

# A Profile of the 2006 Visitor to the Imperial Sand Dunes Recreation Area



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## Preface

There are two parts to this report. Part 1 is a profile of the visitors and visitation pattern to the Imperial Sand Dunes Recreation Area in 2006. It was prepared by Dr. Glenn Haas.

Part 2 is a profile of the economic expenditures by a sample of visitors to the Imperial Sand Dunes Recreation Area in 2006. It was prepared by Dr. Kimberly Collins. Part 2 begins on page 67.

# Part 1

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## **Background**

In September of 2004, an assistance agreement between the United Desert Gateway (UDG) group and the U.S. Bureau of Land Management (BLM) was signed. The purpose of the agreement is in part to help develop and foster partnerships with the local communities, businesses, sand sport enthusiasts, and visitors to the Imperial Sand Dunes Recreation Area (ISDRA).

More specifically related to this study, the UDG and BLM are committed to promoting and stimulating support and interest for the ISDRA by (a) gathering information to assist the partnership in determining how best to meet the needs of visitors, and (b) providing support to the BLM in the management/implementation of the ISDRA Recreation Area Management Plan (RAMP).

## **Purpose of Study**

The objective for the 2006 visitor survey was to provide the UDG and BLM with the following information.

1. A descriptive profile of the visitor to ISDRA (e.g., activity participation, visitation pattern, group size, residence).
2. An assessment of visitor preference for types of changes that would improve the quality of their ISDRA visit (e.g. facilities, regulations, information).
3. A descriptive economic profile of the money spent by visitors to ISDRA.
4. Road counter calibration numbers for the BLM to adjust its road counter counts in order to compute visitation, and a comparison of road counter counts to helicopter video counts.

This report addresses objectives #1, #2, and #4. The #3 economic profile objective is Part 2 of this report which was prepared by Dr. Kimberly Collins, Director, California Center for Border and Regional Economic Studies, San Diego State University, Imperial Valley Campus.

# Methodology

The purpose of the section is to provide an overview of the methodology used in this study.

## Visitor Survey

A mail questionnaire was for type of visitor survey chosen based upon the criterion of cost and staffing, convenience for the visitor, to ensure people would respond for their entire trip after arriving home, and given the number of questions of interest.

The survey was an 8-page attractive booklet with a cover letter on page 1 and space for visitor comments on page 8. The cover letter indicated that the survey was an effort of the UDG in cooperation with the BLM.

Questions were compiled from the UDG and BLM, and then Haas examined previous surveys to ensure the ability to compare some questions across time. The strategy of replicating some questions was intended to help ensure using questions and formats that had been previously tested and found to be successful, and to help ensure the ability to later compare previous findings with the findings of this effort.

## Sampling Strategy

Typically, the most challenging part of outdoor recreation field studies is that of an adequate sampling strategy. The 2006 ISDRA Visitor Study was an exception and the sampling strategy was of unusually high quality.

The sample frame for this study was pulled from the overnight registration records that were collected and maintained by the Imperial County Sheriff's Office (ICSO). During the 2006 season the overnight registration system was contracted out to the ICSO. All the key access points to the ISDRA was staffed and registration compliance was unusually high (i.e., compare to unmanned iron rangers). Each vehicle had to register and provide their names and addresses.

The ISCO kept the registration forms in chronological order from November 1, 2005, through March 10, 2006. The forms were stored in 20 boxes. The sampling strategy was to select 40 registration forms from each box. Approximately every 20<sup>th</sup> registration form was selected, and if the address was complete and the printing was legible, it was retained; if the form was not complete or legible, the form was passed over in preference for the next legible registration form. This

strategy provided a sample frame of 800 names and addresses of visitors throughout the visitation season.

### **Data Collection Process**

Surveys were mailed in waves starting in March 2006 from the El Centro office of the UDG. Each survey was mailed in a large manila envelope that also contained a copy of the UDG *Welcome to the Dunes* newspaper.

Up to four contacts were made to encourage people to respond. If people did not respond within 10 days, and reminder postcard was sent to them. If people did not respond in another 10 days, another survey was mailed. If people did not respond to receiving the second survey, another post card was mailed. The data collection process was completed in early May, 2006.

Survey data was entered into an excel spreadsheet. The Statistical Package for the Social Sciences (SPSS) was used to generate descriptive statistics.

### **Response Rate**

The original sample frame contained 800 names and addresses. Seventy surveys were returned as undeliverable/bad addresses resulting in an effective sample frame of 730. The final number of surveys returned was 315, equating to a response rate of 43%.

