

**Open Space Resource Management Plan  
For The  
Hubbell Oxbow Farm**



**March 2, 2004**



**City of Albuquerque  
Parks and Recreation Department,  
Open Space Division**

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## ABBREVIATIONS

ADA - Americans with Disabilities Act  
AMAFCA - Albuquerque Metropolitan Area Flood Control Authority  
CIOTES - Community Interpreters of the Environment  
HOF - Hubbell Oxbow Farm  
LPF - Los Poblanos Farm  
MPOS - Major Public Open Space  
MRGCD - Middle Rio Grande Conservancy District  
MRGOG - Middle Rio Grande Council Of Governments  
OSAB - Open Space Advisory Board  
OSD - Open Space Division  
RFP - Request For Proposal  
RMP - Resource Management Plan

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## MAPS

The following Maps are located in the map packet in the back of this RMP:

- Map 1: Hubbell Oxbow Farm, Area Trails and Open Space**
- Map 2: Surrounding Land Use**
- Map 3: Site Analysis**
- Map 4: Site Design**



## ACKNOWLEDGEMENTS

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Special thanks to Open Space Division Associate Planner Todd Miller who went down the long, winding path of the Resource Management Plan before me and was generous enough to lend me his map.

## CHAPTER 1: INTRODUCTION

The Hubbell Oxbow Farm (HOF) is one of the most recent additions to Albuquerque's Major Public Open Space (MPOS) network. Acquired in 1999, the 87-acre South Valley property is not yet open to the general public. This Resource Management Plan (RMP) is the first step in guiding the Open Space Division's development and management of the property and making the farm accessible to the public.

### 1.1. Organization of the Resource Management Plan

The RMP contains seven chapters. Chapter 1 describes the purpose of the RMP, the RMP approval process and City of Albuquerque planning framework, the location of the HOF, the historical background of the site, and current use.

Chapter 2 consists of a Site Analysis for the HOF. The site analysis is performed to present the physical characteristics of the HOF property and the immediate surrounding land use. The site analysis identifies the current conditions, both environmental and structural, and gauges the positive and negative affects these conditions will have on future development and programs on the property.

Chapter 3 proposes management policies to address management issues identified in the site analysis. Some of these polices are drawn from existing policies in the approved RMP for Los Poblanos Fields and other City plans.

To further address the issues raised in the Site Analysis, Chapter 4 presents a Site Design, which lays out where facilities should be located and where programs should take place on the HOF property. Chapter 4 also identifies tasks to be implemented. OSD staff presented a draft site design to the public during an open house on April 19<sup>th</sup> 2001 at the Mountain View Community Center in SW Albuquerque. Public comments have been incorporated into the final Site Design.

### 1.2 The Purpose of the Resource Management Plan

The HOF will host multiple uses, including low-impact public recreation and education, wildlife habitat areas and private agricultural operations. The purpose of this RMP is to guide the OSD in managing the property to provide for the desired uses while protecting the site's unique resources over the long term. City

agencies and the general public can refer to this document for insight into the management and site design of the farm.

The MPOS Facility plan, approved by the Albuquerque City Council in 1998 and the Bernalillo County Commission in 1999, describes the procedures and objectives for developing Open Space Resource Management Plans. The RMP for the Hubbell Oxbow Farm addresses the criteria from the MPOS Facility Plan outlined below:

"As a preliminary step in Resource Management Plans for each Major Public Open Space area, detailed baseline studies shall be conducted to inventory the following:

- archeological sites<sup>1</sup>,
- wildlife and vegetation (particularly rare, threatened and endangered species and endangered habitats),
- visual resources, opportunities for open space experiences, and
- other opportunities for satisfying MPOS purposes.

In addition the Resource Management Plan shall:

- identify land use "carrying capacity"<sup>2</sup>;
- identify access points;
- identify facility locations, including utility and transportation corridors;
- identify areas to be monitored and develop a monitoring and management plan;
- establish policies for resource management, access and parking, facility management, staffing, fees, interagency cooperation and enforcement;
- classify the parcels within the Resource Management Plan area according to MPOS type<sup>3</sup>
- evaluate impacts of proposed development within the Major Public Open Space on adjacent areas, and
- evaluate reasonable alternative development schemes."

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<sup>1</sup> During the MPOS Acquisition Priority List Preliminary Staff Report OSD staff found no evidence of archeological resources on the HOF (see section 2.2).

<sup>2</sup> Page E-1 of Appendix E in the City of Albuquerque Major Public Open Space Facility Plan (1999) defines carrying capacity as "The degree of use that a facility can accommodate without sustaining degradation of the facility or the immediate environment. The carrying capacity of a facility is determined by evaluating the facility's size, location, number of visitors, parking capacity (off and on street), scheduling and the environmental impact of use."

<sup>3</sup> The Major Open Space Facility Plan (1999) lists 7 types of Major Public Open Space: 1. Protected Undeveloped Open Space, 2. Open Space Preserve, 3. Open Space Facility, 4. Open Space Trail, 5. Special Use Area, 6. Asset Lands, 7. Land Bank.

However, the need for a RMP for the Hubbell Oxbow Farm goes beyond City requirements; this need is demonstrated by public support for Open Space facilities, the need for agricultural preservation in the Albuquerque metropolitan area, and the lack of MPOS<sup>4</sup> in the South Valley.

Completion of a RMP for the HOF meets the public's desire for the continuation of public Open Space services. The 1998 Albuquerque Recreational Services and Needs Study showed that 97% of Albuquerque survey respondents support the continuation of the City's efforts to provide recreational services such as public open space, trails and parks. The same survey indicates that 70% of respondents believe that the City should purchase more Open Space land to protect natural and cultural resources.<sup>5</sup>

There is a long tradition of agriculture in the Albuquerque metropolitan area, especially in the North and South Valleys. The Rio Grande River Valley is prime farmland because of its proximity to water and excellent soil. Unfortunately, rapid urbanization has consumed most of this farmland, and what little is left faces intense development pressure. Albuquerque lacks an institutional framework for agriculture preservation. There is a "Right to Farm" law on the books at the state level, which protects farmers from nuisance lawsuits from neighbors that seek to curtail farming operations. However, there is no proactive institution at the City level that seeks to preserve agriculture. For the most part, private groups, non-profits, and individuals pursue agricultural preservation within the City.

The City of Albuquerque Parks and Recreation Department, Open Space Division plays a vital role in agricultural preservation by purchasing significant agricultural properties in the City. To date, OSD has purchased five parcels totaling over 300

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<sup>4</sup> Major Public Open Space is defined on page E-3 of the City of Albuquerque Major Public Open Space Facility Plan as "an integrated system of lands and waters that have been designated as such in the Comprehensive Plan. The lands and waters and interests therein have been or shall be acquired, developed, used, and maintained to retain their natural character to benefit people throughout the metropolitan area by conserving resources related to the natural environment, providing opportunities for outdoor education or recreation, or defining the boundaries of the urban environment.

<sup>5</sup> Albuquerque Recreational Services and Needs Study 1998; Assessment of Citizen Perceptions: Center for Opinion Research, Institute for Social Research, University of New Mexico. This number refers to Question #59: The City currently maintains several Major Public Open Space areas such as the Rio Grande Bosque, the Sandia Foothills and portions of the Petroglyph National Monument. "Do you think the City should purchase more land to protect natural and cultural resources?"

acres. OSD recognizes that agricultural land fits the agency's mission of "preserving natural and cultural spaces" for the public. The farmlands have proved very popular with Albuquerque residents; events such as the Corn Maze and Harvest Festival at Los Poblanos Fields draw thousands of visitors. The HOF RMP is the first step in preserving additional farmland and providing public access to another Open Space in Albuquerque.

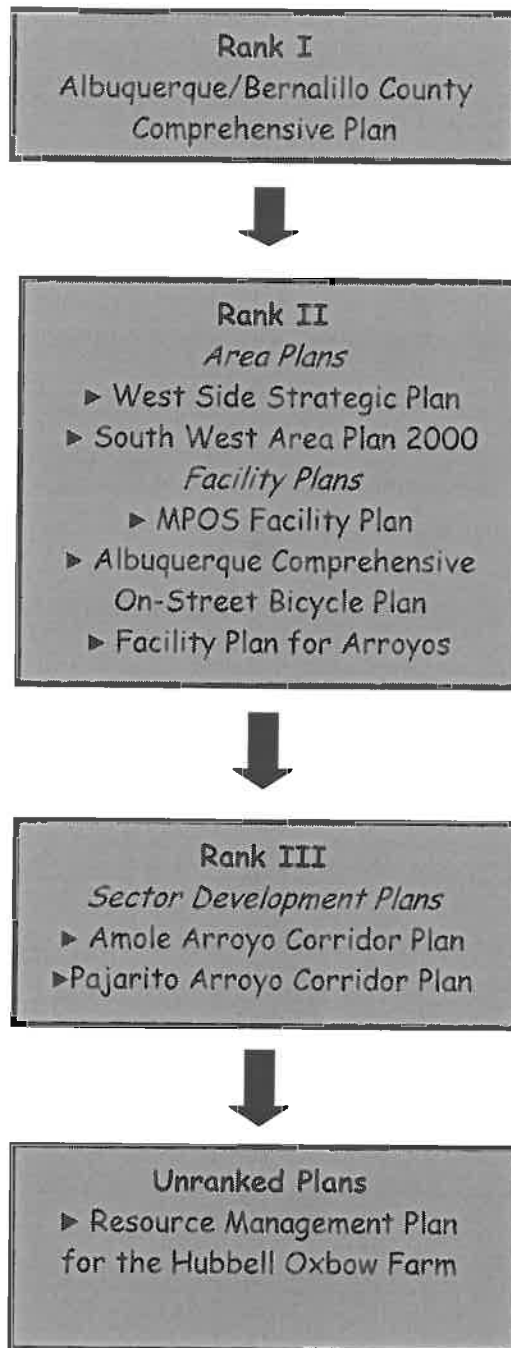
### **1.3 Resource Management Plan Approval Process**

After a draft RMP is completed, it is reviewed by the Open Space Advisory Board (OSAB) for compliance with the MPOS Facility Plan objectives (outlined in Section 1.1 of this RMP) and inclusion of relevant policies from existing City plans (shown in Figure 2). Because the HOF is in the Extraterritorial Zone, the OSAB would then send the RMP to City/County Extraterritorial Land Use Committee as a Special Project for review. The City's Chief Administrative Officer would then take final action.

### **1.4 City of Albuquerque Planning Framework**

In order to be approved this RMP must be consistent with existing higher ranked City plans. The City of Albuquerque ranks official plans as Rank I, Rank II and Rank III. The Albuquerque/Bernalillo County Comprehensive Plan is a Rank I plan. Rank II plans include Facility Plans and Area Plans. Rank III plans include the Sector Development Plans and Neighborhood Development Plans. Certain City plans are classified as unranked plans. These include plans approved prior to specific bond projects, covering areas smaller than those typically covered by neighborhood sector development plans, bond projects with privately owned land and bond projects with city-owned land. This RMP is an unranked plan. Figure 1 illustrates the City plan hierarchy as it applies to the RMP for the Hubbell Oxbow Farm.

Figure 1. Albuquerque Planning Hierarchy.



Appendix 1 provides a description of the plans in Figure 1 and the goals and policies in these plans that pertain to the HOF. The goals and policies for the HOF in Chapter 4, and the site plan proposals in Chapter 5 of this plan should be consistent and compatible with the policies of these higher and equally ranked plans.

### 1.5 Location of the Hubbell Oxbow Farm

The HOF is located on the Southwest side of the City. The property is 87 acres, bordered by Coors Blvd. on the east, the Albuquerque Metropolitan Area Flood Control Authority (AMAFCA) Hubbell Dam<sup>6</sup> on the west and south, and Rio Bravo Blvd. on the north. Map 1, in the map packet, illustrates the vicinity of the HOF within Albuquerque's South Valley, as well as nearby trails and Open Space.

The HOF is a City-owned property that lies within Bernalillo County, and is zoned as A-1, Rural Agricultural Zone. The goals of this designation are to "safeguard the future water supply, to provide open and spacious development in areas remote from available public services, and to recognize the desirability of carrying on compatible agricultural operations and spacious home developments in areas near the fringes of urban development"<sup>7</sup>.

#### **1.5.1. Legal Description**

A parcel of land being a portion of Tract 3C-1 of the Middle Rio Grande Conservancy District (MRGCD) map #48 and a portion of the Plat of the Lands of Federal Realty Corporation as recorded in Volume C1, Folio 17, in the Office of the County Clerk, Situate with Projected Section 10, T. 9n., R.2E., N.M.P.M., Town of Atrisco Grant, Bernalillo County, New Mexico.

### 1.6 Hubbell Farm History

The farm property was part of the 28,600 acre Pajarito Grant, established in 1739 from the Rio Grande west to the Rio Puerco. During the 1800's the Gutierrez family became the major controllers of the Pajarito Grant. Juliana Gutierrez married James Hubbell in 1848. The Hubbell heirs amassed land holdings of 30,000 acres in the Pajarito and Atrisco Grants, operated trading posts and produced wool. Over the years the heirs sold off portions of the land. The last owners of the farm, prior to the purchase by the City, were the Mead family.<sup>8</sup>

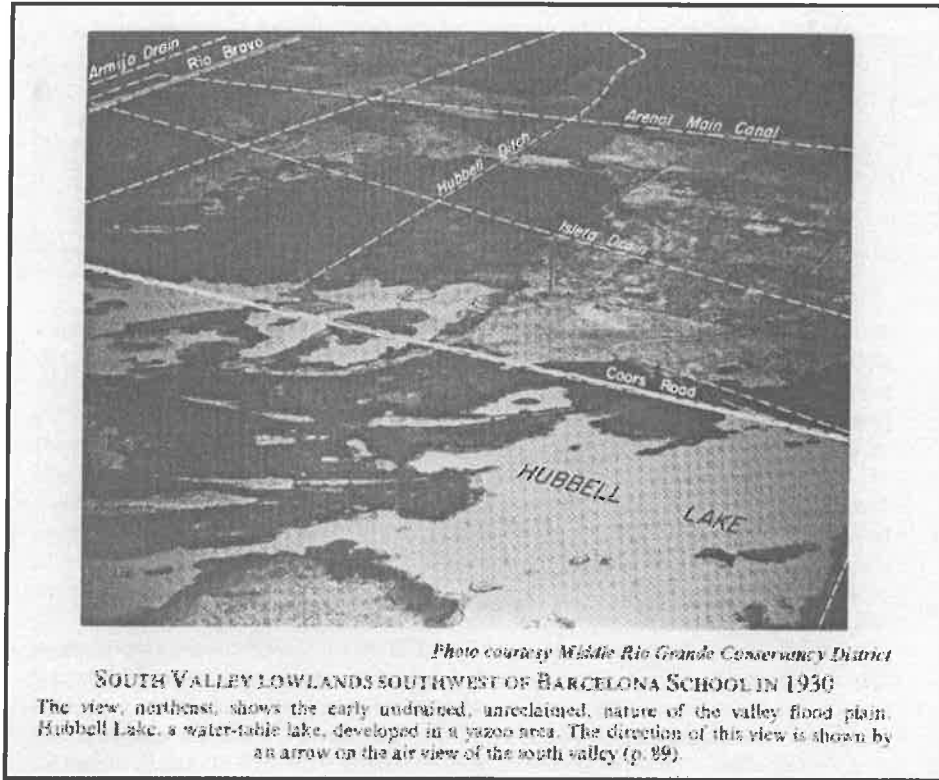
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<sup>6</sup> The Hubbell Dam is a 48-acre AMAFCA-owned facility immediately adjacent to the west side of the HOF. The Hubbell Dam is part of the lower section of the Amole Arroyo, which extends from the Ceja edge in the west to the Rio Grande Valley State Park in the east. The Hubbell Dam supports a variety of vegetation and wildlife due to a high water table and depressed geography, which creates a "moisture sink". The Hubbell Dam area is considered in this RMP because of the natural crossover opportunities between the Basin and the HOF for wildlife habitat preservation and public recreational use. The Hubbell Dam is described in more detail in Sections 4.5.2., 4.5.3, and 4.6.2 and Appendix 1 of this RMP.

<sup>7</sup> Bernalillo County, NM, *Zoning Code* (1995) Sec. 7, County A-1 Rural Agricultural Zone.

<sup>8</sup> South Valley Neighborhood Association, "Preserve the Hubbell Property" (brochure), 1998.

The Hubbell Oxbow Farm was at one point part of an oxbow lake formed by a meander in the Rio Grande. Until the mid 1930's, water table lakes covered the area. Flood control and drainage have since made farming and settlement possible.



*Figure 2. Hubbell Lake in 1930.*

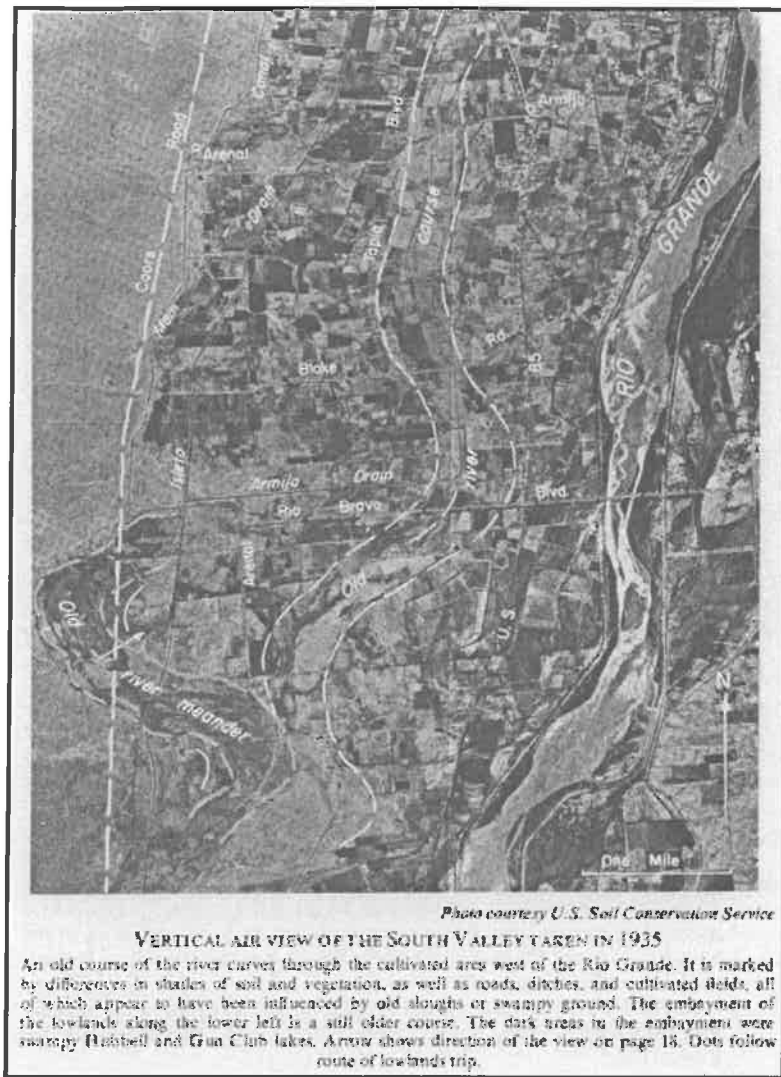
The yellow line represents Coors Blvd. and the green line represents Rio Bravo Blvd.  
 Source: Albuquerque; Its Mountains, Rivers and Volcanoes, Vincent Kelly.

### 1.7 Open Space Acquisition

The Hubbell Oxbow Farm is one of five farm properties that the OSD has purchased. The project history below outlines the identification, acquisition and assessment processes for the HOF.

The 1979 Albuquerque/Bernalillo County Comprehensive Plan listed the HOF as a proposed Open Space parcel. The property was listed for sale in 1989, but the OSD was unable to purchase the property due to a lack of funds.





**Figure 3. Vertical Air View of the South Valley 1935.**  
 The blue lines represent the path of the old Rio Grande River Meander. The yellow line represents Coors Blvd. and The green line represents Rio Bravo Blvd. Source: Albuquerque; Its Mountains, Rivers and Volcanoes, Vincent Kelly.

In 1992, an Albuquerque resident proposed a recreation facility in the southerly 33.66 acres of the property, to be called Campo de Sueños. The proposal outlined plans for seven baseball fields and a concessions stand. Due to proposed alcohol sales at the concession stand, the proposal received indefinite deferral from the Bernalillo County Planning Department. There were also concerns that the proposal would alter the intended primary purpose of the property as Major Public Open Space, and negatively affect adjacent properties.

