

## Sonoita Valley Planning Partnership

**AGENCY:** Bureau of Land Management-Tucson Field Office, U.S. Fish and Wildlife Service-Arizona Ecological Services, Coronado National Forest, Natural Resource Conservation Service

**INVOLVED PARTIES:** Arizona Game and Fish Department, Arizona State Land Department, Pima County Flood Control, Sonoran Institute, The Nature Conservancy, Sky Island Alliance, Empire Ranch LLC, Phoenix Zoo, Huachuca Hiking Club, Sonoita Crossroads Community Forum, Empire Ranch Foundation, private citizens from Tucson, Sierra Vista, and Sonoita, Arizona, among others

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**DATES:** *Began:* July 2005 *Ended:* Ongoing

**INTERNET SITE:** [http://www.sonoran.org/programs/sonoran\\_desert/si\\_sdep\\_sonoita.html](http://www.sonoran.org/programs/sonoran_desert/si_sdep_sonoita.html)

### PROJECT DESCRIPTION:

The Sonoita Valley Planning Partnership (SVPP) is an adhoc, volunteer association of agencies (Federal, State, and local), user groups, organizations, and individuals with a common interest in the upper Cienega watershed including the 42,000 acres of public lands within the Las Cienegas National Conservation Area (NCA).

The goal of the SVPP is to perpetuate naturally functioning ecosystems while preserving the rural grassland character for future generations.

The SVPP was initiated in 1995 in response to the Bureau of Land Management's (BLM) efforts to collaborate with all interested parties in developing a land use plan for what is now the Las Cienegas NCA. Between 1995-2003, BLM and SVPP worked together on developing the *Las Cienegas Resource Management Plan* (RMP), which was approved in 2003. SVPP is continuing to collaborate with BLM on plan implementation, including seeking resources.

SVPP participants reached consensus on a preferred alternative for the Las Cienegas RMP and were instrumental in designating the Las Cienegas NCA.

SVPP is reorganizing with focused working groups, cooperative agreements, and forming a nonprofit 501c3 organization to better support plan implementation and other activities in the watershed.

The SVPP has received national recognition for its achievements, including an invitation to present a case study at the 2005 White House Conference on Cooperative Conservation.

### ADAPTIVE MANAGEMENT (AM) ELEMENTS:

*What management issue was the primary driver?*

The primary management issues at the beginning of the process included (1) whether livestock grazing should be continued; (2) if continued, how should livestock grazing be managed to ensure rangeland health is maintained and impacts on listed and sensitive species and their habitats are minimized; (3) how recreation uses should be managed to ensure rangeland health and to minimize impacts to ecosystem resources and processes; (4) how recreation use should be managed to provide desired recreation opportunities and experiences and to minimize conflicts among different

users; and (5) how wildlife habitats should be managed and what restoration activities for habitats and species should be considered.

*What uncertainties led to an Adaptive Management approach being selected?*

A number of uncertainties led to a decision to use an AM approach.

The variability in rainfall in the desert grasslands of Las Cienegas has a big impact on carrying capacity for livestock and wildlife. Prescribing a flexible stocking rate that responded to monitoring data was felt to be most appropriate to ensure maintenance of rangeland health.

Las Cienegas is less than 1 hour from a fast-growing metropolitan area, and it was anticipated that increasing recreation pressures would occur, which would necessitate adjustments to recreation management to ensure that land health was maintained.

Habitat restoration, including species reintroductions, is also proposed. These may have both known and unanticipated impacts to resources and uses. An AM approach would provide more flexibility to address these issues.

Management of the project area prior to its designation as an NCA was similar to the current management practices because the area has been recognized for quite some time as a place harboring important resources. Important resources include riparian habitats, which support numerous aquatic- and riparian-dependent listed species, declining native grassland habitats, and significant historic and prehistoric cultural resources. Prior to the designation of the NCA in 2000, the various support groups engaged in planning activities recognized these important values by proposing the designation of the BLM public lands in the Sonoita Valley area as an Area of Critical Environmental Concern (ACEC). The area was designated as an ACEC with the signing of the record of decision (ROD) for the Las Cienegas RMP in 2003.

The legislation creating Las Cienegas NCA (December 2000, HR 2941) prescribed the protection of 14 different resources and the accommodation of livestock grazing and recreation in appropriate areas. Recognizing that strategies to protect the diverse resources may not always align, and to meet this mandate, it was felt that an AM approach would provide the best opportunity and most flexibility.

*How was the monitoring and science framework designed to support timely management adjustments to changing resource conditions and increased certainty?*

The monitoring framework is currently being developed (upland vegetation is complete and riparian vegetation and target species for both are being developed). The monitoring framework is being designed to provide for both long-term trend data (e.g., are we heading in direction of maintaining or meeting desired resource conditions) and short-term resource condition data (e.g., ground cover of perennial grass compared to last year). The RMP prescribes plan evaluations at a minimum of every 5 years. In addition, the plan prescribes a biological planning process, which occurs twice a year and is an opportunity to evaluate short-term and long-term monitoring data in a collaborative process and implement management changes in response.

