

APPENDIX D
The Southern Arizona Project
FY2006 End-Of-Year Report

CORONADO NATIONAL MEMORIAL

Project Name: Border Impacts Project

Unit Name: National Park Service (NPS), Coronado National Memorial (CNM)

Date of Project: 9/19/05-12/09/05

Location: Township: 24S. Range: 20E;
Sections: 11-14, 23, 24. Range: R21E;
Sections: 7, 8, 17-20.

Participants: Ashley Green- Student Conservation Association (SCA) Intern
Jeff Williams- Student Conservation Association (SCA) Intern
YCOSA crew members

Project Coordinator(s): Sherry Mann, Biologist

Description of Project: Coronado National Memorial (on the U.S./Mexico border) has historically experienced problems with illegal foot trails being created by Undocumented Alien (UDA) traffic. CNM was the first of 12 border parks in the National Park Service (NPS) to initiate a border impacts survey using a protocol developed through another project done by the Southern Arizona Office (SOAR) of the NPS. In this project, two surveys were conducted; one designed for use in conjunction with the 12 border parks, and the other, a disturbed land survey designed specifically for CNM. The project participants worked closely with SOAR, helping to design and implement the project surveys for use at CNM. The participants used Global Positioning System (GPS) units to track illegal foot trails and document impacts. These impacts include trash sites, damage to natural and cultural resources, as well as park infrastructure. As a subcomponent to the field work, the participants utilized ESRI ArcGIS 9.0 to create a geodatabase to archive the data collected. Participants also created a metadata template that describes the trail shapefiles that were collected.

As part of the Border Impacts Project, the Participants led a group of Youth Corps of Southern Arizona (YCOSA) crew members who assisted with trash cleanup in the park. The participants provided educational activities for the volunteers on the use of GIS and GPS.

Results: The participants surveyed 36,430 meters of trails (22.6 miles) in approximately a six week time period. Approximately 450 working hours were completed by each intern over a 12-week time period. The trail archives are stored in a personal geodatabase and will continue to expand as more data is collected. Although, there are survey results for each trail, the final results will not be compiled until enough data has been collected to make a significant analysis. With the remaining funding for this project, CNM will continue these border impacts surveys with a future SCA interns.

With the assistance of the YCOSA crew members 70 bags (1/2 cubic yard sized bags) were collected over a period of four days, covering approximately 25% of the park's area (approx. 1200 acres). Much of the area covered was in

rugged terrain and required extensive hiking and strenuous labor, especially when carrying full trash bags to vehicle pick-up points. Fourteen participants completed a total of 420 working hours, October 31-November 4, 2005.

