

**BUREAU OF LAND MANAGEMENT
SOUTHEASTERN STATES FIELD OFFICE
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206**

ENVIRONMENTAL ASSESSMENT (EA) FORM

ES-020-2014-16

PROJECT NAME: Fort Morgan Pesticide Use Proposal

TECHNICAL REVIEW:

X	Program	Reviewer	Signature	Date
X	Air Quality	Brian Kennedy Physical Scientist	<i>Brian Kennedy</i>	11/4/14
	ACEC			
X	Botanical including T&E Spp.	Faye Winters Wildlife Biologist	<i>Faye Winters</i>	11/3/14
	Communications (Dispatch)			
X	Cultural/Paleontology	John Sullivan Archeologist	<i>See Section V. for sig.</i>	
	Energy Policy			
	Environmental Justice			
	Farmlands (Prime & Unique)			
	Fire Management			
	Floodplain			
X	Hazardous Material	Brian Kennedy Physical Scientist	<i>Brian Kennedy</i>	11/4/14
X	Invasive & Non-Native Spp.	Brian Kennedy Physical Scientist	<i>Brian Kennedy</i>	11/4/14
	Lands/Realty			
	Land Law Examiner			
	Law Enforcement			
	Minerals			
X	Native American Religious Concerns	John Sullivan Archeologist	<i>See Section V. for sig.</i>	
	Operations			
	Range Management			
X	Recreation	Faye Winters Wildlife Biologist	<i>Faye Winters</i>	11/3/14
X	Soils	Brian Kennedy Physical Scientist	<i>Brian Kennedy</i>	11/4/14
	Surface Protection			
	Visual Resources			
	Water Rights			
X	Water Quality (Surface & Ground)	Brian Kennedy Physical Scientist	<i>Brian Kennedy</i>	11/4/14
	Wetlands/Riparian Zones			
	Wild & Scenic Rivers			
	Wilderness			
	Wild Horse & Burro			
X	Wildlife including T&E Spp.	Faye Winters Wildlife Biologist	<i>Faye Winters</i>	11/3/14



United States Department of the Interior



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Jackson Field Office
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**Environmental Assessment
EA-020-2014-16**

Project Name: Fort Morgan Pesticide Use Proposal EA

Date: Nov. 3, 2014

Chapter 1 – PURPOSE OF AND NEED FOR THE PROPOSED ACTION

Introduction

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental impacts of the invasive plant management as proposed by Southeastern States Field Office (SSFO). The EA is a field office site-specific analysis of potential effects that could result with the implementation of the Proposed Action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any “significant” impacts could result from the analyzed actions. “Significance” is defined by NEPA and is found in regulation 40CFR 1508.27. The purpose of this EA is to demonstrate that under the conditions outlined in the proposed action we will be able to prepare a statement of “Finding of No Significant Impact” (FONSI)

The SSFO is proposing to treat invasive plant species, including cogongrass (*Imperata cylindrical*), torpedo grass (*Panicum repens*), natal grass (*Melinis repens*), and Chinese tallow tree (*Triadica sebifera*), on BLM-administered tracts on the Fort Morgan Peninsula in Baldwin County, Alabama. There is also the potential need to treatment beach vitex (*Vitex rotundifolia*), as species known to occur on Fort Morgan, but not yet recorded on BLM.

BLM administers three beach front tracts, totaling 0.5 miles, on the Fort Morgan Peninsula in southern Alabama along the Gulf of Mexico. There are also three BLM-administered tracts along approximately 1 mile of Fort Morgan Road (State Highway 180). Together the BLM beach and highway tracts total 58.04 acres. On BLM, all of the known invasive plant infestations occur on the highway tracts. However, this EA addresses the potential for early detection/early treatment of invasives on the BLM beach tracts. Maps of the project area are provided in Appendix A.

The legal descriptions of the BLM tracts are:

Fort Morgan Beach Tracts			St. Stephens Meridian
Our Road Beach Tract	0.84	Baldwin	T. 9S, R. 1E, Sec. 25, Lot 24
Lotsa Sand Beach Tract	5.32	Baldwin	T. 9S, R. 1E, Sec. 26, Lots 13 and 14
Veteran’s Road Beach Tract	10.60	Baldwin	T. 9S, R. 2E, Sec. 27, Lots 54 and 55
Acreeage of Beach Tracts	16.76		
Fort Morgan Highway Tracts			St. Stephens Meridian
Our Road Highway Tract	20.16	Baldwin	T. 9S, R. 1E, Sec. 25, Lot 5
			T. 9S, R. 1E, Sec. 26, Lot 15
Center Highway Tract	8.88	Baldwin	T. 9S, R. 2E, Sec. 28, Lot 43
Veteran’s Road Highway Tract	12.24	Baldwin	T. 9S, R. 2E, Sec. 27, Lot 56

		T. 9S, R. 2E, Sec. 28, Lot 44
Acreage of Highway Tracts	41.28	
Total BLM Acreage	58.04	

Need for Proposed Action

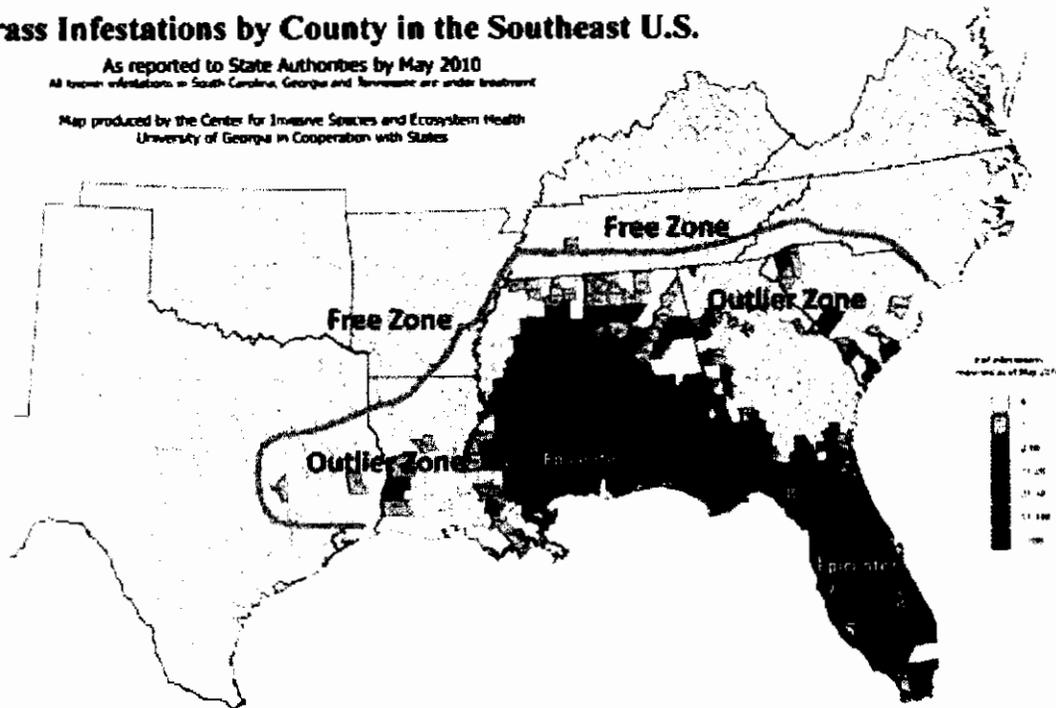
Cogongrass, torpedo grass, and Chinese tallow tree are all aggressive invasives that given the right conditions substantially displace native vegetation, degrade habitat and, in the case of cogongrass, alter natural fire regimes. All of these species are naturalized throughout the southeast and their ranges are expanding. Natal grass and beach vitex are known to occur on the BLM tracts or in the adjacent Bon Secour National Wildlife Refuge and have the potential to degrade scrub and beach dune habitats.

On the BLM tracts, almost 95 percent of the cogongrass and torpedo grass infestations occur on the Our Road Highway tract. Cogongrass and torpedo grass are most prevalent in the maintained road right-of-way, but extend into adjacent natural areas, particularly in low lying areas.

Cogongrass is known to occur in virtually every county in Alabama, Florida, and Mississippi and is considered one of the worst weeds in the nation, and even the world, in its potential to degrade natural areas. The project site is within the epicenter of the national cogongrass infestation.

Cogongrass Infestations by County in the Southeast U.S.

As reported to State Authorities by May 2010
 All known infestations in South Carolina, Georgia and Tennessee are under treatment
 Map produced by the Center for Invasive Species and Ecosystem Health
 University of Georgia in Cooperation with States



Cogongrass is difficult to control. Rapidly growing rhizomes eventually create a dense mat excluding other vegetation. Capable of prolific flowering, the seed viability is highly variable. Germination rates are high, greater than 90%, but seeds are short-lived generally remaining viable in the soil for only about 1 year. Viability of seeds stored in a laboratory steadily decreased over 13 months. Field studies in Asia show a maximum seed life of 16 months. Flowering generally occurs in the spring, but can be stimulated by mowing, fertilization and fire.

Torpedo grass invades coastal beaches, wetlands, and other moist plant communities, although it is also documented in scrub areas. It is highly resilient, and can survive both drought and flooded conditions. Once established it is difficult to control and even small fragments of the rhizomes can establish and quickly form dense stands. Torpedo grass can flower almost year round, but is variable on seed abundance and viability.

Chinese tallow tree is found occasionally on the BLM tracts. This species is widespread across the southeast and has had a dramatic impact on regional wetlands where it has displaced native vegetation and reduced habitat values. This tree is establishing itself on the margins of the right-of-way and in wetlands and disturbed sites on the Fort Morgan peninsula.

Natal grass establishes quickly in disturbed sites and is found along Fort Morgan Road in drier areas of the right-of-way. Unlike cogongrass and torpedo grass, natal grass is propagated primarily by seed, which are readily windblown.

Beach vitex (*Vitex rotundifolia*), which has been found on the Fort Morgan Peninsula, but not yet been recorded on BLM-administered tracts. However, this plant has the capacity to substantially degrade beach dune habitats.

Management Objectives of the Action

The need for the action is to reduce, control, and manage cogongrass, torpedo grass, natal grass, Chinese tallow tree, and other invasives on the 58.4 acres of BLM-administered tracts on the Fort Morgan Peninsula. BLM will determine whether or not agency approved herbicides should be used alone or in conjunction with other integrated pest management methods, such as biological, mechanical, or cultural to control cogongrass, torpedo grass, natal grass, and Chinese tallow tree on BLM-administered tracts, and to establish and support early detection/early response activities on the Fort Morgan Peninsula for these and other invasive plants.

Land Use Plan Conformance:

The proposal conforms to the 2009 Alabama and Mississippi Resource Management Plan (RMP) and Record of Decision (ROD) prepared by the Southeastern States Field Office. The RMP specifically mentions control of invasive species to improve habitat quality and improve conditions for special status species.

A digital copy of the RMP is available on-line at:
http://www.blm.gov/es/st/en/fo/Jackson_Home_Page/planning/alabama_and_mississippi.html

A hard copy of the RMP is available at the following address:
Bureau of Land Management (BLM)

Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206

Applicable Regulatory Requirements and Required Coordination

The following authorities and documents are applicable, or incorporated by reference into this document.

Carlson-Foley Act of 1968 – Directs agency heads to enter upon lands under their jurisdiction with noxious plants and destroy noxious plants growing on such land.

Departmental Manual 209 – Prescribes policy to control undesirable or noxious weeds on the lands, waters, or facilities under its jurisdiction to the extent economically practicable, and as needed for resource protection and accomplishment of resource management objectives.

Departmental Manual 517 – Prescribes policy for the use of pesticides on the lands and waters under its jurisdiction, and for compliance with the Federal Insecticide, Fungicide, and Rodenticide Act, as amended.

Executive Order 13111 of February 3, 1999 - Directs federal agencies to prevent the introduction of invasive species and provide for their control, and to minimize the economic, ecological, and human health impacts that invasive species cause.

Endangered Species Act of 1973 - requires federal agencies to complete formal consultation with the U.S. Fish and Wildlife Service (FWS) for any action that “may affect” federally listed species or critical habitat. The ESA also requires federal agencies to use their authorities to carry out programs for the conservation of endangered and threatened species.

Federal Insecticide, Fungicide and Rodenticide Act - Establishes procedures for the registration, classification, and regulation of all pesticides.

Federal Land Policy and Management Act of 1976 – Directs the BLM to “take any action necessary to prevent unnecessary and or undue degradation of the public lands.”

Federal Noxious Weed Act of 1974, as amended by Sec. 15 – Management of Undesirable Plants on Federal Lands, 1990 - Authorizes the Secretary “to cooperate with other federal and state agencies, and others in carrying out operations or measures to eradicate, suppress, control, prevent, or retard the spread of any noxious weed. Each federal agency shall 1) designate an office or person adequately trained to develop and coordinate an undesirable plants management program for control of undesirable plants on federal lands under the agency’s jurisdiction, and 2) establish and adequately fund an undesirable plants management program through the agency’s budgetary process, 3) complete and implement cooperative agreements with State agencies regarding the management of undesirable plant species on federal lands, and 4) establish integrated management systems to control or contain undesirable plant species targeted under cooperative agreements.”

Noxious Weed Control Act of 2004 -Established a program to provide assistance through states to eligible weed management entities to control or eradicate harmful, nonnative weeds on public and private lands.

Plant Protection Act of 2000 (PL 106-224) - Includes management of undesirable plants on federal lands) authorize the BLM to manage noxious weeds and to coordinate with other federal and state agencies in activities to eradicate, suppress, control, prevent, or retard the spread of any noxious weeds on federal lands

Watershed Restoration and Enhancement Agreements (Wyden Amendment) - Gives BLM the authority to use appropriated funds to enter into cooperative agreements with other federal agencies, tribal, State or local governments, private and non-profit entities, and landowners on project that protect, restore, and enhance habitat or other resources, or that reduce risk from natural disaster where public safety is a concern, including those lands outside of the public domain.

BLM – Final Programmatic Environmental Impact Statement (PEIS) for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States (PEIS for Vegetation Treatments; BLM 2007)- This project is not specifically covered by the PEIS, but it does adopt the applicable best management practices, maximum use rates, and incorporates by reference the risk analyses presented in that document. Guidance and objectives incorporated into this project which were identified in the PEIS, include, but are not limited to, containment to prevent weed spread from moving beyond the current infestation; control to reduce the extent and density of a target weed; and restoration of native plant communities and habitats.

Decision(s) That Must Be Made

This EA discloses the environmental consequences of controlling invasive weeds on BLM-administered land on the Fort Morgan Peninsula. The Southeastern States Field Manager is the Deciding Official and based on this document and other public and regulatory review will decide whether to approve the project.

Chapter 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION

Proposed Action:

Under the proposed action, the BLM would treat infestations of cogongrass and torpedo grass, and potentially beach vitex, using foliar applications of a broad-spectrum herbicide (glyphosate) formulated for aquatic situations up to a twice a year. Annual application rates of the herbicide and adjuvants are provided in the table below.

