



Central Yavapai Highlands Water Resources Management Study

Technical Working Group Meeting

Wednesday May 14, 2008

Yavapai County Water Advisory Committee

Arizona Department of Water Resources

Bureau of Reclamation

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Reclamation's Authorizations and Objectives for Water Resource Planning

Objectives:

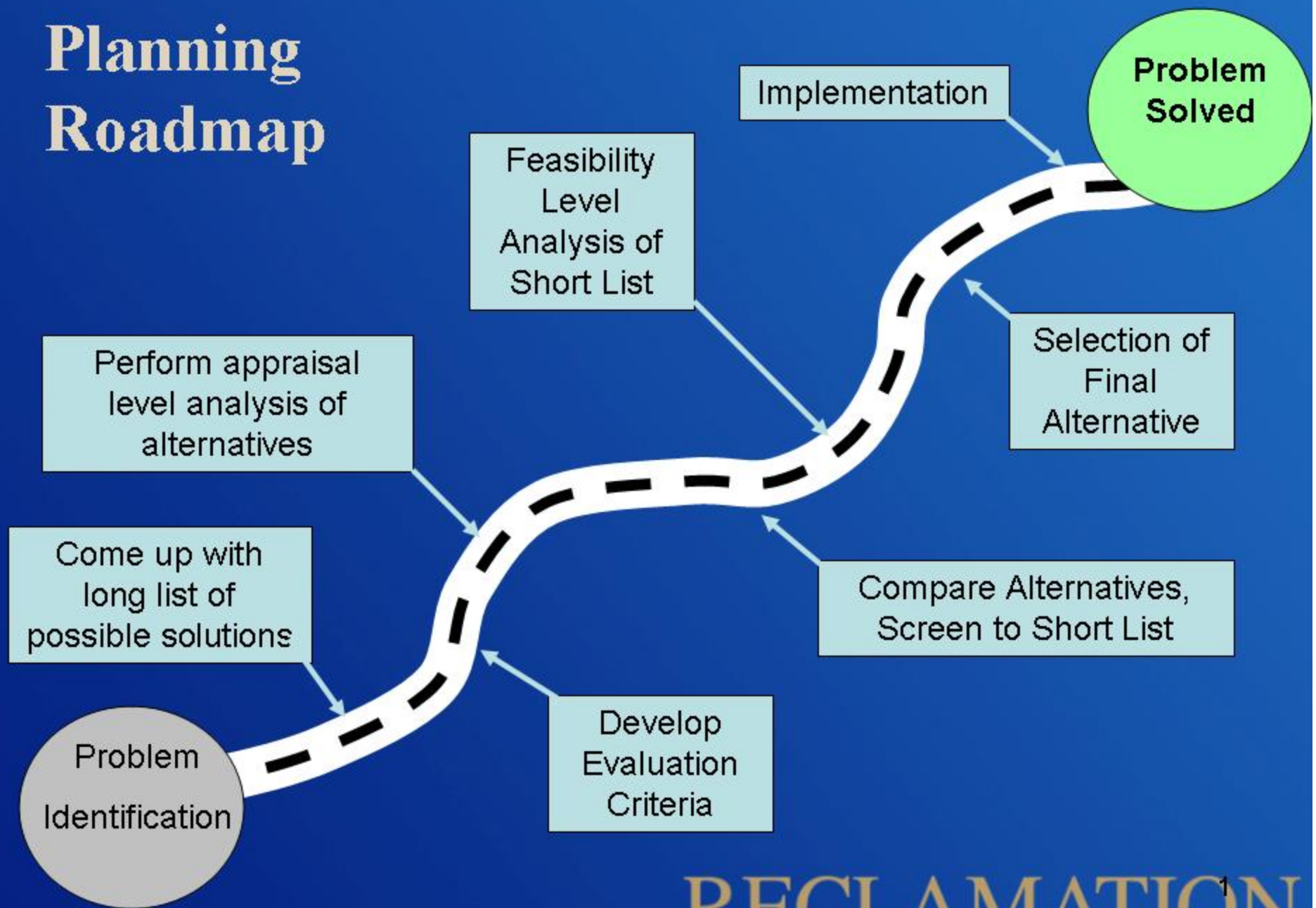
- **Contribute to National Economic Development consistent with protecting the environment.**
- **Implement a structured approach to water resource problem solving.**
- **Ensure use of a rational framework for sound decision making.**