A number of measurable criteria have been developed to determine the condition of the grassland watershed and whether the goal of ensuring the maintenance of rangeland health is being achieved. These criteria were derived from the BLM Arizona Standards and Guidelines for Rangeland Health, goals and objectives in the Las Cienegas RMP, the published literature, and expert opinion. The

criteria include bare ground cover, basal cover of perennial grasses, canopy cover of mesquite and all shrubs; percentage of perennial grass species trending downward; and the Ecological Site Inventory Similarity Index value (see Gori and Schussman 2005 for review). Monitoring to estimate these criteria has been implemented at 31 key area locations in different ecological sites and in different pastures at Las Cienegas NCA and is being used to make annual grazing management decisions related to stocking rate and pasture use. An additional five to six key area plots with paired livestock exclosures were established this spring to provide supplementary information on pastures and ecological sites that are less well represented by the original key area locations.

There are a number of working hypotheses that can be evaluated through the monitoring framework. These include:

1. Moderate livestock use during the nongrowing season will have no effect on basal cover and species composition of perennial grasses or achieving the management objective of less than 30 percent cover of bare ground in grassland ecological sites.
2. Moderate livestock use of Lehmann lovegrass, an invasive nonnative grass species, during the spring can maintain a mix of native perennial species and will prevent further spread and displacement of native perennial grass species by Lehmann lovegrass.
3. Flexible stocking rates and pasture rotation that result in moderate livestock use (35-40 percent utilization of annual productivity) will maintain or improve basal cover and species composition of perennial grasses; result in a similarity index value indicative of good to excellent range condition; and maintain a bare ground cover value of less than 30 percent cover at different ecological sites.
4. Prescribed burns and mechanical treatments are needed in many ecological sites to reduce shrub encroachment and meet objectives for bare ground and perennial grass cover.
5. Some combination of fire and mechanical and herbicide treatments is needed to reduce cover and mesquite density of greater than 2 inches diameter at breast height.

*Please describe the process used for involving partners/stakeholders.*

Partners and stakeholders are involved in several processes. Through the SVPP and its working groups, they have the opportunity to work with BLM on plan implementation including input on project planning, on-the-ground volunteer labor, and matching donations of labor, materials, or other resources. Through the biological planning process, the Rangeland Resource Team (advisory committee under Arizona Resource Advisory Council) and the agency Technical Review Team help the BLM review monitoring data and provide input on proposed actions. This process also provides the public and other interested agencies or organizations an opportunity to provide input at the biannual meetings.

*Please describe the mechanism for adapting decisions based on monitoring results. Was an Environmental Management System (EMS) used?*

Resource management of the Las Cienegas NCA is based on an EMS model. At least two mechanisms are in place to adapt decisions based on monitoring. The first is through the biological planning process where monitoring data are evaluated once or twice a year and decisions (thus far mainly those related to grazing management) are adapted based on the evaluation. The second is through plan evaluations where trends from monitoring data would be evaluated. These adaptations, which come as a result of plan evaluations, could be refinements to desired condition objectives, use of alternative management actions, or other refinements or changes in implementing

plan decisions. The adaptations are part of the process of incorporating new information, responding to trends, and addressing new issues. For example, if monitoring data and/or new research information demonstrated that a desired condition objective, such as percent perennial grass cover, is not achievable at a certain subset of locations due to soil conditions, then the desired condition objective might need to be revised to reflect an achievable objective for these areas.

*Was the AM approach established as a result of a National Environmental Policy Act (NEPA) process (analysis and documentation supporting the decision to implement the AM)? If so, how did the NEPA process address subsequent adaptive decisions and actions?*

The adaptive management (AM) approach was prescribed and analyzed in the proposed *Las Cienegas Resource Management Plan/Final Environmental Impact Statement* (EIS) (June 2002). The proposed action (implementation decisions) was written to provide flexibility in implementing the desired conditions, allocations, and special management.

As an example, flexible livestock grazing management is prescribed in the RMP, which allocates the forage and allowable livestock use for each allotment. In implementing these allocations, the plan prescribes a biological planning process where annual adjustment of stocking rates and pasture rotations is based on monitoring data. Although the plan was only finalized in 2003, two of the biological planning processes for adaptive grazing management have been implemented. The necessary adjustments in stocking rates and pasture rotations have been made without the need for additional NEPA analysis.

In addition, we are currently implementing recreation management decisions including designated recreation sites, transportation system, and interpretive products. Similarly, AM was used for recreation implementation, providing us the flexibility to pursue adjustments in recreation site locations, boundaries, and infrastructure, as needed. These adjustments were a response to new issues such as adapting to changes in grazing use of pastures, changes in recreation use patterns, and increasing immigration impacts. The adjustments were generally made as the result of collaborative discussions with users and other interested parties. The land use plan decisions were flexible enough to allow these adjustments to be made.