Trade Name	Common Name	Project Maximum Application Rate Per Acre (acid equivalent)	Formulation Label Maximum Application Rate Per Acre
Glyphosate	Glyphosate	7.0 lbs. a.e./yr.	8.0 quarts/yr. (8 lbs. a.e. /yr.)
Induce	Surfactant	N/A	0.05% V/V
Hi-Light	Colorant	N/A	0.125% V/V

For cogongrass, a fall application of up to 4 lbs. a.e. of glyphosate would be applied to maximize transport the herbicide into the rhizomous roots and reduce the production of seed heads the following spring. A second treatment would follow the following spring to continue to reduce the extent of the infestation. Combined application rates would not exceed BLM's maximum of 7 lbs. a.e. per year. These treatments are expected to continue for at least three years, re-treating surviving stands and treating plants germinating from the soil seed bank. Follow-up treatments would then be used, as needed, to maintain control of these invasive plant species. Foliar applications would be made using hand-directed spray equipment where infestations occur within the maintained highway right-of-way. Infestations that have spread outside of the maintained right-of-way would be targeted using hand-held backpack sprayers. Hand applications allow for more targeted applications to avoid mature perennials, such as scrub oaks (*Quercus* spp.), yaupon (*Ilex vomitoria*), saw palmetto (*Serenoa repens*), and scrub rosemary (*Ceratoila ericoides*), and other non-target plants. This equipment may be fitted with a hooded or shielded applicator tip to focus the herbicide application directly over the target, reducing the potential of drift and increase accuracy. BLM would use a glyphosate formulation and surfactant approved for aquatic situations. Woody invasives, including Chinese tallow tree, would be treated during the growing season using a cut-stump application with immediate application of undiluted glyphosate on the entire cambium.

Control of natal grass would include hand pulling and bagging of plants to remove the potential for seed dispersal, as well as targeted herbicide application of non-flowering plants.

Foliar applications of glyphosate would be made using the following best management practices:

1. To the extent practicable, use targeted hand application under and around scrub oaks, mature saw palmetto, yaupon and other mature native shrubs and trees.
2. Apply foliar applications only when wind speeds are below 5 mph.
3. Use the largest droplet size that will provide sufficient coverage to reduce the potential for drift. Use a surfactant that will also limit the potential for drift.
4. Use glyphosate formulations approved for aquatic applications.
5. Treatment areas will be identified and flagged before herbicides are applied to ensure that all infestations are treated, but also to ensure that areas without cogongrass or torpedo grass are not treated.
6. In accordance with the herbicide label directions, a surfactant will be included in the application where specified. Only those surfactants identified for use in aquatic situations will be used. In order to identify treated areas, ensuring coverage of target plants and avoid accidental retreatment and to identify potential off-site movement, thereby preventing damage to native and desirable vegetation, a dye marker will be added.

No Action Alternative

Under this alternative, there would be no effort to control invasive weeds. There are no practical control measures for either cogongrass or torpedo grass, other than herbicides, and these invasives are expected to continue to expand across the BLM highway tracts particularly into low lying areas eventually encroaching into scrub habitats and the edges of dune habitats, degrading Alabama beach mouse habitat and displacing native vegetation, and ultimately resulting in monocultures, particularly in regards to cogongrass. Natal grass is expected to

continue to spread from the roadway into adjacent scrub areas. Chinese tallow tree has the capacity to dominate low lying areas and wetlands across the Fort Morgan peninsula.

Alternatives Rejected from Further Consideration

1. The use of imazapyr in conjunction with glyphosate is often recommended to improve control of cogongrass. Imazapyr, however, does not readily bind to mineral soils and has the potential to translocate through root systems to adjacent vegetation killing non-target vegetation. Given the mix of native vegetation near and intermixed with cogongrass use of this herbicide was not considered appropriate.
2. Alabama Department of Transportation has had success using Perspective (aminocyclopyrachlor + chlorsulfuron) for the treatment of cogongrass along highway right-of-ways. This broadleaf herbicide can also translocate through root systems resulting in the loss of non-target natives, and was dropped from consideration for this situation.
3. Cogongrass will not persist in areas that are frequently cultivated; however, this was not considered to be viable option for Alabama Department of Transportation which by policy maintains a vegetated right-of-way along State roads. It would also not be feasible outside of the right-of-way, in native plant communities with a predominance of desirable grasses, forbs, and shrubs, or in designated Alabama beach mouse critical habitat.

Chapter 3 – DESCRIPTION OF THE AFFECTED ENVIRONMENT

Introduction

The following critical elements are not present or would not be affected by this proposed action(s); therefore they will not be addressed in this EA: BLM designated Areas of Critical Environmental Concern, Climate Change, Environmental Justice, Farm Lands (Prime or Unique), Floodplain, Hazardous or Solid Waste, Wild and Scenic Rivers, and Wilderness.

Description of Project Area

Fort Morgan Peninsula is located west of the city of Gulf Shores and stretches 18 miles to the Fort Morgan State Park at its most western tip. Average elevation is 10 feet above sea level and the area is subject to wash over during hurricane associated surges. The area is primarily single family residences/beach homes with several larger developments interspersed. The Bon Secour National Wildlife Refuge encompasses 7,000 acres of the peninsula.

Air Quality

The Clean Air Act of 1990, as amended (42 USC 7401, 7642), requires the BLM to protect air quality, maintain Federal- and state-designated air quality standards, and abide by the requirements of the State implementation plans. The Alabama Department of Environmental Management and the Environmental Protection Agency (EPA) are responsible for regulating activities affecting air quality in the project areas. The Air Division is charged with the responsibility of insuring that Alabama's air quality meets federal standards. Air quality on the Fort Morgan Peninsula is generally ranked as good (<http://www.usa.com/alabama-state-air-quality.htm>, accessed July 29, 2014); however as part of the Mobile Metropolitan Statistical

Area, Baldwin County may not meet current EPA ozone attainment standards (http://www.co.baldwin.al.us/PageView.asp?edit_id=533, accessed on July 29, 2014).

Cultural Resources

The BLM Fort Morgan tracts have been surveyed. Four cultural sites are located on or within one-half mile of five of the highway tracts during a BLM survey in 2007. A second BLM survey was conducted on November 2, 2013, and no cultural resources were discovered. Cultural resources would be identified and protected on a case-by-case basis, according to site-specific needs. Any significant sites discovered would be available for scientific, conservation, traditional, or interpretations use as the law and BLM policy allows. A site that is not significant (as determined by the BLM, State Historic Preservation Office (SHPO) and Tribal consultations) would be released from management concerns.

Human Health and Safety

The treatment area straddles a public road where uses also include cyclists, runners and walkers. The project also includes both public and private driveways that intersect Fort Morgan Road. There are seventeen single family residences, two multi-family residences, a restaurant/ convenience store and a fire station within 500 feet of Our Road Highway tract where the majority of the cogongrass and torpedo grass are located. There is no known prior use of herbicides in the treatment area.

All applicators must hold current state or federal applicator licenses, be able to identify the target plants, be competent with application equipment and calibration of that equipment. Daily tallies of all herbicide and adjuvants, as well as a map of treatment areas, will be retained by BLM to ensure that maximum use rates are not exceeded and for monitoring purposes. Personnel would be required to follow all label precautionary protocols during application, and for personal protection and the safety of the general public.

Public notification prior to the application would alert the public and local residents ahead of scheduled treatments.

Native American Religious Concerns:

A number of the native plants on the Fort Morgan Tracts are important to Southeastern Tribes such as saw palmetto (*Serenoa repens*), rosemary (*Ceratiola ericoides*) and yaupon (*Ilex vomitoria*). While there is no active collecting of these native plants on these BLM tracts, Tribes have concerns that these plants are maintained and a thriving community. Tribes are interested in their ancestral home lands and sites.

Recreation

Recreation use is primarily focused on Fort Morgan's white sand beaches. Many of the residences are rental properties and the peninsula is a popular vacation destination. Historic Fort Morgan State Park and the Bon Secour National Wildlife Refuge are also major draws. Fort Morgan is a major migratory bird stop-over location, and the peninsula is a key destination on the Alabama Coastal Birding Trail.

Special Status Species

Alabama beach mouse (*Peromyscus polionotus ammobates*), federally listed as endangered

The Alabama beach mouse is restricted to coastal dunes and scrub/shrub habitats. Primary and secondary coastal dunes provide the principle habitat, while adjacent scrub habitats can serve as crucial refugia for repopulation after catastrophic loss of primary habitat from hurricanes. All of the BLM tracts, both beach and highway tracts, are designated critical habitat.

Piping plover (*Charadrius alexandrinus*), federally listed endangered

All three populations of piping plover winter along the southern Atlantic and Gulf Coasts, where they are classified as threatened. Piping plover can be present in Alabama from August to May, but numbers peak during the winter months. On July 10, 2001, USFWS designated 165,211 acres along 1,798 miles of coastline in eight southern States as critical habitat for the wintering population of piping plover. This included several barrier islands and the western tip of the Fort Morgan Peninsula, west of the subject tracts. The project area is outside of piping plover designated critical habitat, but the BLM beach tracts provide suitable wintering habitat.

Loggerhead sea turtle (*Caretta caretta*), federally listed as threatened

The most common nesting sea turtle in Alabama, loggerheads nest on open sandy beaches above the high-tide mark, seaward of well-developed dunes on both the Atlantic and Gulf coasts. In Alabama the majority nesting occurs between Fort Morgan and the City of Gulf Shores. Nesting normally occurs from early May through August, with the majority of nests being laid during June and July. Females lay three to five nests, and sometimes more, during a single nesting season. The eggs incubate approximately 2 months before hatching sometime between late June and the end of October.

The BLM beach tracts provide suitable nesting habitat.

Green sea turtle (*Chelonia mydas*), federally listed as threatened

Green sea turtles nests have been reported on Florida Gulf Coast and rarely in Alabama, most nesting occurs on the Atlantic coast from Florida to North Carolina.

The BLM beach tracts provide suitable nesting habitat.

Kemp's Ridley sea turtle (*Lepidochelys kempii*), federally listed as endangered

Kemp's Ridley sea turtle is an occasional visitor to Alabama waters, where it is sometimes caught in shrimp nets. Although virtually the entire population nests in Mexico and southern Texas, at least three nests have been documented in Alabama (2001, 2006, and 2007) and have been documented on the nearby Bon Secour Refuge. Based on USFWS records, juvenile Kemp's ridleys are the most common marine turtle in Alabama bays and estuaries.

The BLM beach tracts provide suitable nesting habitat.

Vegetation

The BLM tracts encompass the supratidal zone, both frontal and back dunes, coastal scrub, depression herbaceous wetlands, and wet pine flatwoods.

The primary coastal dunes are dominated by sea oats (*Uniola paniculata*), with minor components of beach morning glory (*Ipomoea imperati*), seashore elder (*Iva imbricata*), largeleaf pennywort (*Hydrocotyle bonariensis*), and sea purslane (*Sesuvium portulacastrum*). Secondary dunes are increasingly stabilized by vegetation and can include scrub oaks (*Quercus* spp.). The coastal scrub habitats occur landward of the secondary dune systems and are dominated by scrub oak (*Quercus geminate*), saw palmetto, rosemary, yaupon, and ground lichens (*Cladonia* sp.). Roadside ditches and low lying areas north of Fort Morgan Road tend to be herbaceous wetlands with cordgrass (*Spartina patens*), and sedges (*Cyperus* spp.) and interspersed slash pine (*Pinus ellottii*), including regeneration after 2004 Hurricane Ivan when winds and subsequent inundation killed many pines.

On the BLM tracts, all of the invasive plants occur on the tracts straddling the Fort Morgan Road. Almost 95 percent of the cogongrass and torpedo grass infestation occurs on the Our Road Highway tract. The infestation occurs primarily in the maintained right-of-way within 26 feet on each side of the Fort Morgan Road. These infestations total approximately 3 acres, with an additional acre of cogongrass and torpedo grass estimated to occur on the BLM highway tracts outside of the maintained right-of-way. Maps of the current infestations of cogongrass and torpedo grass on the BLM tracts along Fort Morgan Road are provided in Appendix A. Natal grass tends to occur on the drier areas along the highway right-of-way outside of the cogongrass and torpedo grass infestations. Individual Chinese tallow trees occur on the BLM highway tracts on the edges of the mowed highway right-of-way and are estimated to infest less than an acre. Individual Chinese tallow trees occur on the BLM highway tracts outside of the maintained right-of-way and are estimated to cover no more than 0.1 acres.

Visual Resources

The Fort Morgan Road is a National Scenic Byway, part of the Alabama's Coastal Connection. The Fort Morgan tracts are managed for a Class III objective. The site and sound of man are readily evident and concentration of users can be high during the summer months and holiday weekends. The Fort Morgan Road right-of-way includes stretches of relatively open sand and areas of native and non-native ground cover/grasses. Alabama Department of Transportation maintains the right-of-way by periodic mowing.

Water - Ground and Surface

There is typically no standing water on any of the BLM highway or beach tracts. However, localized flooding can occur, particularly in the ditches along Fort Morgan Road during heavy rain events. All of the low lying areas are subject to flooding during hurricanes and surge events and can be subjected to extended periods of inundation by brackish water following major hurricanes and tropical storms. The A1 aquifer underlying Fort Morgan has been affected by salt water either from intrusion from the Gulf of Mexico or from infiltration of seawater as a result of storm events and Fort Morgan Peninsula residential water service is provided by Gulf Shores.

Wildlife

Fort Morgan is a critical stopover point for migratory birds flying across the Gulf to Central and South America, the first landfall and last departure point for thousands of birds annually. This includes not only Neo-tropical passerines, but in the fall migrating hawks, primarily sharp-shinned hawks (*Accipiter striatus*), broad-winged hawks (*Buteo platypterus*), and American kestrel (*Falco sparverius*). Spring migrants in coastal Alabama start arriving in early March and continue through May. Fall migrants begin to arrive in the middle of September and continue through the middle of November. The nearby 7,000 acre Bon Secour National Wildlife Refuge and Fort Morgan State Park are both designated Globally Important Bird Areas.

The Fort Morgan Peninsula supports a wide variety of wildlife associated with coastal beaches, scrub habitats, pine flatwoods, interior wetlands. Wildlife use of the areas where herbicide use is being proposed is expected to be more limited than surrounding areas because of the vehicle traffic and other human uses along the Fort Morgan Road (cyclists, runners/walkers).

Chapter 4 – ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

This chapter assesses potential environmental consequences associated with the Proposed Action and alternatives.

Air Quality - Impacts of the Proposed Action:

Spray drift (movement of herbicide in the air to unintended locations) and volatilization (the evaporation of liquid to gas) of glyphosate would temporarily result in herbicide particles in the air. Herbicide particles can be transported away from the target location, depending on weather conditions and the herbicide application method. All herbicides used for this project would contain the marker dye to make the herbicide visible wherever it is applied. Glyphosate has very low volatility and risks of inhalation are low. Applicators would be required to wear all necessary personal protection, and herbicides would only be applied when the potential for drift is very low, wind speeds below 5 mph.

Air Quality – Impacts of the No Action Alternative:

No impacts to air quality.

Cultural Resources - Impacts of the Proposed Action:

The proposed action is not likely to have direct impacts on any cultural resources. The likelihood of undiscovered cultural and/or historical resources occurring on the project site is deemed low. The highway right-of-way and adjacent areas have been subjected to past ground disturbance. No vehicle use is proposed outside off the road shoulder, and there are no surface disturbing activities anticipated. Tallow tree would be killed in place and allowed to disintegrate over time with no resulting ground disturbance.

Cultural uses could benefit from the maintenance and protection of native plant communities.

Cultural Resources - Impacts of the No Action Alternative:

No impacts are expected to either prehistoric or historic cultural resources. Cultural uses of native plants could be adversely affected in the future if plant communities continue to be degraded by these invasive plant species.

Health and Human Safety – Impacts of the Proposed Action:

There are no risks associated with nearly all human exposures to glyphosate at the typical or maximum application rate. Research suggests the adjuvants, particularly polyoxyethyleneamine (POEA) surfactants added to increase efficacy, has a greater toxicity than glyphosate alone. Only POEA free formulations would be used in this application.