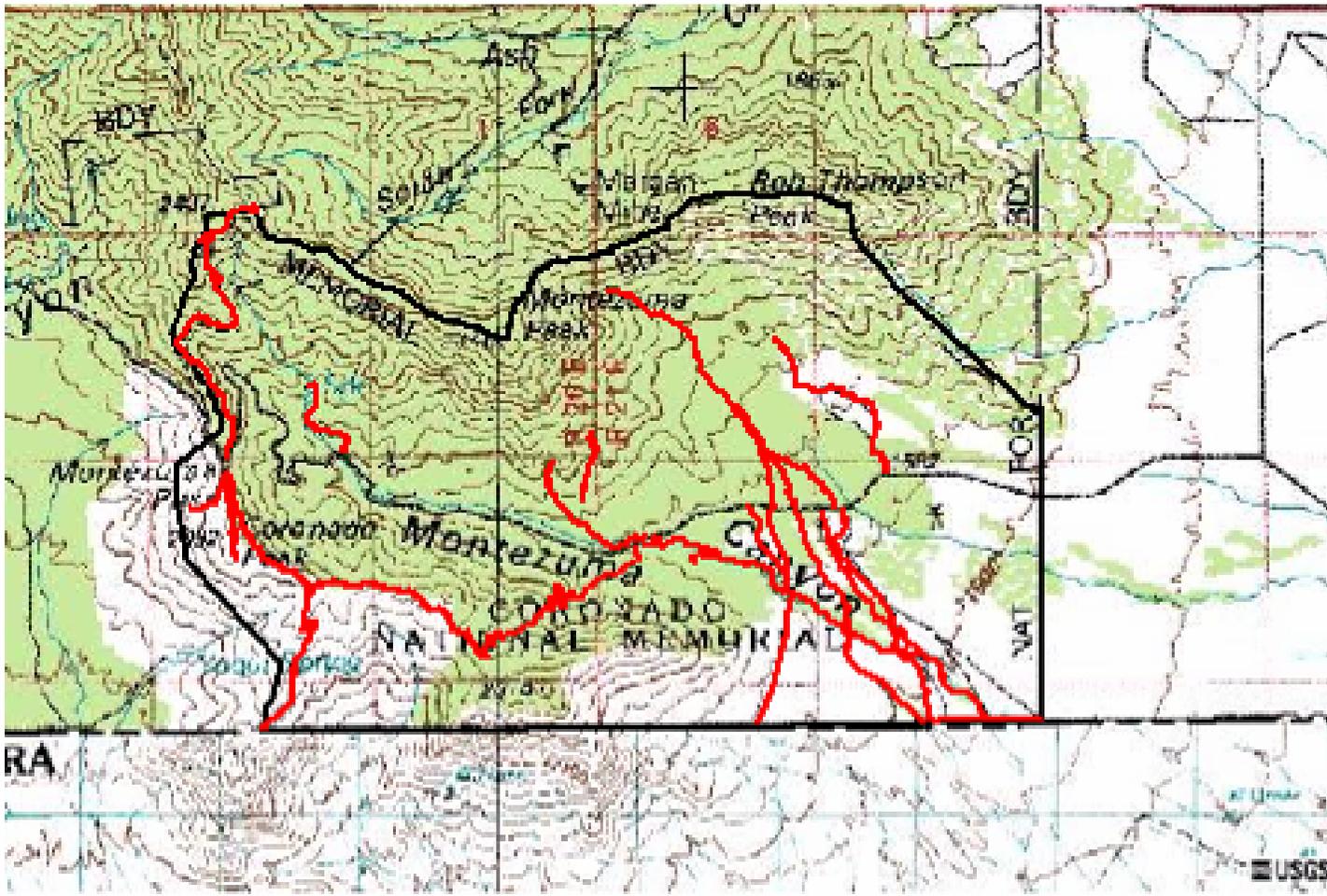


Figure 1. Trail shapefiles (in red) and topographic map of Coronado National Memorial, AZ displayed in ESRI ArcCatalog.