In 1994, the Open Space Advisory Board filed an MPOS Protection/Acquisition application for the property,<sup>9</sup> proposing that the property be upgraded from the second to first priority group for acquisition. The OSD Preliminary Staff Report on the MPOS Acquisition Priority List outlined basic information about the site and presented a series of recommendations, including:

- fence and sign the entire property; begin periodic patrols
- keep agricultural lands in production for wildlife forage crops
- use AMAFCA drainage right-of-way area for nature trails and picnic area
- develop or upgrade trail system along Gun Club Lateral/Amole Arroyo levee
- offer interpretive tours on a scheduled basis

The report stressed that the property had been identified as a vital component of the MPOS system, and that it would provide much needed public open space to South Valley residents.

In January 1997 Albuquerque voters approved a two-year Quarter-cent sales tax for the acquisition and development of land for parks and Open Space. The City collected the tax revenues from gross receipts from July 1, 1997 to June 30, 1999. The funds collected from this tax were instrumental in acquiring several MPOS areas, including the Los Poblanos Fields and the Hubbell Oxbow Farm. In March 1999, the City paid \$1,254,000.00 to purchase the property for MPOS.

### 1.8 Current Activities on the HOF property

A contract farmer currently maintains the HOF and uses the ditches for irrigation to grow alfalfa. The latest lease agreement between the farmer and OSD requires the farmer to pay the City a total sum of \$5,250, and terminates on December 31, 2003. The lease can be viewed in Appendix 5.

In general, the lease directs the farmer to "use the Premises as and only for the agricultural purposes of growing, producing, and harvesting alfalfa and other types of hay and grasses and farm the Premises in a good and husband like manner,

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<sup>9</sup> Page 17 of the City of Albuquerque Major Public Open Space Facility Plan contains a description of the preliminary steps for acquisition of open space property: "Each property requires that a nomination form be completed which details the site's relevant characteristics. The Open Space Advisory Board evaluates nominations and determines whether to recommend adding a parcel to the MPOS network. The site evaluation includes a cursory assessment of the natural resource and environmental characteristics of the site.

observing accepted agricultural techniques and procedures, and in accordance with a cropping plan approved by the City." The farmer must provide all labor, equipment and supplies to meet the obligations under the lease. In addition, the farmer must provide and pay for all utilities on the Premises. Any improvements to the property must be approved by the City and performed at the farmer's expense. The lessee is responsible for performing any repairs and maintenance to the Premises. Such repairs shall be at the expense of the lessee and made promptly and when needed. Some of the lease conditions are incorporated into the policies in Chapter 3; alternative arrangements may also be adopted.

Although many of those driving along Coors or Rio Bravo probably enjoy the open views across the farm, there is very limited public use of the property. A few local people walk or ride horses on the dirt farm roads. The adjacent Hubbell Dam provides significant habitat for native plants and animals, and some people walks or ride horses there, too. Unfortunately, there is evidence of unauthorized use by ATV's at the Hubbell Dam, where several informal trails have been created by repeated use. Coordinated management of the HOF and Hubbell Dam, along with designated public parking and trails along with proper signage, gates, and fencing would encourage low-impact public use of the property, while discouraging unauthorized use and preserving valuable wildlife habitat.



*Figure 4. Looking south across the farm to the Hubbell Dam wall.*

## CHAPTER 2: SITE ANALYSIS

Due to the added potential for public education, recreation and habitat conservation at the HOF if the property is considered in conjunction with the adjacent Hubbell Dam, this Site Analysis will consider both properties together. The objective of the Site Analysis is to analyze potential use of the area, based on current use patterns, physical characteristics at the site, environmental conditions that affect the site, and surrounding land use. The Site Analysis identifies the current conditions and gauges the positive and negative affects these conditions will have on future development and programs on the property. Conclusions will be incorporated into the appropriate policies in Chapter 3 and the Site Design in Chapter 4.

### 2.1 Multiple Use

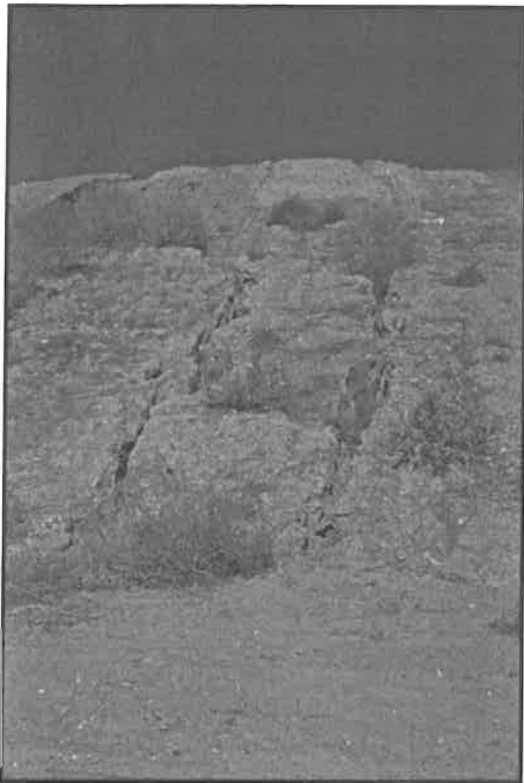
The OSD acquired this property in order to preserve farmland for agriculture, provide for appropriate public use with educational programs, trails and picnic areas, and preserve habitat in conjunction with the Hubbell Dam. These properties also provide open views sheds of the West Mesa and East Mountains for those traveling around the property. Aside from minimal public use for walking and riding horses, agriculture is the only one of these potential uses that has been developed on the site. The Management Goals and Policies in Chapter 3, and the Site Design in Chapter 4 will aim to provide for these multiple uses.

### 2.2. Surrounding Land Use.

Before focusing on the HOF site itself, it is useful to first analyze the adjacent infrastructure and surrounding land uses that influence the site. Map 2 illustrates the surrounding land use and infrastructure.

#### 2.2.1. Streets.

Rio Bravo Blvd. passes along the north side of the HOF, and Coors Blvd. passes along the east side. Both are busy streets serving the rapidly urbanizing area around the site, and have both audio and visual impact on the HOF. As illustrated in Figure 4, the erosion occurring on the Rio Bravo re-alignment berm presents visual blight and may impact the property as soil moves down the steep slope.



*Figure 5. Erosion from the Rio Bravo Re-Alignment.*

The section of Coors Blvd that borders the eastern edge of HOF is two lanes in each direction with a 55 mph posted speed limit. The section of Rio Bravo that borders the northern edge of the HOF is one lane in each direction with a 35 mph posted speed limit. Now that the Rio Bravo extension is being completed, and as development increases on the Westside, there could be an increase in traffic on both roads.

The adjacent streets may provide important trail connections to the HOF. MRCOG has recognized an existing bike route heading south along Coors Blvd., and has proposed a bike trail along Coors Blvd. heading north from the HOF. MRCOG has also proposed a bike trail adjacent to the HOF heading west on Rio Bravo, and a proposed bike lane heading east. The City's Trails and Bikeways Facility Plan also proposed this as a Primary Trail, defined as a facility that is of primary importance to the regional transportation network.

It is also worth noting that Suntran bus Route 52 passes the HOF on Coors Blvd. Near the HOF, there is a bus stop along Coors Blvd., south of the Country Side Mobile Home Park.

### 2.2.2. The Gun Club Lateral.

The Gun Club Lateral flows southwest from the Arenal Main Canal, briefly paralleling Rio Bravo Blvd. and then crossing under Rio Bravo, where the lateral enters an underground culvert. After crossing under Rio Bravo, the Gun Club Lateral continues south along the West side of the Hubbell Dam. The Gun Club Lateral is the water source for the irrigation ditches at the HOF. The City's Trails and Bikeways Facility Plan proposed the portions of the Gun Club Lateral next to Coors Blvd. and the Hubbell Dam as Secondary Trails.

### 2.2.3. Arroyos.

The Amole Arroyo begins at the Westgate dam and runs south for 7.6 miles to end at the Hubbell Dam. On the way, a major portion of the arroyo passes through the Amole Dam, which captures sediment, and can handle slightly less than the upstream run-off from a 25-year flood. Any additional run-off would flow down to the Hubbell Dam. The Amole Arroyo has a watershed area totaling 4.2 square miles (2640 acres)<sup>10</sup>. The Borrego Arroyo flows east into the Hubbell Dam, through a large gate structure that traps large debris.

The City's Trails and Bikeways Facility Plan proposed several portions of the Amole Arroyo as Secondary Trails, which are defined as trails that supplement the primary trails network and may provide access to it. The Arroyo could also provide a potential trail connection with the HOF.



*Figure 6. Graffiti along Amole Arroyo.*

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<sup>10</sup> Albuquerque, NM, "The Amole Arroyo Corridor Plan", as adopted by the City Council on October 21, 1991 and the Bernalillo County Commission on April 28, 1992, 9.

One drawback is that the walls along the sides of the Amole Arroyo as it passes under Rio Bravo are covered in graffiti. This visual blight needs to be cleaned up before a trail system is developed; more regular use of the area for recreation may also discourage graffiti.

#### **2.2.4. The Hubbell Dam.**

The Hubbell Dam is capable of containing 5,411 acre-feet of water. In the event of a flood, the piped discharge system would transport all excess water to the Arenal Main Canal east of the Hubbell Dam. If the flooding is too great for the discharge pipe, or if the pipe is clogged, the water flows over the cement spillway on the northern end of the dam into the HOF. The spillway is designed to handle 19,854 cubic feet of water per second.<sup>11</sup>

The dirt road on top of the Hubbell Dam is a potential public trail, with some current use. It connects to the dirt road into the northwest corner of the farm, and to the dirt roads along the Amole Arroyo and Gun Club Lateral. The Hubbell Dam road also provides nice views of the HOF and the surrounding landscape.

Management issues visible within the Hubbell Dam include unauthorized off-road vehicle use and illicit garbage dumping. This area needs to be secured to protect the unique habitat within the dam and provide an appealing recreational destination.

#### **2.2.5. Utility Corridors**

There are overhead utility lines on the east side of the property along the Coors Blvd. right of way, and directly over the farm road separating Fields #1 and #2. Both have a visual impact on the property. There are no gas or water lines on the property. Water is delivered to the property from the ditch system described above.

#### **2.2.6. Surrounding Land Use**

Aside from those features mentioned above, Map 2 illustrates that the land surrounding the HOF is a mix of agricultural, low density residential and retail. On the east side of the property, across Coors Blvd., is a large section of land zoned County A-1. This is agricultural land that stretches from the southern boundary of the HOF to the parcel immediately south of Rio Bravo, which has been re-zoned

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<sup>11</sup> Ibid.

for Commercial Retail. A Super Walmart has been proposed for this corner, and the outside lighting, increased traffic and resulting noise will have some impact on the HOF. On the west side of Coors Blvd is the Rio Bravo Square Shopping Center, zoned County C-1, which is identified as the neighborhood center in the West Side Strategic Plan. This also generates some traffic and noise. The closest neighborhoods to the HOF are Rose Acres to the north and the Country Side Mobile Home Park to the south of the Hubbell Dam. Residents of these neighborhoods may one day be frequent users of the property. As the surrounding land is developed, the HOF may end up being an island of farmland in an urban landscape.

### **2.3 Agriculture**

OSD manages over 400 acres of flood-irrigated farmland, a phenomenal amount for a major metropolitan area, in five separate properties. The area surrounding the HOF has a long history of agriculture and the HOF property continues this tradition. However, development around the property is increasing and both large and small farms are disappearing. Keeping the HOF property in agricultural production helps preserve agriculture in the South Valley area as well as in the City as a whole.

The OSD has established an effective, low-cost system for keeping the land in farming by contracting private farmers to use and maintain the farm fields, ditches and roads, and manage pests and weeds in order to grow crops at the HOF.

#### **2.3.1. Contract Farming**

Currently, the City leases the HOF to a local farmer to manage and maintain, on a cash basis. With this arrangement, the farmer can use the whole property to grow commercial crops. During the 2000 growing season the farmer leasing the land planted the property in alfalfa. Through annual lease renewals, the farmer has maintained that alfalfa crop until the present time. Alfalfa has several advantages over other crops, including its ability to fix nitrogen into the soil, and the fact that it will grow productively for 5-7 years without having to break the soil and re-plant it. The latter minimizes dust.

At other Open Space farms, the City uses Farm Operating Agreements instead of cash leases. Through Operating Agreements, farmers agree to manage and maintain the property, and may grow commercial crops in exchange for growing wildlife crops on 25% of the acreage.



There are advantages to each form of management, and the OSD will need to choose the most appropriate one for the HOF.

### 2.3.2. Irrigation and Ditch Maintenance.

The average annual rainfall for the City of Albuquerque is about 10 inches<sup>12</sup>. The lack of precipitation, variable summer monsoons, and high summer daytime temperatures make the efficient and effective delivery of irrigation water crucial to farming at HOF and throughout the Albuquerque area.

The Gun Club Lateral brings river water to the HOF, where the farmer can open gates to fill Ditches A and C. Ditch A feeds Ditch B; Ditches A and C together feed Ditch D. Ditch C is 5' concrete while the Ditch A, B and D are 4' dirt. Dirt ditches raise several farm management issues. While they are easy to build and re-build as needed, they lose irrigation water to seepage into the ground, and they provide a good growing surface for weeds. Besides consuming water intended for crops, weeds physically impede and slow down the flow of irrigation water. Slow irrigation and the need to repeatedly mow and/or spray the weeds add significantly to the farmer's labor costs.



*Figure 7. The earthen Ditch B, running west along the power line.*

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<sup>12</sup> New Mexico in Maps, Edited by Jerry L. Williams, University of New Mexico Press, 1986.

Water moves downhill, so efficient ditches must have enough slope to move the water to its destination. Some of the ditches have inadequate slopes. For example, Ditch C used to fill Ditch D, and water would flow from west to east across the top of Field 3 to water that field. However, the ditch is so poorly sloped that water no longer flows east to the end of Ditch D. Therefore, the farmer had to extend Ditch A down the length of Field 2 to fill Ditch D from the east and irrigate the eastern portion of Field 3. Extending Ditch A means the farmer has more ditch to maintain, at a higher cost. To improve irrigation, several of the ditches may need to be re-graded, possibly in combination with field leveling (see next section). Furthermore, the earthen ditches should be lined.



*Figure 8. Looking south down concrete-lined Ditch C.*

### **2.3.3. Field Leveling**

In order to water crops, the farmer opens gates in the ditches so that water can flow downhill across the fields. To maximize the percentage of water that is used by the intended crops, and minimize water waste, each field should be leveled so that water from the ditches moves down a uniform slope from one side of a field to the other. Proper field leveling not only conserves water, but also promotes uniform crop growth and fewer weeds. Furthermore, properly leveled fields irrigate more quickly than uneven fields, with lower labor costs. The fields have not been leveled in several years, and are in need of re-leveling.

#### **2.3.4. Pest and Weed Management**

The presence of weed species such as Siberian Elm trees, Field Bindweed and Johnson Grass are a potential problem at HOF. Elm tree roots growing along ditches threaten their integrity, and other weeds compete with crops for space, water and nutrients. OSD and the farmer should be aware of problem species and take steps to eradicate them when found.

#### **2.3.5. Farm Roads.**

Circulation routes within the HOF are limited. There is a 12' dirt farm road located on the north end of the property. This road connects to the Hubbell Dam road, which in turn can be taken to the south end of the property. There is a rough farm road along the western edge of the property that terminates at Ditch D. Coors Blvd. serves as the transportation corridor along the eastern edge of HOF. With some improvement, the dirt farm roads could serve as public trails through the property.

#### **2.3.6. Farm Storage.**

Currently there are no secure storage areas for farm equipment or supplies at the HOF. The farmer's equipment has suffered minor vandalism when left on site, so the farmer stores everything elsewhere. This is a real inconvenience for the farmer.

### **2.4 Public Use**

Potential public uses at the HOF include education and interpretive activities, low-impact recreation on trails, community gardening and harvesting, picnics and special events. These are popular at other Open Space farms, but have not yet been developed at the HOF. As programs are developed, accessibility will be an important issue to address, and visitor facilities will need to be improved.

#### **2.4.1. Public Access and Parking**

The public access system should allow access to the desired uses at appropriate points, and use gates and fences to prevent access where it is not appropriate. As illustrated in Map 3, there are three access points into the property. Two access points are located along Coors Blvd., where dirt roads run west into the farm. The third access point is in the northwest corner of the HOF, where people traveling along the Amole Arroyo, Gun Club Lateral or the Hubbell Dam road can access a dirt road into the property. Currently, there are no gates or fences around the

HOF property itself, so the public can easily drive into and around the property from any of these access points, and there is evidence of unauthorized off-road vehicle access. Gates and fences will be required to secure the property from unauthorized use, and provide access at appropriate places, especially as the development of adjacent land increases traffic in the area.

At the southeast corner of the Hubbell Dam, a ramp provides a public access point from Coors Blvd., where a gate prohibits motorized vehicles. Although people use the roads along the Gun Club Lateral and Amole Arroyo as trails, gates attempt to prohibit motorized access at several intersections. However, these gates are often without locks and left open, and ATVs have created several other informal trails and access points into the Dam. The lack of a gate at the access point into the northwest corner of the HOF may also invite ATVs into the farm.

AMAFCA has a three-string barbed wire fence in front of the cement spillway, along the south end of the HOF. There is also some fencing along the sides of the Dam where it meets the Amole Arroyo and Gun Club Lateral. AMACFA has signs posted along this fence and along the west edge of the farm, immediately adjacent to Ditch C, that mark the edges of the agency's property.

There is no dedicated public parking area at the HOF. A parking area would substantially increase the potential for public use at the property.

#### **2.4.2. Educational and Interpretive Activities**

The agricultural system at the HOF and the riparian habitat at the Dam provide great educational and interpretive opportunities for school groups and the general public. OSD Environmental Education staff and trained volunteers could lead activities, and self-guided interpretive trails are also a possibility.

#### **2.4.3. Recreational Trails**

At this point there is no usable bike/pedestrian circulation system on the HOF property, and few people use the dirt roads through the property for walking, jogging, or riding horses or bicycles. In addition, the dirt road on top of the Hubbell Dam (and the adjacent Gun Club Lateral) has excellent potential as a public loop trail, with fine views over the surrounding landscape. To make a loop, it is possible to travel up the road on one side of the Dam, cross the Amole Arroyo, and travel down the road on the other side of the Dam. At its north end, the Hubbell Dam road also connects with the dirt roads along the Amole Arroyo, the Gun Club

Lateral, and the dirt road leading east into the HOF. Bicycle and pedestrian access to the HOF from the surrounding neighborhoods is limited. Improving the dirt farm roads and the connecting trails along the Amole Arroyo, the Gun Club Lateral, Coors and Rio Bravo Blvds. could enhance the potential for low-impact recreation at the HOF.

#### 2.4.4. Viewpoints

From the HOF there are panoramic views of the Sandias and the Manzano mountain ranges to the east. These views are especially dramatic from the Hubbell Dam road, which is higher than the farm. The view to the west of the HOF includes the riparian area within the Dam and the bluffs that overlook the property. There are also clear views of the entire property from both the north and south ends. There is also a great view of the HOF from the vehicle pull-off on Rio Bravo. Formal viewpoints could be developed along the trails, and at the vehicle pull-off, with amenities such as interpretive signs and benches.



*Figure 8. View (looking east) from the AMAFCA Hubbell Dam road.*

#### **2.4.5. Community Gardening and Harvesting**

Community Gardening and Harvesting are popular activities at Los Poblanos Fields Open Space, and may have potential at the HOF if contract farmers are interested. Community Gardening involves selecting a garden site and dividing plots or rows among members. Community Harvesting invites the public to pick crops planted by the farmer, for consumption or donation to food banks or other charitable organizations. Both are good ways to involve the public in the farm.

#### **2.4.6. Picnic Tables**

There are several shaded sites along the quieter western edge of the HOF that might be appropriate for public picnic tables. This area is conveniently located along potential trails and out of the way of farm operations and the habitat area inside the Dam.

#### **2.4.7. Special Events**

Special Events typically involve a larger number of people or a different kind of use than is normally permitted on the property. The Corn Maze and Harvest Festival at Los Poblanos Fields are two examples of popular Special Events that require Special Use permits from the OSD and/or other agencies. Special Events at the HOF could serve a different area of the city. This plan will develop policy guidelines to ensure that any Special Events at the HOF are safe and appropriate for the site.