The following summary is excerpted from a study listed on the National Institutes of Health webpage (<http://www.ncbi.nlm.nih.gov/pubmed/15862083>, Bradberry, et. al. 2004) “The oral absorption of glyphosate and AMPA is low, and both materials are eliminated essentially unmetabolized. Dermal penetration studies with Roundup showed very low absorption. Experimental evidence has shown that neither glyphosate nor AMPA bioaccumulates in any animal tissue. No significant toxicity occurred in acute, subchronic, and chronic studies. Direct ocular exposure to the concentrated Roundup formulation can result in transient irritation, while normal spray dilutions cause, at most, only minimal effects. The genotoxicity data for glyphosate and Roundup were assessed using a weight-of-evidence approach and standard evaluation criteria. There was no convincing evidence for direct DNA damage in vitro or in vivo, and it was concluded that Roundup and its components do not pose a risk for the production of heritable/somatic mutations in humans. Multiple lifetime feeding studies have failed to demonstrate any tumorigenic potential for glyphosate. Accordingly, it was concluded that glyphosate is noncarcinogenic. Glyphosate, AMPA, and POEA were not teratogenic or developmentally toxic. There were no effects on fertility or reproductive parameters in two multigeneration reproduction studies with glyphosate. Likewise there were no adverse effects in reproductive tissues from animals treated with glyphosate, AMPA, or POEA in chronic and/or subchronic studies. Results from standard studies with these materials also failed to show any effects indicative of endocrine modulation. Therefore, it is concluded that the use of Roundup herbicide does not result in adverse effects on development, reproduction, or endocrine systems in humans and other mammals. For purposes of risk assessment, no-observed-adverse-effect levels (NOAELs) were identified for all subchronic, chronic, developmental, and reproduction studies with glyphosate, AMPA, and POEA. Margins-of-exposure for chronic risk were calculated for each compound by dividing the lowest applicable NOAEL by worst-case estimates of chronic exposure. Acute risks were assessed by comparison of oral LD50 values to estimated maximum acute human exposure. It was concluded that, under present and expected conditions of use, Roundup herbicide does not pose a health risk to humans”.

According to the Helena Material Safety Data Sheet for Induce, the formulated surfactant, Induce, is considered a moderate skin irritant and can cause mild irritation of eyes and nose in very high concentrations. The liquid can “defat” the skin, producing a dermatitis characterized by drying and fissuring.

Hi-Light spray indicator is a short-term dye that may cause respiratory tract, eye and skin irritation, but short-term harmful effects are not expected.

Health and Human Safety – Impacts of the No Action Alternative

No impact to public, as no herbicides or manual methods would be used to remove invasive species from the project site.

Recreation – Impacts of the Proposed Action:

The control of these invasive species would have limited effect on recreation focused on the beach experience. The browning of portions of the roadside may raise some concerns, but most of the public is expected to be supportive of the efforts if they understand the threat these invasive plants pose to the native plant communities of Fort Morgan.

Recreation - Impacts of the No Action Alternative:

Under the No Action Alternative, there would be no change in most recreation use of the area. However, eventually these invasive species are expected to alter the native vegetation and alter the natural experience for visitors while walking on trails or along Fort Morgan Road.

Special Status and Priority Species – Impacts of the Proposed Action:

Alabama beach mouse – The proposed project may affect, but is not likely to adversely affect Alabama beach mouse and designated critical habitat. The current treatments areas are outside of the preferred primary dune habitat. It is considered unlikely that cogongrass or torpedo grass would occur in the immediate area of an occupied burrow, or that sea oats, a primary food source would be killed during herbicide treatments. However, the control of these invasives is expected to safeguard suitable habitat and prevent degradation of scrub habitats and the fringes of dune habitats. Natal grass has the potential to spread to scrub habitats, particularly in disturbed areas, but effects to beach mice are expected to be minimal. Monitoring for and early treatment of beach vitex would avoid future impacts to Alabama beach mouse habitat, if this plant is detected on BLM tracts.

Piping plover – The proposed project may affect, but is not likely to adversely affect piping plover. There would be no effect on designated critical habitat. The treatment of cogongrass, torpedo grass, natal grass, and tallow tree is not expected to affect piping plover. However, monitoring for and early treatment of beach vitex could benefit piping plover by displacing native vegetation and degrading wintering habitat, if this plant is detected on BLM tracts.

Gopher tortoise - This project would not affect gopher tortoise.

Loggerhead sea turtle – No invasive species treatments would occur within the upper beach area used by nesting sea turtles. The proposed project is not expected to affect nesting loggerhead sea turtles.

Green sea turtle – No invasive species treatments would occur within the upper beach area used by nesting sea turtles. The proposed project is not expected to affect nesting green sea turtles.

Kemp's ridley sea turtle - No invasive species treatments would occur within the upper beach area used by nesting sea turtles. The proposed project is not expected to affect nesting Kemp's ridley sea turtles.

Flatwoods salamander – This project would not affect flatwoods salamander.

On Oct. 14, 2014, BLM received concurrence from the U.S. Fish and Wildlife Service, Daphne Ecological Services Office that this project is likely to affect, but not adversely affect Alabama beach mouse or designated critical habitat, and that there would be no effect on gopher tortoise, nesting sea turtles or flatwoods salamander (see Appendix A for copy of correspondence).

Special Status Species - Impacts of the No Action Alternative:

Without treatment cogongrass, torpedo grass, natal grass, and tallow tree are expected to continue to expand into natural vegetation communities. All of these species are capable of establishing monocultures and displacing and degrading the plant communities on the Fort Morgan Peninsula. There is potential for beach vitex to degrade dune habitats on BLM beach tracts, displacing native vegetation and adversely affecting Alabama beach mice in particular.

Native American Religious Concerns and Consultation – Impacts of the Proposed Action:

No impacts are expected.

Native American Religious Concerns and Consultation - Impacts of the No Action Alternative:

No impacts are expected.

Soils - Impacts of the Proposed Action:

Glyphosate is water soluble, but it has a high affinity to bind to soil particles. Adsorption of glyphosate increases with increasing clay content and decreasing soil pH and phosphorous content.

Typically, the glyphosate mobility is limited to approximately 6 inches deep in soils when applied in accordance with the label; some data suggests that mobility may extend to 18-24 inches in depth in certain situations, but this is rare (EPA Glyphosate Red 1994). The active ingredients in glyphosate are biodegraded to aminomethyl phosphoric acid and then to carbon dioxide by soil organisms (BLM 2007: 4-19). Glyphosate has a typical soil half-life of 47 days and soil adsorption of 24,000 milliliters per gram (BLM 2007 4-19). Because glyphosate has a strong tendency to absorb to soil particles it is generally not available for uptake by other plants or to leaching once it has come in contact with soil. Degradation of glyphosate in soils is mainly a biological process accomplished by different microorganisms. Long-term effects of glyphosate on soil microbial communities appear to be overshadowed by natural variations due to moisture and temperature, as well as land uses, and lead to the conclusion that glyphosate had no consequential effect on soil communities (Busse, et. al, 2001).

Solomon and Thompson (2003) note that the surfactant, Induce, would not persist nor bioaccumulative in the environment and that it presents an insignificant acute risk to aquatic organisms. Assuming similar applications rates, significant ecological effects were also not expected.

Soils – Impact of the No Action Alternative:

Under the No Action Alternative herbicides would not be used and invasive plants would continue to rapidly spread resulting in potentially irreversible effects on soil quality through increases in in organic matter content, changes in diversity and abundance of soil organisms, and nutrient and water availability.

Vegetation - Impacts of the Proposed Action:

Glyphosate is a non-selective systemic herbicide that can damage any nontarget plant to varying degrees. Glyphosate inhibits the production of aromatic amino acids and certain phenolic compounds. This leads to a variety of toxic effects in plants, resulting in cellular disruption, decreased growth, and death at sufficiently high levels of exposure. Because of its non-selective nature, glyphosate may be highly effective in both spot applications or in areas where invasive species dominate and where very few nontarget plants exist. Glyphosate has low residual activity and would not affect the re-establishment of native plants after the treatments are ceased (BLM, 2007: 4-58).

The planned herbicide application program would result in loss of ground cover along the sections of Fort Morgan Road within the maintained right-of-way. There would also be loss of ground cover wherever cogongrass and torpedo grass have infested adjacent areas. It is anticipated that this would result in the loss of 2.8 acres of herbaceous cover, averaging 20 feet on either side of the roadway for approximately 0.5 miles. Within this area, some loss of shrubs and sapling trees, primarily slash pine (*Pinus elliottii*) is expected. Early successional shrubs, such as groundsel tree (*Baccharis halimifolia*) which are common along the roadway are likely to be killed during treatments within or adjacent to the maintained right-of-way. Efforts would be made to avoid scrub oak, mature yaupon, saw palmetto and scrub rosemary and other mature shrubs and trees with hand applications.

Native species lost in areas infested with cogongrass, torpedo grass and natal grass are expected to re-establish in most cases by natural re-seeding after these invasives are controlled and herbicide treatments cease. The use of glyphosate has no long term effects on the area's ability to support native vegetation. Glyphosate adsorbs rapidly and binds tightly to most soils, although this is reduced in highly sandy soils. However, once adsorbed it is not available for uptake by adjacent plants or very little can be desorbed by water. Outside of the maintained right-of-way, many of the cogongrass and torpedo grass infestations occur in low lying areas which generally have higher levels of organic material and where glyphosate can be expected to adsorb strongly to the soil. Translocation to non-target plants is not expected.

Vegetation - Impacts of the No Action Alternative:

Under the No Action Alternative, infestations will continue to spread and degrade even more area on the Fort Morgan Peninsula and will eventually hamper any efforts to control the infestations.

Visual Resources – Impacts of the Proposed Action

The proposed action would result in stretches of dead vegetation along Fort Morgan Road. Although most of the dead vegetation should be ground cover, grasses and forbs it is likely that there will be unintentional loss of some native shrubs and small trees where they are mixed in or on the margins of the cogongrass or torpedo grass infestations. This may be considered unsightly by the public who are used to maintained highway right-of-ways and it is likely to raise questions from the visiting public. There are sections along Fort Morgan road in natural scrub areas with bare or almost bare sand, so the presence of bare sand along these areas is not necessarily considered detracting to the public, but dead shrubs and trees would likely be considered unsightly. Public notification of the treatment along with the objectives and timeframes would help to diffuse public concerns and help in making the public aware of the threat these invasive plants pose to the native vegetation communities on Fort Morgan.

Visual Resources - Impacts of the No Action Alternative:

The No Action Alternative would not alter the existing vista, however the expanding infestations of cogongrass and torpedo grass would eventually alter the natural setting along this scenic byway, and members of the public that recognize these species would consider the scenic corridor degraded where these species dominate the vista.

Water Resources – Impacts of the Proposed Action:

The most likely avenue for glyphosate to move into water is with eroded soil particles but it dissipates rapidly from surface water by adsorption to organic substances and inorganic clays. Strong adsorption to particles slows microbial degradation, allowing inactivated glyphosate to persist in aquatic environments. Those same strong adsorption characteristics prevent the movement of glyphosate into ground water. All of the formulations of glyphosate planned for use are approved for aquatic use.

Water Resources - Impacts of the No Action Alternative:

Under this alternative, there would be not effects to either ground or surface water as a result of herbicide applications on BLM-administered lands.

Wildlife – Impacts of the Proposed Action:

Glyphosate applications pose low to moderate risk to terrestrial wildlife receptors under multiple exposure scenarios involving applications at the typical and maximum application rates (Monsanto Company 2011). Direct spray of small mammals and insects, assuming 100 percent absorption, poses a low risk at the typical application rate and a moderate risk at the maximum application rate. Consumption of vegetation sprayed with glyphosate poses a low risk to small

mammals for scenarios involving the maximum application rate only. A bird that consumes vegetation sprayed with glyphosate would face a low acute and chronic risk (BLM 2007:4-106). Consumption of contaminated insects would pose a low risk to both small mammals and small birds if the herbicide was applied at the typical application rate. The herbicide would pose a moderate risk if applied at the maximum rate. Acute risks from glyphosate exposure are low at the typical application rate under all scenarios, and there are no chronic risks. Exposure scenarios with the greatest risk are direct spray and acute consumption of contaminated vegetation and insects. Spot applications would have lower risks associated with consumption of contaminated vegetation and insects than broadcast applications, as fewer non-target areas would be impacted by direct spray or spray drift (BLM 2007:4-106).

Glyphosate formulations, including the original Roundup and similar formulations, containing POEA (polyethoxylated tallowamine) surfactants have been shown to be more toxic than technical grade glyphosate, particularly for amphibians (Relyea, R.A. 2005). Only glyphosate formulations and surfactants approved for aquatic situations, and without POEA, are proposed for use.

The fall glyphosate applications would occur after most migratory birds have left the area.

The surfactant, Induce, is not known to persist or bioaccumulative, and significant ecological effects are not expected.

Wildlife – Impacts of the No Action Alternative:

Not controlling cogongrass, torpedo grass, and tallow tree would result in continuing degradation of wildlife habitats, particularly wetlands and scrub habitats. All of these invasive species are capable of forming monocultures, displacing native vegetation and reducing the capacity of habitat to support its natural biodiversity.

Summary and Cumulative Effects:

The use of glyphosate to control invasive plant species, specifically cogongrass, torpedo grass, natal grass, and Chinese tallow, is expected to result in short-term losses of native plants occurring in or near current infestations along Fort Morgan Road. Initial treatments are expected to reduce seed production, and follow-up treatments are expected to reduce stand size and vigor of invasives. The use of this broad-spectrum herbicide is expected to result in the loss of some non-target native plant species where they are closely intermixed with cogongrass and torpedo grass. However, the targeted use of glyphosate is the most effective option for achieving control of these aggressive invasive plants while minimizing residual effects and allowing for the natural regeneration of native plant species after target species have been controlled. Ultimately, the proposed weed treatment program is expected to benefit native plant communities and endemic wildlife by allowing native plant communities to recover and preventing further spread of these aggressive invasive plant species.

This project would be coordinated with control efforts on adjacent public properties, including Bon Secour National Wildlife Refuge and the portions of the Fort Morgan Road outside of the BLM-administered tracts. The impacts related to the use of glyphosate are expected to occur in these areas, regardless of BLM's participation. Without control on the BLM properties these

tracts would be a source for expansion of these invasive species onto adjacent private or public lands.

BLM has received concurrence that the proposed invasive weed treatment program may affect, but is not likely to affect Alabama beach mouse, and would not affect nesting sea turtles or wintering piping plover.

V. References and Literature Cited:

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Busse, M.D., A.W. Ratcliff, C.J. Shestak, and R.F. Powers. 2001. Glyphosate toxicity and the effects of long-term vegetation control on soil microbial communities. *Soil Bio. Biochem.* 33(12/13): 1777– 1789.

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Rick A. Relyea 2005. The lethal impact of roundup on aquatic and terrestrial amphibians. *Ecological applications* 15:1118–1124. <http://dx.doi.org/10.1890/04-1291>

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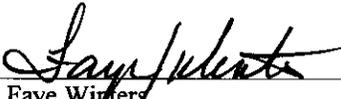
Stone, Katharine R. 2011. *Panicum repens*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/> [2014, July 22]

U.S. Department of Interior, Bureau of Land Management (BLM) 2007 Final Programmatic Environmental Impact Statement for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States. June. Available at: http://www.blm.gov/wo/st/en/prog/more/veg_eis.html.