This response rate was lower than anticipated by survey consultant. There are two factors that were likely the cause. First, the survey consultant received some 20 phone people upon their receiving the post card reminder. They indicated that they did not see or feel the smaller survey in the larger manila envelope that also contained the *Welcome to the Dunes* newspaper. A second factor is that one-half of the people surveyed had visited the ISDRA in the first half of the recreation season (i.e., November through January), while the surveys did not arrive until mid-March. This time delay is suspected to have hurt the final response rate.



## Overall Profile of the 2006 Visitors

The following profile represents a characterization of all the 315 survey respondents to the 2006 survey. Key highlights are provided for each table. Comparisons are also made where data is available from a 1993 study entitled the Imperial Sand Dunes Research Case Study (i.e., Deborah Chavez, Patricia Winter, and John Baas, *Imperial Sand Dunes Visitor Research Case Study*, US Forest Service Pacific Research Station, Riverside, California, August 1993).

<b>Table 1. Basic Visitation Characteristics of the ISDRA Visitors during 2005-06 visitation season (n=315)</b>		
<i>Variable</i>	<i>Mean (Range)</i>	
Times visited ISDRA in past 12 months	5.8 times (1-37)	
Total days spent at ISDRA in past 12 months	18 days (1-120)	
People transported in vehicle (including self) on typical trip this past year	4 people (1-23)	
First visit to ISDRA	14 yrs. ago (0-40)	
Percentage of ISDRA visitors who typically drive through xxx community	<i>Community</i>	<i>%</i>
	Brawley	40%
	El Centro	26%
	Yuma	23%
	Blythe/Palo Verde	9%
	Other (Calexico, local)	2%
Percent of visitors who stopped at these communities.	<i>Frequency</i>	<i>%</i>
	Never	4%
	Occasionally	20%
	Frequently	22%
	Always	54%

- ISDRA visitors are experienced repeat visitors (almost 6 visits per year on average) who spend considered time (18 days on average) and extending back a considerable numbers of years (14 years on average).
- Average size of people per vehicle was 4 people

<b>Table 2. Accommodations, Overnight Destinations, Activities Participated in, and Primary Activities (n=315)</b>		
<i>Response</i>	<i>Percentage</i>	
<b>Typical overnight accommodations</b>		
Toy-hauler at ISDRA	43%	
Motor home at ISDRA	32%	
Tent camping at ISDRA	13%	
Truck, truck with camper, or van at ISDRA	7%	
Other	3%	
None, I'm typically a day user	1%	
Motel/hotel/RV Park near Yuma	0%	
Motel/hotel/RV Park near Brawley	0%	
Motel/hotel/RV Park near El Centro	0%	
<b>Overnight area</b>		
Wash Road/Rail Road	28%	
Dune Buggy Flats/Gordon's Well	19%	
Buttercup/Grays Well	18%	
Gecko Road	13%	
Glamis Flats/vendor area	9%	
Roadrunner/Keyhole campground	5%	
Ogilby Area	4%	
Other	3%	
Mammoth Wash	1%	
Cement Flats	1%	
Osborne Overlook	0%	
<b>Activities Participated In and Primary Activity while at ISDRA</b>		
<i>Activity</i>	<i>Participated in at ISDRAs*</i>	<i>Primary Activity</i>
Drive Quads (4-wheelers)	84%	53%
Visiting with friends and family	74%	8%
Shopping at ISDRA vendors	68%	0%
Drive 4-wheel vehicles	44%	6%
Drive rails/dune buggies	40%	23%
Drive motorcycles	38%	9%
Watching special events and races	37%	0%
Shopping at local community vendors	30%	0%
Reading	23%	0%
Walking	20%	0%
Other	6%	1%
Hiking	4%	0%
Taking pictures	1%	0%

\* percentages for these variables will not sum to 100% as respondents could check multiple responses.

- Motorized recreation vehicles are the primary forms of accommodations (82%).
- Virtually no one stays in local hotels when they visit the ISDRA.
- Roughly 3 out of every 4 groups stay overnight in the Wash Road/Railroad, Dune Buggy, Buttercup and Gecko Road areas. The Wash Road/Railroad was indicated most frequently (28%)
- More than 50% of the respondents participated in driving quads, visiting friends and family, and shopping at ISDRA vendors.
- In 1993, while the question was worded differently, 12% of the visitors indicated participating in socializing in contrast to 74% in 2006 indicating participating in visiting with family and friends.
- 90% of the people indicated that their primary activities were driving quads, rails, dune buggies, motorcycles, and 4-wheel vehicles. In 1993, 90.3% of the respondents that OHV riding was one of the three most important reasons for visiting ISDRA.
- Almost one out of three people participated in shopping in the local communities.
- Visiting ISDRA is a social experience with many people visiting with friends and family, shopping at both local and community vendors, and watching special events.

