

**U.S. Department of the Interior
Bureau of Land Management**

ENVIRONMENTAL ASSESSMENT

DOI-BLM-AZ-C020-2011-0007-EA

Mittry South Bermuda Grass Prescribed Fire

Yuma County, Arizona

Yuma Field Office
2555 East Gila Ridge Road
Yuma, AZ 85365

Prepared by: David Daniels
Date: Insert Date Signed



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1. CHAPTER 1 - INTRODUCTION

A. **Project Location**

This project is located at: T.7 S., R. 22 W., sec 13 W1/2 , sec 14. It is within the Mittry Lake Wildlife Area (MLWA), managed by the Bureau of Land Management, Bureau of Reclamation, and Arizona Game and Fish. MLWA is located between Imperial and Laguna Dams on the lower Colorado River in Yuma Arizona.

B. **Project Background**

Forty-three acres of Bermuda grass has been planted as a cover crop to reduce salinity and improve soil conditions in preparation for planting native riparian habitat. When the soils are suitable, the area would be planted with native species such as cottonwood, willow, mesquite and salt bush. Planting these native species would reduce the hazardous fuels loading, and increase habitat structure and complexity. The EA has analyzed the No Action and Proposed Action Alternatives, and concluded in a Finding of No Significant Impact (FONSI).

C. **Purpose and Need for the Proposed Action**

The purpose of this project is to burn the Bermuda grass that was planted as a cover crop. The burn would eliminate grass thatch, weeds, and saltcedar sprouts. The burnt cover crop would rejuvenate in the spring as a healthier crop to reduce the salinity in the soil. In lieu of herbicide application, prescribed fire would be used to control the saltcedar and weeds, and promote healthy Bermuda grass growth.

D. **Decision to be Made**

To implement the proposed prescribed burn of 43 acres of Bermuda grass or no action.

E. **Scoping and Issues**

The proposed action was presented to the BLM interdisciplinary NEPA team on November 23, 2010.

The following scoping issues were identified:

- Air Quality
- Threatened and Endangered Species
- Invasive/Nonnative Species
- Wetland/Riparian
- Climate Change

2. CHAPTER 2 - PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action

The purpose of this project is to burn 43 acres of Bermuda grass that was planted as a cover crop at the Mittry South Restoration area. The burn would eliminate grass thatch, weeds, and saltcedar sprouts. The burned cover crop would rejuvenate in the spring as a healthier crop to reduce the salinity in the soil. In lieu of herbicide application, prescribed fire would be used to control the saltcedar and weeds, and promote healthy Bermuda grass growth. Burning would be conducted each February for the next 5 years.

The Bureau of Land Management would write and implement a prescribed fire plan to conduct the broadcast prescribed fire. The burn would be conducted within the 43 acres of Bermuda grass crop that is sectioned into five units ranging from seven acres to ten acres per unit. Each unit is lined with a minimum of ten foot perimeter of soil, through the use of a road or vegetation break. Beyond the ten foot break, there is both native and invasive riparian species, including saltcedar, cottonwood, willow, and mesquite varieties.

B. No Action Alternative

Under the no action alternative, the proposed project would not occur, and the land would remain in the present condition. Existing vegetation would continue to increase in height and density. Conformance with Land Use Plan

The proposed action is in conformance with the Yuma Field Office Resource Management Plan (RMP) which was approved on January 29, 2010.

The proposed action is in conformance with the applicable RMP because it is specifically provided for in the following RMP decision(s):

VM-058: Non-native invasive species management is enhanced through a collaborative approach with fire management.

FM-008: Utilize prescribed and wildland fire techniques to protect values at risk (life and property and to maintain or restore desirable plant communities).

C. Relationship to Statutes, Regulations, or Other Plans

Mittry Lake Hazardous Fuels Reduction and Riparian Restoration Environmental Assessment AZ-050-2002-0002

3. CHAPTER 3 - AFFECTED ENVIRONMENT

This section describes the existing conditions of the affected environment. The table

below summarizes the resources and concerns reviewed for this project. Resources not present within the project study area, as well as those present and not affected, are not discussed. Those resources that have been identified by an interdisciplinary team as present and potentially affected are discussed below.

