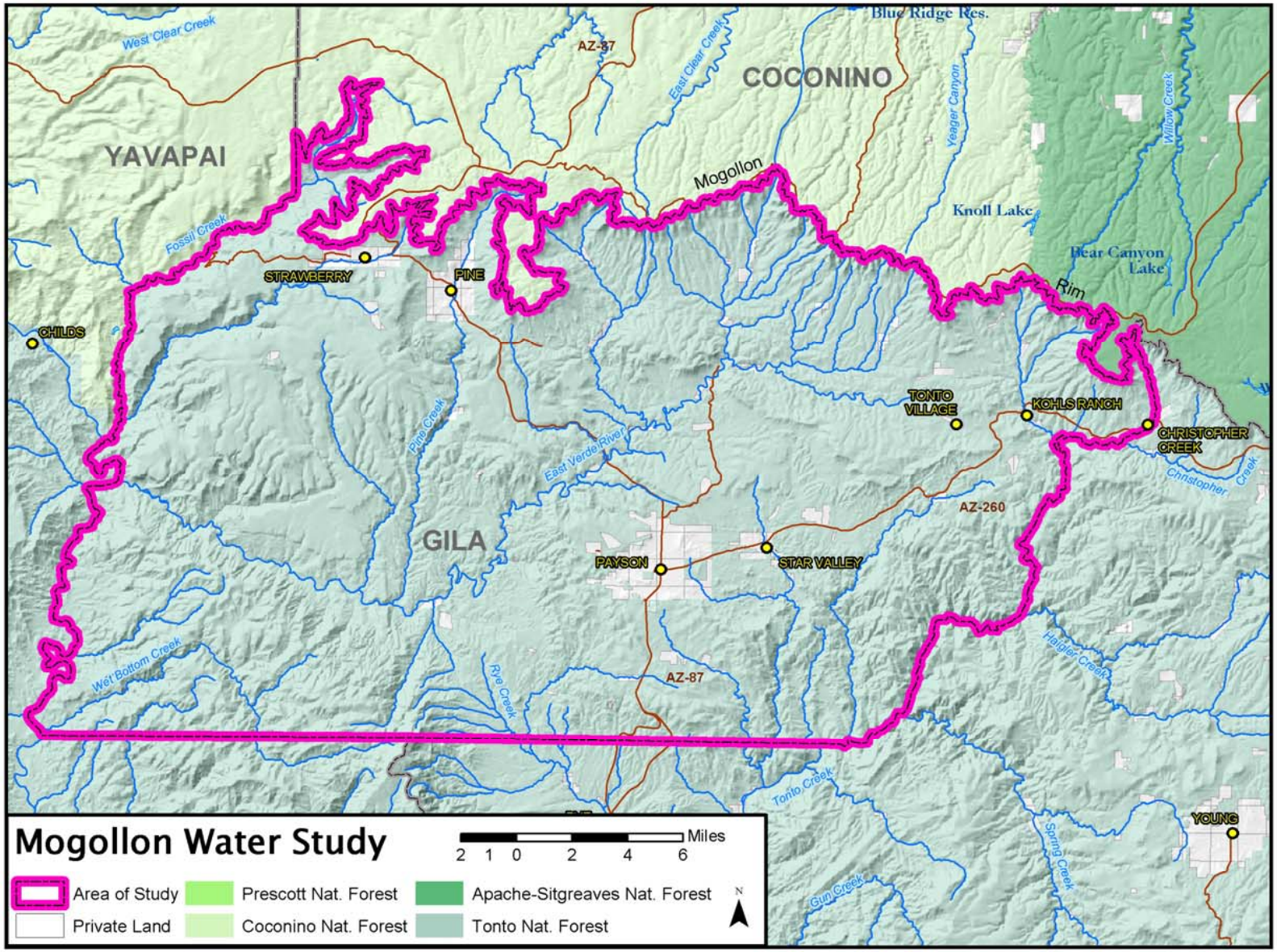
KEY TO LONG TERM WATER SUPPLY

- **COLLABORATIVE EFFORTS WITH DOWNSTREAM WATER RIGHT HOLDERS**
  - **C.C. Cragin (Blue Ridge Reservoir) water to Payson via agreement with SRP**
- **DEMONSTRATE RESPONSIBLE GROWTH MANAGEMENT EFFORTS VIS A VIS AVAILABLE WATER SUPPLY (i.e. "Live Within Your Means")**
- **DEMONSTRATE LEGAL AND POLITICAL ASTUTENESS**
- **IMPLEMENT CONJUNCTIVE WATER MANAGEMENT POLICY**
  - **Continually strive to expand the water resources portfolio**
  - **All types of water considered: Surface, Ground, Reclaimed ect…GOOD OR BAD**
  - **Manage towards sustainability within the local and regional environment**
- **ATTITUDE ADJUSTMENT - "I'D RATHER *SWITCH* THAN *FIGHT*"**
- **"KEEP IT PROFESSIONAL" – LEGAL, TECHNICAL, STAFF DEVELOPMENT, PUBLIC RELATIONS, ETC.**
  - **Professional Water Resources Managers Recommended**