**Table 3. Desired Information Visitors Want about ISDRA and Local Communities Before their Next Visit**

<i>Topic</i>	<i>Percentage</i>	<i>Topic</i>	<i>Percentage</i>
<b>Information about ISDRA</b>		<b>Information about local communities</b>	
ISDRA area maps	57%	OHV vehicle services	40%
Weather Information	48%	RV gas and repairs	32%
Tread Lightly Information	41%	Other recreation sites within 50 miles	29%
ISDRA management rules	40%	Locations for potable drinking water	26%
ISDRA dump locations	40%	OHV towing out of dunes	26%
First Aid information	29%	Restaurants and bars	25%
OHV safety information	23%	Coupons for special savings	25%
Watchable wildlife information	18%	Local information and fun things to do	20%
Information about history and cultural resources	15%	Special community events	14%
Desert Ecology information	13%	Shopping centers	13%
Other	5%	Hotels, motels, and RV parks	11%
		Other	9%
		Casinos and gaming locations	6%
		Movies, pools, play centers	5%

- The most desired information included ISDRA maps, weather information, Tread Lightly information, management rules, and dump locations.
- About 1 out of 6 people wanted interpretive information related to watchable wildlife, history and culture, and desert ecology.
- In terms of information about local communities, most people wanted information on OHV and RV services.
- Roughly 1 in 4 people wanted information about restaurants, locations of potable water, towing services, and local information about fun things to do.
- Roughly 1 in 10 people wanted information about hotels, casinos, movies, and shopping centers.

In 1993, the types of information desired were safety (50%), management rules (46%), natural and cultural features (~32%), and things to see and do (30%).

**Table 4. Preferable Information Sources**

<i>Information Source</i>	<i>% supportive</i>
Read and ISDRA internet website	67%
Read the <i>Welcome to the Dunes</i> newspaper	48%
Read literature and brochures	37%
Read signs and kiosks	33%
Talk with rangers at the campsite	22%
Visit the Ranger Station	16%
Talk with on-site camp hosts	12%
I do not need any information	9%
Other	4%
Contact local BLM office	3%
Visit the local chamber of commerce	1%
Contact local tourism welcome center	1%

- The web was the preferred information choice by almost 7 out of every 10 people. In 1993, the web was not even listed in the survey.
- The *Welcome to the Dunes* newspaper, with the 2005 2006 season being its debut, was preferred by half of the people.
- Roughly 1 in 3 people preferred reading literature, signs, and kiosks. In 1993, more than 50% of the people indicated this source
- Rangers at the campsite were a preferred source by 22% of the people. In 1993, 40% indicated rangers who stop to visit were a preferred way.
- The BLM office, local tourism welcome centers, nor the chambers of commerce were preferred by virtually no one.

**Table 5. Hours in the Dunes, Quality of ISDRA Experience and Support for Differential Fees.**

Average hours/day spent away from your camp in the dunes driving, sightseeing, watching others, hiking, taking pictures, or picnicking.	<i>Mean (Range)</i>	
	5.4 hours/day (0-20)	
Overall quality of your recreation experience (on most recent visit to ISDRA).	<i>Rating</i>	<i>Percent</i>
	1 = Very Poor	1%
	2	1%
	3	1%
	4	7%
	5	28%
	6	31%
	7 = Excellent	32%
Likelihood of paying a per vehicle charge of \$30/non-holiday weekend; \$60/holiday weekend, or \$280/season permit	<i>Likelihood Scale</i>	<i>Percent</i>
	Not at all	19%
	moderately	22%
	somewhat	22%
	very	18%
	extremely	19%

- ISDRA visitors average a little more than 5 hours per day away from camp and out in the dunes.
- 90% of the ISDRA visitors rated their recreation experience a 5, 6, or 7 on a 7-point scale with 7 meaning excellent. 10% rated their experience as 4 or less; that is, moderately favorable to very poor. 32% rated their experience as excellent.
- Visitors were divided on the question of charging lower fees on non-holiday weekends. 19% indicated they were extremely likely to change their visitation given this fee change. 37% indicated very or extremely likely.

**Table 6. Socio-demographic summary of respondents**

<i>Variable</i>	<i>Mean (Range)</i>	
Miles from ISDRA	205 miles (3-2800)	
Age	40 years (20-76)	
Gender	<i>Gender</i>	<i>Percentage</i>
	Female	28%
	Male	72%
Education	<i>Level</i>	<i>Percentage</i>
	< high school grad	1%
	HS grad or GED	21%
	Post-HS business or trade school	13%
	Some college	35%
	College grad	22%
	Some graduate school	4%
	Advanced graduate degree	4%
Ethnicity	<i>Race</i>	<i>Percentage</i>
	White	83%
	Hispanic, Latino, Spanish	13%
	American Indian or Alaskan Native	2%
	Asian	1%
	Other	1%
	Black or African American	0%
	Native Hawaiian or Pacific Islander	0%
Income	<i>Category</i>	<i>Percentage</i>
	Less than \$20K	1%
	\$20,000 - \$39,999	7%
	\$40,000 - \$59,999	16%
	\$60,000 - \$79,999	21%
	\$80,000 - \$99,000	23%
	\$100,000 - \$119,000	14%
	\$120,000 or more	17%