PROJECT RESOURCE REVIEW			
Resources & Programs Considered	Not Present	Present and Not Affected	Present and/or Potentially Affected
Air Quality*			X
Areas of Critical Environmental Concern	X		
Climate Change*			X
Cultural, Historic & Paleontological Resources*	X		
Environmental Justice*	X		
Farmlands (Prime or Unique)		X	
Fish Habitat*	X		
Floodplains*		X	
Fuels/Fire Management		X	
Grazing	X		
Invasive & Non-Native Species			X
Lands & Realty		X	
Law Enforcement	X		
Migratory Birds*		X	
Minerals	X		
Native American Religious Concerns*	X		
Noise	X		
Public Health & Safety	X		
Rangelands and Forests*	X		
Recreation		X	
Socioeconomics	X		
Soils			X
Threatened or Endangered Species*		X	
Travel Management	X		
Vegetation			X
Visual Resources	X		
Wastes (Hazardous or Solid)*	X		
Water Quality (Drinking or Groundwater)*	X		
Wetlands/Riparian Zones*			X
Wild & Scenic Rivers*	X		
Wild Horses/Burros	X		
Wilderness*	X		
Wildlife		X	

A. Air Quality and Climate Change

The lower Colorado River Valley challenges the Mohave Desert's Death Valley as the hottest and driest place in North America. The temperature extremes range from 32 degrees F to 120 degrees F. The amount and seasonality of rainfall are defining characteristics of the Sonoran Desert. Much of the area has a bi-seasonal rainfall pattern. A brief summer rainy season and widespread winter rains deliver 3 inches of rainfall on average (Phillips, 2000).

Data from Arizona Department of Environmental Quality (ADEQ) for 1991-1995 do not show PM-10 levels above the Arizona Ambient Air Quality Standards. The major sources of air pollution are vehicular travel on improved and unimproved surfaces and agricultural activities. Air quality is otherwise excellent except during times of high winds (U.S. Army Yuma Proving Ground, 2001).

B. Soils

The Mittry Lake Riparian Restoration project is proposed to take place between the banks of the lower Colorado River and Mittry Lake. The proposed project area is on a floodplain characterized by alluvial soils which are nearly level, well-drained, clay soils having periodic inclusions of more gravelly, well-drained soils. The area was surveyed between 1972-1977 (Soil Conservation Service, 1980). Three soil types are present. These are: Holtville clay, Indio silt loam, and Salorthids. Dredge spoil from the Colorado River also exists on portions of the site and adjacent lands. The U.S. Bureau of Reclamation deposited dredged material during dredging operations at Laguna Dam.

Holtville clay, present at Betty's Kitchen and a portion of the Pratt agricultural lease and tree nursery, is suitable for irrigated crops and wildlife habitat. According to the survey, this soil is good for open land wildlife habitat and poor for wetland habitat because of the clay content of the soils.

Indio silt loam is also present at the Pratt agricultural lease and extends into the proposed project area. This soil is moderately permeable and used for many types of crops. If irrigated, this soil has good potential for open land wildlife habitat and poor potential for wetland wildlife habitat.

The majority of the proposed project area is mapped as Salorthids. These soils are deep, poorly drained, strongly saline, and contain floodplain soils from the Gila and Colorado rivers. Preliminary soil testing within the proposed project area revealed high salinity levels. With proper site preparation, including engineering, leveling, ditching, leaching, deep irrigation and soil amendments, the soil would be suitable for native riparian and floodplain tree planting (McDermott, personal communication 2001).

C. Vegetation Native and Non- Native

The proposed project area is located within the Lower Colorado Valley Subdivision of the Sonoran Desert. This is the most arid and largest region of the Sonoran Desert. Uplands are chiefly vegetated with creosote bush (*Larrea tridentata*) in plant communities containing a variety of other species. Facultative and obligate riparian trees and shrubs characterize uncultivated floodplains.