*Has the AM approach been evaluated in a subsequent NEPA process? If so, what has AM contributed to the NEPA process?*

Most management actions that have been implemented have been within the range of actions analyzed in Las Cienegas RMP/EIS; however, a few were not. For example, herbicide treatment for combating invasive species was described in the final EIS, but BLM administrative procedures require site-specific NEPA compliance for use of herbicides. Another example is the instance where the failure of the Empire Ranch headquarters' water system required replacement, an action that was not reasonably foreseeable and thus not covered in the final EIS.

The adaptive approach contributes to the NEPA process by allowing increased flexibility in implementation and more certainty of the impacts due to monitoring. In addition, the AM process is likely to minimize the need for RMP amendments.

## **RESULTS:**

*Benefits provided by AM to date (i.e., reduced uncertainty, improved project efficiency and efficacy compared with other management options):*

### *Limitations of using AM:*

The use of AM on Las Cienegas has provided recognition and support for the development of the monitoring program. The monitoring data have provided a better foundation upon which to base decisions. AM has provided the opportunity and latitude for increased flexibility and improved timely responses to changing conditions and demands. AM works best for implementation-level decisions and less well for land use allocation and designation decisions. The latter would require plan amendments to change.

Allocation and designation decisions are land use decisions that involve quantitatively defining resources such as amount of forage allocated for a grazing allotment, miles of roads allocated to motorized users, or boundaries for an ACEC or recreation area. BLM procedures require any changes in land use allocations or designations be addressed with a plan amendment and appropriate compliance. The result is that the AM process does not afford BLM the same type of flexibility with these types of decisions as it does for implementing the management practices that occur within the allotments or designations. BLM has the flexibility to adjust resource management activities so long as they remain within the range of actions analyzed in the final EIS.

There are still challenges in streamlining an AM process. It can break down if it takes too long to implement changes.

### *Financial cost of implementing AM:*

*How did the AM approach affect the timeline for managing the system?*

AM has worked on Las Cienegas where it is done through a collaborative process. This can increase the time and cost in the short term, but in the long term, it is probably less costly and time consuming if it avoids litigation and other escalating disputes.

### *Degree of stakeholder buy-in:*

There is a high degree of stakeholder buy-in for AM on Las Cienegas. Participants in SVPP, including rancher and recreational users, actively participate in the biological planning process and SVPP collaborative process and recognize the values that AM provides.

## **CHALLENGES:**

*What impediments, constraints, and/or challenges were overcome? How?*

Challenges that were overcome included developing a flexible planning document to incorporate the anticipated needs for change due to new information, new demands, and new technologies, among others, and developing trust with participants that similar collaborative processes to those used in developing the original plan will be employed when AM changes are made. We seem to have had success with the original planning document to support AM. Although the plan is still quite new, having been finalized in 2003, we have been successful in implementing a flexible livestock grazing program with annual adjustments in stocking rates and pasture rotations. We have also had success with implementing recreation site proposals and making adjustments to locations and boundaries based on new resource information. The biological planning process that we prescribed in the RMP has provided an effective way for the interested public to remain involved in AM decisions for grazing and recreation. The continuation of BLM's collaborative partnership with SVPP has also provided a forum for the public to have input as AM occurs and to partner on plan implementation.

*What aspects of the project need improvement?*

Aspects of the project that need improvement include better documentation of the data, evaluation, and input that leads to AM changes and continuing education to recognize needs for AM in all programs.

*How and when will the need for improvement be addressed, if at all?*

Some improvements to the project currently being worked on include reorganization of the partnership to support plan implementation better, including monitoring and AM aspects. The reorganization has included formation of more focused working groups, development of a cooperative agreement, pursuit of a nonprofit status, and increased coordination among partners.

Other improvements being worked on include continuing development of the ecological monitoring program; better documentation of data, processes, and evaluations; and establishment of process and timelines for regular updates to the plan implementation strategy.

#### **SOURCES OF INFORMATION/REFERENCES:**

Bureau of Land Management and Sonoran Institute. 2000. *A Desktop Reference Guide to Collaborative, Community-Based Planning*.

Gori D., and H. Schussman. 2005. *State of the Las Cienegas National Conservation Area: Part I. Condition and Trend of the Desert Grassland and Watershed*. Prepared by The Nature Conservancy of Arizona. Available at <http://www.azconservation.org/action.php>

*Las Cienegas Resource Management Plan/Environmental Impact Statement and Record of Decision*. June 2002; approved July 2003

Public Law 106-538. 2000. An Act to Establish the Las Cienegas National Conservation Area in the State of Arizona.

“The Sonoita Valley Planning Partnership: A New Approach to Community Participation in Public Land Management Planning.” August 2005. Paper prepared by Karen Simms for SVPP panel presentation at the White House Conference on Cooperative Conservation.