- The average visitor traveled 200 miles to reach the ISDRA.
- The average age of the ISDRA was 40 years. In 1993, the average age was approximately 31 years.
- 72% of the respondents were males, compared to 66% in 1993.
- 22% of the people had a high school degree, GED, or fewer years of schooling, compared to 64% in 1993.
- 35% of the people had some college education compared to 18% in 1993..
- 4% of the visitors in 2006 and 1993 had post-college education..
- 83% of the visitors were white Americans, compared to 68% in 1993.
- 13% of the people were Hispanic, Latino, or Spanish, compared to 11% in 1993.

**Table 7. Visitor Preferences for Selected Management Actions**

<i>Possible ways to improve your next visit to ISDRA</i>	<i>Not at all desirable</i>	<i>Slightly desirable</i>	<i>Moderately desirable</i>	<i>Very desirable</i>	<i>Extremely desirable</i>
Add more trash containers	8%	18%	27%	27%	21%
Require visitors to take home their trash	42%	18%	9%	9%	22%
Offer more nature interpretive programs	46%	28%	22%	4%	0%
Enforce rules and regulations	8%	18%	34%	24%	16%
Have more rangers and patrol	21%	21%	31%	15%	12%
Provide more emergency medical services	6%	14%	36%	26%	18%
Provide more information about local businesses/services/parks/events/shopping	32%	32%	27%	6%	3%
Have more private long-term RV and vehicle storage areas nearby ISDRA	45%	24%	16%	7%	7%
Have some camp areas at ISDRA available through an advanced reservation system	40%	15%	18%	11%	16%
Maintain a high quality website with information about ISDRA and the communities	6%	8%	29%	26%	31%
Have nearby showers provided by the private sector	35%	19%	15%	14%	16%
Increase number of portable toilets	29%	20%	20%	15%	20%
Improve the road grading	13%	21%	25%	18%	23%
Increase number of fully developed RV parks within a few miles of ISDRA	38%	23%	15%	11%	13%
Charge a lower fee for visitors on weekdays and non-holidays	17%	12%	15%	15%	41%

- More trash containers was moderately, very, or extremely desirable by 69% of the visitors, while conversely, requiring visitors to take home their trash was not at all or slightly desirable by 60% of the visitors.
- More interpretive programs were not at all or slightly desirable to 74% of the visitors, and 0% indicated extremely desirable.



- Enforcing rules and regulations was very or extremely desirable to 40% of the visitors, yet having more rangers was not at all or slightly desirable by 42% of the visitors. 27% of the visitors thought more rangers and patrol was very or extremely desirable.
- More emergency medical services was not at all or slightly desirable, yet 18% indicated they were extremely important.
- More information about local business and services, parks, and private RV storage areas was not at all or slightly important to about 2 out of 3 visitors.
- Having some camp areas at ISDRA available through a reservation system was very or extremely desirable to 26% of visitors, yet not at all desirable to 40%.
- Website was very or extremely desirable to a big majority of visitors (67%) and not at all desirable to 6%.
- 54% indicated that nearby showers were not at all or slightly desirable, but very or extremely desirable to 30%.
- There is mixed support for showers, portable toilets, road grading and for nearby RV parks.
- 56% of the visitors indicated that lower fees on non-holiday periods were very or extremely desirable compared to 17% indicating not at all desirable.

## Special Selected Community Analysis

UDG was interested in obtaining a profile of their visitors. Based upon the respondent's answer Question #5 (i.e., which community do you typically drive through to visit the ISDRA?), the sample was divided into four sub-samples in order for the communities to see more clearly who their visitors are. Tables 2-5 provide a descriptive profile for Brawley, El Centro, Blythe/Palo Verde, and Yuma, respectively.