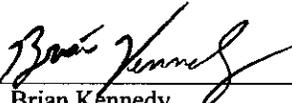
V. - LIST OF AGENCIES AND PERSONS CONSULTED

Historical Preservation Office: Alabama State Historical Preservation Office
U.S Fish and Wildlife Service: Daphne Ecological Services Office
Baldwin County Transportation Department
Alabama Department of Transportation
Bon Secour National Wildlife Refuge

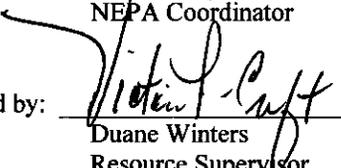
VI. Preparers and Reviewers

Prepared by:  Date: 11/3/14
Faye Winters
Wildlife Biologist (Lead)

Prepared by:  Date: _____
John Sullivan
Archaeologist/Tribal Coordinator

Prepared by:  Date: 11/4/14
Brian Kennedy
Physical Scientist/Certified Pesticide Applicator

Reviewed by:  Date: 11/4/14
Gary Taylor
NEPA Coordinator

Reviewed by:  Date: 11/4/2014
Duane Winters
Resource Supervisor

APPENDIX A

Maps

Map 3

Alabama and Mississippi RMP-EIS

Rt. Morgan - Highway Tracts (41.28 total acres)

Baldwin County, AL

- T. 9 S, R. 1 E, Sec. 25, Lot 5
- T. 9 S, R. 1 E, Sec. 26, Lot 15
- T. 9 S, R. 2 E, Sec. 27, Lot 5B
- T. 9 S, R. 2 E, Sec. 28, Lot 43
- T. 9 S, R. 2 E, Sec. 28, Lot 44

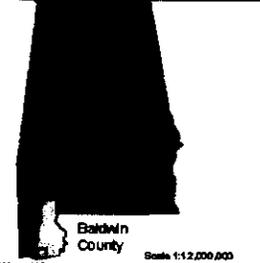
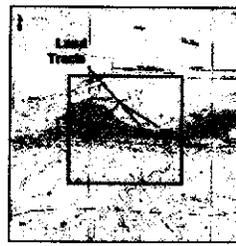
St. Stephens Meridian

 Public Domain Lands

 Bon Secur National Wildlife Refuge

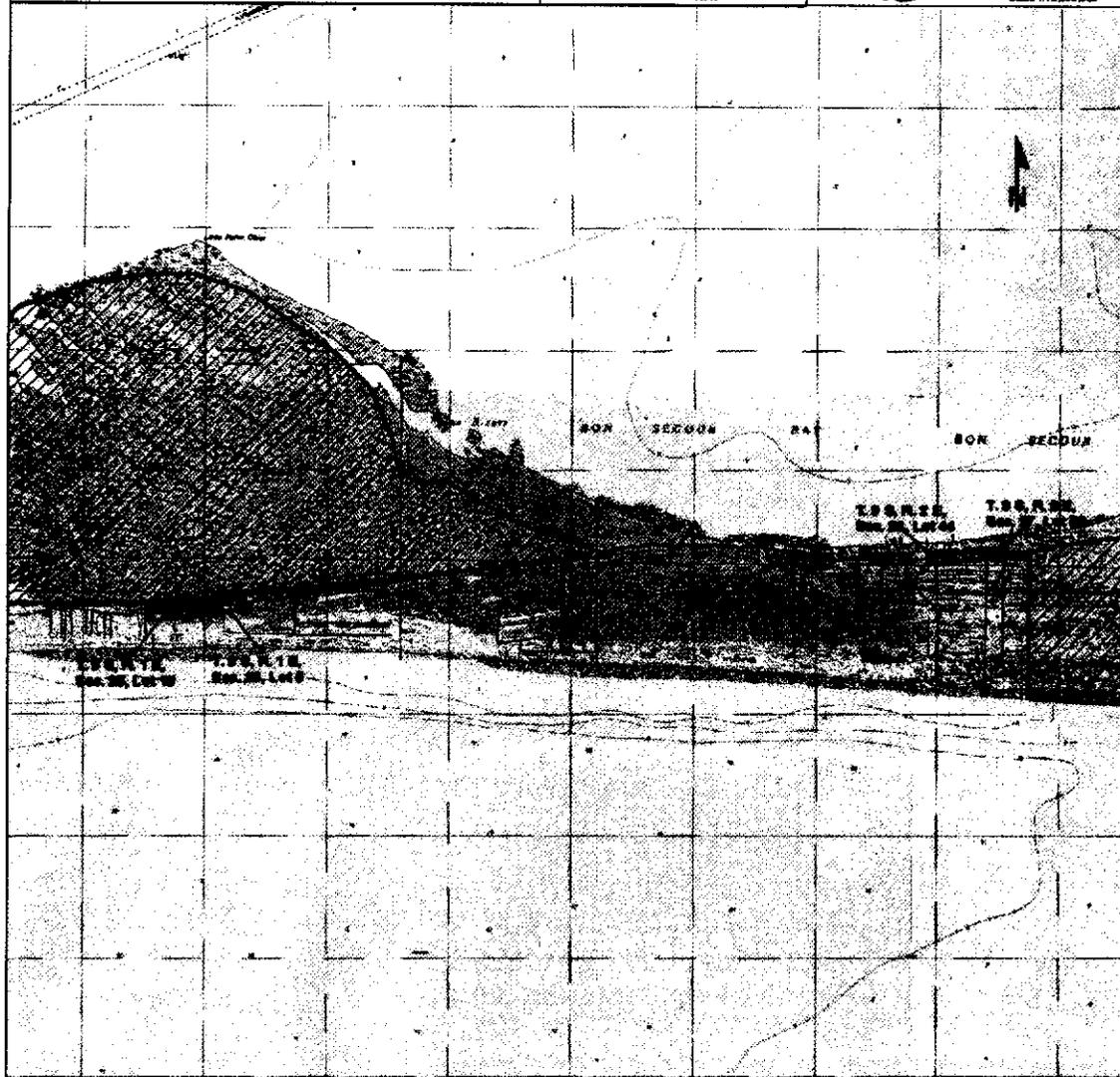
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Source: BLM, Jackson Field Office
USGS - National Elevation Data
Environmental Systems Research Institute
TOPOL 2003 National Geographic Maps



Scale 1:400,000

Scale 1:12,000,000



Scale 1:48,000



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for hydrologic use or application with other data.



Map 2

Alabama and Mississippi RMP-EIS

R. Morgan - Beach Tracts (28.70 total acres)

Baldwin County, AL

T. 9 S., R. 1 E., Sec. 25, Lot 24
 T. 9 S., R. 1 E., Sec. 26, Lot 13
 T. 9 S., R. 1 E., Sec. 26, Lot 14
 T. 9 S., R. 2 E., Sec. 25, Lot 73
 T. 9 S., R. 2 E., Sec. 25, Lot 74
 T. 9 S., R. 2 E., Sec. 27, Lot 54
 T. 9 S., R. 2 E., Sec. 27, Lot 55

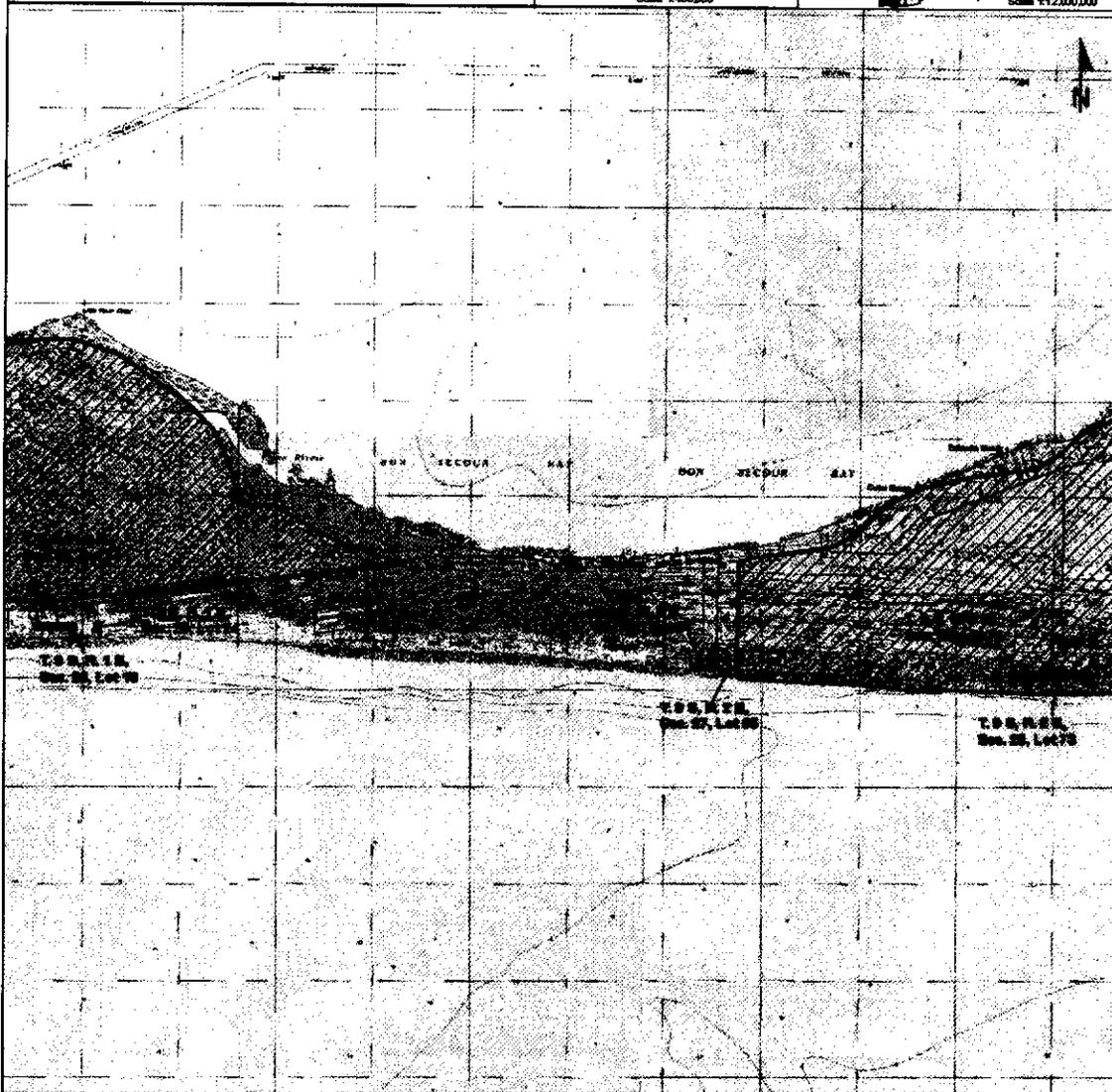
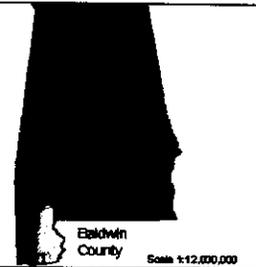
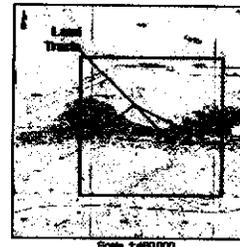
Projection: UTM, Zone 18 North
 Datum: North American Datum of 1983 (NAD83)

Source: BLM, Jackson Field Office
 USGS - National Wetlands Data
 Environmental Systems Research Institute
 TIGRIS 2007 National Geographic Maps

Bl. Stephens Meridian

 Public Domain Lands

 Bon Secur National Wildlife Refuge



Scale 1:60,000



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*Note: Lots 73 and 74 (T. 9 S., R. 2 E., Section 25) shown on the beach tracts map are not included in this project. These lots are within the boundary of the Bon Secur National Wildlife Refuge and are expected to be transferred to Fish and Wildlife Service.

Bureau of Land Management Cogon Treatment Areas

Veteran's Road Highway Tract, Fort Morgan
Baldwin County, Alabama

Date of map compilation: October 2, 2014



Legend

- cogon single
- cogon start
- ▲ cogon start north
- cogon stop
- ▲ cogon stop north
- ▭ BLM tract boundary



N



This document is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

Bureau of Land Management Cogon Treatment Areas

Center Highway Tract, Fort Morgan
Baldwin County, Alabama

Date of map compilation: October 6, 2014



Legend

- cogon single
- cogon start
- ▲ cogon start north
- cogon stop
- ▲ cogon stop north
- ▬ BLM tract boundary



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for treatment use or application with other data.

Bureau of Land Management Cogon Treatment Areas

Our Road Highway Tract, Fort Morgan
Baldwin County, Alabama

Date of map completion: October 6, 2014



Legend

- cogon single
- cogon start
- ▲ cogon start north
- cogon stop
- ▲ cogon stop north
- BLM tract boundary



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**BUREAU OF LAND MANAGEMENT
SOUTHEASTERN STATES FIELD OFFICE
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206**

ENVIRONMENTAL ASSESSMENT (EA) FORM

ES-020-2014-16

PROJECT NAME: Fort Morgan Pesticide Use Proposal

TECHNICAL REVIEW:

X	Program	Reviewer	Signature	Date
X	Air Quality	Brian Kennedy Physical Scientist	<i>Brian Kennedy</i>	11/4/14
	ACEC			
X	Botanical including T&E Spp.	Faye Winters Wildlife Biologist	<i>Faye Winters</i>	11/3/14
	Communications (Dispatch)			
X	Cultural/Paleontology	John Sullivan Archeologist	<i>See Section V. for sig.</i>	
	Energy Policy			
	Environmental Justice			
	Farmlands (Prime & Unique)			
	Fire Management			
	Floodplain			
X	Hazardous Material	Brian Kennedy Physical Scientist	<i>Brian Kennedy</i>	11/4/14
X	Invasive & Non-Native Spp.	Brian Kennedy Physical Scientist	<i>Brian Kennedy</i>	11/4/14
	Lands/Realty			
	Land Law Examiner			
	Law Enforcement			
	Minerals			
X	Native American Religious Concerns	John Sullivan Archeologist	<i>See Section V. for sig.</i>	
	Operations			
	Range Management			
X	Recreation	Faye Winters Wildlife Biologist	<i>Faye Winters</i>	11/3/14
X	Soils	Brian Kennedy Physical Scientist	<i>Brian Kennedy</i>	11/4/14
	Surface Protection			
	Visual Resources			
	Water Rights			
X	Water Quality (Surface & Ground)	Brian Kennedy Physical Scientist	<i>Brian Kennedy</i>	11/4/14
	Wetlands/Riparian Zones			
	Wild & Scenic Rivers			
	Wilderness			
	Wild Horse & Burro			
X	Wildlife including T&E Spp.	Faye Winters Wildlife Biologist	<i>Faye Winters</i>	11/3/14



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
Jackson Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206

**Environmental Assessment
EA-020-2014-16**

Project Name: Fort Morgan Pesticide Use Proposal EA

Date: Nov. 3, 2014

Chapter 1 – PURPOSE OF AND NEED FOR THE PROPOSED ACTION

Introduction

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental impacts of the invasive plant management as proposed by Southeastern States Field Office (SSFO). The EA is a field office site-specific analysis of potential effects that could result with the implementation of the Proposed Action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any “significant” impacts could result from the analyzed actions. “Significance” is defined by NEPA and is found in regulation 40CFR 1508.27. The purpose of this EA is to demonstrate that under the conditions outlined in the proposed action we will be able to prepare a statement of “Finding of No Significant Impact” (FONSI)

The SSFO is proposing to treat invasive plant species, including cogongrass (*Imperata cylindrical*), torpedo grass (*Panicum repens*), natal grass (*Melinis repens*), and Chinese tallow tree (*Triadica sebifera*), on BLM-administered tracts on the Fort Morgan Peninsula in Baldwin County, Alabama. There is also the potential need to treatment beach vitex (*Vitex rotundifolia*), as species known to occur on Fort Morgan, but not yet recorded on BLM.

BLM administers three beach front tracts, totaling 0.5 miles, on the Fort Morgan Peninsula in southern Alabama along the Gulf of Mexico. There are also three BLM-administered tracts along approximately 1 mile of Fort Morgan Road (State Highway 180). Together the BLM beach and highway tracts total 58.04 acres. On BLM, all of the known invasive plant infestations occur on the highway tracts. However, this EA addresses the potential for early detection/early treatment of invasives on the BLM beach tracts. Maps of the project area are provided in Appendix A.

