

# TURNING OUR VISION INTO WATER MANAGEMENT STRATEGIES

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# This Presentation Will Give Some Suggestions on Actions

- We are discussing adaptation
  - Changes made in response (or anticipation) of climate change
  - Note that we are not addressing “mitigation” here
    - Mitigation is reduction of greenhouse gas emissions
- My presentation organized around way water managers think about water resources
  - After you hear this presentation, what revisions might you want to make to the list of actions you’ve identified?

# Summary of Issues

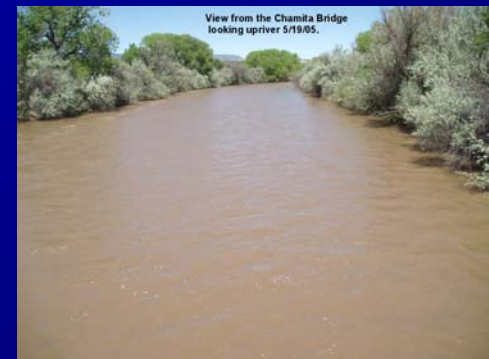
- Climate is variable
  - Drier periods and bigger floods have happened in the past
- The climate is changing
  - It is getting warmer
  - Precipitation patterns are changing, but are also uncertain
    - Climate models tend to point to drier conditions
  - Climate variability (e.g., droughts, floods) is likely to increase

# Given Uncertainties About the Future: Two General Types of Adaptation Strategies

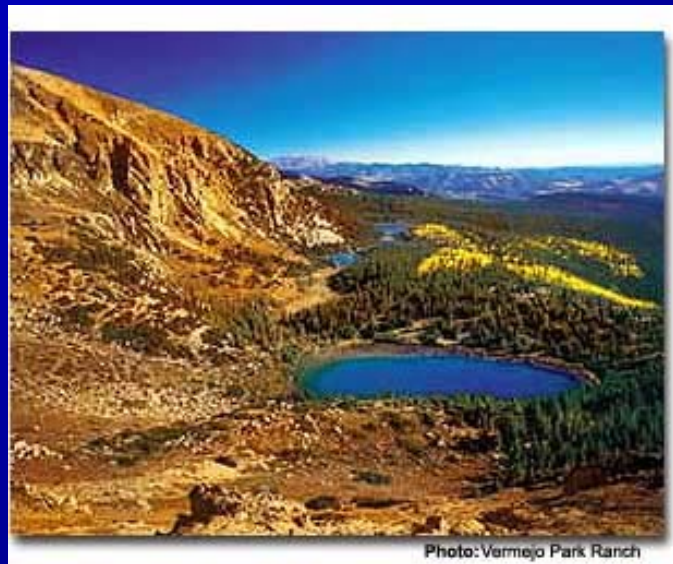
- Adaptations that make sense anyway under current conditions
  - And make more sense under changed conditions
  - “No regrets”
- Adaptations justified by projected changed conditions
  - Only undertake because of possibility of changed conditions
  - Some are “Low regrets”
  - Be cautious about costly investments

# Dealing with Uncertainty

- Use vulnerability analysis to inform risk management
- Get the most out of the current system
- Look for ways that provide or enhance flexibility
- Apply iterative approach: refine and update
  - Need not solve everything at once
  - Can make incremental changes
  - Avoid costly or major changes until implement no or low regrets measures; and until reduce uncertainty



# Some Examples of Actions



# Ensuring Water is Available for Economic Vitality and Quality of Life

- Develop accurate supply inventories
- Metering
- Water markets
- Land use and development decisions consistent with supplies
- Water banks



# Promote Conservation and Efficient Water Use

- Improve efficiency of use and reuse
- Information and education programs
- Technical assistance
- Require water conservation
  - w/ state funding
  - In local and regional plans
- Financial incentives e.g., tiered incentives
- Leak detection



# Promote Drought Planning



- Require all suppliers have drought contingency plans
- Develop shortage sharing agreements
- Encourage tiered drought plans by local gov'ts
- Prioritize infrastructure requests

# Expand Existing Supplies



- Watershed rehabilitation projects
- Integration of water purveyor plans
- Desalinization
  - (cost and energy)
- Aquifer characterization and storage
- Decrease evaporation

# Protect Water Quality

- Determine requirements for central water supplies
- Assess treatment needs for new development
- Manage watersheds to promote water quality and quantity
- Coordinate activities of state agencies
- Consider demands of low flow and wet weather conditions



# Habitat Protection and Restoration



- Improve water supplies and habitats
- Research on water flow requirements for aquatic and riparian species and habitat
- Fund water acquisition for riparian and watershed projects

# Water Rights



- Clarify ownership and property rights
- Examine use of domestic wells

# Planning

- Develop strategic plan for water infrastructure and management projects
  - Use for investment of State funds and leverage federal appropriations toward water security enhancement



How do the Adaptation  
Actions Fit in With Water  
Management Topics?

What Should the Priorities be?