Authorizations:

- **The Reclamation Act of 1902 authorizes the Bureau of Reclamation to conduct Appraisal Studies, Special Studies, and Investigations.**
- **Specific Congressional authorization is required for a Feasibility Study.**

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Planning Roadmap



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Cost Sharing



Agreement Partners

Yavapai County Water Advisory Committee

Arizona Department of Water Resources

Bureau of Reclamation

Requirement

50% - Federal 50% - Non-Federal

Accounting

Transferred Funds

In-kind

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Plan of Study



Water Advisory Committee

- **Introduction**
- **Study Approach**
- **Special Considerations**
- **Technical Evaluations**
- **Study Organization**
- **Deliverables**
- **Program Analysis**

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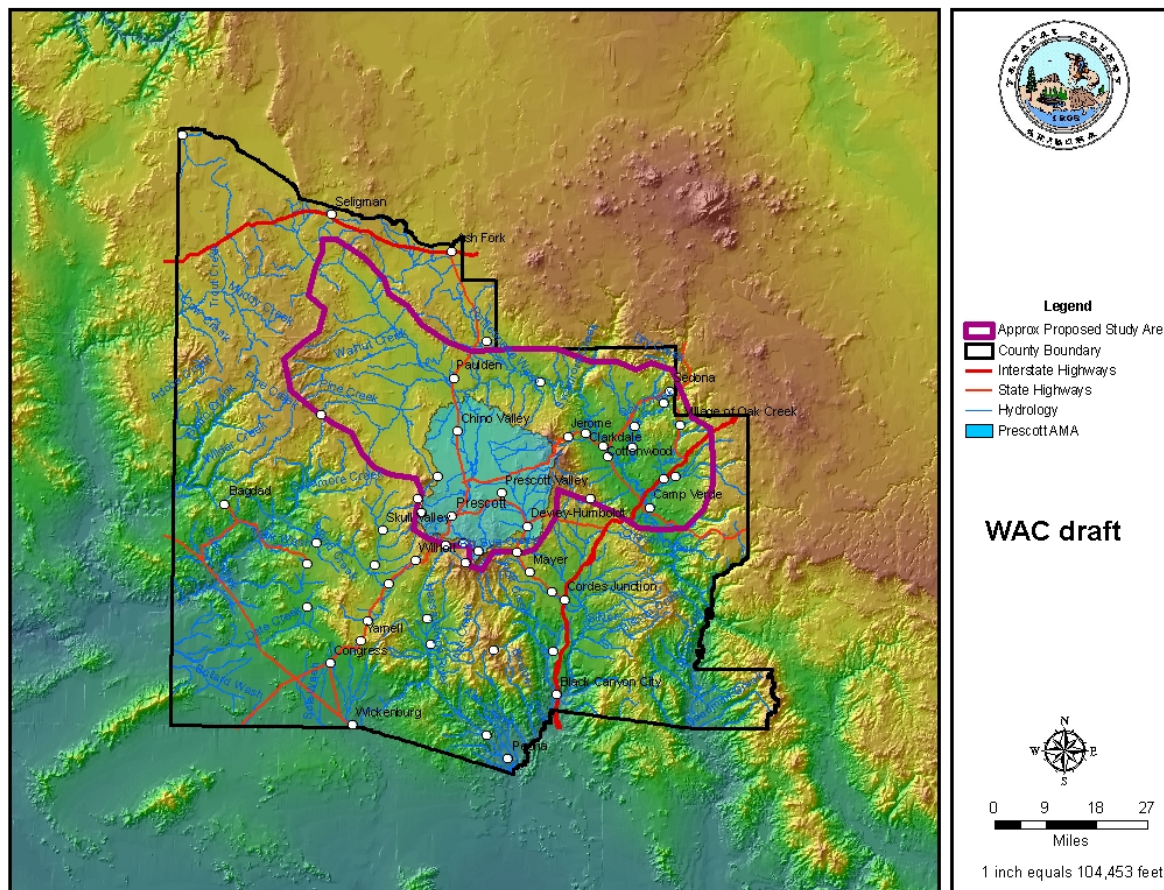
1.0 Introduction

- **PURPOSE:** Identify water resources and water management strategies that include a range of alternatives designed to meet future water supply needs in the Study Area.
- **OBJECTIVES and OUTCOME:**
 - Summarize and clarify needs, constraints and opportunities
 - Identify stakeholders
 - Report comprehensive range of water supply alternatives and demand management practices
 - Formulate, evaluate and present cost effective alternative(s) for alleviating identified problem(s)
 - Logical, organized, comprehensive documentation and assessment of alternatives to meet future water demands.