The legal descriptions of the BLM tracts are:

Fort Morgan Beach Tracts			St. Stephens Meridian
Our Road Beach Tract	0.84	Baldwin	T. 9S, R. 1E, Sec. 25, Lot 24
Lotsa Sand Beach Tract	5.32	Baldwin	T. 9S, R. 1E, Sec. 26, Lots 13 and 14
Veteran’s Road Beach Tract	10.60	Baldwin	T. 9S, R. 2E, Sec. 27, Lots 54 and 55
Acreage of Beach Tracts	16.76		
Fort Morgan Highway Tracts			St. Stephens Meridian
Our Road Highway Tract	20.16	Baldwin	T. 9S, R. 1E, Sec. 25, Lot 5
			T. 9S, R. 1E, Sec. 26, Lot 15
Center Highway Tract	8.88	Baldwin	T. 9S, R. 2E, Sec. 28, Lot 43
Veteran’s Road Highway Tract	12.24	Baldwin	T. 9S, R. 2E, Sec. 27, Lot 56

		T. 9S, R. 2E, Sec. 28, Lot 44
Acreage of Highway Tracts	41.28	
Total BLM Acreage	58.04	

Need for Proposed Action

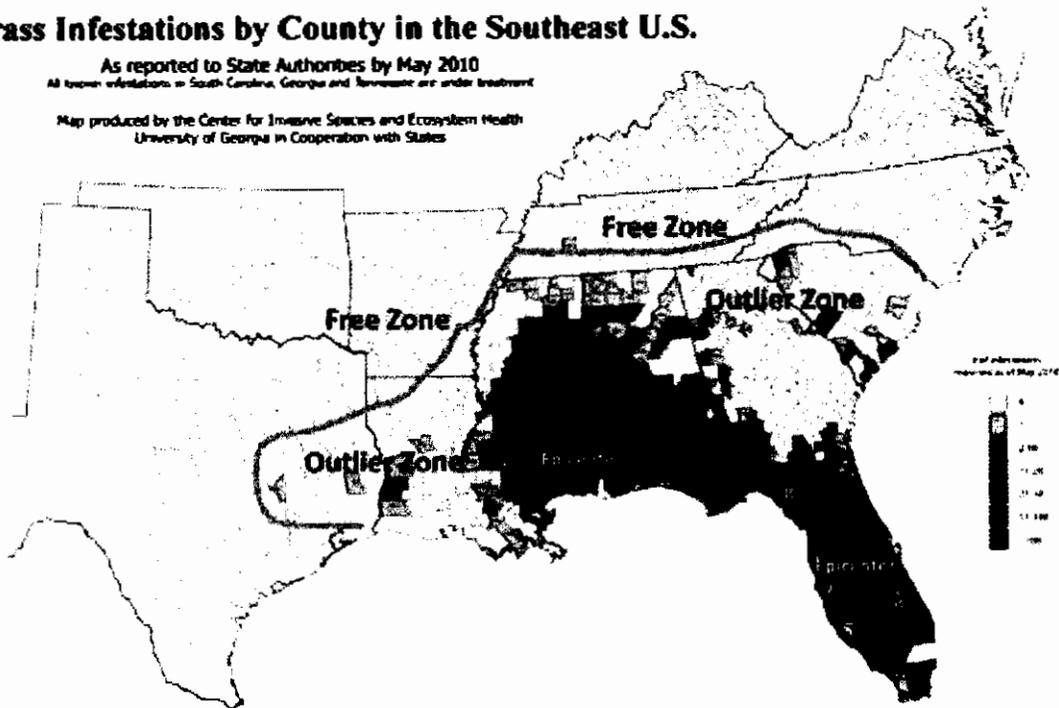
Cogongrass, torpedo grass, and Chinese tallow tree are all aggressive invasives that given the right conditions substantially displace native vegetation, degrade habitat and, in the case of cogongrass, alter natural fire regimes. All of these species are naturalized throughout the southeast and their ranges are expanding. Natal grass and beach vitex are known to occur on the BLM tracts or in the adjacent Bon Secour National Wildlife Refuge and have the potential to degrade scrub and beach dune habitats.

On the BLM tracts, almost 95 percent of the cogongrass and torpedo grass infestations occur on the Our Road Highway tract. Cogongrass and torpedo grass are most prevalent in the maintained road right-of-way, but extend into adjacent natural areas, particularly in low lying areas.

Cogongrass is known to occur in virtually every county in Alabama, Florida, and Mississippi and is considered one of the worst weeds in the nation, and even the world, in its potential to degrade natural areas. The project site is within the epicenter of the national cogongrass infestation.

Cogongrass Infestations by County in the Southeast U.S.

As reported to State Authorities by May 2010
 All known infestations in South Carolina, Georgia and Tennessee are under treatment
 Map produced by the Center for Invasive Species and Ecosystem Health
 University of Georgia in Cooperation with States



Cogongrass is difficult to control. Rapidly growing rhizomes eventually create a dense mat excluding other vegetation. Capable of prolific flowering, the seed viability is highly variable. Germination rates are high, greater than 90%, but seeds are short-lived generally remaining viable in the soil for only about 1 year. Viability of seeds stored in a laboratory steadily decreased over 13 months. Field studies in Asia show a maximum seed life of 16 months. Flowering generally occurs in the spring, but can be stimulated by mowing, fertilization and fire.

Torpedo grass invades coastal beaches, wetlands, and other moist plant communities, although it is also documented in scrub areas. It is highly resilient, and can survive both drought and flooded conditions. Once established it is difficult to control and even small fragments of the rhizomes can establish and quickly form dense stands. Torpedo grass can flower almost year round, but is variable on seed abundance and viability.

Chinese tallow tree is found occasionally on the BLM tracts. This species is widespread across the southeast and has had a dramatic impact on regional wetlands where it has displaced native vegetation and reduced habitat values. This tree is establishing itself on the margins of the right-of-way and in wetlands and disturbed sites on the Fort Morgan peninsula.

Natal grass establishes quickly in disturbed sites and is found along Fort Morgan Road in drier areas of the right-of-way. Unlike cogongrass and torpedo grass, natal grass is propagated primarily by seed, which are readily windblown.

Beach vitex (*Vitex rotundifolia*), which has been found on the Fort Morgan Peninsula, but not yet been recorded on BLM-administered tracts. However, this plant has the capacity to substantially degrade beach dune habitats.

Management Objectives of the Action

The need for the action is to reduce, control, and manage cogongrass, torpedo grass, natal grass, Chinese tallow tree, and other invasives on the 58.4 acres of BLM-administered tracts on the Fort Morgan Peninsula. BLM will determine whether or not agency approved herbicides should be used alone or in conjunction with other integrated pest management methods, such as biological, mechanical, or cultural to control cogongrass, torpedo grass, natal grass, and Chinese tallow tree on BLM-administered tracts, and to establish and support early detection/early response activities on the Fort Morgan Peninsula for these and other invasive plants.

Land Use Plan Conformance:

The proposal conforms to the 2009 Alabama and Mississippi Resource Management Plan (RMP) and Record of Decision (ROD) prepared by the Southeastern States Field Office. The RMP specifically mentions control of invasive species to improve habitat quality and improve conditions for special status species.

A digital copy of the RMP is available on-line at:
http://www.blm.gov/es/st/en/fo/Jackson_Home_Page/planning/alabama_and_mississippi.html

A hard copy of the RMP is available at the following address:
Bureau of Land Management (BLM)

Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206

Applicable Regulatory Requirements and Required Coordination

The following authorities and documents are applicable, or incorporated by reference into this document.

Carlson-Foley Act of 1968 – Directs agency heads to enter upon lands under their jurisdiction with noxious plants and destroy noxious plants growing on such land.

Departmental Manual 209 – Prescribes policy to control undesirable or noxious weeds on the lands, waters, or facilities under its jurisdiction to the extent economically practicable, and as needed for resource protection and accomplishment of resource management objectives.

Departmental Manual 517 – Prescribes policy for the use of pesticides on the lands and waters under its jurisdiction, and for compliance with the Federal Insecticide, Fungicide, and Rodenticide Act, as amended.

Executive Order 13111 of February 3, 1999 - Directs federal agencies to prevent the introduction of invasive species and provide for their control, and to minimize the economic, ecological, and human health impacts that invasive species cause.

Endangered Species Act of 1973 - requires federal agencies to complete formal consultation with the U.S. Fish and Wildlife Service (FWS) for any action that “may affect” federally listed species or critical habitat. The ESA also requires federal agencies to use their authorities to carry out programs for the conservation of endangered and threatened species.

Federal Insecticide, Fungicide and Rodenticide Act - Establishes procedures for the registration, classification, and regulation of all pesticides.

Federal Land Policy and Management Act of 1976 – Directs the BLM to “take any action necessary to prevent unnecessary and or undue degradation of the public lands.”

Federal Noxious Weed Act of 1974, as amended by Sec. 15 – Management of Undesirable Plants on Federal Lands, 1990 - Authorizes the Secretary “to cooperate with other federal and state agencies, and others in carrying out operations or measures to eradicate, suppress, control, prevent, or retard the spread of any noxious weed. Each federal agency shall 1) designate an office or person adequately trained to develop and coordinate an undesirable plants management program for control of undesirable plants on federal lands under the agency’s jurisdiction, and 2) establish and adequately fund an undesirable plants management program through the agency’s budgetary process, 3) complete and implement cooperative agreements with State agencies regarding the management of undesirable plant species on federal lands, and 4) establish integrated management systems to control or contain undesirable plant species targeted under cooperative agreements.”

Noxious Weed Control Act of 2004 -Established a program to provide assistance through states to eligible weed management entities to control or eradicate harmful, nonnative weeds on public and private lands.

Plant Protection Act of 2000 (PL 106-224) - Includes management of undesirable plants on federal lands) authorize the BLM to manage noxious weeds and to coordinate with other federal and state agencies in activities to eradicate, suppress, control, prevent, or retard the spread of any noxious weeds on federal lands

Watershed Restoration and Enhancement Agreements (Wyden Amendment) - Gives BLM the authority to use appropriated funds to enter into cooperative agreements with other federal agencies, tribal, State or local governments, private and non-profit entities, and landowners on project that protect, restore, and enhance habitat or other resources, or that reduce risk from natural disaster where public safety is a concern, including those lands outside of the public domain.

BLM – Final Programmatic Environmental Impact Statement (PEIS) for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States (PEIS for Vegetation Treatments; BLM 2007)- This project is not specifically covered by the PEIS, but it does adopt the applicable best management practices, maximum use rates, and incorporates by reference the risk analyses presented in that document. Guidance and objectives incorporated into this project which were identified in the PEIS, include, but are not limited to, containment to prevent weed spread from moving beyond the current infestation; control to reduce the extent and density of a target weed; and restoration of native plant communities and habitats.

Decision(s) That Must Be Made

This EA discloses the environmental consequences of controlling invasive weeds on BLM-administered land on the Fort Morgan Peninsula. The Southeastern States Field Manager is the Deciding Official and based on this document and other public and regulatory review will decide whether to approve the project.

Chapter 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION

Proposed Action:

Under the proposed action, the BLM would treat infestations of cogongrass and torpedo grass, and potentially beach vitex, using foliar applications of a broad-spectrum herbicide (glyphosate) formulated for aquatic situations up to a twice a year. Annual application rates of the herbicide and adjuvants are provided in the table below.

Trade Name	Common Name	Project Maximum Application Rate Per Acre (acid equivalent)	Formulation Label Maximum Application Rate Per Acre
Glyphosate	Glyphosate	7.0 lbs. a.e./yr.	8.0 quarts/yr. (8 lbs. a.e. /yr.)
Induce	Surfactant	N/A	0.05% V/V
Hi-Light	Colorant	N/A	0.125% V/V

For cogongrass, a fall application of up to 4 lbs. a.e. of glyphosate would be applied to maximize transport the herbicide into the rhizomous roots and reduce the production of seed heads the following spring. A second treatment would follow the following spring to continue to reduce the extent of the infestation. Combined application rates would not exceed BLM's maximum of 7 lbs. a.e. per year. These treatments are expected to continue for at least three years, re-treating surviving stands and treating plants germinating from the soil seed bank. Follow-up treatments would then be used, as needed, to maintain control of these invasive plant species. Foliar applications would be made using hand-directed spray equipment where infestations occur within the maintained highway right-of-way. Infestations that have spread outside of the maintained right-of-way would be targeted using hand-held backpack sprayers. Hand applications allow for more targeted applications to avoid mature perennials, such as scrub oaks (*Quercus* spp.), yaupon (*Ilex vomitoria*), saw palmetto (*Serenoa repens*), and scrub rosemary (*Ceratoila ericoides*), and other non-target plants. This equipment may be fitted with a hooded or shielded applicator tip to focus the herbicide application directly over the target, reducing the potential of drift and increase accuracy. BLM would use a glyphosate formulation and surfactant approved for aquatic situations. Woody invasives, including Chinese tallow tree, would be treated during the growing season using a cut-stump application with immediate application of undiluted glyphosate on the entire cambium.

Control of natal grass would include hand pulling and bagging of plants to remove the potential for seed dispersal, as well as targeted herbicide application of non-flowering plants.

Foliar applications of glyphosate would be made using the following best management practices:

1. To the extent practicable, use targeted hand application under and around scrub oaks, mature saw palmetto, yaupon and other mature native shrubs and trees.
2. Apply foliar applications only when wind speeds are below 5 mph.
3. Use the largest droplet size that will provide sufficient coverage to reduce the potential for drift. Use a surfactant that will also limit the potential for drift.
4. Use glyphosate formulations approved for aquatic applications.
5. Treatment areas will be identified and flagged before herbicides are applied to ensure that all infestations are treated, but also to ensure that areas without cogongrass or torpedo grass are not treated.
6. In accordance with the herbicide label directions, a surfactant will be included in the application where specified. Only those surfactants identified for use in aquatic situations will be used. In order to identify treated areas, ensuring coverage of target plants and avoid accidental retreatment and to identify potential off-site movement, thereby preventing damage to native and desirable vegetation, a dye marker will be added.

No Action Alternative

Under this alternative, there would be no effort to control invasive weeds. There are no practical control measures for either cogongrass or torpedo grass, other than herbicides, and these invasives are expected to continue to expand across the BLM highway tracts particularly into low lying areas eventually encroaching into scrub habitats and the edges of dune habitats, degrading Alabama beach mouse habitat and displacing native vegetation, and ultimately resulting in monocultures, particularly in regards to cogongrass. Natal grass is expected to

continue to spread from the roadway into adjacent scrub areas. Chinese tallow tree has the capacity to dominate low lying areas and wetlands across the Fort Morgan peninsula.

Alternatives Rejected from Further Consideration

1. The use of imazapyr in conjunction with glyphosate is often recommended to improve control of cogongrass. Imazapyr, however, does not readily bind to mineral soils and has the potential to translocate through root systems to adjacent vegetation killing non-target vegetation. Given the mix of native vegetation near and intermixed with cogongrass use of this herbicide was not considered appropriate.
2. Alabama Department of Transportation has had success using Perspective (aminocyclopyrachlor + chlorsulfuron) for the treatment of cogongrass along highway right-of-ways. This broadleaf herbicide can also translocate through root systems resulting in the loss of non-target natives, and was dropped from consideration for this situation.
3. Cogongrass will not persist in areas that are frequently cultivated; however, this was not considered to be viable option for Alabama Department of Transportation which by policy maintains a vegetated right-of-way along State roads. It would also not be feasible outside of the right-of-way, in native plant communities with a predominance of desirable grasses, forbs, and shrubs, or in designated Alabama beach mouse critical habitat.

Chapter 3 – DESCRIPTION OF THE AFFECTED ENVIRONMENT

Introduction

The following critical elements are not present or would not be affected by this proposed action(s); therefore they will not be addressed in this EA: BLM designated Areas of Critical Environmental Concern, Climate Change, Environmental Justice, Farm Lands (Prime or Unique), Floodplain, Hazardous or Solid Waste, Wild and Scenic Rivers, and Wilderness.