Surrounding the proposed project area, the dominant vegetation is the nonnative tamarisk. Several site visits along with aerial and infrared photographs document this finding. Arrowweed, quailbush, phragmites and seep willow are also present. The saltcedar range in size, age class and density. Few athel tamarisk (*Tamarix aphylla*) occur adjacent to the proposed project area. Several openings also contain litter from dead tamarisk and remnants of cattail. The habitat of Mittry Lake Wildlife Area was described using Braun-Blanquet releve' method as follows: *Salix goodingii* 15 percent, *Salix exigua* 20 percent, *Tamarix chinensis* 50 percent, *Populus fremontii* 0 percent and *Typha* spp. 15 percent (McKernan, June 2000).

D. Wetlands/Riparian Zones

The proposed project area is within a riparian area associated with the Colorado River. Currently the riparian zone is dominated by monotypic nonnative vegetation. Southwestern riparian ecosystems are one of the most critically endangered habitats in North America (U.S. Fish and Wildlife Service, 2001)

E. Cultural Resources

A previous Class III (field inventory) cultural resources survey was conducted within the current proposed project area. Approximately 20 acres were surveyed in 1987 (Johnson 1987). No cultural resources were identified. Due to the proposed project area being in the floodplain, the chances for any type of intact cultural resources are low. No additional cultural resources surveys are necessary. Pursuant to Section 106 of the National Historic Preservation Act and regulations set forth in 36 CFR 800.3(a)(1), BLM has no further obligations under Section 106.

4. CHAPTER 4 - ENVIRONMENTAL CONSEQUENCES

A. Potential Direct and Indirect Effects

This section describes the environmental consequences of those resources/concerns identified in Chapter 3 as present and/or potentially affected. Resources not present within the project study area, as well as those present and not affected, are not discussed.

1. Air Quality and Climate Change

a. Effects of Proposed Action.

The burning of the 43 acres of Bermuda grass would cause short term effects to air quality by producing small amounts of carbon monoxide and smoke. However, the affects would be temporary. The proposed action would contribute to levels of PM-10 for a limited duration of a few hours.

b. Effects of No Action.

Air quality would not be affected if the proposed project does not take place.

2. Soils

a. Effects of Proposed Action.

Surface soils over the entire proposed project area would burn during the prescribed fire. However, there would be no long term effect on the soils. Bermuda grass is the cover crop planted to reduce soil salinity and improve soil conditions. As soil conditions improve the burn units will be planted with native vegetation. This is expected to take 3 to 5 years.

b. Effect of No Action.

No soil would be disturbed as a result of this alternative. Salt cedar and weeds would continue to invade the Bermuda grass fields. Soils would be likely to increase in salinity as the result of tamarisk dominance.

3. Vegetation Native and Non- Native

a. Effects of Proposed Action.

Vegetation (Bermuda grass, saltcedar sprouts and various weeds) in the proposed project area would be burned. This would be a short term effect as Bermuda grass resprouts vigorously after burning and will out compete weeds and saltcedar. Planting native riparian vegetation along with recruitment from existing seed beds and neighboring lands augment the structural complexity of habitat and generally enhance ecological diversity (U.S. Fish and Wildlife Service, 2001).

b. Effects of No Action.

Saltcedar and weeds would continue to invade the Bermuda grass fields jeopardizing the success of the project. Existing vegetation would continue to increase in height and density. Saltcedar would exclude recruitment of native species. Seed and pollen from the saltcedar in and around the proposed project area would continue to infect and degrade cottonwood-willow habitat elsewhere. Nonnative vegetation communities would continue to persist and expand. Hazardous fuels would accumulate, further increasing the possibility of wildfire. Quality habitat in the neighboring Betty's Kitchen, Pratt tree nursery, and native

planted Mittry South would remain vulnerable to the threat of wildfire.