<b>Table 8. Number of Visits, Length of Visits, Average Group Size and Years of Visitor Experience at ISDRA by Visitors of different Counties</b>					
	County				
	Orange (n=19)	Los Angeles (n=20)	San Diego (n=91)	Riverside (n=45)	San Bernardino (n=19)
<b><i>Number of visits to ISDRA in the past 12 months:</i></b>					
Average	4.8	5	6.6	5.2	5.3
Median	5	5	6	5	5
Range	2-10	1-10	1-20	2-15	1-12
<b><i>Total days spent at ISDRA in the past 12 months:</i></b>					
Average	16	20.1	18.9	18.1	15.4
Median	14	18	18	13	13
Range	4-30	2-42	2-65	3-80	3-38
<b><i>Number of people in vehicle on a typical trip:</i></b>					
Average	3.4	3.6	3.3	3.8	4
Median	4	4	3	4	4
Range	1-5	1-6	1-12	2-10	2-9
<b><i>Number of years ago for the first visit to ISDRA:</i></b>					
Average	11.3	15.4	15.9	14.5	11.2
Median	10	15	15	13	11
Range	1-39	1-33	0-40	1-36	1-22

- Visitors to the ISDRA are annual repeat visitors. The average number of visits per year is approximately 5 visits, with visitors from San Diego County visited slightly more often on average. Statistically there is little variation by county.
- Visitors spend between 2-3 weeks on average at the ISDRA. Fifty% of the visitors spend more that two weeks, and 50% less than two weeks. Statistically there is little variation by county.
- The average number of people in a vehicle on a typical trip ranges from 3.3 to 4 people, with 50% of the vehicles having more that 4 people and 50% less. Statistically there is little variation by county.

- Visitors to the ISDRA are long-time visitors to ISDRA with the first visit averaging from 11 to 16 years ago. Statistically there is little variation by county.

<b>Table 9. Drive throughs and stops in local communities</b>					
	County				
	Orange (n=19)	Los Angeles (n=20)	San Diego (n=91)	Riverside (n=45)	San Bernardino (n=19)
<i>Which community do you typically drive through to visit the ISDRA?</i>					
Brawley	84%	95%	26%	91%	90%
El Centro	16%	0%	74%	4%	0%
Blythe/Palo Verde	0%	5%	0%	2%	0%
Calexico	0%	0%	0%	0%	0%
Yuma	0%	0%	0%	0%	0%
Other	0%	0%	0%	2%	11%
<i>How often do you stop in any of the local communities?</i>					
Never	0%	11%	3%	2%	11%
Occasionally	16%	32%	17%	27%	32%
Frequently	32%	5%	20%	30%	16%
Always	53%	53%	60%	41%	42%

- Based upon the California zip codes provided by UDG (no zip codes from Arizona were included) Brawley is the primary access to the ISDRA.
- Three out of four groups from San Diego County access the ISDRA through El Centro.
- Brawley serves as an access point from a broader geographic area of California than El Centro.
- The majority of visitors indicated that they “frequently” or “always” stop in the local communities. More than half of the visitors from Orange county, Los Angeles county and San Diego county “always” stop in a local community.

<b>Table 10. Information Desired by Visitors of Different Communities</b>				
Type of Information:	Community <sup>1</sup> :			
	Brawley (n=90)	El Centro (n=67)	Blythe/Palo Verde (n=18)	Yuma (n=59)
Special community events	13%	15%	17%	15%
Shopping centers	17%	6%	11%	12%
Restaurants and bars	26%	24%	39%	22%
Other recreation sites within 50 miles	36%	31%	17%	20%
Locations to get potable drinking water	37%	19%	33%	27%
OHV towing out of the dunes	23%	27%	39%	19%
Casinos and gaming locations	6%	5%	11%	5%
Movies, pools, and play centers	3%	8%	6%	3%
OHV vehicle services and parts	44%	40%	44%	27%
Local information on fun things to do	20%	18%	33%	19%
Coupons for special savings	22%	30%	44%	32%
Hotels, motels, and RV parks	8%	12%	22%	12%
RV gas and repairs	38%	30%	39%	24%
Other information	3%	2%	0%	3%

- There is no statistical variation across the four communities; that is, the pattern of answers are similar.
- RV and OHV services are of the greatest interest in general, followed by potable water.
- One potentially significant difference is that visitors through Brawley and El Cento were more interested in knowing about other recreation sites within 50 miles.
- Movies, pools, play centers, casinos and gaming locations were of little interest.

## Selected Analysis for the BLM

<b>Table 11. Number of Visits, Length of Visits, and Average Group Size by Visitors of Individual Management Units</b>					
	Management Unit				
	Glamis (n=32)	Wash Road (n=85)	Buttercup (n=53)	Dune Buggy (n=62)	Gecko (n=57)
<i>Number of visits to ISDRA in the past 12 months:</i>					
Average	6.7	5.8	5.6	6.2	5.3
Median	6	5	5	6	5
Range	1-20	1-37	1-20	1-14	1-12
<i>Total days spent at ISDRA in the past 12 months:</i>					
Average	22.4	17.3	16.5	19	18.1
Median	18	15	14	20	16
Range	2-120	2-50	3-70	3-43	3-80
<i>Number of people in vehicle on a typical trip:</i>					
Average	3.7	3.4	3.5	3.5	3.8
Median	3	3	3	3	3
Range	1-12	1-10	2-7	1-11	1-23

- The average number of visits to ISDRA in the past 12 months did not vary across the management units. Statistically there is little variation by county
- The average number of total days spent at ISDRA in the past 12 months was similar across management units, although Glamis visitors tended to spend more days particularly compared to those visiting Buttercup. Statistically there is little variation by management unit.
- The average number of people per vehicle across the management units did not vary. Statistically there is little variation by management unit.