Description of Project Area

Fort Morgan Peninsula is located west of the city of Gulf Shores and stretches 18 miles to the Fort Morgan State Park at its most western tip. Average elevation is 10 feet above sea level and the area is subject to wash over during hurricane associated surges. The area is primarily single family residences/beach homes with several larger developments interspersed. The Bon Secour National Wildlife Refuge encompasses 7,000 acres of the peninsula.

Air Quality

The Clean Air Act of 1990, as amended (42 USC 7401, 7642), requires the BLM to protect air quality, maintain Federal- and state-designated air quality standards, and abide by the requirements of the State implementation plans. The Alabama Department of Environmental Management and the Environmental Protection Agency (EPA) are responsible for regulating activities affecting air quality in the project areas. The Air Division is charged with the responsibility of insuring that Alabama's air quality meets federal standards. Air quality on the Fort Morgan Peninsula is generally ranked as good (<http://www.usa.com/alabama-state-air-quality.htm>, accessed July 29, 2014); however as part of the Mobile Metropolitan Statistical

Area, Baldwin County may not meet current EPA ozone attainment standards (http://www.co.baldwin.al.us/PageView.asp?edit_id=533, accessed on July 29, 2014).

Cultural Resources

The BLM Fort Morgan tracts have been surveyed. Four cultural sites are located on or within one-half mile of five of the highway tracts during a BLM survey in 2007. A second BLM survey was conducted on November 2, 2013, and no cultural resources were discovered. Cultural resources would be identified and protected on a case-by-case basis, according to site-specific needs. Any significant sites discovered would be available for scientific, conservation, traditional, or interpretations use as the law and BLM policy allows. A site that is not significant (as determined by the BLM, State Historic Preservation Office (SHPO) and Tribal consultations) would be released from management concerns.

Human Health and Safety

The treatment area straddles a public road where uses also include cyclists, runners and walkers. The project also includes both public and private driveways that intersect Fort Morgan Road. There are seventeen single family residences, two multi-family residences, a restaurant/ convenience store and a fire station within 500 feet of Our Road Highway tract where the majority of the cogongrass and torpedo grass are located. There is no known prior use of herbicides in the treatment area.

All applicators must hold current state or federal applicator licenses, be able to identify the target plants, be competent with application equipment and calibration of that equipment. Daily tallies of all herbicide and adjuvants, as well as a map of treatment areas, will be retained by BLM to ensure that maximum use rates are not exceeded and for monitoring purposes. Personnel would be required to follow all label precautionary protocols during application, and for personal protection and the safety of the general public.

Public notification prior to the application would alert the public and local residents ahead of scheduled treatments.

Native American Religious Concerns:

A number of the native plants on the Fort Morgan Tracts are important to Southeastern Tribes such as saw palmetto (*Serenoa repens*), rosemary (*Ceratiola ericoides*) and yaupon (*Ilex vomitoria*). While there is no active collecting of these native plants on these BLM tracts, Tribes have concerns that these plants are maintained and a thriving community. Tribes are interested in their ancestral home lands and sites.

Recreation

Recreation use is primarily focused on Fort Morgan's white sand beaches. Many of the residences are rental properties and the peninsula is a popular vacation destination. Historic Fort Morgan State Park and the Bon Secour National Wildlife Refuge are also major draws. Fort Morgan is a major migratory bird stop-over location, and the peninsula is a key destination on the Alabama Coastal Birding Trail.

Special Status Species

Alabama beach mouse (*Peromyscus polionotus ammobates*), federally listed as endangered

The Alabama beach mouse is restricted to coastal dunes and scrub/shrub habitats. Primary and secondary coastal dunes provide the principle habitat, while adjacent scrub habitats can serve as crucial refugia for repopulation after catastrophic loss of primary habitat from hurricanes. All of the BLM tracts, both beach and highway tracts, are designated critical habitat.

Piping plover (*Charadrius alexandrinus*), federally listed endangered

All three populations of piping plover winter along the southern Atlantic and Gulf Coasts, where they are classified as threatened. Piping plover can be present in Alabama from August to May, but numbers peak during the winter months. On July 10, 2001, USFWS designated 165,211 acres along 1,798 miles of coastline in eight southern States as critical habitat for the wintering population of piping plover. This included several barrier islands and the western tip of the Fort Morgan Peninsula, west of the subject tracts. The project area is outside of piping plover designated critical habitat, but the BLM beach tracts provide suitable wintering habitat.

Loggerhead sea turtle (*Caretta caretta*), federally listed as threatened

The most common nesting sea turtle in Alabama, loggerheads nest on open sandy beaches above the high-tide mark, seaward of well-developed dunes on both the Atlantic and Gulf coasts. In Alabama the majority nesting occurs between Fort Morgan and the City of Gulf Shores. Nesting normally occurs from early May through August, with the majority of nests being laid during June and July. Females lay three to five nests, and sometimes more, during a single nesting season. The eggs incubate approximately 2 months before hatching sometime between late June and the end of October.

The BLM beach tracts provide suitable nesting habitat.

Green sea turtle (*Chelonia mydas*), federally listed as threatened

Green sea turtles nests have been reported on Florida Gulf Coast and rarely in Alabama, most nesting occurs on the Atlantic coast from Florida to North Carolina.

The BLM beach tracts provide suitable nesting habitat.

Kemp's Ridley sea turtle (*Lepidochelys kempii*), federally listed as endangered

Kemp's Ridley sea turtle is an occasional visitor to Alabama waters, where it is sometimes caught in shrimp nets. Although virtually the entire population nests in Mexico and southern Texas, at least three nests have been documented in Alabama (2001, 2006, and 2007) and have been documented on the nearby Bon Secour Refuge. Based on USFWS records, juvenile Kemp's ridleys are the most common marine turtle in Alabama bays and estuaries.

The BLM beach tracts provide suitable nesting habitat.

Vegetation

The BLM tracts encompass the supratidal zone, both frontal and back dunes, coastal scrub, depression herbaceous wetlands, and wet pine flatwoods.

The primary coastal dunes are dominated by sea oats (*Uniola paniculata*), with minor components of beach morning glory (*Ipomoea imperati*), seashore elder (*Iva imbricata*), largeleaf pennywort (*Hydrocotyle bonariensis*), and sea purslane (*Sesuvium portulacastrum*). Secondary dunes are increasingly stabilized by vegetation and can include scrub oaks (*Quercus* spp.). The coastal scrub habitats occur landward of the secondary dune systems and are dominated by scrub oak (*Quercus geminate*), saw palmetto, rosemary, yaupon, and ground lichens (*Cladonia* sp.). Roadside ditches and low lying areas north of Fort Morgan Road tend to be herbaceous wetlands with cordgrass (*Spartina patens*), and sedges (*Cyperus* spp.) and interspersed slash pine (*Pinus ellottii*), including regeneration after 2004 Hurricane Ivan when winds and subsequent inundation killed many pines.

On the BLM tracts, all of the invasive plants occur on the tracts straddling the Fort Morgan Road. Almost 95 percent of the cogongrass and torpedo grass infestation occurs on the Our Road Highway tract. The infestation occurs primarily in the maintained right-of-way within 26 feet on each side of the Fort Morgan Road. These infestations total approximately 3 acres, with an additional acre of cogongrass and torpedo grass estimated to occur on the BLM highway tracts outside of the maintained right-of-way. Maps of the current infestations of cogongrass and torpedo grass on the BLM tracts along Fort Morgan Road are provided in Appendix A. Natal grass tends to occur on the drier areas along the highway right-of-way outside of the cogongrass and torpedo grass infestations. Individual Chinese tallow trees occur on the BLM highway tracts on the edges of the mowed highway right-of-way and are estimated to infest less than an acre. Individual Chinese tallow trees occur on the BLM highway tracts outside of the maintained right-of-way and are estimated to cover no more than 0.1 acres.

Visual Resources

The Fort Morgan Road is a National Scenic Byway, part of the Alabama's Coastal Connection. The Fort Morgan tracts are managed for a Class III objective. The site and sound of man are readily evident and concentration of users can be high during the summer months and holiday weekends. The Fort Morgan Road right-of-way includes stretches of relatively open sand and areas of native and non-native ground cover/grasses. Alabama Department of Transportation maintains the right-of-way by periodic mowing.

Water - Ground and Surface

There is typically no standing water on any of the BLM highway or beach tracts. However, localized flooding can occur, particularly in the ditches along Fort Morgan Road during heavy rain events. All of the low lying areas are subject to flooding during hurricanes and surge events and can be subjected to extended periods of inundation by brackish water following major hurricanes and tropical storms. The A1 aquifer underlying Fort Morgan has been affected by salt water either from intrusion from the Gulf of Mexico or from infiltration of seawater as a result of storm events and Fort Morgan Peninsula residential water service is provided by Gulf Shores.

Wildlife

Fort Morgan is a critical stopover point for migratory birds flying across the Gulf to Central and South America, the first landfall and last departure point for thousands of birds annually. This includes not only Neo-tropical passerines, but in the fall migrating hawks, primarily sharp-shinned hawks (*Accipiter striatus*), broad-winged hawks (*Buteo platypterus*), and American kestrel (*Falco sparverius*). Spring migrants in coastal Alabama start arriving in early March and continue through May. Fall migrants begin to arrive in the middle of September and continue through the middle of November. The nearby 7,000 acre Bon Secour National Wildlife Refuge and Fort Morgan State Park are both designated Globally Important Bird Areas.

The Fort Morgan Peninsula supports a wide variety of wildlife associated with coastal beaches, scrub habitats, pine flatwoods, interior wetlands. Wildlife use of the areas where herbicide use is being proposed is expected to be more limited than surrounding areas because of the vehicle traffic and other human uses along the Fort Morgan Road (cyclists, runners/walkers).

Chapter 4 – ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

This chapter assesses potential environmental consequences associated with the Proposed Action and alternatives.

Air Quality - Impacts of the Proposed Action:

Spray drift (movement of herbicide in the air to unintended locations) and volatilization (the evaporation of liquid to gas) of glyphosate would temporarily result in herbicide particles in the air. Herbicide particles can be transported away from the target location, depending on weather conditions and the herbicide application method. All herbicides used for this project would contain the marker dye to make the herbicide visible wherever it is applied. Glyphosate has very low volatility and risks of inhalation are low. Applicators would be required to wear all necessary personal protection, and herbicides would only be applied when the potential for drift is very low, wind speeds below 5 mph.

Air Quality – Impacts of the No Action Alternative:

No impacts to air quality.

Cultural Resources - Impacts of the Proposed Action:

The proposed action is not likely to have direct impacts on any cultural resources. The likelihood of undiscovered cultural and/or historical resources occurring on the project site is deemed low. The highway right-of-way and adjacent areas have been subjected to past ground disturbance. No vehicle use is proposed outside off the road shoulder, and there are no surface disturbing activities anticipated. Tallow tree would be killed in place and allowed to disintegrate over time with no resulting ground disturbance.

Cultural uses could benefit from the maintenance and protection of native plant communities.

Cultural Resources - Impacts of the No Action Alternative:

No impacts are expected to either prehistoric or historic cultural resources. Cultural uses of native plants could be adversely affected in the future if plant communities continue to be degraded by these invasive plant species.

Health and Human Safety – Impacts of the Proposed Action:

There are no risks associated with nearly all human exposures to glyphosate at the typical or maximum application rate. Research suggests the adjuvants, particularly polyoxyethyleneamine (POEA) surfactants added to increase efficacy, has a greater toxicity than glyphosate alone. Only POEA free formulations would be used in this application.

The following summary is excerpted from a study listed on the National Institutes of Health webpage (<http://www.ncbi.nlm.nih.gov/pubmed/15862083>, Bradberry, et. al. 2004) “The oral absorption of glyphosate and AMPA is low, and both materials are eliminated essentially unmetabolized. Dermal penetration studies with Roundup showed very low absorption. Experimental evidence has shown that neither glyphosate nor AMPA bioaccumulates in any animal tissue. No significant toxicity occurred in acute, subchronic, and chronic studies. Direct ocular exposure to the concentrated Roundup formulation can result in transient irritation, while normal spray dilutions cause, at most, only minimal effects. The genotoxicity data for glyphosate and Roundup were assessed using a weight-of-evidence approach and standard evaluation criteria. There was no convincing evidence for direct DNA damage in vitro or in vivo, and it was concluded that Roundup and its components do not pose a risk for the production of heritable/somatic mutations in humans. Multiple lifetime feeding studies have failed to demonstrate any tumorigenic potential for glyphosate. Accordingly, it was concluded that glyphosate is noncarcinogenic. Glyphosate, AMPA, and POEA were not teratogenic or developmentally toxic. There were no effects on fertility or reproductive parameters in two multigeneration reproduction studies with glyphosate. Likewise there were no adverse effects in reproductive tissues from animals treated with glyphosate, AMPA, or POEA in chronic and/or subchronic studies. Results from standard studies with these materials also failed to show any effects indicative of endocrine modulation. Therefore, it is concluded that the use of Roundup herbicide does not result in adverse effects on development, reproduction, or endocrine systems in humans and other mammals. For purposes of risk assessment, no-observed-adverse-effect levels (NOAELs) were identified for all subchronic, chronic, developmental, and reproduction studies with glyphosate, AMPA, and POEA. Margins-of-exposure for chronic risk were calculated for each compound by dividing the lowest applicable NOAEL by worst-case estimates of chronic exposure. Acute risks were assessed by comparison of oral LD50 values to estimated maximum acute human exposure. It was concluded that, under present and expected conditions of use, Roundup herbicide does not pose a health risk to humans”.

According to the Helena Material Safety Data Sheet for Induce, the formulated surfactant, Induce, is considered a moderate skin irritant and can cause mild irritation of eyes and nose in very high concentrations. The liquid can “defat” the skin, producing a dermatitis characterized by drying and fissuring.

Hi-Light spray indicator is a short-term dye that may cause respiratory tract, eye and skin irritation, but short-term harmful effects are not expected.

Health and Human Safety – Impacts of the No Action Alternative

No impact to public, as no herbicides or manual methods would be used to remove invasive species from the project site.

Recreation – Impacts of the Proposed Action:

The control of these invasive species would have limited effect on recreation focused on the beach experience. The browning of portions of the roadside may raise some concerns, but most of the public is expected to be supportive of the efforts if they understand the threat these invasive plants pose to the native plant communities of Fort Morgan.

Recreation - Impacts of the No Action Alternative:

Under the No Action Alternative, there would be no change in most recreation use of the area. However, eventually these invasive species are expected to alter the native vegetation and alter the natural experience for visitors while walking on trails or along Fort Morgan Road.

Special Status and Priority Species – Impacts of the Proposed Action:

Alabama beach mouse – The proposed project may affect, but is not likely to adversely affect Alabama beach mouse and designated critical habitat. The current treatments areas are outside of the preferred primary dune habitat. It is considered unlikely that cogongrass or torpedo grass would occur in the immediate area of an occupied burrow, or that sea oats, a primary food source would be killed during herbicide treatments. However, the control of these invasives is expected to safeguard suitable habitat and prevent degradation of scrub habitats and the fringes of dune habitats. Natal grass has the potential to spread to scrub habitats, particularly in disturbed areas, but effects to beach mice are expected to be minimal. Monitoring for and early treatment of beach vitex would avoid future impacts to Alabama beach mouse habitat, if this plant is detected on BLM tracts.

Piping plover – The proposed project may affect, but is not likely to adversely affect piping plover. There would be no effect on designated critical habitat. The treatment of cogongrass, torpedo grass, natal grass, and tallow tree is not expected to affect piping plover. However, monitoring for and early treatment of beach vitex could benefit piping plover by displacing native vegetation and degrading wintering habitat, if this plant is detected on BLM tracts.

Gopher tortoise - This project would not affect gopher tortoise.