5. Wetlands/Riparian Zones

a. Effects of Proposed Action.

The proposed prescribed fire would have no immediate effect on the quality of the riparian zone. Eventual restoration of the site would promote riparian landscape complexity.

b. Effects of No Action.

The existing Bermuda grass crop would not be burned. Saltcedar sprouts would not be killed if the burn does not take place.

B. Mitigating Measures for the Proposed Action

All actions proposed in this EA would occur before March 15th or after September 15th to avoid Southwestern willow flycatcher, and Western yellow billed cuckoo nesting and migration periods as well as the nesting periods of the Yuma clapper rail and California black rail. Extensive measures will be taken to prevent any escape of the wildfire into the SWFL habitat. If the fire escapes, then full force suppression will take place and the wildfire will be fought aggressively providing for safety first. Crews will be instructed to use Minimum Impact Suppression Tactics (M.I.S.T) so as not to affect SWFL habitat.

C. Cumulative Effects

1. Introduction

Cumulative effects are the impacts on the environment that may result from the incremental effect of the Proposed Action or No Action alternative in combination with other past, present, and reasonably foreseeable future actions on BLM-administered lands, as well on those lands under other jurisdictions that are adjacent to or within BLM boundaries. Cumulative effects must consider the likely impact of the Proposed Action or No Action alternative when combined with these additional actions. This section describes the cumulative effects of those resources/concerns identified in Chapter 3 as present and/or potentially affected.

There will be no cumulative effects due to the proposed action of this project.

5. CHAPTER 5 - TRIBES, INDIVIDUALS, ORGANIZATIONS

OR AGENCIES CONSULTED

Bill Knowles

Arizona Game and Fish

6. CHAPTER 6 – REFERENCES

McDermott, B. Natural Resource Conservation Service. Personal Communication. February, March 2002

McKernan, R.L. and Braden, G. (2001). *Status, Distribution, and Habitat Affinities of the Southwestern Willow Flycatcher Along the Lower Colorado River Year 4-1999*. pp. 44, 5, 7.

McKernan, R.L. and Braden, G. (2001). *Status, Distribution and Habitat Affinities of the Southwestern Willow Flycatcher Along the Lower Colorado River Year 5-2000*. pp. 14, 46, 59, 81, 83.

Mittry Lake Hazardous Fuels Reduction and Riparian Restoration Environmental Assessment AZ-050-2002-0002

USDA-Soil Conservation Service (1980). Soil Survey of Yuma-Wellton Area. pp. 14, 15, 23

USDI-Bureau of Land Management (2010). Yuma Field Office Resource Management Plan and Environmental Impact Statement.

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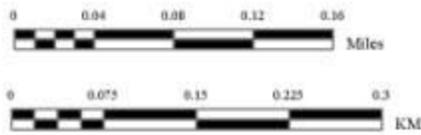
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_____. (1998). Yuma/Havasu Fire Management Zone Fire Management Plan. pp.2, 22.

7. APPENDICES

Appendix A – Maps

43 Acres Mittry Bermuda Grass RX



1 = 4,664



United States Department of the Interior
 Bureau of Land Management
 Arizona State Office
 Land Status updated as of August 27, 2010
 Map created as Oct 20, 2010



The Bureau of Land Management (BLM) makes no representations or warranties regarding the accuracy or completeness of this map. This map does not address encroachments or questions of location, boundary, and area, which an accurate survey may disclose. This map is intended and is to be used as an illustration only. The map is merely representational, it and the data from which it was derived are not binding on the BLM and may be revised at any time in the future. The BLM shall not be liable under any circumstances for any direct, indirect, special, incidental, or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map or the data from which it was derived.