#### **2.4.8. Accessibility**

People with impairments affecting their hearing, vision, mobility or other abilities may be limited from participating in public use programs by inadequate physical infrastructure at the site, or the nature of the program. Upon request, the OSD may need to adjust programs to make them fully accessible to the public. When possible, the design of visitor facilities should also provide for access by visitors with mobility impairments. While the ramps accessing the Dam road may be too steep for people with mobility impairments and wheel chairs, the roads through the farm are relatively flat, and may be accessible with some re-grading.

### **2.5 Habitat**

As part of the RMP, staff conducted inventories of the vegetation and wildlife at the HOF property and the adjacent Hubbell Dam. The wildlife inventory for the HOF and Dam focuses mainly on birds, which the farmland habitat can support without creating nuisance situations. In addition, the HOF is actively farmed and

therefore not ideal habitat for large mammals. Small mammals such as gophers and ground squirrels reside on the farm, but become pest species if their populations grow the point where they disrupt farming operations. Coyotes frequent the property, and probably help reduce the numbers of pest species. See Policy Section 4.4 of this RMP, which discusses appropriate native plant and animal species for habitat areas.

### 2.5.1. Vegetation

Native plant communities are essential habitat for birds and other small wildlife in and around the farm. There is a tree grove and some individual trees along the west side of the farm, but no hedgerows or other native plant assemblies have been planted on the farm. The physical high water table and basin topography of the Hubbell Dam, however, have created a "moisture sink" that allows the area to several types of native vegetation (See Figure 9). In February 2001, OSD performed a vegetation assessment in the Hubbell Dam and the west edge of the HOF. The assessment is designed to inventory trees, shrubs, and flowering plants. Grasses were not included in the assessment because they are difficult to identify during the winter months. Trees and shrubs are inventoried by identifying individuals. Inventories were taken in the two heavily vegetated sites in the Dam and the area between the Ditch C<sup>13</sup> and the Dam road, on the west edge of the HOF. The results of the field assessment are shown below in Figure 10.



*Figure 9. Vegetation in the AMAFCA Hubbell Dam.*

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<sup>13</sup> See Section 4.7 for a description of the irrigation identification system in this RMP.

*Figure 10. Trees, Shrubs & Flowering Plants Found in AMAFCA Hubbell Dam.*

Trees	Common Name	Scientific Name
	Rio Grande Cottonwood	Populus wislizenii
	Russian Olive	Elaeagnus angustifolia
	Coyote Willow	Salix exigua
	Tamarisk	Tamarix pentandra
	Siberian Elm	Ulmus pumila
<b>Shrubs</b>	Four-wing Saltbush	Atriplex canescens
<b>Flowering Plants</b>	Sand Sage	Artemisia filifolia
	Annual Sunflower	Helianthus annuus
	Broadleaf Milkweed	Asclepias latifolia
	Broad leaf cattail	Typha latifolia
	Prickly Pear Cactus	Opuntia erinacea
	Purple Aster	Machaeranthera canescens
	Wire rush	Juncas mexicanus
	Yerba mansa	Anemopsis californica

### 2.5.2. Bird life.

OSD performed a bird survey for the HOF and Dam on December 12<sup>th</sup> 2000, with the assistance of Hart R. Schwarz, executive director of the New Mexico Ornithological Society.<sup>14</sup> The survey consisted of a visual and audio assessment. All birds that were seen and heard during the field trip were recorded. Figure 11, below, is a record of the birds confirmed during the visit.

*Figure 11. Birds recorded at the HOF & Dam, 12/12/00.*

#### Raptors and other birds of prey

Kestrel  
 Northern Harrier Hawk  
 Sharp Shinned Hawk  
 Western Redtail, Rufous Variation (winter only)  
 Great Horned Owl

#### Other Birds

American Crow  
 Bewick's Wren

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<sup>14</sup> Mr. Schwarz is the author of the Placitas Open Space Bird Survey: March 1997 to February 1998. The survey was written for OSD and the Las Placitas Association.



Robin  
White Crown Sparrow  
Sand Hill Crane (Winter only, 4 individuals)  
Rock Doves  
Song Sparrow  
McCowan's Longspur  
Chestnut Collared Longspur  
Savannah Longspur  
Roadrunner  
Flicker  
Hornlarks  
Starlings  
Say's Phoebe

None of the birds sighted during the field visit are threatened or endangered species. The red-tailed hawk is a rare variety but not officially classified as endangered.

## **2.6 Administration**

Administration includes the topics of staffing, law enforcement, public participation and interagency cooperation.

### **2.6.1. Staffing.**

Open Space Division staff from the Resource Management & Visitor Services (RMVS), Maintenance & Operations (MO), and Strategic Support (Support) units oversees and provide technical assistance in managing Open Space properties. MO staff oversees the operation and maintenance of Open Space properties, including the farm infrastructure and visitor facilities. RMVS staff oversees the work of the contract farmers, and coordinates planning and public program activities. With help from Support staff, they also develop and oversee the farmers' compliance with Operating Agreements. Support staff allocates Open Space funds and do accounting for projects on Open Space properties, and supervises RMVS and MO staff. One staffing issues at HOF will be how to delineate responsibilities between the contract farmers and OSD staff. This will be addressed throughout the policy chapter of this document.

### **2.6.2. Law Enforcement.**

OSD Law Enforcement Officers oversee the enforcement of Open Space rules and regulations at all Open Space properties. Each group of officers is assigned to patrol different areas of the City, and is in touch with a radio dispatcher at the OSD headquarters who can receive calls from the public and direct officers to check into possible law enforcement issues at specific locations. One issue is that because OSD Law Enforcement Officers are assigned to numerous Open Space properties, they cannot always be available to oversee policy enforcement at a specific location. OSD Trailwatch Volunteers could greatly assist them in this service. Trailwatch Volunteers regularly visit Open Space properties and are trained by the OSD to provide guidance to visitors, monitor visitor compliance with policies and monitor resource conditions.

### **2.6.3. Public Participation.**

Open Space in Albuquerque has historically received enormous public support, and public participation in managing Open Space properties is critical to the success of the program. There was widespread public support for the City of Albuquerque's purchase of this property for Open Space, and OSD would like to encourage public participation in the management of the property. In accordance with current policy, public participation must occur during public hearings to review Management Plan proposals and revisions. The OSD is also available to create opportunities for public input in managing the property on an ongoing basis, by creating volunteer opportunities and attending meetings with neighborhood groups and other interested parties.

### **2.6.4. Interagency Cooperation.**

Opportunities for interagency cooperation at HOF include creating habitat areas and corridors within and around the property, and designing and building new farm infrastructure and visitor facilities. AMAFCA, Bernalillo County, the State Game and Fish Department, US Fish and Wildlife Service, Natural Resource and Conservation Service and Middle Rio Grande Conservancy District could lend valuable support in managing the property. The OSD should foster interagency cooperation whenever possible in managing HOF.

## CHAPTER 3: MANAGEMENT GOALS, ISSUES AND POLICY

The following section outlines the management issues at the HOF, goals to aim for in managing the property, and policy to achieve those goals. The format for the section is the management issue heading, followed by the goal statement, a brief discussion of the management issue and then the policy to achieve the goal. The goal statements and the policies address the issues raised in the Site Analysis and Environmental Conditions sections of this plan, input from the April 19, 2001 public open house and policies from existing city-approved plans (relevant sections of these plans are presented in Appendix 1).

### 3.1 Multiple Use

*Goal: Designate a MPOS category for the HOF that allows for appropriate multiple uses of the property.*

Discussion: Multiple Uses at HOF may include agriculture, low-impact recreation and educational activities. In order for the HOF to become a public use facility it must be classified under one to the categories described in the City of Albuquerque Major Public Open Space Facility Plan. An MPOS category defines acceptable public use types of development for the property. Since most Open Space categories aim to preserve sites in their natural state, the most appropriate MPOS designation for the HOF and most other Open Space Farmlands is Special Use Area. The Major Public Open Space Facility Plan defines a Special Use Area as a " parcel within the MPOS Network that serves a unique function and is developed with facilities that are unique in the POST Network. These facilities contribute to the inventory of recreation opportunities in the metropolitan area but are not commonly found in the MPOS Network. These facilities generally require special programming or management" (p. 14).

In addition, Policy A.1.F of the MPOS Facility Plan states, "Special use areas must serve an open space purpose. These areas shall include facilities that are not allowable in other MPOS types but that contribute to overall network needs. Management policies applicable in other types shall be applicable in this type. However, more specialized uses may require specific policies. Special use areas may be developed and managed by governmental and private entities other than the City of Albuquerque Open Space Division if:

- The proposed uses comply with the Extraordinary Facilities Ordinance.

- A site development plan, resource inventory and management plan are provided to the City Open Space Division demonstrating that the proposed uses do not negatively impact adjacent Major Public Open Space.
- Limits are placed on the allowable uses in the Special Use Area, and
- Maintenance requirements and development limitations are incorporated in the lease to the outside entity"(p. 14).

Such policy allows OSD to maintain the property for its goals while at the same time fulfilling farm obligations efficiently and effectively through a more experienced party.

### **Policy 3.1.1. Designated Open Space Category and Purposes**

This plan designates the HOF as an *Open Space Special Use Area*.

- The HOF shall serve the following general Open Space purposes:
  - Conservation of natural resources and environmental features, including farmland, public view sheds and habitat for native plants and animals.
  - Opportunities for outdoor recreation through on-site educational programs and exhibits and interpretive trails.
  - Opportunities for low-impact recreation such as walking, jogging, bicycling and horseback riding.
  - Shaping of the urban form by preserving farmland and view sheds.
  - Conservation of archaeological resources if intact cultural artifacts or sites are found within the property.
  - Provision of trail corridors within and along the boundaries of the property.
- In addition to the above purposes, HOF shall maintain agricultural use, produce food for wildlife and provide opportunities for public participation in farming and farm related special events.
- The HOF Special Use Area may be managed by private entities through leases or farming agreements with OSD, as defined by Policy 4.2.1 of this RMP.
- The cultivation of crops and operation of farm vehicles and machinery, normally not allowed on MPOS properties, are permitted in the HOF Special Use Area.

### **Policy 3.1.2. Permissive Uses.**

Permissive uses are those which do not disrupt the preservation of HOF as farmland, and which are compatible with other uses. These include:

- Agriculture for commercial use and wildlife feed.
- Low-impact recreation, including walking, jogging, bicycling and horseback riding.
- On-leash dog walking.
- Educational activities facilitated by or with approval of the Open Space Division.
- Permanent farm infrastructure, including permanent ditches, wells and other irrigation structures, and dirt roads.
- Temporary farm infrastructure, including storage buildings, vegetable stands and greenhouses.
- Visitor facilities including trails, interpretive signs and exhibits, drinking fountains, picnic tables, permanent and temporary parking lots and temporary restrooms.
- Habitat areas such as wetlands, hedgerows and tree groves.

**Policy 3.1.3. Conditional Uses.**

Conditional uses, requiring a Site Development Plan and review as specified by the MPOS Facility Plan and the Extraordinary Facility Ordinance<sup>15</sup>, include:

- Permanent buildings such as restrooms, barns, storage buildings, greenhouses, classrooms and visitor centers, which may require approval of Site Development Plan.
- Farm related special events, which require Special Use Permits from the Open Space Division.
- The use of chemical pesticides and insecticides, which requires prior approval of the Open Space Division.

**Policy 3.1.4. Prohibited Uses.**

Prohibited uses are those not allowed by existing City, County, State and Federal Law. Among prohibited activities cited in the City of Albuquerque and Bernalillo County Open Space Management Ordinances (RO-1994, Section 9, Article 2, and #88-9, respectively) are:

- Trespass by unofficial vehicles,
- Carrying or discharging of firearms or other weapons,
- Discharging fireworks
- Removing of natural resources or archaeological artifacts,
- Harming or harassing wildlife,

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<sup>15</sup> The Extraordinary Facilities in Open Space Ordinance "defines the current procedures for obtaining approval for facilities within MPOS that are not parking lots, trails or other minor facilities."

- Dumping waste,
- Consuming alcoholic beverages or
- Possessing glass containers.

In addition, City of Albuquerque and Bernalillo County Animal Control Ordinances (RO-1994, Section 9, Article 2, and 88-16-5D and 6A, respectively) state that:

- Dogs are prohibited from running at large, and must be on a leash.

### **3.2 Surrounding Land Use.**

*Goal: Manage and improve the HOF in a way that promotes effective linkages to surrounding land use and adjacent infrastructure.*

Discussion: The adjacent streets, arroyos and ditches provide excellent opportunities to link the HOF with the network of trails that get developed in the area. Public access from some of these points may need to be controlled, and audio and visual impact of adjacent roads may need to be buffered.

#### **Policy 3.2.1. Streets.**

To minimize the impact of adjacent streets and link to possible trails, the OSD should:

- Plant hedgerows and create other landscaping buffers to minimize audio and visual impact of adjacent streets.
- As trails along adjacent streets are built and designated, create effective links to them from the HOF.

#### **Policy 3.2.2. The Gun Club Lateral.**

To enable effective irrigation and trail linkages, the OSD shall coordinate with the MRGCD to:

- Ensure that modifications and improvements in the Gun Club Lateral do not adversely affect the HOF, and control access into the HOF.
- Create effective linkages between designated trails along the Gun Club Lateral and the HOF.

#### **Policy 3.2.3. Arroyos.**

To ensure effective floodwater management and trail linkages, the OSD should work with AMAFCA to:

- Ensure that modifications and improvements in the Amole and Borrego Arroyos do not adversely affect the HOF, improve security, control access into the HOF and reduce graffiti.
- Create effective linkages between designated trails along the Arroyos and the HOF.

#### **Policy 3.2.4. The Hubbell Dam.**

To minimize impact on the HOF, protect wildlife habitat and provide trail linkages and viewpoints, the OSD shall work with AMAFCA to:

- Control access into the HOF and ensure that modifications and improvements in the Hubbell Dam do not adversely affect the HOF.
- Create effective linkages between designated trails along the Hubbell Dam Road and the HOF.
- Protect and enhance native plant communities for wildlife habitat within the Hubbell Dam.

#### **Policy 3.2.5. Utility Corridors**

To minimize impact on the HOF, the OSD shall work with utility companies to

- Ensure that modifications and improvements to the utility lines across the HOF do not adversely affect the property.

#### **Policy 3.2.6. Surrounding Land Use**

The OSD will work with area neighborhoods and adjacent property owners to:

- Develop effective links to the property, while controlling access.
- Buffer the impact of adjacent development on the HOF.
- Promote Open Space programs, facilities and resource conservation.

### **3.3 Agriculture**

*Goal: By contracting farmers to farm the HOF property, OSD will maintain the HOF property in agricultural production using methods that enhance the agricultural landscape, ensure long-term agricultural productivity, and provide adequate farm infrastructure and habitat for native animal and plant species.*

Discussion: Maintaining the HOF in agricultural production is one of the top priorities for the property. However, the OSD lacks the necessary resources and staff to farm the property. Therefore, the City will continue contracting private farmers to manage the cropland. Contracts may include cash leases, as is currently

the case at HOF. Alternatively, as is the practice on other Open Space farmlands, the OSD may contract private farmers through a type of Professional Service Contract known as a Farm Operating Agreement, whereby farmers manage the cropland in exchange for making improvements and growing wildlife crops.

Efficient farm operations require certain infrastructure, such as irrigation ditches and farm storage facilities for tools and equipment. Irrigation ditches in particular must be functional in order for farming to be successful. Furthermore, in order to increase irrigation efficiency and save water, ditches will need to be lined and fields re-leveled.

### **Policy 3.3.1. Contract Farming**

The Open Space Division shall contract an individual, group or organization to farm the land for a renewable period of up to five years.

- OSD shall select the farmer who demonstrates the best ability to meet the goals and policies outlined in this plan and work with the selected farmer to develop a clear contract, to which the farmer is bound in farming the land.
- Contract policies shall ensure that the property is farmed in such a way that preserves agricultural landscape, maintains long-term agricultural productivity, maintains groundwater quality and soil stability, protects habitat for native plants and animals, and produces food for migrating waterfowl. Policies shall direct the farmer to:
  - Grow crops on all viable fields, with the exception of designated habitat areas, trails, wildlife blinds, parking lots, access roads, and structures listed in this plan.
  - Minimize the use of chemical pesticides, herbicides and fertilizers.
  - Maintain soil stability through the use of no-till farming, planting alfalfa and other perennials, and by establishing hedgerows.
  - Maintain soil fertility by rotating crops and adding chemical free mulch, compost or manure.
  - Protect the habitat areas for native plants and animals within the Open Space. These areas may include wetlands, tree groves and hedgerows.
  - Maintain the public view sheds on the property identified in this plan.
  - Obtain written permission from OSD before beginning any activity or placing any structure not explicitly approved by this plan.



- Prepare annual crop and irrigation plans and submit them to OSD prior to implementation.
- To evaluate the contract farmer's compliance with this RMP and the contract, OSD may inspect the property at any time, and may request annual reports on farming activities from the contract farmer. If the farmer is not in compliance, OSD may request that the contract farmer adjust activities accordingly.
- If, at any time, OSD determines that the contracted farmer is not making satisfactory progress to improve land management practices, OSD may terminate the contract.
- OSD shall work with the contract farmer and other interested parties to periodically monitor soil fertility, ground water quality and wildlife habitat.

### **Policy 3.3.2. Irrigation and Ditch Maintenance**

The Open Space Division is responsible for providing irrigation infrastructure at HOF; the contract farmer will use and maintain this infrastructure.

- OSD is responsible for building new ditches and installing alternative irrigation technologies, and making major repairs to ditches resulting from regular use.
- OSD shall pursue efficiency improvements in the irrigation system whenever possible.
- OSD may negotiate payment for improved irrigation infrastructure and water delivery fees with the contract farmer as part of the contract.
- OSD may install meters to monitor water use for irrigation.
- The contract farmer is responsible for scheduling and managing crop irrigation.
- The contract farmer is responsible for conducting regular ditch maintenance, including patching cracks, mowing along ditches, and burning or removing weeds and other debris in preparation for irrigating.
- The contract farmer is responsible for any damages to ditches or other irrigation technologies resulting from misuse or neglect by the contract farmer.

### **Policy 3.3.3. Field Leveling.**

Unless agreed to otherwise by the Open Space Division, the contract farmer shall have responsibility for field leveling, and shall include field leveling activities in annual crop plans and reports.

- The OSD may be responsible for field leveling in combination with new berms, ditches, pipes or other OSD-funded irrigation or facility improvements.
- For the purpose of compensation for termination of contracts, the OSD may amortize the cost of field leveling and other irrigation improvements over the term of the contract.

#### **Policy 3.3.4. Pest and Weed Management**

The Open Space Division shall work with the contract farmer to monitor and treat pest and weed infestations as necessary to maintain the long-term productivity of the farm.

- OSD and the contract farmer are encouraged to use organic, non-chemical pest and weed management methods whenever possible. Crop planning should specifically address weed infestation problems.
- To remove small mammal pests, the OSD and the contract farmer may use traps or poisons that do not pose a threat to ground water, other wildlife or the public.
- Pesticides and insecticides may be permitted with the express permission of OSD, only when no other pest treatment methods are effective.<sup>16</sup>
- OSD and the contract farmer may apply herbicides to treat invasive weeds. The herbicide and application method may not threaten groundwater, crops, wildlife or the public.
- OSD and the contract farmer should periodically monitor pest and weed abundance and distribution, and adjust farm operations and other management practices as necessary.

#### **Policy 3.3.5. Farm Roads**

The OSD shall be responsible for maintaining the farm roads within the property, and may seek licenses with from AMAFCA and MRGCD to manage and maintain Hubbell Dam maintenance roads and lateral roads adjacent to the property.

- The contract farmer will be responsible for repairing any damages to farm roads resulting from misuse by the contract farmer.

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<sup>16</sup> OSD and the contract farmer must keep in mind that the use of certain pesticides and insecticides may be incompatible with the standards outlined by the New Mexico Organic Commodities commission that are to be adhered to on the HOF property, in accordance with Policy 7.2.1. Contract Farming of this RMP. Therefore, their use should only be considered as a very last resort with the knowledge that crops at the HOF may not be able to be classified as organic.

### **Policy 3.3.6. Farm Storage**

If necessary, the Open Space Division may design and build permanent farm buildings and fenced enclosures for storage of farm equipment, materials and supplies.