Loggerhead sea turtle – No invasive species treatments would occur within the upper beach area used by nesting sea turtles. The proposed project is not expected to affect nesting loggerhead sea turtles.

Green sea turtle – No invasive species treatments would occur within the upper beach area used by nesting sea turtles. The proposed project is not expected to affect nesting green sea turtles.

Kemp's ridley sea turtle - No invasive species treatments would occur within the upper beach area used by nesting sea turtles. The proposed project is not expected to affect nesting Kemp's ridley sea turtles.

Flatwoods salamander – This project would not affect flatwoods salamander.

On Oct. 14, 2014, BLM received concurrence from the U.S. Fish and Wildlife Service, Daphne Ecological Services Office that this project is likely to affect, but not adversely affect Alabama beach mouse or designated critical habitat, and that there would be no effect on gopher tortoise, nesting sea turtles or flatwoods salamander (see Appendix A for copy of correspondence).

Special Status Species - Impacts of the No Action Alternative:

Without treatment cogongrass, torpedo grass, natal grass, and tallow tree are expected to continue to expand into natural vegetation communities. All of these species are capable of establishing monocultures and displacing and degrading the plant communities on the Fort Morgan Peninsula. There is potential for beach vitex to degrade dune habitats on BLM beach tracts, displacing native vegetation and adversely affecting Alabama beach mice in particular.

Native American Religious Concerns and Consultation – Impacts of the Proposed Action:

No impacts are expected.

Native American Religious Concerns and Consultation - Impacts of the No Action Alternative:

No impacts are expected.

Soils - Impacts of the Proposed Action:

Glyphosate is water soluble, but it has a high affinity to bind to soil particles. Adsorption of glyphosate increases with increasing clay content and decreasing soil pH and phosphorous content.

Typically, the glyphosate mobility is limited to approximately 6 inches deep in soils when applied in accordance with the label; some data suggests that mobility may extend to 18-24 inches in depth in certain situations, but this is rare (EPA Glyphosate Red 1994). The active ingredients in glyphosate are biodegraded to aminomethyl phosphoric acid and then to carbon dioxide by soil organisms (BLM 2007: 4-19). Glyphosate has a typical soil half-life of 47 days and soil adsorption of 24,000 milliliters per gram (BLM 2007 4-19). Because glyphosate has a strong tendency to absorb to soil particles it is generally not available for uptake by other plants or to leaching once it has come in contact with soil. Degradation of glyphosate in soils is mainly a biological process accomplished by different microorganisms. Long-term effects of glyphosate on soil microbial communities appear to be overshadowed by natural variations due to moisture and temperature, as well as land uses, and lead to the conclusion that glyphosate had no consequential effect on soil communities (Busse, et. al, 2001).

Solomon and Thompson (2003) note that the surfactant, Induce, would not persist nor bioaccumulative in the environment and that it presents an insignificant acute risk to aquatic organisms. Assuming similar applications rates, significant ecological effects were also not expected.

Soils – Impact of the No Action Alternative:

Under the No Action Alternative herbicides would not be used and invasive plants would continue to rapidly spread resulting in potentially irreversible effects on soil quality through increases in in organic matter content, changes in diversity and abundance of soil organisms, and nutrient and water availability.

Vegetation - Impacts of the Proposed Action:

Glyphosate is a non-selective systemic herbicide that can damage any nontarget plant to varying degrees. Glyphosate inhibits the production of aromatic amino acids and certain phenolic compounds. This leads to a variety of toxic effects in plants, resulting in cellular disruption, decreased growth, and death at sufficiently high levels of exposure. Because of its non-selective nature, glyphosate may be highly effective in both spot applications or in areas where invasive species dominate and where very few nontarget plants exist. Glyphosate has low residual activity and would not affect the re-establishment of native plants after the treatments are ceased (BLM, 2007: 4-58).

The planned herbicide application program would result in loss of ground cover along the sections of Fort Morgan Road within the maintained right-of-way. There would also be loss of ground cover wherever cogongrass and torpedo grass have infested adjacent areas. It is anticipated that this would result in the loss of 2.8 acres of herbaceous cover, averaging 20 feet on either side of the roadway for approximately 0.5 miles. Within this area, some loss of shrubs and sapling trees, primarily slash pine (*Pinus elliottii*) is expected. Early successional shrubs, such as groundsel tree (*Baccharis halimifolia*) which are common along the roadway are likely to be killed during treatments within or adjacent to the maintained right-of-way. Efforts would be made to avoid scrub oak, mature yaupon, saw palmetto and scrub rosemary and other mature shrubs and trees with hand applications.

Native species lost in areas infested with cogongrass, torpedo grass and natal grass are expected to re-establish in most cases by natural re-seeding after these invasives are controlled and herbicide treatments cease. The use of glyphosate has no long term effects on the area's ability to support native vegetation. Glyphosate adsorbs rapidly and binds tightly to most soils, although this is reduced in highly sandy soils. However, once adsorbed it is not available for uptake by adjacent plants or very little can be desorbed by water. Outside of the maintained right-of-way, many of the cogongrass and torpedo grass infestations occur in low lying areas which generally have higher levels of organic material and where glyphosate can be expected to adsorb strongly to the soil. Translocation to non-target plants is not expected.

Vegetation - Impacts of the No Action Alternative:

Under the No Action Alternative, infestations will continue to spread and degrade even more area on the Fort Morgan Peninsula and will eventually hamper any efforts to control the infestations.

Visual Resources – Impacts of the Proposed Action

The proposed action would result in stretches of dead vegetation along Fort Morgan Road. Although most of the dead vegetation should be ground cover, grasses and forbs it is likely that there will be unintentional loss of some native shrubs and small trees where they are mixed in or on the margins of the cogongrass or torpedo grass infestations. This may be considered unsightly by the public who are used to maintained highway right-of-ways and it is likely to raise questions from the visiting public. There are sections along Fort Morgan road in natural scrub areas with bare or almost bare sand, so the presence of bare sand along these areas is not necessarily considered detracting to the public, but dead shrubs and trees would likely be considered unsightly. Public notification of the treatment along with the objectives and timeframes would help to diffuse public concerns and help in making the public aware of the threat these invasive plants pose to the native vegetation communities on Fort Morgan.

Visual Resources - Impacts of the No Action Alternative:

The No Action Alternative would not alter the existing vista, however the expanding infestations of cogongrass and torpedo grass would eventually alter the natural setting along this scenic byway, and members of the public that recognize these species would consider the scenic corridor degraded where these species dominate the vista.

Water Resources – Impacts of the Proposed Action:

The most likely avenue for glyphosate to move into water is with eroded soil particles but it dissipates rapidly from surface water by adsorption to organic substances and inorganic clays. Strong adsorption to particles slows microbial degradation, allowing inactivated glyphosate to persist in aquatic environments. Those same strong adsorption characteristics prevent the movement of glyphosate into ground water. All of the formulations of glyphosate planned for use are approved for aquatic use.

Water Resources - Impacts of the No Action Alternative:

Under this alternative, there would be not effects to either ground or surface water as a result of herbicide applications on BLM-administered lands.

Wildlife – Impacts of the Proposed Action:

Glyphosate applications pose low to moderate risk to terrestrial wildlife receptors under multiple exposure scenarios involving applications at the typical and maximum application rates (Monsanto Company 2011). Direct spray of small mammals and insects, assuming 100 percent absorption, poses a low risk at the typical application rate and a moderate risk at the maximum application rate. Consumption of vegetation sprayed with glyphosate poses a low risk to small

mammals for scenarios involving the maximum application rate only. A bird that consumes vegetation sprayed with glyphosate would face a low acute and chronic risk (BLM 2007:4-106). Consumption of contaminated insects would pose a low risk to both small mammals and small birds if the herbicide was applied at the typical application rate. The herbicide would pose a moderate risk if applied at the maximum rate. Acute risks from glyphosate exposure are low at the typical application rate under all scenarios, and there are no chronic risks. Exposure scenarios with the greatest risk are direct spray and acute consumption of contaminated vegetation and insects. Spot applications would have lower risks associated with consumption of contaminated vegetation and insects than broadcast applications, as fewer non-target areas would be impacted by direct spray or spray drift (BLM 2007:4-106).

Glyphosate formulations, including the original Roundup and similar formulations, containing POEA (polyethoxylated tallowamine) surfactants have been shown to be more toxic than technical grade glyphosate, particularly for amphibians (Relyea, R.A. 2005). Only glyphosate formulations and surfactants approved for aquatic situations, and without POEA, are proposed for use.

The fall glyphosate applications would occur after most migratory birds have left the area.

The surfactant, Induce, is not known to persist or bioaccumulative, and significant ecological effects are not expected.

Wildlife – Impacts of the No Action Alternative:

Not controlling cogongrass, torpedo grass, and tallow tree would result in continuing degradation of wildlife habitats, particularly wetlands and scrub habitats. All of these invasive species are capable of forming monocultures, displacing native vegetation and reducing the capacity of habitat to support its natural biodiversity.

Summary and Cumulative Effects:

The use of glyphosate to control invasive plant species, specifically cogongrass, torpedo grass, natal grass, and Chinese tallow, is expected to result in short-term losses of native plants occurring in or near current infestations along Fort Morgan Road. Initial treatments are expected to reduce seed production, and follow-up treatments are expected to reduce stand size and vigor of invasives. The use of this broad-spectrum herbicide is expected to result in the loss of some non-target native plant species where they are closely intermixed with cogongrass and torpedo grass. However, the targeted use of glyphosate is the most effective option for achieving control of these aggressive invasive plants while minimizing residual effects and allowing for the natural regeneration of native plant species after target species have been controlled. Ultimately, the proposed weed treatment program is expected to benefit native plant communities and endemic wildlife by allowing native plant communities to recover and preventing further spread of these aggressive invasive plant species.

This project would be coordinated with control efforts on adjacent public properties, including Bon Secour National Wildlife Refuge and the portions of the Fort Morgan Road outside of the BLM-administered tracts. The impacts related to the use of glyphosate are expected to occur in these areas, regardless of BLM's participation. Without control on the BLM properties these

tracts would be a source for expansion of these invasive species onto adjacent private or public lands.

BLM has received concurrence that the proposed invasive weed treatment program may affect, but is not likely to affect Alabama beach mouse, and would not affect nesting sea turtles or wintering piping plover.

V. References and Literature Cited:

Bradberry, Sally M., A. T. Proudfoot, J. A. Vale. 2004. Glyphosate poisoning. *Toxicol Rev.* 23(3): 159–167.

Busse, M.D., A.W. Ratcliff, C.J. Shestak, and R.F. Powers. 2001. Glyphosate toxicity and the effects of long-term vegetation control on soil microbial communities. *Soil Bio. Biochem.* 33(12/13): 1777– 1789.

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Rick A. Relyea 2005. The lethal impact of roundup on aquatic and terrestrial amphibians. *Ecological applications* 15:1118–1124. <http://dx.doi.org/10.1890/04-1291>

Solomon KR, Thompson DG. Ecological risk assessment for aquatic organisms from over-water uses of glyphosate. *J Toxicol Environ Health B Crit Rev.* 2003 May-Jun;6(3):289-324. Review. PubMed PMID: 12746143. <http://www.ncbi.nlm.nih.gov/pubmed/12746143?report=docsum&format=text>

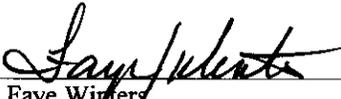
Stone, Katharine R. 2011. *Panicum repens*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/> [2014, July 22]

U.S. Department of Interior, Bureau of Land Management (BLM) 2007 Final Programmatic Environmental Impact Statement for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States. June. Available at: http://www.blm.gov/wo/st/en/prog/more/veg_eis.html.

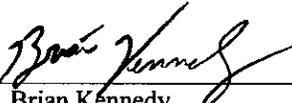
V. - LIST OF AGENCIES AND PERSONS CONSULTED

Historical Preservation Office: Alabama State Historical Preservation Office
U.S Fish and Wildlife Service: Daphne Ecological Services Office
Baldwin County Transportation Department
Alabama Department of Transportation
Bon Secour National Wildlife Refuge

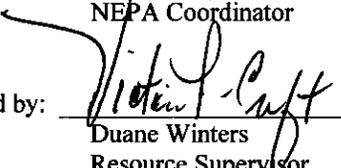
VI. Preparers and Reviewers

Prepared by:  Date: 11/3/14
Faye Winters
Wildlife Biologist (Lead)

Prepared by:  Date: _____
John Sullivan
Archaeologist/Tribal Coordinator

Prepared by:  Date: 11/4/14
Brian Kennedy
Physical Scientist/Certified Pesticide Applicator

Reviewed by:  Date: 11/4/14
Gary Taylor
NEPA Coordinator

Reviewed by:  Date: 11/4/2014
Duane Winters
Resource Supervisor

APPENDIX A

Maps

Map 3

Alabama and Mississippi RMP-EIS

R. Morgan - Highway Tracts (41.28 total acres)

Baldwin County, AL

- T. 9 S, R. 1 E, Sec. 25, Lot 5
- T. 9 S, R. 1 E, Sec. 26, Lot 15
- T. 9 S, R. 2 E, Sec. 27, Lot 5B
- T. 9 S, R. 2 E, Sec. 28, Lot 43
- T. 9 S, R. 2 E, Sec. 28, Lot 44

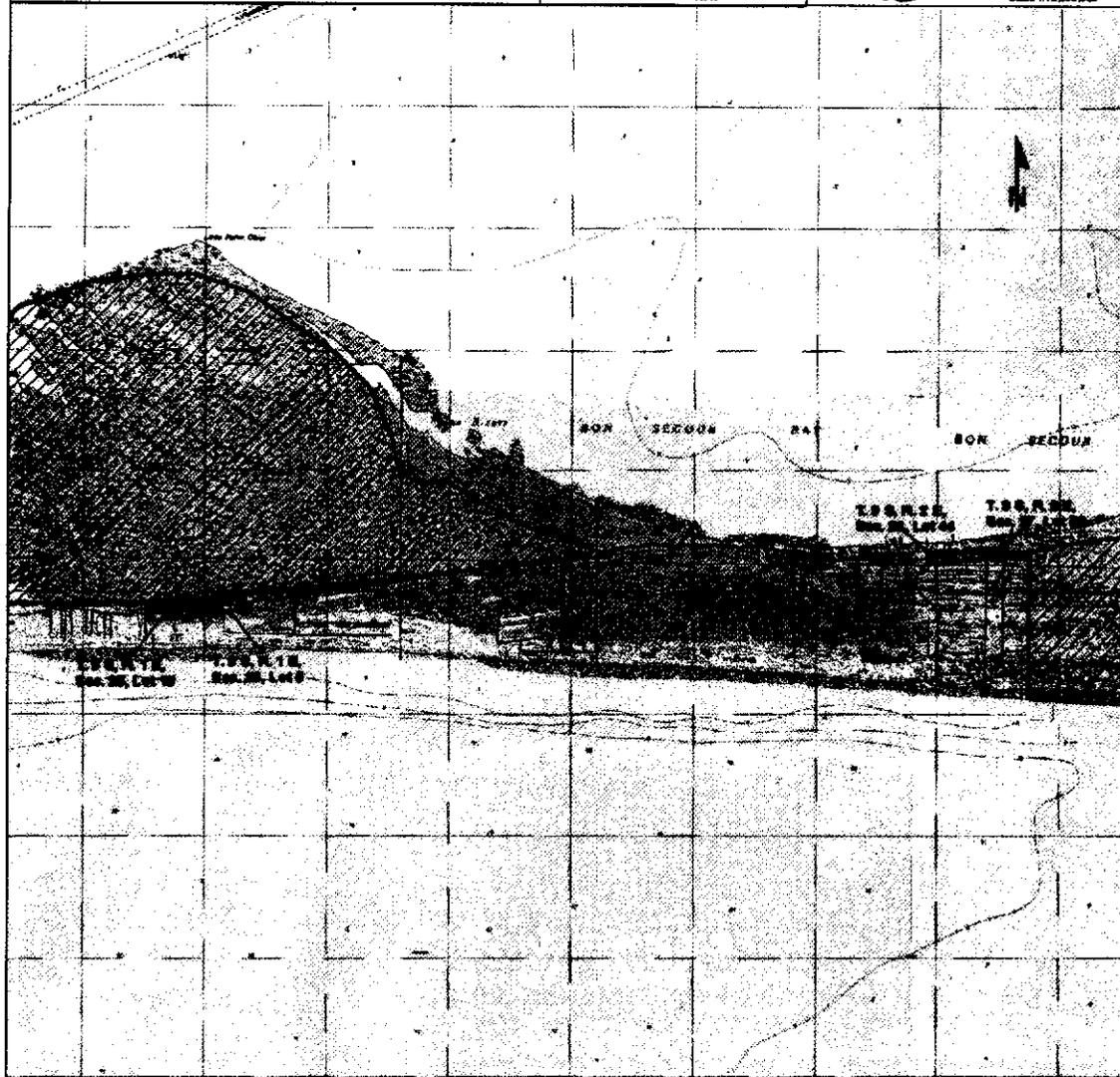
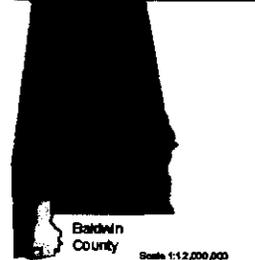
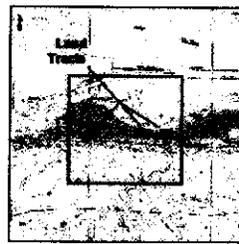
St. Stephens Meridian

 Public Domain Lands

 Bon Secur National Wildlife Refuge

Projection: UTM, Zone 18 North
Datum: North American Datum of 1983 (NAD83)

Source: BLM, Jackson Field Office
USGS - National Elevation Data
Environmental Systems Research Institute
TOPOL 2003 National Geographic Maps



Scale 1:48,000



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for hydrologic use or application with other data.