**Table 12. Information Desired by Visitors of Individual Management Unit**

Type of Information:	Management Unit				
	Glamis (n=32)	Wash Road (n=85)	Buttercup (n=53)	Dune Buggy (n=62)	Gecko (n=57)
OHV safety information	28%	22%	21%	19%	25%
First aid information	28%	32%	21%	26%	33%
Weather information	47%	52%	49%	53%	42%
Tread Lightly/Leave no Trace information	13%	15%	11%	15%	19%
ISDRA area maps	69%	61%	57%	55%	58%
Desert ecology information	19%	9%	9%	11%	21%
Watchable wildlife information	16%	14%	11%	19%	32%
History and cultural resources information	13%	14%	13%	11%	19%
ISDRA management rules and regulations	41%	33%	47%	34%	39%
RV dump locations	31%	42%	38%	42%	44%
Other information	6%	4%	2%	5%	4%

- There were no obvious patterns of variation or significant differences across the management units.
- Gecko had the highest interest in watchable wildlife information, Tread Lightly information, desert ecology information, and history and cultural resource information.
- ISDRA maps, weather information, and rules and regulations were the most desired information sources.

**Table 13. Improvements Desired by Visitors to Individual Management Units**

Type of Improvement:		Management Units:				
		Glamis (n=32)	Wash Road (n=85)	Buttercup (n=53)	Dune Buggy (n=62)	Gecko (n=57)
Add more trash containers	Not at all desirable	0%	8%	4%	8%	13%
	Slightly desirable	16%	16%	14%	26%	20%
	Moderately desirable	19%	21%	33%	37%	29%
	Very desirable	34%	32%	31%	21%	14%
	Extremely desirable	31%	23%	19%	8%	25%
Require visitors to take home their trash	Not at all desirable	48%	40%	41%	36%	46%
	Slightly desirable	16%	21%	16%	20%	11%
	Moderately desirable	3%	11%	16%	3%	11%
	Very desirable	3%	11%	6%	18%	5%
	Extremely desirable	29%	18%	22%	23%	27%
Offer more nature interpretive programs	Not at all desirable	42%	44%	45%	48%	51%
	Slightly desirable	13%	31%	25%	29%	26%
	Moderately desirable	36%	24%	25%	17%	15%
	Very desirable	10%	0%	6%	7%	6%
	Extremely desirable	0%	1%	0%	0%	2%
Enforce rules and regulations	Not at all desirable	7%	7%	4%	8%	11%
	Slightly desirable	13%	22%	15%	21%	16%
	Moderately desirable	32%	29%	32%	41%	32%
	Very desirable	29%	24%	26%	21%	21%
	Extremely desirable	19%	17%	23%	8%	20%
Have more rangers and patrol	Not at all desirable	19%	22%	12%	23%	18%
	Slightly desirable	16%	22%	24%	28%	22%
	Moderately desirable	28%	27%	37%	34%	24%
	Very desirable	16%	17%	12%	13%	22%
	Extremely desirable	22%	12%	16%	2%	15%
Provide more emergency medical services	Not at all desirable	6%	6%	2%	5%	4%
	Slightly desirable	13%	17%	14%	9%	14%
	Moderately desirable	28%	30%	35%	56%	34%
	Very desirable	25%	30%	33%	22%	20%
	Extremely desirable	28%	17%	16%	9%	29%
Provide more information about local businesses/services/ parks/events/shopping	Not at all desirable	27%	34%	26%	33%	31%
	Slightly desirable	37%	33%	33%	30%	33%
	Moderately desirable	20%	24%	28%	32%	33%
	Very desirable	13%	2%	6%	5%	4%
	Extremely desirable	3%	6%	8%	0%	0%
Have more private long- term RV and vehicle storage areas nearby ISDRA	Not at all desirable	38%	45%	42%	47%	44%
	Slightly desirable	22%	26%	30%	30%	18%
	Moderately desirable	22%	15%	18%	12%	24%
	Very desirable	6%	6%	6%	8%	7%
	Extremely desirable	13%	9%	4%	3%	7%