TOWN OF PAYSON

PAYSON LONG TERM PARTNERSHIPS

- **SALT RIVER PROJECT/CONGRESSIONAL DELEGATION/TOWN OF PAYSON SECURE C.C. CRAGIN (BLUE RIDGE) RESERVOIR SURFACE WATER SOURCE FOR PAYSON VIA ARIZONA WATER RIGHTS SETTLEMENT ACT**
  - **Work to get off groundwater supplies ASAP, to effectively implement conjunctive use management strategies.**
- **10 SMALL WATER-SHORT COMMUNITIES ADJACENT TO PIPELINE COULD ESTABLISH DEPENDABLE WATER SUPPLY UNDER REGIONAL AUTHORITY, PINE/STRAWBERRY, TOO**
- **_ GILA COUNTY MUST TAKE LEAD FOR OUTLYING AREAS AND WORK WITH PAYSON AND SRP**
- **3,000 AF/YR BLUE RIDGE SURFACE WATER + 2,681 LOCAL GROUNDWATER + 1,000 AF/YR EFFLUENT REUSE = 6,253 AF/YR = PAYSON BUILDOUT 0F 44,000 POPULATION WATER BUDGET OF 6,000 AF/YR**
- **BUREAU OF RECLAMATION INSTRUMENTAL IN DEVELOPING MUCH NEEDED REGIONAL HYDROGEOLOGICAL INFORMATION AND LOCAL WATER SUPPLY PLANNING EFFORTS**
  - **The Bureau of Reclamation's Mogollon Rim Water Resources Management Study is essentially complete and is expected to be finalized by year end 2007.**


Mogollon Water Study
Miles
2 1 0 2 4 6
Area of Study
Private Land
Prescott Nat. Forest
Coconino Nat. Forest
Apache-Sitgreaves Nat. Forest
Tonto Nat. Forest
N
YAVAPAI
COCONINO
GILA
Mogollon
Rim
West Clear Creek
Fossil Creek
AZ-87
East Clear Creek
Blue Ridge Res.
Veager Canyon
Willow Creek
Knoll Lake
Bear Canyon Lake
STRAWBERRY
PINE
CHILDS
Pine Creek
East Verde River
TONTO VILLAGE
KOHLS RANCH
CHRISTOPHER CREEK
Christopher Creek
AZ-260
PAYSON
STAR VALLEY
Wet Bottom Creek
Rye Creek
AZ-87
Haigler Creek
Tonto Creek
Spring Creek
Gun Creek
YOUNG

TOWN OF PAYSON

Mogollon Rim Water Resources
Management Study
"MRWRMS"

- The Mogollon Study is Sponsored by the the Bureau of Reclamation, The Town of Payson, and Gila County. In Addition, the Salt River Project, Arizona Department of Water Resources, the University of Arizona, and Local Water Providers (and others) are also Participating.

- The Goal of the Study is to Collect Information on the Region's Current Water Resources Issues and Availability such that a "toolbox" of Solutions to the Water Resources Challenges of the Region can be Created.

- Since Groundwater is the Primary Source of Supply within the Area, an Important Factor for this Effort is the Collection of Sufficient Data to Develop a Regional Conceptual Groundwater Model.