Map 2

Alabama and Mississippi RMP-EIS

P. Morgan - Beach Tracts (28.70 total acres)

Baldwin County, AL

T. 9 S., R. 1 E., Sec. 25, Lot 24
T. 9 S., R. 1 E., Sec. 26, Lot 13
T. 9 S., R. 1 E., Sec. 26, Lot 14
T. 9 S., R. 2 E., Sec. 25, Lot 73
T. 9 S., R. 2 E., Sec. 25, Lot 74
T. 9 S., R. 2 E., Sec. 27, Lot 54
T. 9 S., R. 2 E., Sec. 27, Lot 55

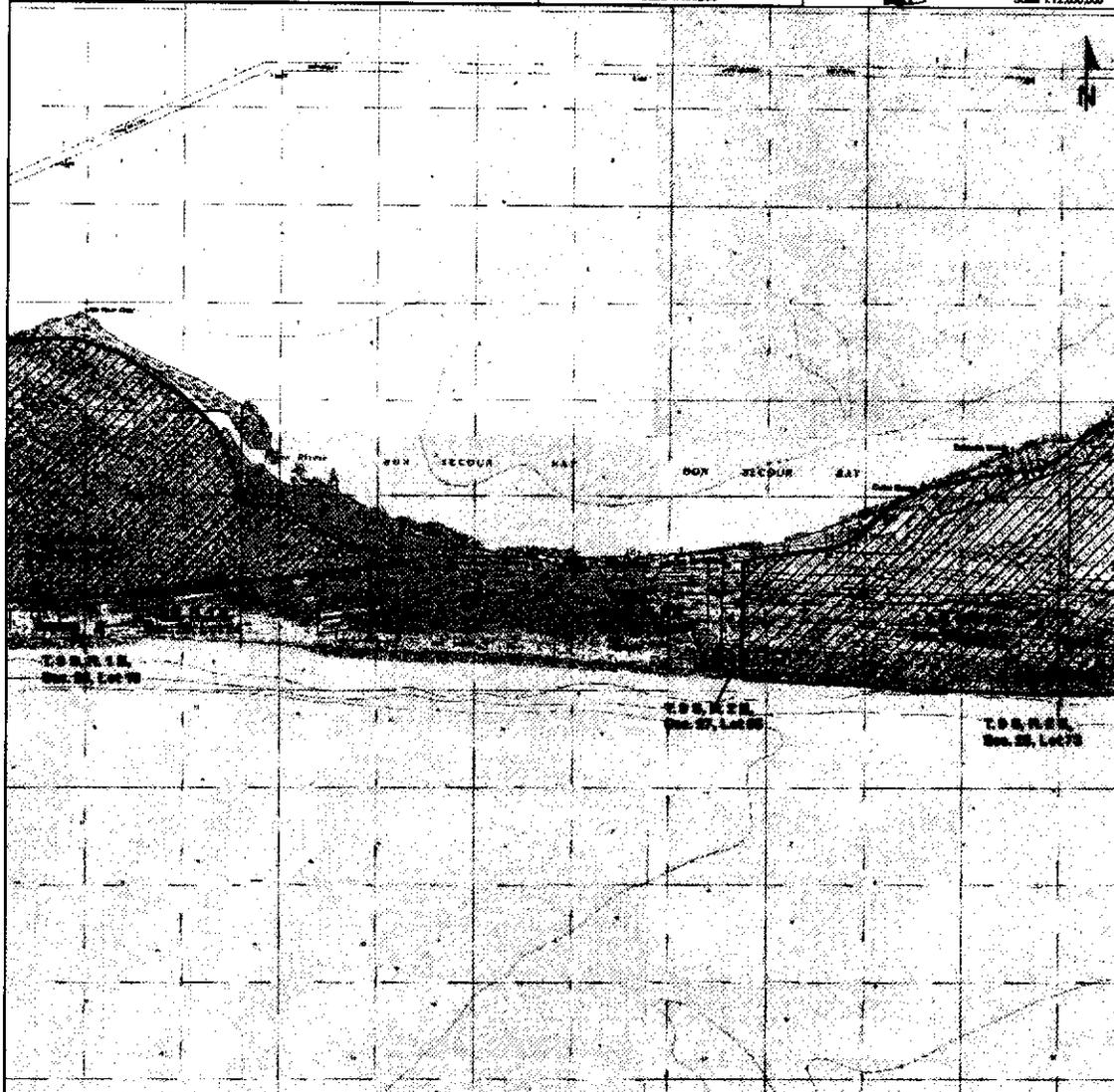
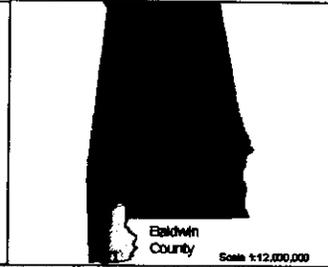
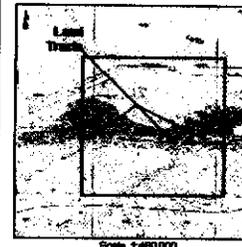
By: Stephens Meridian

 Public Domain Lands

 Bon Secur National Wildlife Refuge

Projection: UTM, Zone 18 North
Datum: North American Datum of 1983 (NAD83)

Source: BLM, Jackson Field Office
USGS - National Wetlands Data
Environmental Systems Research Institute
TPOI, 2007 National Geographic Maps



Scale 1:60,000



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

*Note: Lots 73 and 74 (T. 9 S., R. 2 E., Section 25) shown on the beach tracts map are not included in this project. These lots are within the boundary of the Bon Secur National Wildlife Refuge and are expected to be transferred to Fish and Wildlife Service.

Bureau of Land Management Cogon Treatment Areas

Veteran's Road Highway Tract, Fort Morgan
Baldwin County, Alabama

Date of map compilation: October 2, 2014



Legend

- cogon single
- cogon start
- ▲ cogon start north
- cogon stop
- ▲ cogon stop north
- ▭ BLM tract boundary



N

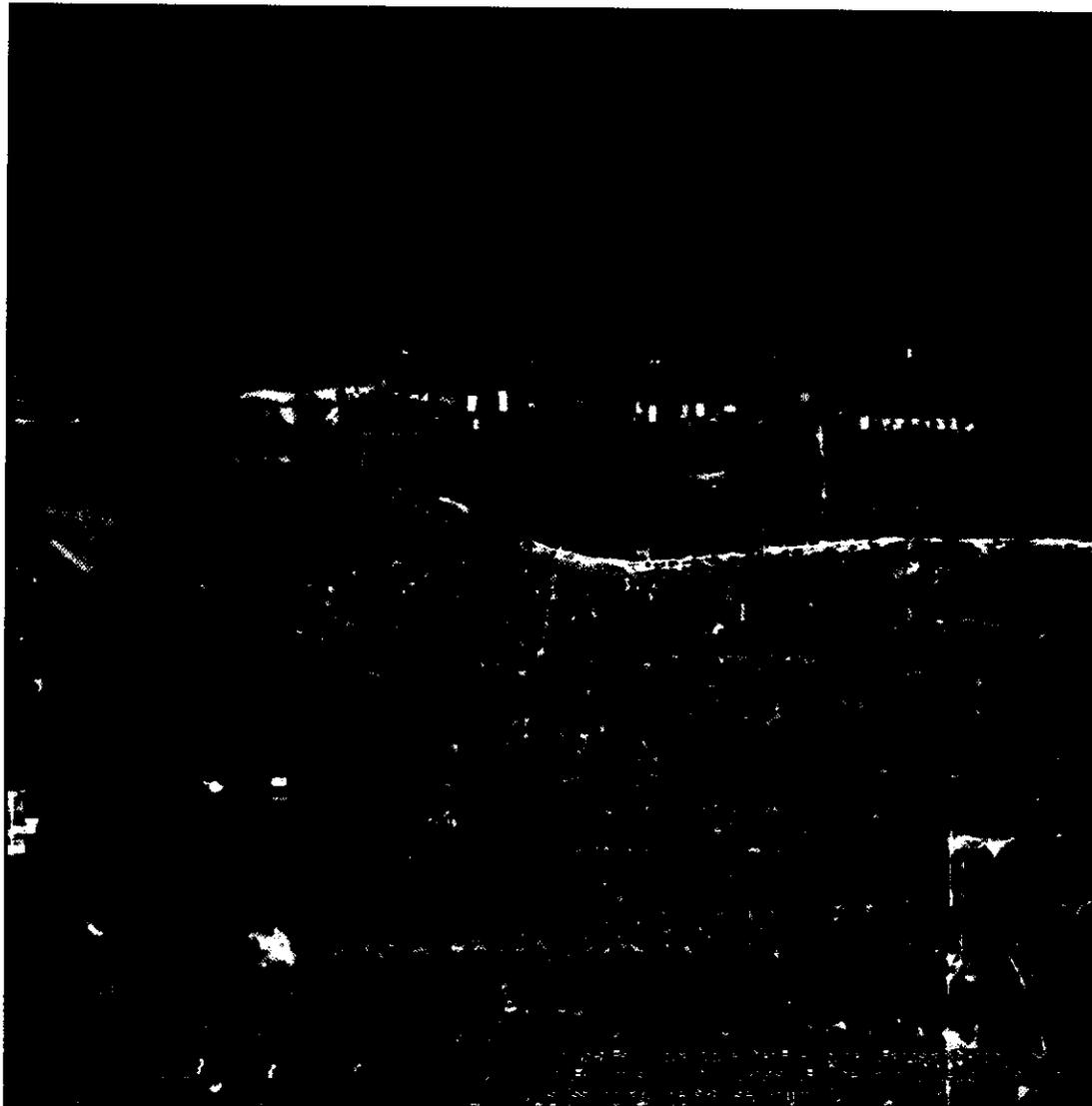


This document is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

Bureau of Land Management Cogon Treatment Areas

Center Highway Tract, Fort Morgan
Baldwin County, Alabama

Date of map compilation: October 6, 2014



Legend

- cogon single
- cogon start
- ▲ cogon start north
- cogon stop
- ▲ cogon stop north
- ▬ BLM tract boundary



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for treatment use or application with other data.

Bureau of Land Management Cogon Treatment Areas

Our Road Highway Tract, Fort Morgan
Baldwin County, Alabama

Date of map compilation: October 6, 2014



Legend

- cogon single
- cogon start
- ▲ cogon start north
- cogon stop
- ▲ cogon stop north
- ▭ BLM tract boundary



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of the data for individual use or aggregate use with other data.

Appendix A – Correspondence



Re: Fort Morgan pesticide use proposal and EA

11/11/14 10:59 AM

Winters, Faye <fwinters@blm.gov>
To: "Everson, Dan" <dan_everson@fws.gov>
Cc: William Lynn <william_lynn@fws.gov>

Tue, Oct 14, 2014 at 2:39 PM

Dan,

Thanks so much for your response. Looking forward to starting on cogongrass control!

Faye

*Faye Winters
Field Office Biologist
Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, MS 39206
(601) 977-5431 office
(601) 977-5440 fax*

On Tue, Oct 14, 2014 at 2:35 PM, Everson, Dan <dan_everson@fws.gov> wrote:

Hi Faye:

We concur with your determination that the proposed treatment may affect, but not adversely affect the Alabama beach mouse, and wintering piping plover, and will not impact nesting sea turtles.

Any questions, let me know

Dan Everson
Deputy Field Supervisor
US Fish and Wildlife Service
Alabama Ecological Services Field Office
251-441-5837 office
251-599-2014 cell
dan_everson@fws.gov

On Tue, Oct 7, 2014 at 3:25 PM, Lynn, William <william_lynn@fws.gov> wrote:

I concur with these findings. However, I do not believe I have time to handle this in these last minutes.....

Where the cogon grass areas and tallow tree infestations occur are highly wet. Thus, I do not believe ABM will be adversely affect by this treatment of these invasives. In fact, I think they would be more adversely affected by not having a treatment than treating.

Bill

----- Forwarded message -----

From: **Winters, Faye** <fwinters@blm.gov>
Date: Tue, Oct 7, 2014 at 11:22 AM
Subject: Fort Morgan pesticide use proposal and EA

To: William Lynn <william_lynn@fws.gov>, "Ingram, Dianne" <Dianne_Ingram@fws.gov>

Bill,

Will you or Dianne be able to concur that the proposed weed treatment may affect, but not adversely affect Alabama beach mouse and wintering piping plover, and have no affect on nesting sea turtles?

P.S. Bon Voyage!

*Faye Winters
Field Office Biologist
Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, MS 39206
(601) 977-5431 office
(601) 977-5440 fax*

—

Bill Lynn
Fish & Wildlife Biologist
Certified Wildlife Biologist
Alabama ES Field Office
1208B Main Street
Daphne, AL 36526
251-441-5868 Office
251-441-6222 Fax
<http://www.fws.gov/daphne/>

FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD

FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts contained in the attached environmental assessment (EA), I have determined that the proposed action, as described will not have any significant impacts on the human environment, and an environmental impact statement (EIS) is not required.

DECISION RECORD

It is my decision to authorize this Pesticide Use Proposal for treatment of invasive species on BLM-administered lands on the Fort Morgan Peninsula. This will include the use of a broad spectrum herbicide, glyphosate, to treat cogongrass, torpedo grass, natal grass, and Chinese tallow tree, and other invasives up to two times annually for an expected three years, and then as needed to maintain control of these invasive weeds. This treatment program is being coordinated with Alabama Department of Transportation where infestations occur on BLM-administered land within the Fort Morgan Road maintained right-of-way. This decision incorporates by reference those measures and conditions addressed in the EA.

RATIONALE FOR DECISION

The decision to allow the proposed action does not result in any undue or unnecessary environmental degradation and is in conformance with applicable plans.

Authorized Officer: Bruce Dowg Date: 11/04/2014