- The OSD is responsible for designing and building permanent farm buildings and fenced enclosures, and repairing major damage caused by normal use.
- OSD may negotiate payment for the costs of storage facilities with the contract farmer as part of the contract.
- The contract farmer shall be responsible for regular maintenance of farm buildings and fenced enclosures, and for repairing damage caused by misuse or neglect.
- With approval from OSD, the contract farmer may also place temporary portable farm structures (such as a tool shed or vending stand) on the property.
- Upon termination of the contract, the contract farmer must remove temporary structures from the property, after sending written notice to the Open Space Division.
- The Open Space Division shall work with the contract farmer to carefully design and place farm buildings and fenced enclosures on appropriate sites so as to minimize impact on public view sheds, avoid habitat areas, facilitate circulation of visitors and farm equipment, and preserve the most productive farmland (See section 4.3.6.).
- The design and construction materials for temporary and permanent farm buildings should replicate styles traditional to the Rio Grande Valley and blend with the landscape.
- Permanent buildings that will be accessed by the public should offer the highest level of accessibility, and must comply with ADA standards.
- Recycled and salvaged materials shall be used when possible, as long as they follow the above policies.

### **3.4 Public Use**

*Goal: To develop the HOF into a multi-use facility that incorporates public uses with agricultural operations and wildlife habitat areas.*

Discussion: In order to successfully combine public use with agricultural operations and wildlife habitat areas, OSD must define the allowed public use activities and where on the HOF property they occur. Public use activities that are

allowed at the HOF include community gardens and you-pick crops, educational and interpretive activities, low-impact recreation and special uses and events. Public use requires adequate parking, trails and other facilities. Policies herein will guide the OSD in providing and maintaining such facilities.

One of the MPOS Facility Plan criteria for Resource Management Plans, outlined in section 1.1, is to define carrying capacity for the property. For this section carrying capacity is identified for education and interpretive activities, recreation and special uses and events.

#### **Policy 3.4.1. Public Access and Parking.**

The OSD shall design, build and maintain, public access points, parking areas, gates and fencing that controls and directs visitor access to HOF. These facilities are identified in Map 4.

- Public vehicular access to HOF shall be along the dirt road entering the property from Coors Blvd., south of Rio Bravo.
- A parking area shall be designed and built along the dirt road, using permeable gravel or other natural materials. The parking lot should accommodate about 25 vehicles, including at least three paved and marked ADA parking spaces.
- Access trails and sidewalks from the parking lot should be designed with the highest level of accessibility.
- Pedestrian and non-motorized access points are at the northeast corner, northwest corner, immediately north of ditch D and in the southeast corner of the HOF.
- OSD may design and build additional access points as necessary.
- Gates into the property shall remain locked, accessible only to vehicles operated by OSD, the contract farmer and other agencies and individuals cooperating in the management of the property.
- OSD shall seek license with AMAFCA and MRGCD to develop access routes from the Hubbell Dam and Gun Club Lateral maintenance roads.
- Fencing shall be placed along property boundaries as necessary to prevent vehicular access to the farm.
- OSD may install fencing around new habitat areas for protection.
- Signs informing visitors about the regulations at the property should be located at points of public access.

### **Policy 3.4.2. Education and Interpretive Activities**

OSD and other interested groups may develop and implement public education and interpretive activities about HOF's natural and cultural resources.

OSD environmental staff should develop plans and curricula for educational activities and programs at HOF. These education activities and programs should be available to school groups, local residents, farm groups and other interested parties.

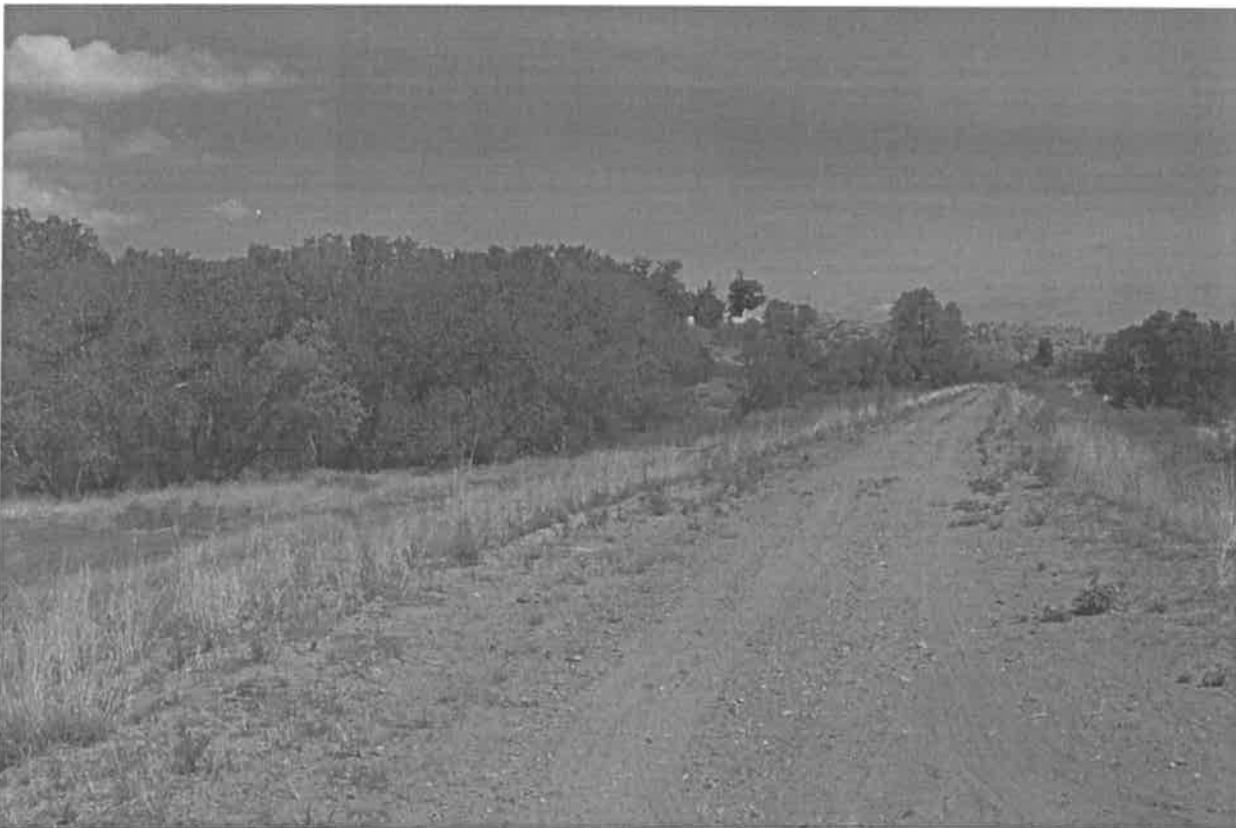
- OSD must notify the contract farmer at least one week in advance of the educational activity and should not impede on scheduled farm operations.
- The contract farmer and other interested parties may also design and lead educational activities and programs for the public with approval of OSD.
- Educational and interpretive activities and programs should avoid farm operations and risks to public safety, avoid disturbing wildlife or damaging habitat areas, and should stay on designated visitor trails and farm roads as much as possible.
- Educational groups must remove their trash from HOF or place trash in the available receptacles.
- OSD staff or the contract farmer must supervise educational groups.
- In accordance with existing OSD environmental education policy, the provisional carrying capacity per individual educational activity at the farm is 35 students. There must be 1 supervisor, not including OSD staff, for every 6-8 students. OSD may adjust these numbers as experience demonstrates necessary.
- Interpretive displays and kiosks may be placed along trails, at viewpoints and access points, and should follow accessibility standards established by the ADA or other sources.
- The OSD shall continue to produce and distribute, or display informational materials, such as brochures, news bulletins and videos, about HOF to members of the general public.
- Hay bales may be used to construct temporary amphitheatres, providing school groups and the public with a chance to gather for presentations, sunset chats, and other activities.

### **Policy 3.4.3. Recreational Trails.**

Walking, jogging, bicycling, horseback riding, walking dogs on leash and visiting the farm in wheel chairs or other non-automotive devices used by people with mobility impairments will be permissible types of low-impact recreation on designated trails (see Policy 3.1.2., 3.1.3., and 3.1.4. on permissible, conditional and prohibited uses).

- The dirt farm roads at HOF shall also be designated recreational trails, and the OSD may build additional trails for recreational use.
- New trails should not traverse fields in places where they may interfere with farm operations. Trail surfaces should be unpaved, hard packed dirt, which blends with the natural landscape and is accessible to a variety of users. Trails should be at least 6 feet in width.
- Trails should be constructed to the highest level of accessibility possible and must meet ADA standards. ADA standards dictate trail entrances at least 32 inches wide, cross slope should not exceed 2% and elevation gain should not exceed 5%.
- Trails at HOF should be designed to link with nearby bicycle trails, lanes or routes, and multiple use trails.
- Trails at HOF shall link with on site parking and access routes. These links shall be designed according to ADA guidelines.
- The OSD is responsible for managing recreational activities at HOF so that those involved avoid disturbing farm operations and wildlife habitat areas.
- Recreational users shall only be allowed on farm roads and designated trails, and shall not trespass onto agricultural fields or habitat areas.
- HOF visitors must follow multiple trail use rules and etiquette promoted by the City of Albuquerque Parks and Recreation Department:
  - Stay to the right and allow others to pass.
  - Announce yourself before passing. Pass others cautiously, on the left and in single file.
  - Upon encountering a horse on a trail, slow to a stop, avoid making sudden moves, and ask the rider how to proceed.
  - All users should yield to persons in wheel chairs or with disabilities.
  - Dogs must be on-leash, and owners must pick up and remove their wastes.
- So that the number of recreational users does not exceed the capacity of on-site parking spaces for the various public uses at the farm, the provisional carrying capacity for recreational use is set at 20 people on the farm at one time. OSD may adjust the carrying capacity as experience demonstrates.
- The OSD may seek to develop trails on AMAFCA property adjacent to HOF and the MRGCD service road along the Gun Club Lateral immediately west of the AMAFCA property. In seeking licenses to designate these as trails, OSD shall follow the following guidelines:

- Design of the Hubbell Dam trail should incorporate trail design guidelines found in the Amole Arroyo Corridor Plan (see Appendix 1, section A1.7).
- Design of the trail on the MRGCD service road along the Gun Club Lateral should incorporate trail design guidelines found in the Pajarito Arroyo Corridor Plan (see Appendix 1, section A1.8, Policy 6).
- Levee trails and other trails on the property should be designed to connect and provide a safe and efficient circulation route for recreational users.
- In seeking licenses to designate these trails, OSD may also design observation areas, as illustrated in Map 4



*Figure 12. The Hubbell Dam Road.*

#### **Policy 3.4.5. Community Gardening and Harvesting.**

Community gardens are spaces set aside for community cultivation and harvesting of vegetables. Community harvesting involves arrangements whereby members of the public pick crops grown by the farmer, in exchange for a fee or for donation to charity. The contract farmer is encouraged to work with other interested parties

in organizing community gardens and harvesting activities. The role of OSD is to provide technical guidance and oversight.

- OSD may encourage the farmer organize community gardens and harvesting, but may not require the farmer to do so.
- The contract farmer must obtain written approval from OSD before planting community gardens or conducting community harvesting activities (they can be included in the annual crop plan).
- Other parties interested in establishing community gardens at HOF must obtain written approval from OSD.
- If approved by the OSD, the contract farmer or other parties interested in establishing community gardens or community harvesting shall be responsible for organizing public participation in these programs, assume liability for public access to and use of these areas, and may charge the public a fee for crops or participation.
- Effort should be made to incorporate accessible areas in community gardens at HOF.
- Community gardens and harvesting areas should be located to avoid habitat areas, preserve important views, facilitate safe public access from existing trails and parking lots and to keep the public away from dangerous farm equipment or machinery.
- The carrying capacity for community gardening and harvesting activities is provisionally set at 35 people at one time. The OSD may adjust this number if needed. Community gardening and harvesting activities involving more than 35 people at one time may be considered special use activities, and event sponsors must obtain an OSD Special Use Permit prior to the events (see Policy 3.4.7).

#### **Policy 3.4.6. Picnic Areas.**

OSD may design and build picnic areas that blend in with the landscape, and provide the public with opportunities to enjoy outdoor picnics.

- Picnic areas should be designed to minimize impact on the HOF environment, landscape and farming operations.
- Picnic tables and shade structures should be constructed of stone, wood adobe or other natural materials.
- Picnic areas should be located and landscaped in order to facilitate the circulation of visitors, avoid farming operations, and minimize environmental impact.



- Picnic areas should have the highest level of accessibility possible and at a minimum must meet ADA standards.
- Picnic areas should be designed and located to minimize long-term maintenance needs.
- Portable toilets and garbage cans may be placed near the picnic areas or elsewhere on the property for the use of the visiting public at HOF.

### **Policy 3.4.7. Special Events**

Special events such as the annual Harvest Festival and Corn Maze at Los Poblanos Field are very popular with the general public. These events provide the public with unique outdoor opportunities and an educational forum on preservation of Open Space, wildlife habitat and farm systems. Special Events may also include other organized activities that attract a larger than usual number of visitors to the farm, to do activities not usually permitted, and/or take visitors beyond the reach of public use facilities. Special Events may occur at HOF, according to the following criteria:

- Special Events (not including community garden activities described in Policy 4.5.3) that require prior approval of a Special Use Permit from the OSD are defined as those which involve;
  - Groups of over 20 people (other than Educational/Interpretation, Community Gardening and Harvesting activities: see Policies 3.4.2. and 3.4.5.).
  - The use of fields and other off-trail areas not designated for public use.
  - Potential disturbance to adjacent properties.
  - Potential disruption of farm operations, local traffic patterns or normal public use of the property.
- Parties other than OSD seeking to hold a Special Event at HOF must apply for a Special Use Permit from OSD. OSD will evaluate requests and forward those requests for special events that will involve cooking, open fires or other potential public and environmental health issues and traffic or potential public safety concerns to the City of Albuquerque's Special Events Committee.
- The OSD may approve those special uses and events at HOF that meet the following Special Event Guidelines:
  - The Special Event cannot occur elsewhere, or has a clear rationale for being held at HOF.

- Increases public awareness of HOF and its resources.
  - Avoids disturbing resident wildlife or degrading habitat areas,
  - Keeps the public away from crop areas, farm machinery and farm operations.
  - Minimizes disturbance of local residents,
  - At least 2 attendants per parking area should be present to help direct vehicles.
  - Parking areas, entrances and exits and rows should be clearly marked.
  - Provide and clearly identify an adequate number of ADA designated parking spots.
  - Provide at least 2 ADA designated portable toilets per event, and one additional portable toilet per every 500 people expected.
  - If deemed necessary by OSD, contract Open Space Rangers for public safety and traffic direction.
  - Obtain proper permits for the sale of food and merchandise.
  - Provide adequate lighting for nighttime events.
  - Provide proof that special use and event participants are covered under insurance and liability policies held by event organizers and the City is released from liability associated with the special use or event.
- OSD shall approve only Special Use Permit applications that clearly comply with the Special Event Guidelines and Open Space rules and regulations.
  - With prior approval from OSD, special use and event organizers may charge attendees for entrance or other fees associated with the special uses and events.
  - With prior approval from OSD, Special Event organizers may place temporary structures on the property, and are responsible for their installation, damage or loss, and removal from the property upon conclusion of the event.
  - Special Event organizers must provide prior notice to adjacent property owners if there is likelihood of disturbance.
  - OSD staff may be present at any special event to ensure compliance with Special Event Guidelines and promote public awareness about HOF.

**Policy 3.4.8. Accessibility.**

The OSD shall comply with Title II of the Americans with Disability Act, the MPOS Facility Plan and Management Guide (Appendix 2), the Mayor's Executive Instruction Number 8 (Appendix 3), and other Federal and State policies and standards in designing visitor facilities that are accessible and usable by people

with disabilities, and in making reasonable accommodations to provide access for people with disabilities to participate in the public use programs and activities at HOF enjoyed by the public at large, according to the following guidelines:

- Reasonable accommodations may include, but are not limited to, adapting program and activity rules and registration processes to people with disabilities; providing extra staff to assist disabled users; providing the required aids to people with speech or hearing impairments; providing Braille, large print documents, or other aids, for those suffering vision impairments; and removing physical barriers to disabled visitors in the site.
- Reasonable accommodations may not need to be made if they would cause the City to suffer undue economic or administrative burden, or fundamentally change the nature of the program or activity; but even in these cases, the OSD must take some action to provide disabled users with access to public programs and activities at HOF.
- Whenever possible, whenever necessary to accommodate disabled users, and with the exception of the recreational use of farm and ditch roads as trails, public programs and activities shall be sited along fully accessible routes that maximize potential use by people with and without disabilities.
- OSD may need to change existing facilities if doing so is the only way to provide equitable access to visitor programs and activities for people with disabilities. This may include re-grading existing farm roads.
- New facilities shall, whenever possible, be constructed to enable access and use by people with disabilities.
- The OSD may not need to make changes to existing facilities, or design new facilities to enable access by people with disabilities, if doing so would change the fundamental nature of the site, program or activity, or if it would create an undue administrative or financial burden; but even in these cases, the OSD must take some action to provide disabled users with access to public programs and activities at LPF.
- Where possible, essential visitor facilities should be clustered along a fully accessible route that enables equal access by disabled visitors and the public at large.

### 3.5 Wildlife Habitat Areas

*Goal: Recreate and protect native plant communities at the HOF in which wildlife native to the Middle Rio Grande Valley can thrive.*

Discussion: The middle Rio Grande valley has lost acres of natural habitat to development. Wetlands and farmland have been especially lost or damaged. Open Space properties such as the HOF offer opportunities to restore habitat for native flora and fauna. In addition, the HOF property provides a model of farmland as habitat. The bird inventory documented in Section 3.5.2. illustrates the variety of bird life found at the HOF and Hubbell Dam. This diversity should be protected and increased by maintaining and protecting the bosque-like area found in the Hubbell Dam and creating habitat at the HOF. The objective of new habitat areas should be to increase the complexity of the farm ecosystem by increasing the diversity of plant and wildlife species. Habitat areas should be designed to increase the diversity of songbirds, waterfowl, raptors, reptiles, and non-pest species of small mammals.

Created habitat could include new types of vegetation including wetlands, trees and hedgerows. Wetlands are generally constructed by digging a depression, lining it with some kind of impermeable material (such as plastic liner, clay, vegetable emulsion), backfilling with soil, filling with water, and planting with appropriate vegetation. Given its shallow groundwater, good visibility from the surrounding road, existing wildlife and habitat diversity and relative protection, the Hubbell Dam is an especially promising site for wetlands.

Hedgerows consist of shrubs and small trees that provide wildlife habitat, particularly food, perches and movement corridors for birds. They can reduce dust from wind erosion, and also reduce the visual impact of roads and development on the north and east sides of the property, and of the Hubbell Dam wall on the west and south sides.

Trees can be planted individually or in groves to provide shade for visitors, habitat for native plants or animals, and/or fruit. Hedgerows are vegetation corridors of shrubs and trees that provide habitat, food and shelter for wildlife. They are usually planted along the edge of a field, defining the area and creating windbreaks.



*Figure 13. Cottonwood trees growing along the Hubbell Dam.*

#### **Policy 3.5.1. Vegetation.**

The OSD may create native plant communities at the HOF, including wetlands and hedgerows, and may work with AMAFCA to do so in the Hubbell Dam area.

- Wetlands should be designed and constructed for use by migratory wading shore and birds, and waterfowl, particularly in the autumn and winter months. Wetlands should be build in protected sites, far from public roads and access points, and should not be accessible to the public. The OSD may build viewpoints and blinds for public viewing of wildlife.
- Hedgerows may be planted along the edge of the farm fields, so as to provide birds and other farm-compatible species with perches and nest sites, movement corridors and food sources, as well as erosion windbreaks. Hedgerows should be planted with a mixture of native grasses, forbs, shrubs and/or trees and also non-native yet non-invasive fruit producers to provide food and habitat especially for songbirds. Trees over 10 feet tall should be spaced out within a hedgerow so as not to block large areas from view. Because their roots may damage small farm ditches, hedgerows should not be located immediately adjacent to ditches, but should be planted so as to receive irrigation water from the fields.

- Trees planted individually or in groves for habitat purposes should be located where they can be irrigated along the outside edges of the farm, should not be planted adjacent to ditches, and should not be accessible by visitors.
- The contract farmer, with prior approval from OSD, may plant and maintain trees and hedgerows.
- OSD shall work with volunteers and other agencies to monitor the diversity and populations of native plants and animals in these native plant communities.
- Farming operations and public use impact shall be monitored and adjusted to minimize effects on these native plant communities.
- OSD is encouraged to work with state, federal and City agencies, such as AMAFCA and MRGCD, the contract farmer, University of New Mexico and other interested parties in designing, building and monitoring habitat areas.
- OSD, in conjunction with AMAFCA, should develop a monitoring system for vegetation in the Hubbell Dam.