Mogollon Study Area Regional Groundwater Systems Findings

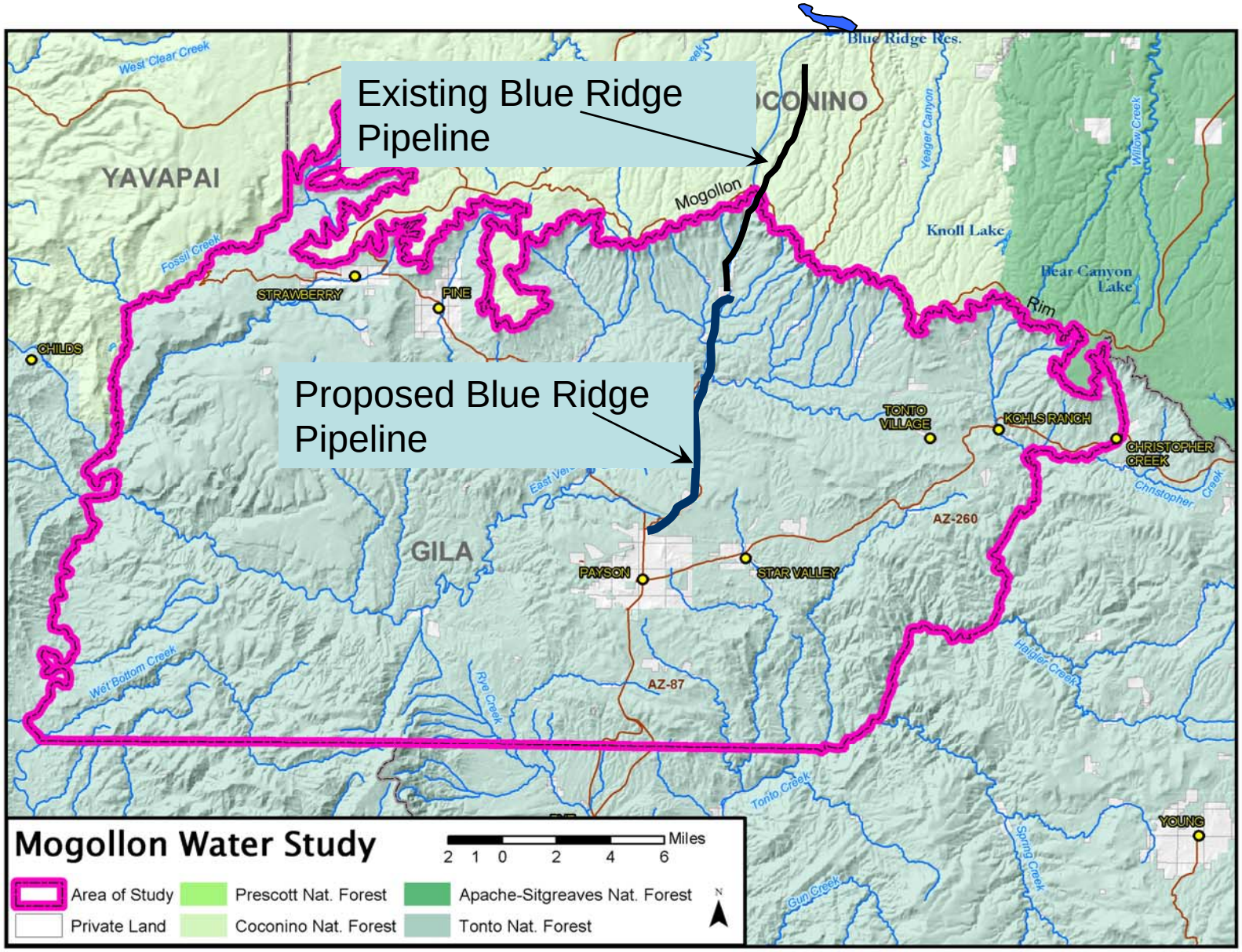
- The Movement and Occurrence of Groundwater is Related to Depth, Precipitation Source (Recharge Source), Geology (both Lithological and Structural), and Geomorphology (topography).

- Understanding the Region's Groundwater System is Complicated by Structural Features and Localized Mixing of Aquifer Systems and Recharge Sources.

- The Importance of Both Structural Controls and Both Local and Distant Recharge Sources is Paramount in Understanding the Regional Hydrogeology
  - A Regional Hydrogeological Framework for the MRWRMS area is now being finalized.
  - New geological mapping, groundwater and surface water chemistry and isotope analysis, and groundwater elevation mapping is now complete.

MRWRMS “Toolbox” of Solutions

- Importation of Surface water via C.C. Cragin (Blue Ridge) Reservoir is Vitally Important to Payson and Plays a Primary Role in Achieving Sustainability within the Region
- Limited Development of Un-utilized Deep Regional Groundwater Supplies in Areas of Low Growth Potential and Limited Long-Term Demand
- Utilization of Reclaimed Sources via Recharge and/or Reuse wherever Possible and as they Become Available Into the Future
- The Conjunctive Utilization of Each Water Source in Concert with Conservation and Regional Partnerships are Key in Achieving and Maintaining Sustainability
- Restoring and Maintaining a Healthy Watershed is Paramount (Vegetative Management)


Existing Blue Ridge Pipeline
Proposed Blue Ridge Pipeline
Blue Ridge Res.
West Clear Creek
YAVAPAI
COCONINO
Mogollon
Veager Canyon
Willow Creek
Knoll Lake
Bear Canyon Lake
Rim
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