

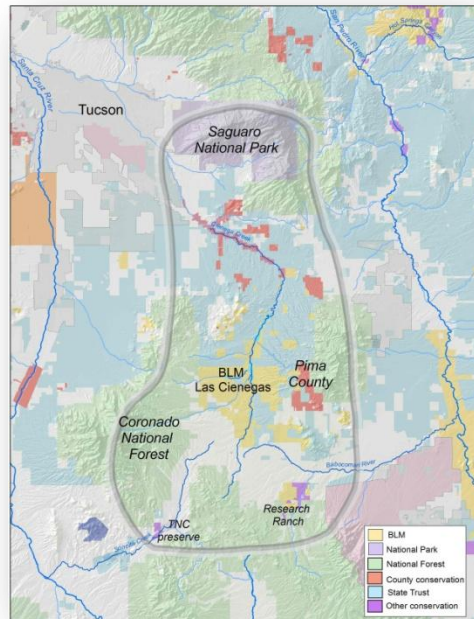
# SCENARIO PLANNING IN THE CIENEGA WATERSHED - PHASE ONE

Update 1 - February 2013

People in the Cienega Watershed have long used partnerships and science to sustain the area's natural and cultural resources and the benefits they bring our communities. Scenario Planning helps us build on this history to sustain these benefits in an uncertain future.

## Why the Cienega Watershed?

The Cienega Watershed is located in southeastern Arizona, an area of great historical and ecological significance. This project builds on an ongoing and successful collaborative approach to adaptive management centered on the Las Cienegas National Conservation Area (LCNCA). Land managers include the Bureau of Land Management (BLM), Coronado National Forest (CNF), the Saguaro National Park, Pima County, and state and private landowners. The watershed is facing a wide range of challenges--an unpredictable future with significant climatic change uncertainties in an already stressed and rapidly changing landscape. Land use plans such as the Resource Management Plan for the LCNCA or park and forest plans have been produced using significant resources and with intense involvement from public groups such as the Sonoita Valley Planning Partnership. These plans may not be realistic, feasible, or adaptive when viewed from a climate change perspective.



## What is Scenario Planning?

Scenario Planning is more than “What If”? It is a deliberate approach to adapt identified visions, goals, and objectives in a risky, uncertain future. In the Cienega Watershed, a group of managers, stakeholders, residents, researchers, planners, and specialists began in 2011 to identify the uncertainties and to improve decision-making in the face rapid changes in climate, economics and other factors. Scenario planning is being used successfully for a range of settings from exploring water release options for multi-jurisdictional dam systems to prioritizing key resource decisions for National Parks. Scenario planning steps have been tested in a number of settings and are now becoming standardized for application to new issues or landscapes.

The Cienega Watershed effort is being led by a team of scenario planning experts from the University of Arizona CLIMAS Center, and builds on the area's existing partnerships, plans, and science. The current process will identify key climatic and other variables and develop four to six very different scenarios. These scenarios are time-evolving narratives which express the potential impacts of these key climate factors on the Cienega Watershed system, including its natural and cultural resources. Using the narratives, workshop participants will review existing information, stresses and strategies and develop key points for adapting existing decisions or making new ones to reduce risks in the watershed's systems. They will discuss what should **not** be done as well.

## Who is Involved in the Cienega Watershed Scenario Planning?

This effort focuses on the Cienega Watershed but takes in adjacent areas where appropriate. The Scenario Planning Phase 1 involves federal, state and local agencies; non-profit organizations and stakeholders of interested public, academic, resident, and other land users. Heavily involved are those watershed partners who form the ongoing technical teams initiated by the BLM for the LCNCA in 2010 with expertise in riparian, upland, heritage and landscape issues. Current partners and participants: the University of Arizona CLIMAS Center (team lead), The Nature Conservancy, BLM Tucson, Cienega Watershed Partnership (CWP), Pima County, US Fish and Wildlife Service, UA School of Natural Resources, Pima Association of Governments, Saguaro National Park, The Audubon-Whittell Research Ranch, Coronado National Forest, local non-profit organizations, and private citizens.

## What is the typical Scenario Planning Process?

Four main stages of work with about 20 steps have been identified:

- Meet with stakeholders to scope out issues and identify system vulnerabilities, drivers of change, impacts and climatic variables;
- Meet with stakeholders to prioritize impacts, drivers, and scenarios which make sense specifically for this watershed and NCA;
- Conduct gap analysis, identify opportunities and threats, and begin strategizing directions; participants and stakeholders will debate scenarios and strategies in terms of specific criteria ranging from feasibility to mission-fit, and look back at key decisions and objectives;
- Request stakeholders to challenge results, test scenarios and objectives, and take a hard look at the strategies to achieve adaptive success; and, develop a set of management objectives or land use action or contingency plans to be shared with stakeholders.

### What are we doing in Phase One?

Phase one is taking place in Spring 2013 and will complete and communicate results for all steps in the Preparation phase (steps 1-5), the Building and Refining phase (steps 6-12), and step 13 (scenario vetting) in the Application phase.

- Task 1: Develop resources and references including setting up project management and teams, identifying general material to use, and adapting CLIMAS regional scenarios.
- Task 2: Complete a fast-track exercise focused on floodplains, steps 13-19, using the scenarios developed at the 2012 workshop in order to see how the scenarios will be used.
- Task 3: Conduct training for project leaders and key participants; a one-day workshop.
- Task 4: Conduct scenario planning in a one-day workshop with four resource teams (Montane, Upland, Riparian and Cultural) to identify key issues, drivers, and variables.
- Task 5: Vet scenarios, individually and across resource areas and present results to the stakeholders at the Science on the Sonoita Plain June 8, 2013.
- Task 6: Report on results and flesh out details of plans for the next phases.

### Why should you participate or support this effort?

Scenario Planning uses a deliberative, inclusive process and fine-tuned climate narratives to:

- Challenge assumptions about the future
- Foster strategic thinking about how to respond in different situations
- Gain insight into how to prepare for and manage change in the face of uncertainty
- Test management strategies that can solve problems here and elsewhere

Scenario planning requires a commitment of time and staff but offers a way to make current land use plans more robust to future uncertainties. Current plans have objectives and strategies based on what is known about natural and socio-cultural systems. These plans did not address uncertainties related to rapid changes in climate whether warming temperatures, change in precipitation, or seasonality, nor is a feedback mechanism for re-considering such information well developed. The good news is that we can build on these expensive, time-consuming and public-accepted plans rather than tossing them away.

Scenario planning offers a way of using existing information, addressing uncertainties, and incorporating new information as it becomes available to develop more robust management plans that are based on stakeholder visions, goals and objectives. We hope that you will stay tuned as the Scenario Planning process (currently underway) continues to unfold!

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