#### **Policy 3.5.2. Bird Life.**

OSD is encouraged to work with interested parties in monitoring native wildlife, especially bird life.

- OSD, in conjunction with AMAFCA, should develop a monitoring system for wildlife in the Hubbell Dam.

### **3.6 Administration**

*Goal: Provide sufficient staffing, law enforcement, public participation and interagency cooperation to ensure proper management of the property.*

Discussion: Open Space Staff and Law Enforcement Officers will implement most of this RMP with the assistance of public participation and interagency coordination, as listed below.

#### **Policy 3.6.1. Staffing**

OSD shall work with the contract farmer, the public and cooperation agencies in managing the property.

- OSD's Resource Management and Visitor Services (RMVS) staff shall coordinate with the contract farmer in:
  - Monitoring compliance with farming agreements.
  - Evaluating requests for Special Events and Special Use permits.

- Planning and overseeing farming activities, public involvement projects, special events and educational activities.
  - Planning and designing new habitat areas, farm infrastructure and visitor facilities.
- As needed, RMVS staff shall coordinate with appropriate governmental bodies (the City's Open Space Advisory Board, Special Events Committee, Environmental Planning Commission and City Council, Bernalillo County Commission and Open Space Advisory Committee) in:
    - Conducting public hearings regarding Site Development Plans, large Special Events, and revisions of this Resource Management Plan.
  - RMVS staff shall coordinate with local citizen groups to:
    - Hold meetings to discuss on-going management issues at HOF.
  - Maintenance staff shall coordinate with the contract farmer in:
    - Maintaining farm infrastructure, including roads and ditches.
    - Maintaining visitor facilities.
    - Planning and designing new habitat areas, farm infrastructure and visitor facilities.

### **Policy 3.6.2. Law Enforcement**

Open Space Law Enforcement Officers shall monitor and enforce applicable policies at HOF (such as those listed in Section 4.1) with the assistance of Trail Watch Volunteers. OSD should organize and train Trail Watch Volunteers to perform the following duties at HOF:

- Provide visitors with guidance about HOF property, trails, and resources and policies.
- Monitor policy compliance and report policy infractions to OSD.
- Monitor resource conditions and report problems to OSD.

### **Policy 3.6.3 Public Participation**

OSD shall seek public participation in major management decisions at HOF, making on-going improvements at the property, and monitoring resources.

- OSD shall work with the applicable government body and follow the appropriate policies in providing adequate public notice and holding public hearings to review Site Development Plans and proposed large Special Events.

- OSD shall attend meetings held by citizen groups to discuss ongoing management of HOF. At these meetings OSD shall consider their input and provide verbal or written response to their questions, concerns and proposals.
- OSD shall seek to create opportunities for the public to volunteer on improvement projects, monitoring conditions at the property, and serving as Trailwatch Volunteers.

**Policy 3.6.4. Interagency Cooperation**

OSD will seek the assistance of other agencies and organizations in planning designing, building, monitoring and maintaining new farm infrastructure, visitor facilities and habitat areas at HOF.



## CHAPTER 4: SITE DESIGN & IMPLEMENTATION

The final step of a Resource Management Plan is the formulation of a Site Design, with an outline of tasks to be accomplished. Map 4 in the map packet at the back of this RMP is the Site Design for the Hubbell Oxbow Farm, and presents a layout that achieves the goal of combining public use, wildlife habitat and private agricultural operations. The Site Design proposes the most suitable locations for new physical infrastructure, the relationship between new and existing infrastructure, and where programs and user activities are to take place on the HOF property. However, the Site Design is merely a guide to help the OSD implement this RMP; if deemed advantageous at a later time, individual facilities and improvements may be placed in alternative locations.

The Site Design is formulated by building upon the pertinent information and policies in previous chapters of this RMP. When necessary, these policies are cross-referenced in the text below. All figures, sections and policies cited in the text below refer to the main text of this RMP unless otherwise indicated.

This chapter also includes instructions for implementation. The implementation timeline is 9 years, divided into three-year phases. Phase 1 goes into effect upon adoption of this RMP, followed by Phase 2 and Phase 3. Phase 1 will focus on improving security and visitor facilities through gates, fencing, parking, trails and signs. Phase 2 will focus on improving farm infrastructure such as ditches and equipment storage. Phase 3 will address wildlife habitat, including potential wetlands. The 9-year timeline is established to allow for a tenth year of evaluation in preparation for producing a new or revised RMP. These phases are only intended as a guide to prioritizing tasks and is not intended to be a rigid schedule; tasks may also be implemented at different times, as resources become available. Figure 16, at the end of this chapter, presents a summary of the implementation process.

### 4.1 Multiple Use

The Site Design depicted in Map 4 reflects the Open Space Category designation of Special Use Area, as designated in Policy 3.1.1., allowing for multiple uses not normally permitted in other Open Space Categories, especially contract farming. The Site Design also allows for the multiple uses associated with preserving wildlife habitat and permitting low-impact recreational use by the public, as outlined in Policies 3.1.2. and 3.1.3. The majority of the HOF is designated farmland, thereby maintaining the agricultural traditions of the South Valley area,

and preserving farmland in an area that is becoming urbanized. The inclusion of low-impact recreational facilities, such as trails and community garden areas, provides the residents of the surrounding single family housing with opportunities for outdoor recreation, education, and community gardening. Preservation and creation of wildlife habitat areas provides wildlife viewing opportunities for the surrounding community.

#### **4.2. Surrounding Land Use.**

This Site Design aims to create effective linkages while controlling access and buffering impacts between the HOF and adjacent development. Controlling access is a top priority, and the OSD will work with adjacent landowners to install and maintain signs, fencing, gates and designated parking and access points in Phase 1. As trails are designated adjacent to the HOF, linkages to the property will be developed.

##### **4.2.1. Streets.**

The HOF will over convenient public access and parking from Coors Blvd. (see 4.4.1), as well as from any designated trails there. Access for the farmer is also conveniently located off of Coors Blvd. A turn lane on Coors Blvd. would improve safety for vehicles accessing the property. Gates and fencing will control access, and hedgerows along the east side of the farm (4.5.1) will buffer some of the audio and visual impact of the road.

##### **4.2.2. The Gun Club Lateral.**

The OSD and AMAFCA gates will control access between the Gun Club Lateral and the HOF (4.4.1), while providing access to trails designated along the Lateral (4.4.3).

##### **4.2.3. Arroyos.**

The OSD will work with AMAFCA to link trails designated along the arroyos to the HOF (4.4.3), and provide gates and fencing to control access (4.4.1).

##### **4.2.4. The Hubbell Dam.**

The OSD shall work with AMAFCA to use gates to control access between the Hubbell Dam and the HOF (4.4.1), create effective linkages between designated trails along the Hubbell Dam Road and the HOF (4.4.3), and protect and enhance native plant communities for wildlife habitat within the Hubbell Dam (4.5.1).

#### **4.2.5. Utility Corridors**

The utility corridors across the property will remain, and the OSD will work with utility companies to minimize the impacts of any modifications.

#### **4.2.6. Surrounding Land Use**

Access points, gates and fencing will be located to provide and control access to the property from surrounding areas (4.4.1), and OSD staff will promote Open Space programs and facilities in local schools and surrounding neighborhoods (4.6.1). Local residents may also participate in development and event planning decisions in and around the property (4.6.3).

### **4.3 Agriculture**

After providing and controlling authorized public use in a way that protects farm resources, improving agricultural infrastructure is a priority for the long-term productivity of the farm, and is programmed for Phase 2.

#### **4.3.1. Contract Farming**

Fields #1, #2 and #3 will be used for contract farming throughout the implementation of this RMP. This Site Design aims to provide contract farming with sufficient acreage for a functioning, profitable farming operation on the property. Devoting the majority of acreage to contract farming assists OSD in attracting a contract farmer who will keep the land in agricultural production, which is one of the main objectives for the HOF.

#### **4.3.2. Irrigation and Ditch Maintenance.**

The contract farmer will irrigate the fields and maintain the ditches throughout the term of this RMP. At this point only ditch C in Field #2 has been concrete-lined. Lining the remaining ditches is imperative for water conservation and would greatly reduce ditch maintenance work. In Phase 2, the OSD will work with the contract farmer and other agencies in securing the labor, equipment and funding required to line the ditches.

If a community garden or community harvesting areas are to be planted, it may be necessary to restore the old well for supplemental or drip irrigation. Drip irrigation would allow for flexibility in designing the community garden area, enabling the division of the land into garden plots of various sizes. Drip irrigation systems also conserve water.

#### **4.3.3. Field Leveling.**

The fields have not been re-leveled for some time. Leveling would probably improve irrigation efficiency and promote more uniform crop growth, and contract farmers are encouraged to re-level the fields as often as necessary.

#### **4.3.4. Pest and Weed Management.**

Throughout the implementation of this RMP, the farmer will monitor and manage pest and weeds on the fields, and will seek OSD approval if chemical pesticides are needed.

#### **4.3.5. Farm Roads.**

The farm roads are in good condition, and OSD shall maintain them throughout the term of this RMP. This includes re-grading some roads to serve as accessible trails, as necessary (see sections 3.4.3. and 3.4.8). To reduce dust, the OSD may eventually improve the surfacing of some or all roads on the property, as necessary.

#### **4.3.6. Farm Storage.**

The OSD shall work with contract farmers to design and build permanent farm buildings and fenced equipment storage areas, if necessary, in Phase 2. To enable easy access for the farmer while avoiding conflicts with public parking and access, wildlife and irrigation, the ideal location for these facilities would be in the southeast corner of Field #2, north of Ditch D, near the access point from Coors Blvd.

### **4.4 Public Use**

With development increasing dramatically in the area surrounding the HOF, establishing compatible public use of the HOF property will be a priority. To address the projected demand for public use and protect critical resources and farm operations, OSD will establish public access, parking, trails, viewpoints and picnic areas in Phase 1.

#### **4.4.1. Public Access and Parking.**

Establishing visitor access points, along with gates and fencing to secure the property are a top priority, and the OSD will do this in Phase 1. Vehicular access for parking by the general public is provided along the dirt road between Fields #1 and #2, immediately west of Coors Blvd. Non-motorized visitors may also access

the property from the Gun Club Lateral on the northwest corner of the property, and may access the Hubbell Dam trail near that same point or at the southeast corner of the site. Gates at the access points will be situated to prohibit access by motorized vehicles into the farm, while providing access to other visitors. The access point for farm vehicles shall be from Coors Blvd. onto the dirt road between Fields #2 and #3, where a gate shall prohibit access to the general public. A fence will be built along the eastern edge of the property to define the property boundaries and prevent vehicular trespass. Additional gates and fencing may be necessary to prevent unauthorized trespass into the Hubbell Dam.

Along with installing gates and fencing to secure the property in Phase 1, the OSD will build a gravel parking area for visitors along the dirt road between Fields #1 and #2. The parking lot is intended to accommodate about 25 cars and include 3 ADA spaces that are paved and marked in accordance with Policy 3.4.1.

Along with the other improvements in Phase 1, an informational kiosk will be located at the visitor access point and parking area on the northeast side of the farm. Signs about the property and Open Space regulations will be posted at each access point.

#### **4.4.2. Education and Interpretive Activities**

OSD, as well as the contract farmer or other interested parties, may conduct education and interpretive activities at the HOF beginning in Phase 1. Educational and interpretive activities will take place in appropriate areas around the farm and along the trails.

#### **4.4.3. Recreational Trails**

As security and visitor facilities are improved in Phase 1, the OSD will also designate two trails on the site, as depicted in the Site Design on Map 4. One trail is described as the Interior Loop Trail, which consists of a dirt road looping around Field #2, and is also used by farm equipment. The location of this trail complies with Policy 13 of the Amole Arroyo Corridor Plan (Appendix 1 section A1.7), which recommends that recreational activities at the Hubbell Oxbow take place in the northern section of the Oxbow. The Interior Loop Trail needs to be graded, and should be constructed of hard packed dirt or other natural material to aesthetically match the surroundings and facilitate drainage. Additional surfacing material may be used to minimize dust.

Also in Phase 1, the OSD shall work with the AMAFCA and MRGCD to designate the dirt Hubbell Dam Road as a Trail<sup>17</sup>. Policy 6 in the Amole Arroyo Corridor Plan and Policy 6 in the Pajarito Arroyo Corridor Plan (Appendix 1 section A1.7 and section A1.8) describe the road as part of a proposed trail system that traverses the entire arroyo, and therefore support its designation as a trail. The Hubbell Dam Trail connects with the Internal Loop Trail in the northwest corner of the HOF. The Hubbell Dam trail takes advantage of the high elevation and the existing graded road, providing a trail with vantage points of the HOF and the Hubbell Dam. There is no immediate construction required for the Hubbell Dam Trail. Design shall incorporate the guidelines presented in the Amole Arroyo Corridor Plan (see Appendix 1, Section A1.7, Policy 6 and Appendix D, Trail Design Standards and Objectives, presented in the Amole Arroyo Corridor Plan but not reprinted in this RMP due to space limitations).



*Figure 14. The view across the farm from atop the Hubbell Dam.*

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<sup>17</sup> The western portion of this road, along the Gun Club Lateral, is actually an MRGCD service road. In this RMP it is incorporated into the Hubbell Dam road for simplicity and to reflect its location around the Basin.

Visitors can access both of these trails from the designated parking area (see 5.6.2.). These trails also form loops accessible from Coors Blvd. (an Existing Bike Route identified by MRCOG), Rio Bravo Blvd. (a Proposed Primary Trail in the Trails and Bikeways Facility Plan and proposed Bike Trail by MRCOG), and the Gun Club Lateral (a proposed Secondary Trail in the Trails and Bikeways Facility Plan).

#### **4.4.4. Viewpoints.**

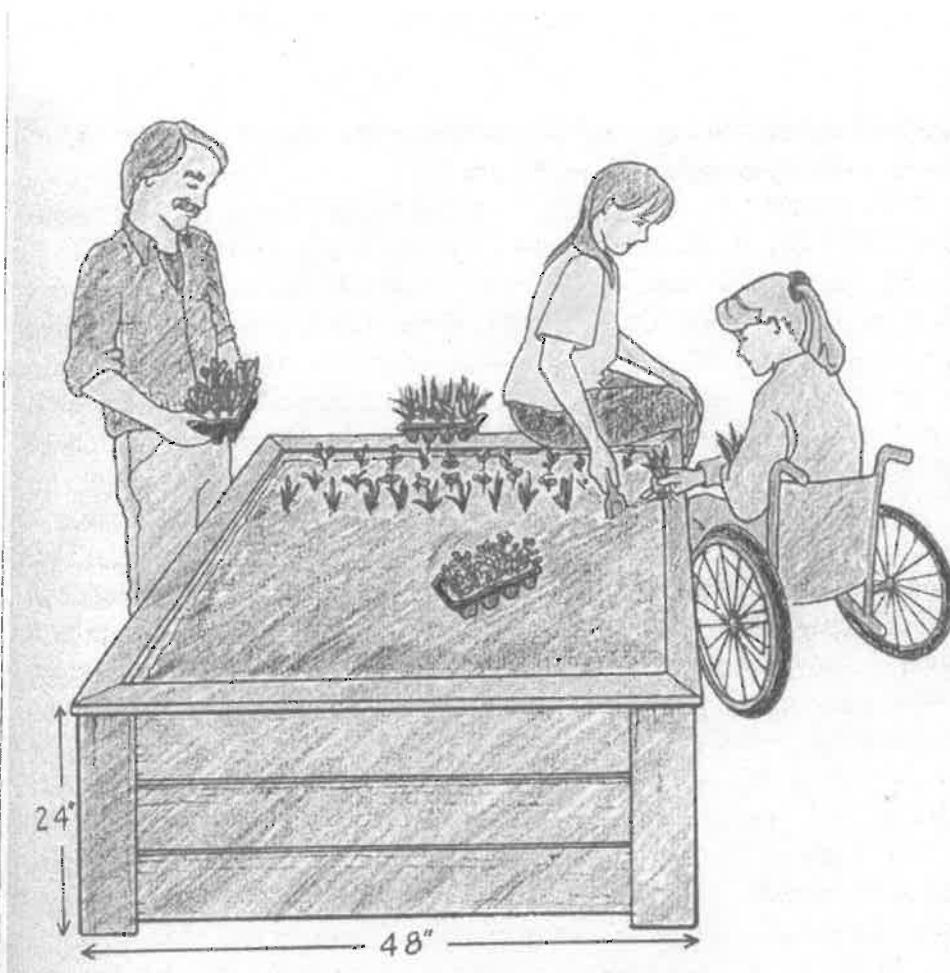
As the OSD designates trails in Phase 1, several viewpoints will be designed along the Hubbell Dam Trail, and another at the vehicle pullout looking over the farm from Rio Bravo Blvd. These viewpoints are placed to take advantage of the road's high vantage point over the HOF and the Hubbell Dam. These areas have interpretive signs in compliance with Policy 8 of the Amole Arroyo Corridor Plan (see Appendix 1, section A1.7).

#### **4.4.5. Community Gardening and Harvesting.**

As outlined in Policy 3.4.5., the Contract Farmer and other interested parties may establish community gardens or you-pick crop areas, with prior approval from the OSD. These areas should be situated as to minimize impact on farm operations and wildlife habitat. Field #1 would probably be the most appropriate area for community gardening and you-pick crops. It is easily accessible from the proposed parking lot, is the farthest from designated wildlife habitat, and activities there would have little impact on farm operations in the much larger Fields #2 and #3. Raised garden beds are encouraged for the community garden. Figure 15 illustrates how raised beds can provide for accessibility by persons with disabilities (including those in wheelchairs), senior citizens, persons with back injuries and children. Raised beds are also useful for demonstration and educational gardens due to their easy visibility.

#### **4.4.6. Picnic Areas**

Beginning in Phase 1, the OSD will install several picnic tables, possibly with trashcans, under shade trees. The location of the picnic tables should comply with Policy 13 of the Amole Arroyo Corridor Plan (Appendix 1 section A1.7), which suggests that development and recreational activities at the Hubbell Oxbow take place in the northern section of the Oxbow.



SOURCE: THE ENABLING GARDEN; CREATING BARRIER-FREE GARDENS, GENE ROTHERT, 1994.

*Figure 15. Raised bed for community garden area.*

#### **4.4.7. Special Uses and Events**

With prior approval from the OSD, Special Uses and Events may take place as appropriate within the farm. Policy 13 of the Amole Arroyo Corridor Plan (Appendix 1, section A1.7) suggests that development and recreational activities at the Hubbell Oxbow take place in the northern section of the Oxbow, which would minimize disturbance to wildlife in the Hubbell Dam. Because of its proximity to the intersection of Coors and Rio Bravo Blvds, identified as the "Community Core Area" of the Gun Club Community described in the West Side Strategic Plan (see



Appendix 1, section A1.2 and Figure 13), Field #1 is probably the most appropriate site for most Special Uses and Events.

#### **4.4.8. Accessibility.**

The Site Design includes accessible features including ADA parking spaces, picnic tables, portable toilets and the Interior Loop Trail. The Hubbell Dam road may not be accessible because of the steep slopes.

### **4.5. Habitat**

The Hubbell Dam already provides habitat for native plant communities and wildlife, and the HOF currently provides valuable farmland habitat, particularly for migratory waterfowl during the fall and winter. Although habitat improvements are deemed important, they are not as critical as other needs on the property, and are programmed for Phase 3.

#### **4.5.1. Vegetation.**

In accordance with Policy 13 of the Amole Arroyo Corridor plan (see Appendix 1, section A1.7), the OSD will work with AMAFCA to manage the Hubbell Dam and its native plant communities as a wildlife habitat area. A wetland may be built within this area where the hydrology, soil and habitat characteristics are suitable. Given the significant habitat already present in the Hubbell Dam, adding wetlands is not an immediate priority, but could be very beneficial for wildlife. With the assistance of appropriate governmental agencies and volunteers, OSD will assess the potential for constructing wetlands in Phase 3. This may require the acquisition of additional water rights.

Hedgerows will be planted on field edges where they are not immediately adjacent to ditches but may be adequately watered, and where they do not impede farm operations. Hedgerows along the eastern edge of the HOF should not interfere with sightlines on to Coors Blvd from the fence gates. The OSD may plant hedgerows, with the assistance of volunteers, in Phase 3 or as resources become available.

#### **4.5.2. Bird Life.**

One goal of this RMP, its policies and site design is to increase the diversity and abundance of wildlife species that are compatible with farming, especially birds. OSD will work with volunteers to monitor wildlife throughout as this RMP and Site Design are implemented.

