Grass Island Fire

Willapa National Wildlife Refuge

Burned Area Rehabilitation Final Accomplishment Report

U. S. Fish and Wildlife Service

September 12, 2007

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Executive Summary

The Grass Island Fire started on July 8, 2006, and burned 51.95 acres of native plant communities in Willapa National Wildlife Refuge. The plant communities affected were part of a coastal marine environment consisting of intertidal, upland and sand dunal plant communities. Fire and suppression activities are expected to be reinfested with non-native invasive plant species, specifically scotchbroom, gorse and beachgrass. The strategy is to stabilize and prevent further degradation to affected resources on the area within the fire perimeter and/or adjacent to the impacted area and to prevent the growth and spread of introduced invasive grass and plant species in the burned area. Initial mapping of the burned area and infestations of gorse and scotchbroom within the burn area was conducted in March of 2007. Mechanical treatment was initiated in June 2007 to remove mature and seedling gorse and scotchbroom plants. Approximately 659 worker hours were used to complete the initial mapping of the burn area and mechanical treatment of approximately 45 acres of invasive plant species infestations within and adjacent to the burn area.

FINAL ACCOMPLISHMENT REPORT
Willapa National Wildlife Refuge
Grass Island Fire

Introduction

The Grass Island Fire started on July 8, 2006, burned 51.95 acres of native plant communities in Willapa National Wildlife Refuge. The plant communities affected were part of the coastal marine environment of Willapa Bay consisting of intertidal, upland and sand dunal plant communities. Fire and suppression activities were expected to be reinfested with non-native invasive plant species, specifically scotchbroom, gorse and American/European beachgrass. To prevent reinfestation of these species the strategy was to map the burn area and the infestation of gorse, scotchbroom and beachgrass species within and adjacent to the burn area and to use mechanical and herbicide control methods for control of these invasive plant species. The Burned Area Restoration funds for the Grass Island fire were received in 2007 to initiate restoration and prevent reinfestation of invasive gorse, scotchbroom and American/European beachgrass into the burn area.

The treatment area that will be targeted to prevent reinfestation of burn area and where the fire suppression activities occurred is approximately 200 acres. The Grass Island fire was located on Willapa Bay side (east side) of the Leadbetter Unit of the Willapa Refuge and on the north end of the Long Beach Peninsula. The Leadbetter Unit is comprised of sand dunes and seasonal marshes. Gorse, scotchbroom and American/European beachgrass has infested portions of the Leadbetter Unit including Grass Island. To protect the Grass Island fire area these invasive plant species need to be removed and controlled from within a 200 acre area (which includes the burn site). The Leadbetter unit and Grass Island are influenced by the tide and weather. The tides and weather can spread invasive plant species into sensitive areas and need to be controlled or eradicated to prevent this from happening. This BAR project will ensure that the burn area will protected from being reinfested by these invasive plant species.

Methods

In March of 2007 the initial mapping of the Grass Island Fire and gorse/scotchbroom infestations within the burn area were completed. Follow up mapping of infestations and plant communities will be needed for the monitoring of the Grass Island and surrounding area.

Mechanical treatment of gorse and scotchbroom was initiated in June 2007 and required the use of chainsaws, weed eaters, and other hand tools. The 2007 mechanical treatment was completed in August 2007. Approximately 45 acres of gorse and scotchbroom were mechanically removed using 659 staff hours. Fifteen acres were removed from within the burn area and 30 acres were removed from the area northwest of the burn site. Mechanical treatment included using weed eaters, chainsaws and other hand tools to remove mature plants and seedlings of these invasive plant species.

Monitoring of the burn area and the treated area will be conducted to ensure treatment is effective.

Results

The results of the 2007 treatments are still to be determined. This will be accomplished by monitoring and follow up treatment.

Discussion

The 2007 burn area restoration was the first year efforts to protect and ensure that the Grass Island burn area is not reinfested with gorse, scotchbroom and non-native beachgrass species. The initial mapping completed in 2007 will need to be expanded to include mapping of plant communities and infestations of areas outside the burn area, specifically the 200 acres located on the northeast side of the Leadbetter Unit that includes Grass Island. Herbicide treatment of the infested areas is a major part of ensuring that the burn area and suppression activities area are not reinfested with invasive plant species.

Conclusion

Additional treatment and continued monitoring are needed to ensure that the Grass Island burn area is not reinfested with invasive plant species. Plant communities throughout the 200 acre area surround the burn area will need to be mapped according to plant communities and infestations of invasive species. Herbicide treatments will need to be conducted to ensure that control of invasive species is successful. Further mechanical treatment is needed to remove gorse and scotchbroom plants as part of the control efforts and make herbicide treatment of some plants easier and more effective.

Fire Name: Grass Island Fire

Fire Number: 13552-9262-CXC0

Fire fully contained: July 20, 2006

Agency Acres Burned: 51.95 acres

Start of Plan Implementation: March 2007

Initial mapping of burn area an infestation of invasive scotchbroom and gorse
June 2007 began mechanical treatment to remove and/or control invasive 45 acres of scotchbroom and gorse within and adjacent to the burn area.
Herbicide treatment of approximately 2 acres of gorse and scotchbroom within the burn area.

Final Accomplishment Report Date: September 2007

BAR Plan Specifications Completed:

1. Initiated monitoring
2. Initiated mapping of burn area and infestations
2. Initiated mechanical control of gorse and scotchbroom
3. Purchased herbicide for October 2007 treatment

BAR Plan Specifications Not Completed

1. 2006 Monitoring of invasive species
2. 2006 chemical treatments of invasive species. Willapa Refuge didn't receive any funding until 2007 to implement the BAR Plan and specifications.

BAR Plan Specifications Ignored: none

Facilities Repaired or Replaced: none

Acres of Non-native Invasive Species Monitored: 55

Acres of Non-native Invasive Species Treated: 45 acres mechanically treated (651 hours)

Estimated Burned Area Rehabilitation Funds Expended: $23,020 (2007 is the first year we received funding under the BAR Plan.)

Total Burned Area Rehabilitation Funds Expended: $23,020

Total Cost (all funding sources): $23,020

Treatments Successful: The mechanical treatment for removing invasive scotchbroom and gorse from within the burned area and adjacent to the burned area to prevent reinfestation of these plant species. Approximately 15 acres within the burned area and 30 acres outside the burned area were mechanically treated using weed eaters and chainsaws. Approximately 651 hours of staff time were used to complete this task.

Treatments Still Left to Complete: Herbicide was purchased for the treatment of gorse, scotchbroom and beachgrass species within and adjacent to the Grass Island burn area. Treatment is best conducted in October and April.

Monitoring was initiated in March of 2007 and will need to be continued to ensure that mechanical and herbicide treatment is effective.

Breakdown of 9262 BAR funding spent in 2007

Staff	$15, 823.98
Equipment & Supplies	$ 1,190.59
Herbicide	$ 4,194.05
Vehicle used for monitoring	$ 1,794.24
Total	$23,020.00