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Introduction (Continued)

- **STUDY AREA:**
 - Big Chino, PrAMA, and Verde Valley
 - High Potential Growth Areas
 - With increased water demands



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Introduction (Continued)



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- **BACKGROUND:**

- Reliable long-term water supplies is a long-standing challenge to the central Yavapai region
 - Supply and Demand Issues (growth pressures)
 - Legal Issues
 - Economic and Environmental Issues
- Much data has been collected (and will be used)
 - Population trends
 - Geology/Hydrology/Climate
 - Water-use
- WAC has worked with ADWR and others to understand regional context. Community leaders recognize need for proactive planning.
- Reclamation has identified this area as “highly likely” conflict potential by 2025.
- Much history has resulted in the Cost Share Partners recognizing we are ready for this collaborative, regional study

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Introduction (Continued)

- **OPPORTUNITIES, ISSUES, and CONSTRAINTS**
 - The study will identify and document opportunities to satisfy the primary needs (understand likely 2050 conditions and acceptable future water resources alternatives)
 - The study will also examine issues and constraints associated with the opportunities and the needs.
- **CURRENT RELATED ACTIVITIES**
 - The study team will utilize applicable credible information such as maps, models, data, and reports (ADWR, USGS, NAU, YCWAC, CPWAC, AWI, and etc)

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2.0 Study Approach

- **SOURCES OF INFORMATION**

The intent of this study is to use existing information to the maximum extent possible. A bibliography of existing studies will be included.

- **CONCEPTUAL METHODOLOGY**

- Collect and evaluate existing data associated with the current supply, usage and conservation of water within the project area.
- Water demands to year 2050 are to be determined and documented by type, quantity, quality, reliability, and source of supply.

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3.0 Special Considerations



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In selecting alternatives for study pursuant to this Agreement, the parties will consider the following additional issues: Threatened and endangered Species, cultural resources compliance concerns, social issues, and state water rights programs.

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4.0 Technical Evaluations



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Water Demand

- Present and Future

Water Supply

- Present and Future (Type, Quality, Reliability, Source)

Alternative Formulation

Alternative Analysis

- Environmental, Economic, Legal and Institutional

Alternative Evaluation

- Completeness, Effectiveness, Efficiency, Acceptability

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5.0 Study Organization



The study team will include a Technical Working Group that consists of regional experts and those that have accountability to manage the water and land resources in the study area.

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Technical Working Group (TWG)