**Figure 16. Implementation Matrix**

Task	Phase			Implemented by:
	1	2	3	
<b>4.1 Open Space Category Designation</b>				
▪ Promote and monitor appropriate uses	X	X	X	OSD
<b>4.2. Adjacent Infrastructure</b>				
<b>4.2.1. Streets</b>				
▪ Provide and control public access, create trail linkages and buffer impacts	X	X	X	OSD
<b>4.2.2. The Gun Club Lateral</b>				
▪ Provide and control public access and trail linkages	X	X	X	OSD/MRGCD
<b>4.2.3. Arroyos</b>				
▪ Provide and control public access and trail linkages	X	X	X	OSD/AMAFCA
<b>4.2.4. The Hubbell Dam</b>				
▪ Provide and control public access and trail linkages	X	X	X	OSD/AMAFCA
▪ Protect and enhance wildlife habitat	X	X	X	OSD/AMAFCA/Agencies/Vols
<b>4.2.5. Utility Corridors</b>				
▪ Minimize impact of any modifications	X	X	X	OSD/Utility Companies
<b>4.2.6. Surrounding Land Use</b>				
▪ Provide and control public access and trail linkages	X	X	X	OSD/neighboring land owners
▪ Promote OSD programs, facilities and regulations	X	X	X	OSD
<b>4.3. Agriculture</b>				
<b>4.3.1. Contract Farming</b>				
▪ Draft, sign & update contract	X	X	X	OSD/Farmers
▪ Prepare annual crop & irrigation plan	X	X	X	Farmers
▪ Farm the property	X	X	X	Farmer
▪ Monitor farming operations	X	X	X	OSD
<b>4.3.2. Irrigation and Ditch Maintenance</b>				
▪ Pay irrigation water delivery fees	X	X	X	OSD/Farmer (as negotiated)
▪ Line ditches with concrete		X	X	OSD/Farmer
▪ Install water meters and other improvements		X	X	OSD/Farmer
▪ Irrigation scheduling & crop irrigation	X	X	X	Farmer
▪ Regular ditch maintenance and repairs	X	X	X	Farmer
<b>4.3.3. Field leveling</b>				
▪ Level fields, as necessary	X	X	X	Farmer
<b>4.3.4. Pest &amp; Weed Management</b>				
▪ Monitor & treat infestations, as necessary	X	X	X	Farmer
<b>4.3.2. Farm Roads</b>				
▪ Maintain roads, as necessary	X	X	X	OSD
<b>4.3.3. Farm Storage</b>				
▪ Design/build farm buildings and storage areas		X		OSD/Farmer (if necessary)
▪ Maintain farm buildings and fenced enclosures		X	X	Farmer (as built)

Task	Phase			Implemented by:
	1	2	3	
<b>4.4 Public Use</b>				
4.4.1. Public Access and Parking				
▪ Design/build access points, kiosk, signs, gates, fencing and parking area, then maintain	X			OSD
4.4.2. Education & Interpretation				
▪ Conduct educational/interpretive activities	X	X	X	OSD/Other interested parties
4.4.3. Recreational Trails				
▪ Design and build Interior Loop Trail, then maintain	X			OSD
▪ Designate and manage Hubbell Dam Road as Trail	X			OSD/AMAFCA
4.4.4. Viewpoints				
▪ Design/build viewpoints along Hubbell Dam Road	X			OSD/AMAFCA
4.4.5. Community Gardening and Harvesting				
▪ Plan, plant community gardens and harvesting areas, and organize related activities, as needed.	X	X	X	Farmer
4.4.6. Picnic and Gathering Areas				
▪ Design, build and maintain picnic areas	X	X	X	OSD
4.4.7. Special Events				
▪ Evaluate Special Event Permits & monitor events	X	X	X	OSD/Special Events Committee
4.4.8. Accessibility				
▪ Ensure facility and program accessibility	X	X	X	OSD
<b>4.5. Habitat</b>				
4.5.1. Vegetation				
▪ Plant, maintain and monitor wetlands & hedgerows		X	X	OSD/AMAFCA/Agencies/Vols
4.5.2. Bird Life				
▪ Monitor birds and other wildlife		X	X	OSD/Volunteers/Agencies
<b>4.6 Administration</b>				
4.6.1. Staffing				
▪ Develop & monitor compliance with farm contract	X	X	X	OSD/Farmer
▪ Conduct public meetings on site development plans, large special events & revisions of this RMP	X	X	X	OSD
▪ Facilitate/hold meetings with public on HOF issues	X	X	X	OSD/Public
4.6.2. Law Enforcement				
▪ Inform visitors about OSD policies	X	X	X	OSD/Trail Watch Volunteers
▪ Enforce OSD policies	X	X	X	OSD
4.6.3. Public Participation				
▪ Review site development plans and event proposals	X	X	X	OSD/OSAB/EPC/Public
▪ Attend community meetings about HOF	X	X	X	OSD/Public
▪ Coordinate volunteer projects	X	X	X	OSD/Volunteers
4.6.4. Interagency Cooperation				
▪ Design, build & monitor habitat areas and irrigation efficiency improvements	X	X	X	OSD/Agencies/Farmer/Volunteers

## CONCLUSION

The Hubbell Oxbow Farm represents an exciting opportunity for the Open Space Division to preserve agricultural land, establish and protect wildlife habitat areas and provide the public with opportunities for low-impact recreational activities and programs.

With the addition of the HOF to the MPOS system, publicly owned farmland in Albuquerque now totals over 400 acres. The combination of rapid growth that consumes remaining farmland (exacerbated by recent attempts to eliminate agricultural zoning in the north and south valleys) and the lack of a formal City agricultural preservation program make OSD's purchase of farmland paramount in preserving these vanishing landscapes. Preservation of HOF does not mean it will become a museum piece. The policies and site design elements of this RMP insure that the HOF will remain a working farm, producing crops for private markets and public programs. As the HOF RMP is implemented OSD should coordinate its efforts and share information with the Bernalillo County Open Space Program, which has recently purchased three agricultural tracts in the South Valley. Together the two agencies have the opportunity to create a farmland open space network in the South Valley connected through programs, policies and even facilities (on road bike lanes and routes and off road trails).

The first line of the OSD mission statement reads "The purpose of the Open Space Division is to acquire, protect, maintain, and manage significant natural landscapes and cultural resources for present and future generations". The policies and site design in this RMP provides the public with various opportunities for learning and recreating at the HOF. The trail networks, community garden area and picnic area allow access to recreation, contemplation and community oriented activities in a unique setting. Education and interpretive activities on the HOF provide opportunities to learn about agricultural operations, food systems and wildlife habitat all at one close-to-home area.

When implemented the HOF RMP presents a balance between the three major goals of agriculture, wildlife habitat and public use making a unique entity within the MPOS system and providing a valuable resource for the public.

## APPENDICES

### Appendix 1: Planning Framework

#### **A.1.1 The 1988 Albuquerque/Bernalillo Comprehensive Plan**

The 1988 Albuquerque/Bernalillo County Comprehensive Plan is a Rank I Plan for Albuquerque and Bernalillo County. The plan provides a framework for all other City plans. It defines the Open Space Network as composed of Major Public Open Space, trail corridors, parks, and other low intensity uses such as agriculture (p. 9). The goal of the Open Space Network is to "provide visual relief from urbanization and to offer opportunities for education, recreation, cultural activities, and conservation of natural resources by setting aside Major Public Open Space, parks, trail corridors, and open areas throughout the Comprehensive Plan area" (p 43).

Policy a, under the Open Space goal, states: "Open space lands and waters shall be acquired or regulated as appropriate to serve one or more of the following specific purposes:

- Conservation of natural resources and environmental features
- Provision of opportunities for outdoor education and recreation
- Shaping of the urban form
- Conservation of archaeological resources
- Provision of trail corridors
- Protection of the public from natural hazards."

#### **A1.2 West Side Strategic Plan (1997)**

The West Side Strategic plan is a Rank II Area Plan. "The purpose and intent of the West Side Strategic Plan is to provide a framework of strategic Policies within which to manage future growth and development on Albuquerque's West Side" (p 1).

The plan divides the West Side into 13 communities, each with its own character and focal points (p 31). Each community within the plan is given a physical definition, a description of relevant issues, and policy recommendations to address these issues. The plan envisions Community Core Areas, located within each identified community, as "the primary focus, identity, and sense of character for the entire Community in conjunction with community-wide services, civic land uses, employment, and the most intense land uses within the community" (p37).

The HOF is within the Gun Club Community. The intersection of Coors and Rio Bravo is identified as the Community Core Area of the Gun Club Community. The proximity of the Community Core Area to the HOF presents management challenges and opportunities that will be addressed in this Resource Management Plan. Below are the West Side Strategic Plan policies that pertain to the HOF.

#### Gun Club Community

*Policy 3.46 Promote low-density development consistent with the rural character of the area within most of this community. Exceptions to this are in Core Areas and Village Centers along with key locations of the Rio Bravo Corridor where mixed use commercial services, public facilities, high-density residential, and employment uses are appropriate.*

*Policy 3.51 The Hubbell Oxbow shall be acquired as Major Public Open Space to preserve agricultural land and to provide open space near the Community Core.*

#### Bikeways and Trails

*Policy 6.22 Bernalillo County and City of Albuquerque Parks and Open Space Division staff members shall work together to identify additional regional trail connections, and work toward acquisition of rights-of-way needed, with identifiable funding sources for construction.*

#### Arroyos

*Policy 7.6 The City of Albuquerque and Bernalillo County shall recognize the arroyo classifications and policies of the Facility Plan for Arroyos and other adopted plans and policies. These public agencies shall recognize that these arroyos require unique development standards in order to satisfy the drainage/flood control and open space/recreational needs of these key natural features on the West Side.*

*Policy 7.8 The major arroyos cross both City, County, and federally managed lands, and all arroyo plans, trail designs, and flood control/drainage measures must be jointly prepared and administered by all affected entities. Additionally, AMAFCA must be involved in the development of any new standards affecting Major Arroyos due to their critical*

*regional flood protection role. Standards affecting arroyos crossing the Petroglyph National Monument must also be coordinated with the NPS.*

### Open Space

*Policy 7.10 The City of Albuquerque and Bernalillo County shall protect and expand both public and private open space on the West Side consistent with the final adopted Facility Plan for Open Space. Private developers are encouraged to include open space in all major private developments consistent with Planned Community Criteria.*

*Policy 7.11 The Rank 2 Open Space Facility Plan will address open space acquisition and management issues consistent with established procedures.*

*Policy 7.12 The City of Albuquerque and Bernalillo County shall jointly work on a strategy for acquiring open space lands within and between communities on the West Side which may include: broader funding sources such as local tax initiatives, State appropriations, density transfers, cluster development, incentives for providing on-site open space, land trading, optioning land early, and long-term purchase of open space.*

### Drainage and Arroyos

*Policy 10.5 Bernalillo County Public works, AMAFCA, and City Parks and General Services Department, County Parks and Recreation Department shall consider joint-use of drainage facilities (for recreational and open space purposes especially) whenever feasible. Joint funding for additional right-of-way and facilities is also necessary.*

*Policy 10.6 Until the Unified Development Code and/or West Side design guidelines are developed, the policies and guidelines in the Facility Plan for Arroyos and other adopted Rank III Arroyo Corridor Plans shall be followed. Where arroyo rights-of-way are to be jointly used for multiple use trail corridors, adequate width shall be provided outside the 100-year flood area for safe and pleasant trail development. The trails standards contained in the Trails and Bikeways Facility Plan contain guidance in this area.*

### **A1.3 Southwest Area Plan 2000**

The Southwest Area Plan 2000 (SWAP 2000) is an update of the Southwest Area Plan 1988. The update was an attempt to create a user-friendly, "living document". The "intent of SWAP 2000 is to continually encourage community involvement, including the participation of the public and private sectors, and non-profit organizations, in order to implement the various policies and action strategies" (p 3).

The HOF is located in the area covered by the SWAP 2000 and is mentioned in a section describing open space, but no specific policies regarding the property are found in the plan. The plan states that South Valley residents "have a strong desire to see it (HOF) remain in agricultural use, as parkland or open space" (P 12). The HOF property has been acquired since SWAP 2000 was completed. In addition, the plan calls for an increase in parks for the Southwest Area Plan area, including a comprehensive network of trails adjacent to arroyos (p 14).

The Plan's introduction includes a section on the importance of agriculture to the cultural heritage of the South Valley. The benefits of agriculture are listed as aquifer recharge for the Middle Rio Grande Valley, local produce production, and the preservation of open space and rural character of the area (p15). Less than 3% of landowners in the plan area own parcels of agricultural land that are larger than 40 acres (p 16). The HOF is a significant piece of agricultural property that can contribute to agricultural preservation efforts in the South Valley. The plan states that open space is a key element of the SWAP 2000, and will become more crucial as property, especially agricultural property, is slated for development (p. 50).

### **A1.4 MPOS Facility Plan (1999)**

The Major Public Open Space (MPOS) Facility Plan is a Rank II Facility Plan that establishes guidelines and policies for implementing the goals of the Open Space Network, as set by the Albuquerque/Bernalillo County Comprehensive Plan. In addition, the MPOS Facility Plan also describes policies regarding planning for Open Space lands and ongoing management. The policy categories in the MPOS Facility Plan that are relevant to the HOF Resource Management Plan are; public involvement, facility location and design, staffing, interagency cooperation, maintenance, visitor management, resource management, law enforcement/public



safety, public awareness/public education, access and parking, and trails. These policies apply to the HOF and are listed below.

Public Involvement.

*Policy A.2.G. Public involvement shall occur throughout the planning process. Land use and facility planning shall be done in consultation with adjacent landowners (both private landowners and public agencies) and community planning area partnerships.*

*At a minimum, public meetings will be held at points of initial scoping, draft report and final draft of Resource Management, Master Plans and site plans for conditional uses. Minimum notification for these meetings shall be: posting at major entrances to the site, legal published notice in a local newspaper, written notification to the parks, open space, trails community planner, a certified mailing to recognized City and County neighborhood associations, and a mailing to persons attending previous meetings for a plan. These notifications shall be made at least two weeks prior to the meetings.*

Facility Location and Design.

*Policy B.2.A. Facilities within Major Public Open Space shall be designed to minimize their impact on natural processes or natural, visual or cultural resources.*

*Policy B.2.B. Archaeological surveys and mitigation shall be conducted prior to facility development. Facilities shall not be located in a manner that will cover, undermine or otherwise damage archaeological or cultural sites. Sites should be preserved in place or avoided whenever possible. If appropriate, information about archaeological sites will be integrated into interpretive facilities.*

*Policy B.2.C. Facilities within Major Public Open Space shall be located and designed to protect the public from natural hazards such as unstable slopes and flood prone areas. No facilities shall be developed on areas with slopes exceeding 25 percent.*

*Policy B.2.D. High-risk uses shall not be allowed in any instance where the possibility of damage to the resource is anticipated. High-risk*

*activities may include rock climbing, hang gliding, shooting ranges and others.*

*Policy B.2.E. Facilities intended for public use shall be designed to facilitate fee collection. This may include the installation of access control devices, entry kiosks and, when possible, visitor centers and buildings.*

*Policy B.2.F. Recycled and salvaged materials should be used when possible. However, the cost savings must be balanced against the aesthetics and long term maintenance in overall site design.*

*Policy B.2.G. Public access trails and easements are recommended as an integral part of private development adjacent to Major Public Open Space. The locations of trails and access points should be coordinated with Open Space staff.*

*Policy B.2.H. Access to open space preserves should be by primitive trails. Access should be restricted to protect vegetation, wildlife habitat, and other fragile resources.*

*Policy B.2.I. Parking lots shall be designed to fit with the MPOS type, facility needs and the landscape where they are sited. Parking lots should provide access to Major Public Open Space for a full range of user, arriving to the site in multiple transportation modes (pedestrians, bikes, buses, etc.).*

*Policy B.2.J. The Open Space trail system shall accommodate a variety of users on single-and multi-purpose trails. Trails should be designed, as much as possible, to meet the requirements and intents of the Americans with Disabilities Act and should accommodate a range of ability levels. Multiple use of trails is encouraged, but in some areas, designated trails may be developed to minimize resource damage. Public information regarding trail etiquette shall be provided at manned facilities.*

*Policy B.2.K. The location of access points, parking and trail heads will be coordinated with the sidewalk system, existing and proposed trails*

*identified in the Bikeways and Trails Facility Plan and on adjacent Federal lands.*

*Policy B.2.L. Trails shall be designed and managed to minimize environmental damage and to conform to the greatest degree possible to the materials and topography of the natural landscape.*

### Staffing

*Policy C.2.A. Most Protected, Undeveloped Open Space requires minimal management, with staffing needs increasing with the level of use. Management of Major Public Open Space will require the attention of additional full and part time staff as uses increases and new facilities are built to accommodate these users. Additional enforcement, visitor services and maintenance staff should be added as the network expands to ensure adequate protection and management.*

### Interagency Cooperation

*Policy C.3.A. Opportunities to share responsibility with other public agencies shall be encouraged in all management agreements. Agency coordination should include cross-referencing regulations and distributing information about agency functions.*

*Policy C.3.B. The Open Space Division should complete a joint powers agreement with Bernalillo County for coordination of development and management of open space within the unincorporated County, and the Open Space Division should pursue management agreements with all jurisdictions in which it owns property other than land bank lands.*

*Policy C.3.C. Joint facility development and operations shall be considered, particularly for facilities located outside the Albuquerque municipal limits. A City/County joint powers agreement for Major Public Open Space acquisition and/or management and the participation with AMAFCA in acquiring, developing and managing Major Public Open Space arroyos are examples of joint activities. City participation should be visible through a City logo on signs and materials and the presence of City staff at manned facilities.*

*Policy C.3.D. The City shall have no responsibility for improvements, operation or maintenance of private facilities.*

*Policy C.3.E. Other City of Albuquerque Departments, and other jurisdictions that maintain facilities on City-owned Major Public Open Space, shall conform to the policies of the MPOS Facility Plan, and such lands shall fall under the management authority of the Open Space Division.*

#### Maintenance

*Policy C.4.A. Maintenance of facilities and maintenance of the landscape to minimize impact from use shall be an essential part of the operating budget.*

*Policy C.4.B. Maintenance and impact mitigation costs shall be included in the development and operation of facilities.*

#### Visitor Management

*Policy C.5.B. Access to Major Public Open Space shall be controlled in such a way as to protect and preserve it from degradation and disturbance due to overuse. Access to Major Public Open Space shall be controlled through facility development, trails, gates or fencing.*

#### Resource Management

*Policy C.6.A. Major Public Open Space shall be managed with resource protection and enhancement as primary objectives.*

*Policy C.6.B. Major Public Open Space resources shall be managed to encourage natural processes. The Open Space Division shall actively manage lands to encourage natural plan succession, wildlife migration and other processes, which occurred in the Albuquerque area prior to urbanization. When natural processes have been stopped, the Open Space Division may recreate these processes in open space preserves.*

*Policy C.6.C. All native wildlife within each ecologic zone in the MPOS Network shall be protected for conservation purposes. This includes threatened, endangered and rare species and other identified native wildlife populations. All methods of wildlife management and control shall be accepted within environmental tolerances.*

*Policy C.6.D. The restoration of native plant and animal communities shall include protection, enhancement and retention of natural habitat. The objective is to restore native communities in each ecologic zone encompassed by the MPOS Network. Accepted management techniques shall be used to control and abate invading species.*

*Policy C.6.E. Major Public Open Space lands provide a visual relief from the impacts of urban development; as such, all lands within the Network comprise a visual resource. These resources include view sheds, view corridors, mountaintops and high points, escarpments and others.*

*Policy C.6.F. All significant cultural, historical and archaeological components of the MPOS Network shall be protected and/or enhanced for their intrinsic educational and historical value.*

*Policy C.6.G. Surface or groundwater quality and soil stability within the MPOS Network shall be maintained.*

Law enforcement/public safety

*Policy C.7.A. Rules and regulations in Major Public Open Space shall be enforced to ensure visitor safety and discourage illegal activities.*

*Policy C.7.B. The City shall revise the Open Space Management Ordinance (Section 5-6 R.O. 1974, multiple enactments) to authorize Open Space rangers to cite trail users for inappropriate use of trails.*

*Policy C.7.C. The operation of motorized vehicles is prohibited in all open space facilities except in well-marked areas and by open space personnel.*

*Policy C.7.D. Motorized boat and vehicle operation on MPOS lands by emergency personnel such as paramedics, fire crews, law enforcement officers and search and rescue crews shall be allowed. Emergency access points shall be anticipated and designed with the installation of all fencing. Gate keys, or other access devices, shall be forwarded to the applicable emergency agencies. Open space personnel shall assist emergency operations as much as possible throughout the MPOS Network, as needed.*

### Public Awareness/Public Education

*Policy C.8.A. A program shall be developed which educates the public about natural, cultural and archaeological resource protection, conservation and land use ethics, water safety, trails safety and etiquette, and the nature, location and availability of recreational facilities.*

*Policy C.8.B. The City shall develop brochures which include trail information, trail use etiquette, and environmental, historic and cultural interpretive information.*

### **A 1.5 Trails and Bikeways Facility Plan**

The Trails and Bikeways Facility Plan, adopted by the Albuquerque City Council and Bernalillo County Commission in 1993, is a Rank II Facility Plan. The plan contains policies, design recommendations, and site location to support the development of a metropolitan and multi-use recreational trail network. The trail network is envisioned to serve both recreational and commuting purposes. The Trails and Bikeways Facility Plan includes a map of proposed trails and bikeways. The principles that guide the proposed trails and bikeways are:

- link existing and proposed trails, to form a network
- connect neighborhoods to parks and open space, and
- create recreational trail loops.

