

bisect the Refuge, and a 2.5-mile auto tour route. Alamosa NWR is a larger contiguous land base with fewer public accessible roadways, having only a 3-mile auto tour route and a spur off a county road to the Hansen Bluff overlook. Both auto tour routes are near areas regularly used by waterbirds and other wildlife. Two hiking trails also exist on the Alamosa Refuge; a 2-mile (one way) trail along the Rio Grande and a 1-mile walk along wetland edges near the Bluff Overlook. Visitor numbers are directly related to wildlife activities such as courtship behaviors, crane staging, etc. Uses that are not wildlife-dependent are discouraged or even prohibited.

Hunting: Waterfowl and small game hunting would continue to be supported and encouraged. Camping areas for hunters would be provided. Hunter numbers are not regulated except during the first split of the waterfowl season.

Due to safety concerns, public elk hunting opportunities are managed. An elk hunt coordinator, under contract with the Colorado Division Of Wildlife (CDOW), accompanies the hunter to ensure safety. The hunter is selected from a public list maintained by CDOW. All applicants, for this hunt, must demonstrate a high degree of firearm proficiency and must be available on 24 hours notice.

Fishing: The shallow water in Refuge wetlands does not support a viable fishery. Wetlands either dry up or freeze solid annually which eliminates all fish that have entered the system. Therefore, fishing is not allowed on the Refuges. Creation and management of a viable fishery on the portions of the Rio Grande flowing through the Alamosa NWR will not be pursued for a variety of reasons. The major limiting factor is the inability of this stretch of river to support native fish species due to its ephemeral flows; it is often extremely low to dry during summer months.

Wildlife Observation: The Refuge staff is an active participant in the Monte Vista Crane Festival; providing technical support, as well as providing viewing areas, conducting special tours and assisting in setting a direction for the Festival. The Crane Festival is the largest wildlife related public event in Colorado (estimated 10,000 visitors in 1999).

Wildlife Photography: Photography would continue to be allowed, with no additional Refuge support provided to photographers.

Interpretation: A visitor contact station is part of the Complex's main office at the Alamosa NWR and is usually staffed daily. At Monte Vista NWR, the visitor contact station is only

open seasonally and operated by the Friends of the San Luis Valley National Wildlife Refuges or by volunteers. Self-guided auto-tour routes with interpretive signs are available to visitors on both Refuges. Additionally, on the Alamosa NWR, there is a drive to the panoramic "Bluff Overlook" which affords a magnificent view of Refuge wetlands, the Rio Grande, and the Sangre de Cristo mountains to the east.

Environmental Education: Volunteer and/or contractor led environmental education programs for local schools are provided, both as Refuge field trips and classroom presentations.

Universal Access and Design: Although efforts have been undertaken to make the Refuges accessible to all users, the Refuges are still short of this goal. Accessibility issues and needs will be addressed on a project-by-project basis as funding allows.

Cultural Resources: Humans have used the land we now call Alamosa and Monte Vista National Wildlife Refuges for approximately 11,000 years. Fourteen documented prehistoric and historic archaeological sites occur on Monte Vista NWR and eleven on Alamosa NWR. All but four sites (three on Monte Vista and one on Alamosa) have been determined as non-eligible for nomination to the National Register of Historic Places. The remaining four sites require further investigation and data collection before eligibility can be determined. These sites are being protected in accordance with the National Historic Preservation Act of 1996. Extensive archaeological sites exist in the headwaters of Spring Creek on Monte Vista Refuge and along Hansen's Bluff on Alamosa Refuge.

Elk Management: Elk on the Refuge present several problems: Elk trails and bedding areas have an impact on vegetation that could be used, or is being used, by ground-nesting birds; although the elk are easily seen from roads, they are very difficult to harvest in a safe manner; they damage fences and take livestock forage on neighboring, private lands; their movement onto and off the Refuge have resulted in collisions with vehicles on the adjacent public highways.

Current elk management, through a managed public hunt, is conducted in accordance with Colorado Division of Wildlife regulations. Hunts are generally initiated once transient elk numbers exceed 100 on the west end of Monte Vista NWR. The hunts are conducted from August 15 to February 28 and include only cow elk. Hunters are selected from a list of applicants who have demonstrated a high degree of

firearm proficiency and are available on 24 hours notice.

Proposed Alternative

Water Management: Under this Alternative, Refuge staff would continue to utilize surface and well water to create wetland habitat on both Refuges as described under the No Action Alternative. Additional efforts would focus on improving efficiency of surface water application, monitoring of water usage, better understanding of water rights, historical processes, subsurface and surface interactions, and improving knowledge of groundwater and its role in maintaining wetlands. Better methods and capabilities for monitoring habitat responses to water application would be developed to facilitate an adaptive habitat management program.

Efforts will be taken to restore meandering streambeds and their associated hydrology and riparian habitats on Refuge lands. Although such actions will not have major impacts on either the unconfined or confined aquifers of the Valley, they can positively impact localized groundwater tables and artesian wells, and increase efficiency of irrigation during the following season.

Under this Alternative, irrigation systems in all Refuge units would be upgraded as funding allows to enact more precise and efficient management of irrigation water. Currently, wetland vegetation is maintained using flood irrigation practices where water is applied at the highest elevation of a unit from a supply ditch or well head and is allowed to flow across the unit to lower elevations.

Rest: Under this Alternative, irrigation systems in all Refuge units would be upgraded as funding allows to enact more precise and efficient management of irrigation water. Currently, wetland vegetation is maintained using flood irrigation practices where water is applied at the highest elevation of a unit from a supply ditch or well head and is allowed to flow across the unit to lower elevations.

Prescribed Burning: In addition to that described under the No Action Alternative, management would implement two new initiatives. First, formation of an interagency fire team would be pursued. This idea has been discussed among the various State and Federal land management agencies, but no action has been taken. This team would be responsible for conducting prescribed burns and suppressing wildfires on member agency lands. Second, Refuge management would pursue the hiring of additional staff to develop a burn monitoring program and