



desert conservation
PROGRAM

Date December 30, 2011

TO: DISTRIBUTION

RE: DESERT CONSERVATION PROGRAM PROJECT COMPLETION NOTIFICATION:
GYPSUM SOILS ANALYSIS TECHNICAL CONDITIONS
2005-UNLV-609F

The work for the above referenced project has been completed. Please see the attached for all project related information.

The purpose of the above referenced project was:

Determine soil characteristics of rare plant habitat for the Las Vegas Buckwheat (*Eriogonum corymbosum* var. *nilesii*). This information will be used by the County to refine GIS predictive models of rare plant habitat that are presently being developed based on soils mapping and remote sensing imagery. Once developed, the modeling can be used to determine:

- (1) The amount of potential rare plant habitat present in Clark County.
- (2) Direct conservation and management efforts for these rare plant species.

The major accomplishment or findings of this project include:

This project analyzed the soils in Las Vegas Buckwheat plant habitat in three areas to assess which characteristics were most often associated with the presence of the plants. Soil pit samples were analyzed for chemical, mineralogical and textural properties, soil surface characteristics were assessed and LIDAR remote sensing data were processed. All data were then assessed in a multivariate analysis. It was found that the plant is more often found in soils with more calcium carbonate and plant-available iron, nickel, calcium and magnesium. The plants are also associated with soil surfaces with high arsenic in the interspaces between plant canopies. The plant was not found in areas of desert pavement or coarse alluvium geologic units, but is associated with areas that are very calcareous and contain some soluble salts, such as the Las Vegas Formation. Overall, each of the three studied sites varied, indicating that the habitat requirements of the plant may vary by site, and do involve more than one predictive factor.

This information can be used to develop fine-scale, predictive habitat models for the plant to assist in restoration planning or avoidance of the plant's unoccupied habitat.

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For more information about this project and/or for other Project Reports or Symposium Reports, please visit our website at:

<http://www.clarkcountynv.gov/Depts/dcp/Pages/default.aspx>

If you have any questions, please contact Susan Wainscott at (702) 455-3859.

Sincerely,

Marci D. Henson
Program Manager

cc:

- US Fish and Wildlife Service
- Board of County Commissioners (7)
- Permittees' Executive Committee
- Permittees' Process Management Group
- John Hill, Purchasing
- Catherine Jorgenson, District Attorney – Civil Division
- Desert Conservation Program Community Advisory Committee
- Desert Conservation Program Interested Parties List
- Multiple Species Habitat Conservation Plan Implementing Agencies
- Science Advisor
- SNPLMA Office (for SNPLMA projects)
- Congressional Office
- All Environmental Management Staff Distribution

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