Have some camp areas at ISDRA available through an advanced reservation system	Not at all desirable	31%	43%	35%	46%	36%
	Slightly desirable	19%	10%	14%	20%	16%
	Moderately desirable	22%	21%	24%	13%	16%
	Very desirable	6%	9%	16%	12%	14%
	Extremely desirable	22%	18%	12%	10%	18%
Maintain a high quality website with information about ISDRA and the communities	Not at all desirable	6%	5%	4%	5%	7%
	Slightly desirable	0%	12%	8%	5%	5%
	Moderately desirable	31%	23%	36%	34%	23%
	Very desirable	25%	30%	20%	31%	23%
	Extremely desirable	38%	30%	32%	25%	41%
Have nearby showers provided by the private sector	Not at all desirable	28%	40%	29%	32%	37%
	Slightly desirable	22%	16%	18%	25%	22%
	Moderately desirable	22%	10%	14%	18%	19%
	Very desirable	6%	15%	20%	10%	7%
	Extremely desirable	22%	19%	20%	15%	15%
Increase number of portable toilets	Not at all desirable	16%	28%	17%	25%	23%
	Slightly desirable	25%	12%	23%	30%	23%
	Moderately desirable	13%	18%	23%	21%	25%
	Very desirable	13%	12%	19%	13%	14%
	Extremely desirable	34%	29%	17%	12%	14%
Improve the road grading	Not at all desirable	10%	10%	12%	7%	23%
	Slightly desirable	19%	17%	31%	20%	14%
	Moderately desirable	36%	21%	23%	33%	27%
	Very desirable	13%	17%	19%	20%	11%
	Extremely desirable	23%	36%	15%	21%	25%
Increase number of fully developed RV parks within a few miles of ISDRA	Not at all desirable	47%	40%	36%	30%	33%
	Slightly desirable	13%	21%	30%	28%	26%
	Moderately desirable	19%	15%	18%	17%	13%
	Very desirable	6%	8%	10%	13%	11%
	Extremely desirable	16%	17%	6%	12%	18%
Charge a lower fee for visitors on weekdays and non-holidays	Not at all desirable	19%	20%	9%	13%	16%
	Slightly desirable	6%	12%	9%	15%	15%
	Moderately desirable	13%	15%	23%	17%	15%
	Very desirable	6%	20%	19%	18%	9%
	Extremely desirable	56%	34%	40%	37%	46%

- Overall, there is not enough variation among the visitors to the different management units to conclude that they are different types of visitors with different types of management preferences. In general, the pattern of answers is similar across the units.
- The majority of visitors wanted more trash containers. 65% of the Glamis and 55% of the Wash Road visitors indicated trash cans would be very or extremely desirable.
- Roughly half of the visitors found that taking trash home was desirable. Approximately 1/3 of the visitors found that requiring that trash to be taken home was very or extremely desirable.
- Roughly three out of four people said that more interpretive programs was “not at all desirable or slightly desirable.”



- Roughly one out of four people said that enforcing the rules and regulations was not at all desirable or slightly desirable. The dune buggy unit had the lowest (8%) percent of visitors who thought the enforcement was extremely desirable.
- More than 50% of the visitors thought having more rangers and patrol was moderately, very or extremely desirable. The dune buggy unit had the lowest (2%) percent of visitors who thought more rangers and patrol was extremely desirable.
- Roughly four out of five visitors thought more medical services were moderately, very or extremely desirable. The dune buggy unit had the lowest (9%) percent of visitors who thought more medical services were extremely desirable.
- Six out of 10 visitors thought that provide more information about local businesses/ services/parks/events/shopping was not at all or slightly desirable. Glamis and Buttercup visitors indicated the most interest.
- More than half of the visitors thought that have more private long-term RV and vehicle storage areas nearby ISDRA was not at all or slightly desirable. Glamis visitors indicated the most interest.
- More than half the visitors thought having some camp areas at ISDRA available through an advanced reservation system was not at all or slightly desirable. Conversely, one out of every four visitors found the idea very or extremely desirable. 32% of Gecko visitors found the idea to be very or extremely desirable.
- Six out of 10 visitors thought that maintaining a high quality website with information about ISDRA and the communities was very or extremely desirable. Roughly 5% indicated it was not at all desirable.
- Roughly half of the visitors thought that having nearby showers provided by the private sector was not at all or slightly desirable. About one in 5 people thought is was extremely desirable.
- Roughly four out of 10 visitors thought that increasing the number of portable toilets was not at all or slightly desirable. Glamis and Wash Road visitors had a considerably higher percentage of visitors who indicated extremely desirable.
- Visitors tended to find the idea of paving roads to be desirable, Buttercup visitors had the least interest.
- Interest in increasing the number of fully developed RV parks within a few miles of ISDRA was low. Roughly 15% indicated it was extremely desirable, with Buttercup visitors having the least interests.
- A little more than half the visitors thought that charging a lower fee for visitors on weekdays and non-holidays was very or extremely desirable. 56% of the Glamis visitors thought is was extremely desirable.