Technical Review:

Supplemental Authorities /Other Resources or Concerns	May Be Affected		If May affect / Mitigations Assigned	Signature Name/Title	Date
	Yes	No			
Air Quality	X			<i>John Hall</i>	
Areas of Critical Environmental Concern		X		<i>Tom Jones</i>	
Cultural Resources/ Paleontological Resources	X			<i>Tom Jones</i>	
Environmental Justice		X		<i>Project Lead</i>	
Farm Lands (Prime or Unique)		X		<i>Project Lead</i>	
Floodplain		X		<i>Project Lead</i>	
Fuels / Fire Management		X		<i>Erica Faulkner</i>	
Public Health and Safety		X		<i>Project Lead</i>	
Invasive & Non-Native Species	X			<i>John Hall</i>	
Lands/Realty		X		<i>Art Lopez</i>	
Law Enforcement		X			
Migratory Birds		X		<i>Jeff Young</i>	
Minerals		X		<i>Buzz Todd</i>	

Supplemental Authorities /Other Resources or Concerns	May Be Affected		If May affect / Mitigations Assigned	Signature Name/Title	Date
	Yes	No			
Native American Religious Concerns		X			
				<i>Tom Jones</i>	
Operations/ Engineering Review		X			
				<i>Project Lead</i>	
Rangeland		X			
				<i>John Hall</i>	
Recreation		X			
				<i>Ron Morfin</i>	
Socio-economics		X			
				<i>Project Lead</i>	
Soils	X				
				<i>John Hall</i>	
Threatened or Endangered Species	X				
				<i>Jeff Young</i>	
Travel Management		X			
				<i>Joe Raffaele</i>	
Vegetation	X				
				<i>Jeff Young</i>	
Visual Resources Management		X			
				<i>Ron Morfin</i>	
Wastes, Hazardous or Solid		X			
				<i>Cathy Wolff-White</i>	
Water Quality, Drinking or Ground		X			
				<i>Project Lead</i>	
Wetlands/Riparian Zones	X				
				<i>Jeff Young</i>	

Supplemental Authorities /Other Resources or Concerns	May Be Affected		If May affect / Mitigations Assigned	Signature Name/Title	Date
	Yes	No			
Wild and Scenic Rivers		X			
				<i>Project Lead</i>	
Wild Horses/ Burros		X			
				<i>John Hall</i>	
Wilderness & WSA		X			
				<i>Ron Morfin</i>	
Wildlife	X				
				<i>Jeff Young</i>	

Compliance and assignment of responsibility (Type Program or Employee):

Dave Daniels

Monitoring and assignment of responsibility: (Type Program or Employee):

Fire Program

Review:

Prepared by: _____
David Daniels
Project Lead

_____ Date

Reviewed by: _____
David Daniels
Planning and Environmental Coordinator

_____ Date

Reviewed by: _____
Bob Narus
Fire Management Officer

_____ Date

Reviewed by: _____
James T. Shoaff
Field Manager,
Yuma Field Office

_____ Date

**Decision Record
for the
Mittry South Bermuda Grass Burn
DOI-BLM-AZ-C020-2011-0007-EA**

Background

The Yuma Field Office, Bureau of Land Management, has prepared an Environmental Assessment (EA) evaluating burning 43 acres of Bermuda grass fields located within T. 7S., R. 22 W., sec. 13, W^{1/2} ; sec. 14. Forty-three acres of Bermuda grass has been planted as a cover crop to reduce salinity and improve soil conditions in preparation for planting native riparian habitat. When the soils are suitable, the area would be planted with native species such as cottonwood, willow, mesquite and salt bush. Planting these native species would reduce the hazard fuels load, and increase habitat structure and complexity. The EA has analyzed the No Action and Proposed Action Alternatives, and concluded in a Finding of No Significant Impact (FONSI).

Decision

My decision is to adopt the Proposed Action, as described and analyzed in the Environmental Assessment and Finding of No Significant Impact. The Proposed Action would provide for burning the Bermuda grass fields in the Mittry Lake Wildlife Area. Discretion would be given to fire management as how to best implement the proposed action. The subsequent restoration of native vegetation would increase habitat value for wildlife. Portions of the restoration site may eventually be developed for passive recreation such as hiking, bird watching and environmental education. The Proposed Action would have no negative effect on the President's Energy Policy and a Statement of Adverse Energy Impact is not required.