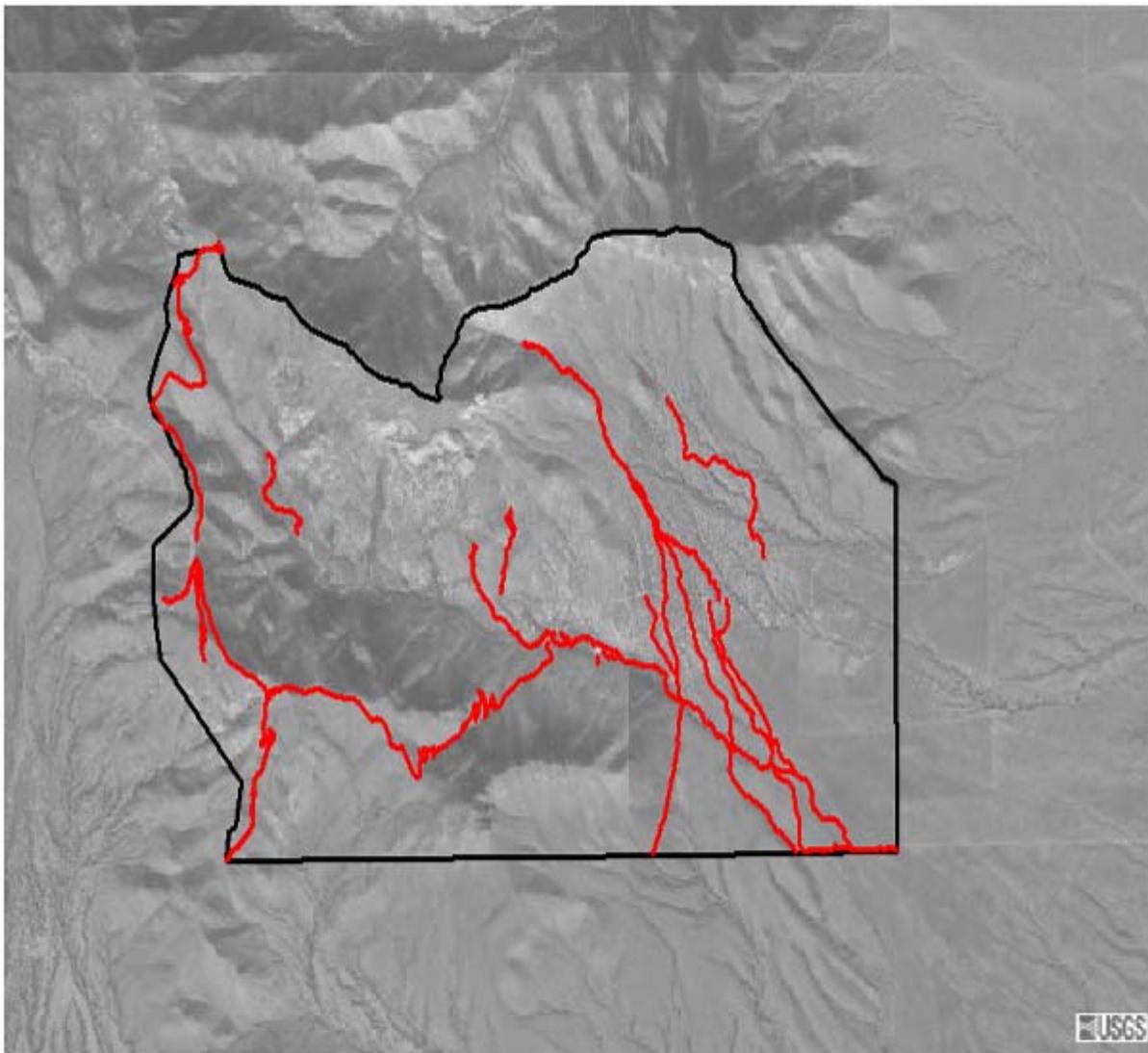


Figure 2. An aerial photo of Coronado National Memorial, AZ with trails surveyed for border impacts displayed (in red) in ESRI ArcMap.



Figure 3. A well defined illegal foot trail in the grasslands of Coronado National Memorial, AZ.



Figure 5. SCA intern, Jeff Williams collecting data for a disturbed land survey on Coronado Peak at Coronado National Memorial, AZ.



Figure 4. SCA interns, Ashley Green and Jeff Williams, conducting border impacts surveys with PDA/GPS units at Coronado National Memorial, AZ.



Figure 6. A trash site consisting of clothes, bags, and toiletries left by undocumented aliens in the grasslands of Coronado National Memorial, AZ.



Figure 7. Trash (35 bags) collected by YCOSA crew members during the first 2 days of work in areas used by undocumented aliens at Coronado National Memorial, AZ.

FY 2006 Border Project Tucson Field Office

Project Name: Border Trash Cleanup

Unit Name: National Park Service, Coronado National Memorial

Date of Project: 10/31/05-11/4/05

Location: *Township: TS24S. Range: R20E; Section: 11-14, 23, 24 . Range: R21E;
Section: 7, 8, 17-20.*

Participants: YCOSA (Youth Corps of Southern Arizona)-1 crew of 12 people
Ashley Green- Student Conservation Association Intern
Jeff Williams- Student Conservation Association Intern

Project Coordinator(s): Sherry Mann, Biologist

Description of Project: Coronado National Memorial (on the U.S./Mexico border) has historically experienced problems with trash being left behind from UDA (Undocumented Alien) traffic. While volunteers do pick up trash regularly, because of the difficult terrain and issues of security, certain areas of the park have not been canvassed in recent years. Our focus was to target these areas, as well as other frequently traversed areas to clean up the park.

Results: Seventy bags (1/2 cubic yard sized bags) were collected over a period of four days, covering approximately 25% of the park's area (approx. 1200 acres). Fourteen participants completed a total of 420 working hours. Due to the large volume of trash collected in such a small area, we recommend that trash pick-up continue to be a priority for the park in the future.



Figure 1: Typical trash site in an area of regular UDA traffic.



Figure 2: YCOSA crew members collect trash on Smuggler's Ridge, a rugged area of the park that receives high UDA traffic.



Figure 3: --See Report Figure 7 above



Figure 4: Trash collected from the 3rd day of work (22 bags or 11 cubic yards).



Figure 5: YCOSA crew members on ridge line between Bob Thompson and Montezuma Peaks.