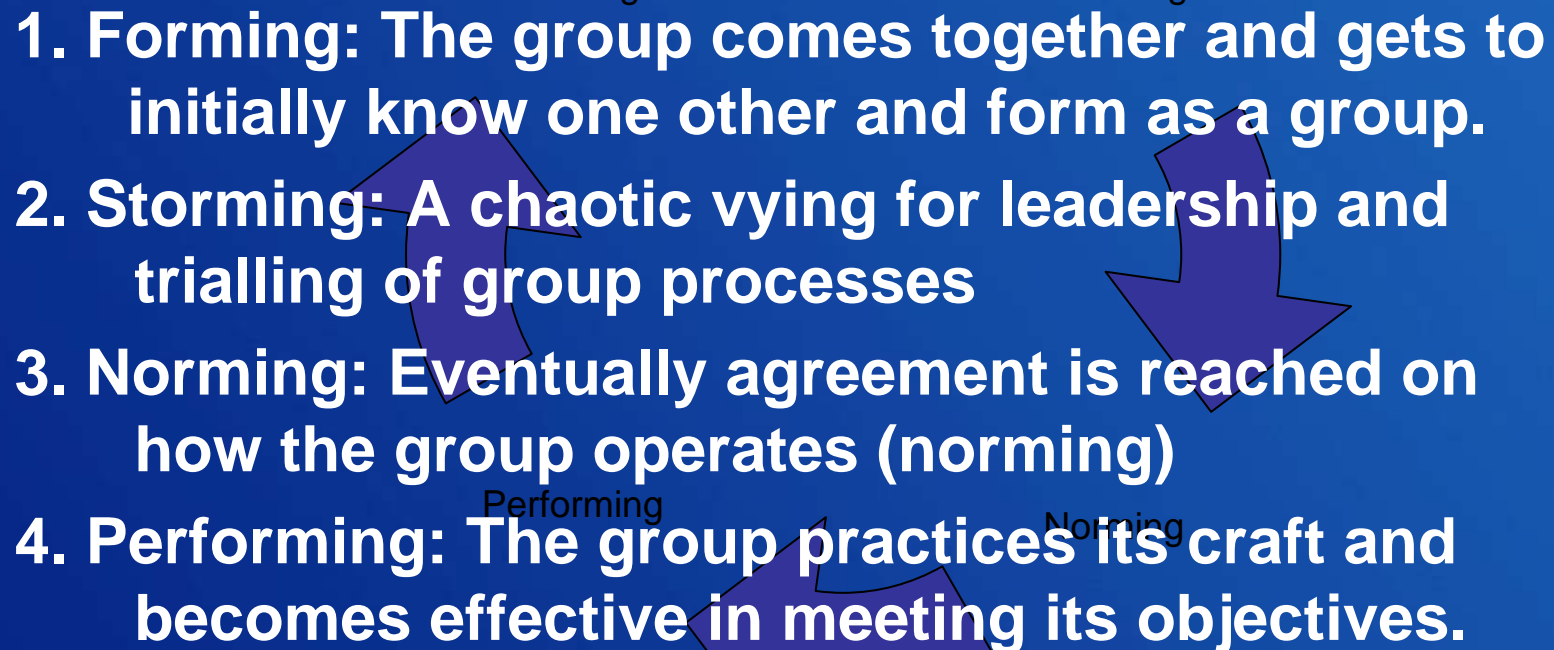
Water Advisory Committee

- Provide technical information and data as needed and requested by the Reclamation study manager.
- Perform specific analyses or tasks as needed and requested by the Reclamation study manager.
- Serve as member of subteams as appropriate to deal with problems in their area of technical expertise.
- Provide peer and technical reviews on work products provided by the Phoenix Area Office at the direction of the Reclamation study manager and in accordance with agreed upon schedules. Study reports will be reviewed for technical accuracy and adherence to the purpose and needs of the study and provide comments and recommendations.

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Stages of group development

Bruce Tuckman (1965) developed a 4-stage model of group development.

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- The diagram illustrates the four stages of group development as a continuous cycle. It features four large, dark blue, downward-pointing arrows arranged in a clockwise loop. Each arrow points from one stage to the next, with the stage name written in small text above the arrow's tail. The stages are: 1. Forming, 2. Storming, 3. Norming, and 4. Performing. The descriptions for each stage are listed to the right of the arrows.
1. **Forming:** The group comes together and gets to initially know one other and form as a group.
 2. **Storming:** A chaotic vying for leadership and trialling of group processes
 3. **Norming:** Eventually agreement is reached on how the group operates (norming)
 4. **Performing:** The group practices its craft and becomes effective in meeting its objectives.

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6.0 Deliverables



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Reports

Supporting Documents

Coordination Activities

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7.0 Program Analysis



Phase I (5 months, allowance \$75,000)

- Study Area
- Water Demand

Questions: Are there demands that will be unmet in 2050? Where? How much?

Phase II (9 months, allowance \$200,000)

- Water Supply Assessment (in addition to present water resources)

Phase III (16 months, allowance \$250,000)

- Alternative Formulation
- Alternative Analysis
- Alternative Evaluation

Question: Is there at least one alternative that can meet the unmet demands?

Question: Is there a Federal Interest in the identified alternatives?

Phase IV (6 months, allowance \$75,000)

- Final Report Formulation

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Tasks – Phase I



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- Define Area
- Develop list of water providers

Water Demand (evaluated for each water provider)

- Present Population
- Future Population
- Present Water Demands
- Present Water Resources (source and amount)
- Future Demands

Questions:

Are there demands that will be unmet in 2050?

Where?

How much?

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Future Meetings



Water Advisory Committee

Schedule

Future Yavapai County TAC Meetings

June 5

July 3

August 7

Location

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