Rational

The proposed action is in conformance with the *Yuma Field Office Resource Management Plan*, (BLM 2010). The *Arizona Standards for Rangeland Health and Guidelines for Grazing Administration* have been incorporated, as amended by the *Statewide Plan Amendment of Land Use Plans in Arizona* (1997). Implementing the proposed action would both reduce hazard fuels within the Wildland Urban Interface (WUI) and increase wildlife habitat for native species.

Monitoring

The restoration site would be monitored and evaluated for several components including efficacy of weed removal.

Mitigating Measures

All actions proposed in this EA would occur before March 15th or after September 15th to avoid Southwestern willow flycatcher, and Western yellow billed cuckoo nesting and migration periods as well as the nesting periods of the Yuma clapper rail and California black rail. Extensive measures will be taken to prevent any escape of the wildfire into the SWFL habitat. If

the fire escapes, then full force suppression will take place and the wildfire will be fought aggressively providing for safety first. Crews will be instructed to use Minimum Impact Suppression Tactics (M.I.S.T) so as not to affect SWFL habitat.

A burn plan will be developed and will follow guidelines provided in the National Fire Plan.

Decision Approved by:

James T. Shoaff
Yuma Field Manager

Date

**Finding of No Significant Impact
for
Mittry South Bermuda Grass Burn
DOI-BLM-AZ-C020-2011-0007-EA**

Summary

The Bureau of Land Management (BLM), Yuma Field Office, has prepared an Environmental Assessment (EA) analyzing the effects of burning 43 acres of Bermuda grass that was planted as a cover crop at the Mittry South Restoration area. The burn would eliminate grass thatch, weeds, and saltcedar sprouts. The burnt cover crop would rejuvenate in the spring as a healthier crop to reduce the salinity in the soil. In lieu of herbicide application, prescribed fire would be used to control the saltcedar and weeds, and promote healthy Bermuda grass growth. The burn would be located at T. 7S., R. 22W., sec. 13, W¹/₂; sec. 14. Bermuda grass is the cover crop planted to reduce soil salinity and improve soil conditions. As soil conditions improve the burn units would be planted with native vegetation. This is expected to take 3 to 5 years. The land would then be revegetated with native species, increasing habitat complexity and reducing fire threat. The Proposed Alternative, as well as the No Action Alternative, together with the effects of each are described in the attached DOI-BLM-AZ-C020-2011-0007-EA.

Rational

The proposed action is in conformance with: Yuma Field Office Resource Management Plan (RMP) which was approved on January 29, 2010.

The proposed action is in conformance with the applicable RMP because it is specifically provided for in the following RMP decision(s):

VM-058: Non-native invasive species management is enhanced through a collaborative approach with fire management.

FM-008: Utilize prescribed and wildland fire techniques to protect values at risk (life and property and to maintain or restore desirable plant communities).

Determination

On the basis of the information contained in the EA, and all other information available to me, it is my determination that the Proposed Action does not constitute a major Federal Action affecting the quality of the human environment. Therefore, an Environmental Impact Statement is unnecessary and will not be prepared.

Finding of No Significant Impact

The Proposed Action is designed to accomplish the desired objective while minimizing adverse impacts. The Environmental Consequences described in the EA are based on research, professional judgment, and the experiences of the Interdisciplinary team members. The

Proposed Action is expected to cause no significant adverse impacts to the human environment. Mitigation measures were incorporated into project design. There would be no negative impacts on: Air Quality, Areas of Critical Environmental, Concern, Cultural Resources, Environmental Justice, Farm Lands (Prime or Unique), Floodplain, Hazardous or Solid Waste, Native American Religious Concerns, Non-Native Invasive Species, Threatened or Endangered Species, Water Quality (Ground or Surface), Wetlands/Riparian Zones ,Wild and Scenic Rivers, Wilderness.

James T. Shoaff

Yuma Field Manager

Date