Although the plan does not mention the HOF, certain policies and proposals affect trail development around and within the property. These elements of the Facility Plan are outlined below.

The plan identifies a proposed primary trail along Rio Bravo Blvd, which passes along the northern boundary of the HOF. A primary trail is defined as a facility that is of primary importance to the regional transportation network. Proposed secondary trail facilities are identified as the Gun Club Lateral, which forms the western boundary of the Hubbell Dam. Secondary trail facilities are defined as trails that supplement the primary trails network and may provide access to it.

Appendix B of the Trails and Bikeways Facility Plan includes specific trail design standards and objectives drafted by the Albuquerque Planning Department/Planning Division. These design recommendations include:

1. To provide controlled, limited access to open space and other fragile environments.
2. To accommodate primarily recreational users, including equestrians, where desirable.
3. To incorporate educational/interpretive elements and identify cultural and natural features found along the trail.
4. To prevent adverse environmental impacts and maximize the contrast with urban development by minimizing trail widths, paved surfaces, and initial disturbance to topsoil and vegetation and prohibiting access where appropriate.
5. To preserve a sense of openness through selection of landscaping and architectural elements that blend visually with surrounding open space.

#### **A 1.6 Facility Plan for Arroyos**

The Facility Plan for Arroyos was adopted in 1986 as a Rank II Facility Plan. The purpose of this plan is to create a multi-purpose network of recreational trails and open space along arroyos.

The Plan defines the Amole Arroyo and the Amole Del Norte Diversion Channel as Major Open Space Links. Therefore, it recommends that the arroyo become a multi-use facility if deemed practical and safe. The AMAFCA right of way is described on page 35 of the plan, "The Hubbell Lake Detention Area retains strong bosque characteristics, with thick stands of cottonwoods, shrubbery and tall grasses resulting from the ponding of storm water runoff." The plan also mentions the continuation of the arroyo trail system past the HOF area and all the way to the Rio Grande.

#### **A 1.7 The Amole Arroyo Corridor Plan**

The Amole Arroyo is not part of the HOF but a section of it, the Hubbell Dam, forms the immediate western border of the property. Therefore, the HOF RMP considers the policy and plans for this contiguous property.

The Amole Arroyo Corridor Plan is a Rank III Facility Plan adopted in 1991 by the Albuquerque City Council by the Bernalillo County Commission in 1992. The plan provides policy direction for the Rank I Albuquerque/Bernalillo County Comprehensive Plan, the Rank II Southwest Area Plan 2000, and the Rank II Facility Plan for Arroyos. Goals of the plan include:

- maintaining the natural character of the arroyo,
- assuring the primary drainage function,

- providing compatible development adjacent to the arroyo and,
- establishing a continuous trail that effectively serves the needs of the residents and the open space system (p 1).

The plan divides the Arroyo into three sections. The lower section, from Amole Hubbell Dam to the Hubbell dam, is located adjacent to the HOF. The Hubbell Oxbow section, within the lower section of the arroyo, is described as containing a southwestern riparian environment with old growth cottonwoods and Russian olives, willow thickets and other under-growth and the area supports nesting birds, small game, reptiles, and insects (p 7). The plan presents a conceptual trail that begins at the western mesa ceja and terminates at the Rio Grande Bosque. Part of this proposed trail will be located in the Amole Arroyo corridor, specifically along the Hubbell Dam adjacent to the HOF.

The following are policies that pertain to the Amole Dam - Hubbell Dam section adjacent to the HOF (referred to as the Hubbell Dam in this RMP).

Policy 6: Trail Types, Locations, and Standards  
Gun Club Connection to Don Felipe

The Hubbell Dam is to remain a bird and wildlife sanctuary and no improved trails will traverse it. The Amole trail system will connect the Gun Club Lateral portion of the Pajarito Trail and to the passive recreation uses in the Oxbow adjacent to the Hubbell Dam as described in the Southwest Area Plan.

At the Hubbell Dam, due to right-of-way constraints, the trail will be diverted to a trail inside the Dam Facility at its narrowest point and continue along the levee until it reaches the Pajarito trail extension, the trail from Hubbell Dam to the Gun Club Road will be an earthen bicycle/pedestrian path.

Platting of the north end of the Hubbell Dam shall provide for a trail connection to Rio Bravo Blvd. and Coors Road. Use of the northern section of the Gun Club Lateral from the Oxbow to Coors Blvd. should be explored.

Connection to Bosque

A continuous trail system will provide a loop for the equestrian/pedestrian



user. The area to be used for equestrian travel will begin at Hubbell Lake Facility and continue southward down Gun Club Lateral where it will connect with the Pajarito Trail and continue eastward toward the State Park, then north along the Riverside Drain to the Amole system, and finally westward to the Hubbell Lake Facility to complete the loop.

#### Connection to Urban Center and Adjacent Neighborhoods

When possible, connections to adjacent neighborhoods should be designed into the trail system to ensure access and encourage use. Designs should incorporate trail connections into the development of the Rio Bravo Urban Center so that residents can easily use the trail system to travel to and from their residence to shop.

#### Policy 7: Trail Access Control

Motorized vehicles except maintenance and emergency vehicles shall be excluded from the trail through signage and access control as those shown in figure 7. Bollards and/or other control devices will be placed at the trail entrances and street crossings to prevent motor vehicle access while permitting passage of pedestrians, wheelchairs, bicycles, and horses.

#### Policy 8: Signage

In selected areas such as the Hubbell Oxbow, Ceja edge and the naturalistic areas of the arroyo, signage shall be provided to help identify significant plant species, geological features, and cultural resources encountered along the trail. All interpretive signs shall be in English and Spanish.

#### Policy 13: AMAFCA Hubbell Lake Facility and the Hubbell Oxbow

Any development which occurs in the Hubbell Oxbow north of the AMAFCA facility, even recreational use, should be located in the northern portion of the Oxbow and comply with the floodplain restrictions which exists on its use. It is recommended that the southern portion remain in agriculture to provide forage for the Hubbell Oxbow wildlife.

"The AMAFCA Hubbell Dam is a storm water detention facility which shall also be preserved as a bosque and wildlife sanctuary. It should be a destination for storm drainage and limited foot traffic only. No park facilities such as picnic tables,

barbeque pits, volley ball or other sports areas shall be allowed in the Hubbell Dam" (p. 29).

### **A1.8 The Pajarito Corridor Plan**

The Pajarito Corridor Plan is a Rank III Sector Development Plan adopted by the Bernalillo County Commissioners and the Albuquerque City Council in 1990 and endorsed by the Albuquerque Metropolitan Flood Control Authority (AMAFCA) in 1990. The plan outlines trail and drainage treatments for the Arroyo, which travels from the eastern ceja of the Southwest Mesa to the Don Felipe Detention Facility (between Gun Club Road to the north and Pajarito Road on the south). The plan describes how the trail, utilizing the Gun Club Lateral service road, travels north from the Don Felipe Detention Facility and passing on the west side of the AMAFCA Hubbell Dam linking with the Amole Arroyo Trail system (see A1.7). The policy below relates to this section of trail.

#### **Policy 6: Trail Types, Location, Standards**

##### **C. Gun Club Connection to Hubbell**

- 1) The trail along the gun club lateral between Pajarito Road and the Hubbell Lake Facility<sup>18</sup> will be an unimproved equestrian and pedestrian trail using the existing MRGCD service roads. Grading to reduce side slope should be undertaken as feasible. Mountain bikes may also be accommodated, but bikes should be separated from horses as feasible using appropriate signage.
- 2) The Hubbell Lake Facility is to remain a limited access stormwater detention facility which also functions as bird habitat and no improvements will traverse it. The Gun Club Lateral trail will connect with the Amole system and to the passive recreation uses in the oxbow adjacent to the Hubbell Lake Facility as described in the Southwest Area Plan.

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<sup>18</sup> This is known as the Hubbell Dam in this RMP.

## Appendix 2: Major Public Open Space Facility Plan: Management Guide

This management guide is intended to supplement the main text of the facility plan by providing detailed management policy applicable to specific areas or conditions. Not all the policies outlined below are applicable to the HOF.

### 1. General Facility Design Standards

**General Site Work.** Protection and enhancement of the natural environment should be the highest priority with respect to open space facilities. Materials such as stone, wood, adobe and concrete are encouraged as opposed to plastics, metals, and other man-made construction materials which conflict with the environment. An adequate pedestrian circulation system should be constructed in areas of activity. Walkways should be surfaced with bark, gravel, or other natural materials, with concrete and asphalt used primarily for heavy circulation areas. Sizing should accommodate peak crowds, especially at entries and junctures between parking and other walkways.

- The visual integrity of the site should be maintained and site development should be conducted to work in harmony with the lay of the land when determining the location and orientation of structures. Existing natural vegetation or landforms should be utilized as buffers whenever possible.
- Facility locations should avoid woodlands, marshlands, aquifer recharge areas, poorly drained soils, highly erodible soils, steep slopes and floodplains whenever possible.
- Facilities within open space shall not degrade the natural, visual or cultural resources of an area beyond current conditions.
- Facilities shall incorporate opportunities for outdoor education and recreation whenever possible.
- **Signing.** All signing should be designed to integrate with the ambient natural color and orientation of the subject facility. Signing should be low maintenance. To mitigate rusting and vandalism, sign materials should include wood, concrete, and non-rusting or oxidizing metal. Wood, concrete or non-punched metal posts should be used to support signs in most applications, however, if possible, signs

should be mounted onto walls, buildings, and shelters in order to reduce visual clutter. Signs should use wordless graphics (or simple and easily read text), with symbols of a high intensity, fully reflectorized white with appropriately colored backgrounds.

- **Access Roads.** Roads for Class I open space facilities should be paved with asphalt, concrete, chip seal, gravel or stabilized soil. Graded and unstabilized soil will not be allowed. Use, topography, soil type, and orientation to the sun should be the primary determinant of material with the most heavily used facilities requiring asphalt or concrete pavement. Control devices should include guardrails (in no circumstances shall concrete wall barriers be used), bollard and cable, curb and gutter (generally where drainage is a problem), fences and natural landforms. Natural topography should be used to determine horizontal and vertical road geometry with relatively little grading or landscaping performed.
- **Picnic Facilities.** Picnic areas for Class II Facilities should be handicapped accessible as defined in the Americans with Disabilities Act. Picnic facilities include tables, benches, and trash receptacles. No electrical service is available. These facilities should be designed to blend with specific locations within the Open Space Network in color, texture, material and overall aesthetic appeal. Construction materials shall include concrete with earthtone pigmentation, wood, powder coated metals such as steel or aluminum, and expanded metal with oven cured poly-vinyl coating (at least 1/8" thickness). In areas where soils create unsafe conditions or structural problems, concrete pads should be considered under all tables and benches. All construction materials should be chosen for low maintenance and abatement of vandalism, as well as aesthetic appeal.
- **Restrooms.** Restrooms should be designed to meet all of the requirements of the Americans with Disabilities Act. Restrooms should be designed to include lavatories, water closets, urinals and trash receptacles in sufficient numbers to meet the need of the specific facility. Construction materials for the building should conform to other facility elements and the location within the Open Space Network in color, character, material and orientation. Construction materials shall generally consist of treated wood, pigmented concrete or concrete block, metal and other ecologically appropriate materials. The use of recycled materials is recommended.

- Fencing. Fencing shall be constructed in such a way as to restrict passage of vehicles beyond the outside edge of the roadway, parking lots, the road shoulder and pull-off zones. Directional and informational signs will be used to guide the vehicular user to open space facilities. Materials shall be chosen based on locale, facility classification, and ecologic zone. Fencing shall meet the requirements of ASHTO, ANSI and other governmental agencies having jurisdiction.
- Other Structures. Structures not included in other classes of open space facilities and within the Open Space Network should be designed to meet all of the requirements of the Americans with Disabilities Act. Structures can include: walls, small natural amphitheaters, picnic shelters, visitor centers, fee collection booths, offices and other built facilities. Construction materials for the structures should be selected so as not to disrupt the visual contiguity of the site. The materials should be chosen based on location within Bernalillo County, due to the varying ecologic zones within each open space facility. Low profile structures are encouraged in order to minimize impact. Construction materials and techniques should consist of treated wood, colored concrete, concrete block, metal ornamental and accent materials such as ornamental iron, ceramic tile, glass block, slump block, stone and brick, as well as, other environmentally appropriate materials. Exposed standard block is discouraged and it is recommended that all concrete block should be treated with stucco art and plaster. Prefabricated structures are not encouraged, in order to create exterior facades which are more in harmony with site surroundings. The use of recycled materials is recommended.

## 2. Parking Lot Design

- Parking lots will be designated for day use, overnight use or overflow use. Parking lots should include space for automobiles, trucks, motorcycles, bicycles, horse trailers and equestrians, open space maintenance vehicles and, in some cases, mass transit. Bike racks will be provided at most facilities. All parking lots will meet the requirements of the Americans with Disabilities Act (ADA) and it is recommended that drop off points be included in the design for physically handicapped users. Trash receptacles shall be provided at all parking lot areas.

- Design and grading of all parking lots will be done sensitively leaving natural landforms, stands of important native vegetation and other important features intact. If possible, design of parking lots will take advantage of natural rainfall and direct water to surrounding vegetation, especially if newly planted.
- All parking shall be as visible as possible to abate burglary or vandalism to parked vehicles.
- Parking lots shall be designed in such a way as to limit automobile access beyond the lot boundaries to authorized personnel and to direct pedestrians and other trail users to trail access points.
- The number of spaces provided and the design of the parking surface will be determined on a site by site basis. Gravel lots are acceptable when they are designed to meet environmental and ADA requirements.
- Access shall generally meet the standard requirements set forth in the Americans With Disabilities Act. Developed amenities at access points may include horse tie ups, bike racks and trash receptacles. New access points will be developed where parking is provided.

### 3. Access Points

- *Direction and Control.* Controlled access shall be provided to all open space lands. Open, dispersed access shall not be allowed in most cases unless it is deemed to be of benefit to the facility. Barriers, such as fencing, walls and natural landforms, will be used to restrict access. In general, developed facilities will provide areas for intense public use. Other areas and trails intended for public use will be well marked and defined. All facilities will be constructed with materials which are appropriate to the site, blend visually to the natural environment and are unobtrusive to the natural setting in color, texture and material. Users of motorized vehicles will be directed through the use of control devices associated with vehicular transport. This includes access control devices, fencing, barricades, natural barriers, signing and other means. As much as possible naturally occurring landforms such as escarpments, arroyos, rivers and streams will be used to control access of motorized vehicles.

- **Access Points.** Access points to open space facilities shall be controlled by use of lockable gates, walk-overs, fence openings and other apparatus. Signs shall be posted to designate and describe all access points. Directional signage to designated trail access points shall be provided. Access points shall be monitored for safety. In certain sensitive areas, access will be restricted to guided tours by open space personnel. Access points to undeveloped open space and adjacent lands shall be provided at open space facilities.
- **Landforms.** As much as possible naturally occurring landforms such as escarpments, arroyos, rivers and streams will be used to control access.
- **Joint Development.** Coordination of access points with other agencies and joint development of facilities at access are encouraged.

#### 4. Trails

- Designated trails shall be designed and managed to control and limit the damage caused by trail users.
- Trails shall be developed to link open space trails with other trails in the POST network and the National Forest. Interpretive trails shall be developed and manned in appropriate areas. Joint use of utility corridors and arroyos should be considered in site selection and alignment study of new trails. Trails shall be located to minimize the impact on adjacent protected lands or lands in private ownership. Trails shall be developed with varying levels of challenge to meet the experiential needs of the entire community.
- New trails shall be carefully located to avoid sensitive habitats, wildlife and vegetation or after extensive study of the area occurs. Alignments of trails shall take ambient vegetation, rock outcrops and other natural features into consideration and should avoid disturbance of those elements. Construction materials should blend into overall location within the Open Space Network dependent on use, local soil type and orientation of trail. Construction materials of trails may include: asphalt, concrete, decomposed granite, fine crushed gravel, stabilized soil, and wood decking. In the case of fine crushed gravels and soil stabilants, the use of concrete edging is recommended.

- The City shall close trails which are not part of a formal trail system to allow recovery from use and rotate use areas to minimize damage to the resource. Existing roads not intended for use as trails shall be closed and reclaimed using proper techniques. When determined prudent by staff, trails shall be temporarily closed to alleviate excessive damage to the resource.
- Signage shall be incorporated to advise users regarding location and distances of access and exit points, challenge levels, steep slopes and interpretation. Where necessary, trail users shall be educated regarding the safe use of trails along waterways or other features through the use of signage and other means.

## 5. Resource Management

### 5.1 General

- *Protection.* The use of vegetation in open space facilities will be restricted to natural and endemic species. The use of non-native exotic species or species unable to naturalize will not be allowed. Because of the wide variety of ecologic zones within the City of Albuquerque and Bernalillo County, vegetation will vary, a list of applicable plant and seed species by area is included in Appendix F. The use or adaptation of vegetation will include strategies for protection, reclamation and enhancement.

Existing vegetation will be protected from the deleterious effects of development whether from within the system or from adjacent parcels not under control of the Division. Protection methods will be defined in the Rank III plan for the area and regulated through overlay zones. All Open space lands will be continually monitored on an informal basis by open space staff.

If and when development occurs adjacent to open space lands, protective barriers shall be utilized around important or endangered vegetation. Confidentiality of sensitive sites, including areas with rare or endangered species, shall be maintained. Methods of protection may include erosion control, fencing, natural brush piles, signage and other such protective measures.

Appropriate environmental mitigation techniques shall be used for impact abatement. These techniques shall include: erosion and sediment control



measures, educational signage and interpretive exhibits illustrating environmental impacts.

- *Reclamation.* Any land disturbed by erosion or for purposes other than the construction of permanent facilities shall be reclaimed with an appropriate reclamation technique. Reclamation includes grading, land stabilization, seeding, overseeding, planting with containerized plant materials, and pole planting. Revegetation of disturbed areas shall occur immediately following development. Development of any site shall be timed such that reclamation can be performed within the current growing season. If reclamation efforts cannot be performed, an approved method of land stabilization shall be used. The growing season shall be defined as April 15 to September 15 dependent on weather.

If reseeding is not successful by the second growing season, the responsible party will repeat the reseeding process.

Species proposed for use in reclamation shall be compatible with those found at the site prior to development if commercially available. Reclamation of fire damaged areas shall include the removal of downed trees as necessary for public safety, and the control of invasion by exotic species. Prescribed burning or the creation of fire breaks in susceptible areas shall be evaluated on a case by case basis, after a study of the area in question has been made.

- *Enhancement.* Species proposed for enhancement of open space areas may be derived from native or endemic plant lists as shown in Appendix F. Species proposed must be compatible with those found at the site in its original condition. Enhancements to vegetation may include the following:
  - Restoration of damaged areas.
  - Wetlands in conjunction with storm water outfalls.
  - Pole planting and controlled flooding of specific areas within the Bosque, for the purpose of encouraging restoration of cottonwood forests.
  - Controlled burning or the removal of invasive species within the Bosque area, as determined by open space staff.
  - Creation of wildlife habitat enhancements such as quail guzzlers.

- Creation of visual or noise screens and buffers for protected areas, or adjacent to developed parcels.

