

Fire Science

Lake Mead Recreational Area Research

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Joint Fire Science Program – Lake Mead National Recreation Area Revegetating Burned Arid Lands: Identifying Successful Native Species Using Trait and Competition Analysis: Quarterly Progress Report, Time Period: October 1 — December 31, 2009

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QUARTERLY PROGRESS REPORT

University of Nevada, Las Vegas Time Period: October 1— December 31, 2009

Cooperative Agreement Number <u>H8R07060001</u>
Task Agreement Number <u>J8360070199</u>
Joint Fire Science Program – Lake Mead National Recreation Area
Revegetating Burned Arid Lands: Identifying Successful Native Species Using Trait and
Competition Analysis

Executive Summary

- Article accepted for publication in Journal of Arid Environments.
- Recharged irrigation gel packs for outplanting and watered seed plots at Goodsprings site.
- Completed full year of seed granivory trials at Goodsprings site.
- Presented information on this Task Agreement to 4th International Fire Ecology and Management Congress.
- Maintained nursery plots and added installment of nitrogen treatment.

Program Activities

The manuscript entitled "Factors affecting exotic annual plant cover and richness along roadsides in the eastern Mojave Desert, USA," was accepted for publication in the Journal of Arid Environments. A spring 2010 print date is anticipated.

Field experiments at the Goodsprings site were maintained this quarter. Irrigation gel packs were added to designated treatments in the outplanting and seeded plots were watered in designated treatments. Also at the Goodsprings site, we completed 12 months of granivory trials and will plan to analyze data and gather more ancillary information for a future publication. Alex Suazo will lead a presentation effort on the granivory experiment results for the upcoming BLM "A Decade of Discovery" conference this coming May.

Scott Abella delivered a poster presentation highlighting information from this task agreement to the 4^{th} International Fire Ecology and Management Congress in Savannah, GA in early December.

The experimental plots at the Lake Mead nursery were watered and maintained on a weekly basis throughout the quarter. Several plants species have performed well while others needed replacements. We found replacements for some species and planted them in place of dead plants. More exotic grass seeds were sown into the plots to ensure high germination and densities for competition. The first of two installments of a nitrogen treatment was added to designated plots for this year.

Papers Published

Craig, D.J., Craig, J.E., Abella, S.R., Vanier, C.H., (in press). Factors affecting exotic annual plant cover and richness along roadsides in the eastern Mojave Desert, USA. Journal of Arid Environments.

Presentations delivered

Abella, S.R., and D.J. Craig. Identifying candidate native species for revegetating desert wildfires. Poster presentation at the 4th International Fire Ecology and Management Congress: Fire as a Global Process, Savannah, GA. 1 December 2009.

Abstracts submitted

Submitted by:

Suazo, A., D.J. Craig and S.R. Abella. Seed removal by granivorous ants and rodents in burned and unburned Mojave Desert habitats: implications for revegetation. Poster presentation for the BLM "A Decade of Discovery" conference, Albuquerque, NM. 25 May 2010.

Technical Assistance/Synergistic Work

Donovan Craig is assisting in the development of an invasive/exotic plant monitoring protocol for the Mojave Inventory and Monitoring Network.

Agency Meetings/Training Attended/Professional Development

S. Abella and D. Craig co-authored poster presentation that was delivered by S.R. Abella at the 4th International Fire Ecology and Management Congress meeting in Savannah, GA, December 2009.

Margaret N. Rees, Project Administrator

Date