## 5.2 Wildlife

- *Protection.* Informal monitoring shall be conducted continually by open space staff. Protection of rare or endangered species and their habitats shall be provided. Access to areas which contain such wildlife and protection methods shall be determined on a case by case basis. Confidentiality of sensitive sites may be maintained by the Open Space Division.
- Monitoring of habitat indicators shall include known locations of dens, perches, nests, washes, forage areas, and migration areas. In instances where a decline in a local population has been observed, the proper steps shall be taken to prevent further loss of habitat and wildlife. A biological study shall be conducted prior to implementation of a specific wildlife management program.
- Control of nuisance populations of wildlife and instances of threat to public safety shall be referred to the proper wildlife management agency, as applicable.
- *Enhancement.* Enhancements to wildlife areas shall be conducted in cooperation with other government agencies, such as the US Fish and Wildlife Service or the New Mexico Game and Fish Department. Projects which encourage wildlife enhancement shall be implemented in conjunction with other resource management projects, such as erosion control measures.

Enhancement methods may include: Quail guzzlers, thickets, hawk roosts and other such devices which encourage and enhance wildlife regeneration.

## 5.3 Views

- *Protection.* It is recommended that current ordinances be amended to provide for the protection of visual resources from the impacts of neighboring development through the implementation and enforcement of existing design restrictions and overlay zones. New zoning and land use policies or protective visual buffers, can be put in place through Rank III plans.

- The acquisition of lands buffering the Open Space Network from adjacent future development is recommended. Agricultural lands and arroyos are examples of appropriate buffers.
- *Enhancement.* When development does occur, consideration shall be made for the incorporation of scenic vistas, and screened viewing areas.

#### 5.4 Cultural, historical and archeological resources

- **Protection.** Open space lands will be surveyed and an inventory of locations and site descriptions will be maintained for planning purposes.
- Special areas of significant value may be accessed for cultural or religious purposes. Access shall be provided through a permit, or as guided by open space staff.
- Unique or rare sites of historical value should be prohibited from access. Confidentiality of such sites shall be maintained. Removal of threatened artifacts by qualified open space staff shall be allowed when deemed necessary following a thorough study of the site. Artifacts shall be retained by the Open Space Division per guidelines for curating such artifacts.
- **Enhancement.** Any development or disturbance of open space land shall be coordinated through the State Historic Preservation Office. The interpretive and educational value of archaeological, historical and cultural sites should be considered in the management of open space facilities.

#### 5.5 Water quality and soil stability

- **Protection.** Activities on open space lands by staff personnel or others shall not unnecessarily encourage the harmful disturbance of soil or water.
- **Protection during construction.** In instances of development, access to the site by construction vehicles shall be restricted to specifically located areas within the site. Stockpiling or temporary storage areas will be minimized. Fencing of areas to be protected during construction shall be required. Runoff shall be directed away from disturbed areas. Temporary diversion berms may be

utilized to divert water to stable waterways or vegetated areas. Open space lands shall be protected from adjacent development impacts. It shall be the responsibility of the adjacent landowner to ensure protection from airborne debris, dust and water of poor quality.

- **Use of Chemicals.** The use of herbicides and insecticides shall be restricted on open space lands unless deemed necessary for exotic species control or for the public welfare by the Environmental Health Division of the City of Albuquerque, or other governing bodies having jurisdiction.
- **Topsoil Stabilization.** Topsoil shall be stabilized by means of geotextiles, jute mesh stabilization systems, rip rap and other technologies. Erosion and sediment control measures shall be implemented as soon as problem areas are located. Environmentally acceptable methods of erosion control shall be used in all cases. Unvegetated slopes should be temporarily scarified to reduce runoff velocities. Compacted soils, as in instances of roads or trails closure, shall be reclaimed. Grama straw shall be utilized for soil stabilization, when obtainable. Hay or straw varieties not naturally occurring on the site shall not be used unless native varieties are unavailable. Other soil stabilization methods may include gravel mulch in conjunction with reclamation seeding and chemical soil stabilizers. Biotechnical means of stabilization may include the use of reed rolls and berms, willow and gabion structures or hand placed stone and willow cuttings.
- **Sediment Control.** Control of sediment is highlighted for any area which has experienced topsoil disturbance or development. The mitigation of sediments shall include the use of sediment basins, check dams, diversion dikes and ditches, berms, seeding and other slope retention technologies.
- **Enhancement.** Water harvesting methods should be used whenever possible.
- **Monitoring of flow characteristics and surface water quality** shall be accomplished by informal investigations by open space personnel. Impermeable surfaces shall be kept to a minimum in developed areas. Porous asphalt pavement may be used for parking surfaces on slopes not greater than 5%. Drainage flows shall be kept on site. Retention basins shall be fenced when greater than 30" deep, and maintained to ensure porosity. Basins should be used to improve wildlife habitats. Temporary check dams and desedimentation

ponds shall be constructed as needed for sediment control.

- Storm water runoff should be diverted as irrigation for existing plant materials, water sources for wildlife, or allowed to infiltrate. Surface methods of storm water management are preferred.
- Waste water for developed sites may be used in cooperation with natural based systems such as constructed wetlands, marsh pond systems, or other water purification systems.

## 6. Law Enforcement

- Enforcement. Ride along programs for interested volunteers and citizens may also be used. Nearby residents may be relied upon for reporting unauthorized activities on open space lands. Methods of patrolling open space lands may include hiking, bicycling, horse patrols, aircraft surveillance, and remote intrusion sensors.
- First-aid. Open space rangers shall be trained in all methods of first aid.
- Search and Rescue. Open space rangers shall be familiar with search and rescue procedures to aid emergency personnel in operations.
- Regionalize Rangers. Ranger substations shall be regionalized to lessen the time necessary for aid in assistance with emergencies. Regionalizing offers a more efficient use of natural resources and fuel.
- Volunteer Trail Watch Program. Volunteers will be recruited and trained to monitor activity along trails and report violations of rules and regulations to open space rangers.

## 7. Educational Methods

The levels of service that personnel can provide is often linked to the funding made available for such programs. Educational methods shall include the following:

- **Signage.** Posted signage along fences and at access points to open space facilities. The use of stenciled or plastic adhesive type signage on asphalt paved trails.
- **Information.** Brochures, maps, and other informational literature.
- **Public announcements.** News releases; regular publication of ranger columns in the local newspapers; feature news stories by radio or television stations; and video programs which can be distributed for public use through public or cable television rental stores or libraries will increase public awareness of the Open Space Program.
- **Public Interaction.** User specific outreach programs for special interest groups; environmental education programs for schools, in order to teach resource protection; safety presentations at public meetings; and displays at the County and State Fairs will involve and educate the public.
- **Coordination with other agencies.** Coordinated educational materials, programs and staffing at jointly managed facilities.

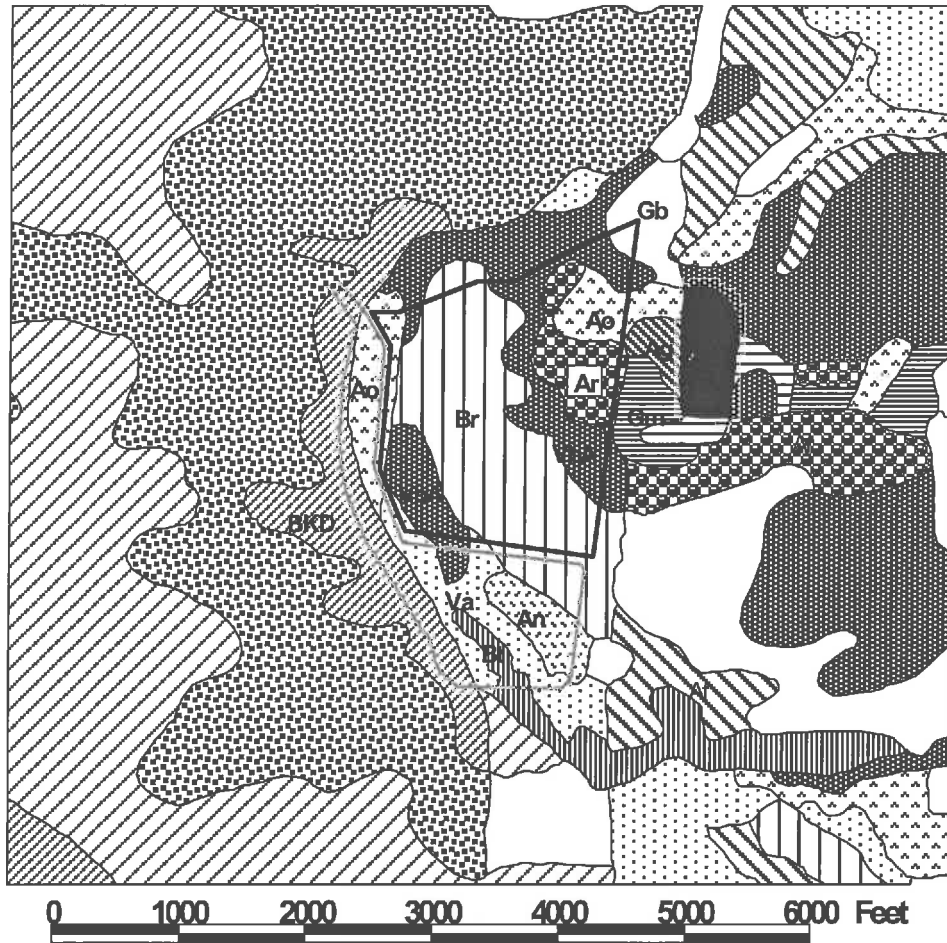
### Appendix 3: Mayor's Executive Instruction No. 8 (1998)

This Executive Instruction directs City agencies to improve accessibility in Parks, Open Space and Trail Facilities. This Resource Management Plan incorporates the Executive Instruction. The Instruction states:

- Federal law requires the City to plan, design and develop parks, open space and trail facilities in accordance with the requirements of the Americans with Disability Act for public recreation facilities. Providing maximum access to the City's parks, open space and trails is important to the City and to all users of these recreation facilities. Parks, open space and trails should be designed, not merely to meet the requirement of federal law, but for the highest level of accessibility possible. The consideration of accessibility in the planning phase and the incorporation of maximum accessible facilities in the design phase for the development of parks, open space and trails will minimize the increase in cost of constructing accessible facilities in these recreation facilities.
- The departments that are responsible for the planning, design and development of new parks, open space and trails shall plan the development of these recreation facilities for the highest level of accessibility possible and shall incorporate the highest level of accessible features into the design for the developed recreation facilities.

Appendix 4: Soil Series Descriptions

Figure A4. Soil Series



- Hubbell Oxbow Farm Open Space
- AMAFCA Detention Basin
- Soil Series**
- Af: Agua loam
- Ag: Agua silty clay loam
- An: Anapra silt loam
- Ao: Anapra silty clay loam
- Ar: Amijo clay loam
- BCC: Bluepoint loamy fine sand
- BKD: Bluepoint-Kokan
- Br: Brazito fine sandy loam
- Bt: Brazito complex
- Gb: Gila loam
- Gc: Glendale loam
- Grr: Glendale clay loam
- MWA: Madurez-Wink
- Va: Vinton loamy sand
- VbA: Vinton sandy loam
- Vc: Vinton clay loam





The following section outlines soil conditions for both the HOF and the Hubbell Dam, based on information obtained from the Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties (Leroy W. Hacker, Soil Conservation Service, June 1977). An understanding of soil conditions helps guide decisions about crop selection and trail and facility construction at the HOF.

Figure A4 on the previous page illustrates the soil series on HOF and the Hubbell Dam. The predominant soil type on the HOF is Brazito fine sandy loam (Br) along with Vinton sandy loam (VbA), Vinton loamy sand (Va), Armijo clay loam (Ar), Anapra silty clay loam (Ao), and Gila loam (Gb).<sup>19</sup>

The predominant soil type on the Hubbell Dam is Vinton loamy sand (Va). Anapra silt loam (An), Anarpa silty clay loam (Ao), Brazito complex (Bt) and Vinton sandy loam (VbA) are also present.<sup>20</sup>

**A4.1 Anapra Series: Anapra silt loam (An) and Anarpa silty clay loam (Ao)**  
This series consists of deep well-drained soils common to the flood plain of the Rio Grande. A representative profile includes an 8-inch surface layer of grayish brown loam, followed by 16 inches of grayish brown clay loam. Below the second layer is light gray sand and sandy loam to a depth of 60 inches or more. The soil is moderately alkaline throughout. Permeability of this series is moderately slow to the lower sandy level and rapid below.

Anapra silt loam has the general profile of the soil series. Slopes are 0 to 1 percent and it is slightly to moderately saline. Runoff is slow, which makes the hazard of erosion minimal. Anarpa silty clay loam has the general profile of the soil series but with a surface layer of different texture. This type shares the same characteristics as Anarpa silt loam described above.

Management needs for both soil types include, maintaining soil fertility, using irrigation efficiently, and controlling annual and perennial weeds. Every three years a high-residue crop or a soil-improving crop should be grown in rotation with other crops. It is suitable to grow three years of grasses or legumes in rotation with other crops. These soil types tend to compact when moist, crack when dry,

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<sup>19</sup> Hacker, Leroy W., Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, United States Department of Agriculture, Soil Conservation Service, plate 40, June 1977.

<sup>20</sup> Ibid.

and seal over when wet. Therefore, regular tillage is needed to prevent clods and controlled irrigation is needed to avoid drowning or scalding the crops.

#### **A4.2 Armijo Series: Armijo clay loam (Ar)**

The Armijo series consists of deep, well-drained soils that formed in alluvial sediment in old oxbow lakes or sloughs on the flood plain along the Rio Grande. A representative profile contains an 8 inch brown clay loam surface layer, a second 38 inch layer of light reddish brown, brown and pinkish gray clay and a lower layer of light brownish gray sandy loam and pale brown loamy sand. Permeability is very slow.

Armijo clay loam has a slope of 0 to 1 percent and is slightly to moderately saline. Runoff is very slow and the danger of erosion is slight.

Management needs for this soil type include, maintaining soil fertility, efficient irrigation and controlling perennial and annual weeds. This soil type is difficult to keep in good tilth and cracks when dry, swells when wet and is easily compacted when wet. It is prone to blowing unless protected. Tillage should be limited and wet soil should not be tilled.

#### **A4.3 Bluepoint Series: Bluepoint-Kokan (BKD)**

This soil type is associated with hilly areas and is found on the western bluffs that overlook the HOF. Runoff is characterized as slow and the hazard of water erosion is moderate or severe. Development on these bluffs could increase soil erosion, which would flow into the Gallegos lateral. Irrigation water for the HOF is drawn from the lateral so development of the bluffs could become a management issue.

#### **A4.4 Brazito Series: Brazito complex (Bt) and Brazito fine sandy loam (Br)**

The Brazito series consists of deep, well-drained soils common to the flood plain along the Rio Grande. Slopes are 0-1 percent. In a representative profile of this series, the surface layer is roughly nine inches of light reddish brown and reddish brown silty clay loam. Light brown coarse sand is found below the surface level at a depth of 60 inches or more. The soil is moderately alkaline. Brazito complex has the same profile as the soil series but with a 3 - 10 inch surface layer of sand, loamy sand, sandy loam, sandy clay loam, clay loam or loam. Brazito Fine sandy loam shares the same general profile of the soil series but the surface layer is different in texture and 12 to 14 inches thick in some areas. Runoff is slow for

this type so erosion is slight. Permeability is moderate through the surface layer but rapid below.

Brazito fine sandy loam is used for irrigated crops but the choice for plants is limited because of low fertility and droughtiness. Chlorosis is a problem on some crops. Due to the shallow layer of underlying sand, deep cuts in land leveling should be avoided.

Management needs for both soil types include, maintaining soil fertility, using irrigation efficiently, and controlling annual and perennial weeds. A high residue crop or a soil-improving crop should be grown in rotation with other crops on an average of twice every 3 years. Manure or commercial fertilizer is needed to maintain soil fertility and productivity. Some plants grown on this soil type benefit from the application of potassium or trace elements. Tillage should be kept to a minimum.

#### **A4.5 Gila Series: Gila loam (Gb)**

The representative profile of this series has a surface layer of brown loam roughly 7 inches thick. Next is stratified brown and light yellowish brown very fine sandy loam and sandy loam for about 37 inches. Pale brown sand is found below this to a depth of 60 inches or more. The soil is moderately alkaline throughout and permeability is moderate.

For this soil type it is helpful to reintegrate crop residue into the soil to maintain the organic matter content, as well as the water intake rate, and soil structure. Phosphorous is required for alfalfa and other legumes and nitrogen is needed for most other crops. Efficient and well-managed irrigation is needed for optimum production. If surface irrigation is used leveling and smoothing of the soils is required. Irrigation must be controlled to avoid drowning or scalding the crops.

#### **A4.6 Vinton Series: Vinton loamy sand (Va) and Vinton sandy loam (VbA)**

The Vinton series is composed of deep, well-drained soils that originated from recent alluvium on the flood plain of the Rio Grande. Slopes are 0 to 3 percent and permeability is moderately rapid. Vinton loamy sand is characterized by pale brown surface layer. Runoff is very slow with the hazard of soil blowing is moderate or severe. Vinton sandy loam (VbA) has the same general profile as the soil series but runoff is slow and the hazard of soil blowing is severe.

Management needs for this soil type include, maintaining soil fertility, using irrigation efficiently, and controlling annual and perennial weeds. Some plants grown on this soil type benefit from the application of potassium or trace elements. Tillage should be kept to a minimum and wet soil should not be tilled.

#### A4.7. Crop Potential Estimates

The table below illustrates the potential growing capabilities of the soil types found at the HOF. The predominant soil type found at the site is Brazito fine sandy loam, which is amenable to alfalfa. Only soil types found at the HOF are included.<sup>21</sup>

*Figure A4.7. Potential Crop Yields.*

	Alfalfa (Drope)	Sweet Corn (bu)	Silage Corn or Sorghum	Green Chile	Pasture
Ao	7	335	22		13
Ar	4	200			8
Br	6				12
Gb	8	342	28	180	10
Va	6				12
VbA	6	204			13

Source: Leroy W. Hacker, *Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties*, (Soil Conservation Service, June 1977), 49.

#### A4.8. Potential for Habitat Elements

The table below illustrates the capabilities of soil types to support various habitat elements. This chart should be consulted when planning habitat areas on the HOF, such as wetlands, hedgerows and wildlife crops. The chart includes soil types found at both HOF and the AMAFCA drainage right of way.

<sup>21</sup> The estimated crop yields from the Soil Survey publication are based on the following assumptions: 1. The cropping system includes crops that produce a large amount of residue and crops that improve the soil. 2. Suitable crop varieties are selected, and seed is planted at the proper time and at the correct rate. 3. The right kind of fertilizer is applied in proper amount and at the proper time. 4. The soils are tilled carefully at the right time and with the right kind of implements so that crop residue is utilized and excessive compaction is avoided. 5. Insect pests, weeds, and plant diseases are controlled. 6. Length and slope or irrigation runs are suitable, and surface, subsurface, and sprinkler irrigation systems are properly designed. 7. Irrigation water is applied in accordance with crop needs and at the proper time. 8. Crops are harvested at the proper time and with equipment that is properly operated.

*Figure A4.8. Potential for Habitat Elements.*

	Seed/Grain	Domestic Grasses/ Legumes	Wild Herbaceous Plants	Shrubs	Wetland Plants	Shallow Water Areas
Ao	Good	Good	Fair	Fair	Good	Fair
An	Good	Good	Fair	Fair	Good	Fair
Ar	Fair	Good	Fair	Fair	Good	Good
Br	Fair	Good	Poor	Poor	Good	Good
Bt	Fair	Good	Poor	Good	Very poor	Very poor
Gb	Good	Good	Poor	Poor	Good	Good
Va	Fair	Fair	Poor	Poor	Poor	Good
Vba	Fair	Fair	Poor	Poor	Poor	Good

Source: Leroy W. Hacker, *Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties*, (Soil Conservation Service, June 1977), 58-61.

#### **A4.9. Soil Limitations: Paths and Trails**

The table below illustrates the limitations that certain soil types have on constructing paths and trails. Limitations are given three classifications: slight, moderate and severe. Slight indicates that the soil conditions are generally favorable and that limitations are minor and can be easily surmounted. Moderate indicates that planning, design or special maintenance may overcome limitations. These limitations should be considered, along with slope and drainage, when planning trails at HOF.

<i>Figure A4.9. Potential for Trails.</i>	
Ao	Slight
An	Slight
Ar	Moderate/too clayey; dusty
Br	Slight
Bt	Slight
Gb	Slight
Va	Moderate/too sandy or too clayey
Vba	Slight

Source: Leroy W. Hacker, *Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties*, (Soil Conservation Service, June 1977), 89-92.

**Appendix 5: Hubbell Oxbow Farm Lease**