<b>Table 14. Visitor Time Spent in the Dunes by Individual Management Unit</b>					
Hours per day spent away from camp in the dunes:	Management Unit				
	Glamis (n=32)	Wash Road (n=85)	Buttercup (n=53)	Dune Buggy (n=62)	Gecko (n=57)
Average	5.7	5.5	5.0	5.4	5.4
Median	5	6	5	6	5
Range	3-12	0-10	0-12	0-12	1-10

- ISDRA visitors spent an average of approximately 5 1/2 hours per day away from camp and in the dunes. Visitors across the units did not vary.

<b>Table 15. Visitor Preferred Information Source by Individual Management Unit</b>					
Information Source:	Management Unit				
	Glamis (n=32)	Wash Road (n=85)	Buttercup (n=53)	Dune Buggy (n=62)	Gecko (n=57)
I do not need any information	9%	11%	9%	3%	7%
Read an ISDRA internet website	69%	68%	64%	68%	77%
Visit the local chamber of commerce	0%	0%	2%	0%	2%
Talk with the on-site camp hosts	3%	9%	23%	10%	12%
Talk with rangers at your campsite	16%	20%	17%	21%	33%
Visit the Ranger Station	13%	13%	9%	11%	35%
Contact local BLM office	6%	1%	2%	3%	4%
Contact local tourism welcome center	3%	1%	2%	0%	2%
Read signs and kiosks	28%	34%	32%	32%	35%
Read literature and brochures	44%	38%	47%	31%	33%

Read the Welcome to the Dunes newspaper	47%	39%	57%	50%	51%
Other	3%	2%	6%	7%	5%

- The preferred information sources included the website, kiosks and signs, the *Welcome to the Dunes* newspaper and literature.
- There was some variation across the management units in that Buttercup visitors had a greater interest in the on-site camp hosts, while Gecko visitors had a greater interest in talking with the rangers at their campsite and ranger station.

<b>Table 16. Quality of Recreation Experience by Individual Management Unit</b>					
Rating of visitors' overall quality of recreation experience on their most recent visit to ISDRA:	Management Unit				
	Glamis (n=32)	Wash Road (n=85)	Buttercup (n=53)	Dune Buggy (n=62)	Gecko (n=57)
1 – Very poor	0%	0%	0%	2%	0%
2	0%	1%	0%	0%	0%
3	3%	0%	0%	2%	2%
4	9%	7%	6%	15%	7%
5	22%	29%	35%	29%	18%
6	25%	29%	40%	34%	26%
7 – Excellent	41%	33%	19%	19%	47%

- Roughly 85% of all visitors scored a 5, 6, or 7 on the quality of their recreation visit. Gecko and Glamis visitors scored very high. Dune Buggy visitors had a higher percent (19%) of visitors scoring 4 or less than the other units.

**Table 17. Likelihood of Non-holiday Weekend Visits with Implementation of New Fee Structure by Individual Management Unit**

Likelihood that visitors would shift their visitation to non-holiday weekends given implementation of new fee structure: \$30 per week for non-holiday weekends, \$60 per week for holiday weekends and \$180 for a season permit.	Management Unit				
	Glamis (n=32)	Wash Road (n=85)	Buttercup (n=53)	Dune Buggy (n=62)	Gecko (n=57)
Not at all likely	17%	19%	6%	17%	21%
Moderately likely	27%	18%	28%	19%	19%
Somewhat likely	23%	21%	18%	27%	19%
Very likely	27%	20%	30%	15%	12%
Extremely likely	7%	21%	18%	22%	28%

- There was variation across the management units on this question. 28% of Gecko visitors indicated extremely likely compared to 7% of Glamis visitors. 48% of the Buttercup visitors indicated very or extremely likely. Overall, roughly 40% of the visitors indicated they were very or extremely likely to visit on non-holiday weekends for \$30.

## Summary

The 2006 visitor to the ISDRA was a white male, middle aged, very familiar with the dunes given their previous visits over a number of years, visited multiple times in the past year for about 18 days, stayed overnight in a motorized vehicle, lives in Southern California, has some college education or a degree, primarily visits the dunes to drive their vehicles, but the socialization with friends and family is a very important component. The ISDRA visitors seem to be loyal, experienced, dedicated, social, and committed to OHV recreation at the ISDRA.

From the UDG perspective, a large majority of visitors already stop in the local communities. They are also interested in more information about the communities. Given their repeat visitation pattern, more information could affect what people do across their multiple visits in any year. Thus, there is likely a large economic development opportunity for the local communities and private businesses through providing more visitor information about their services and their locations.

Certainly a high quality web site and *Welcome to the Dunes* newspaper has support of the visitors.

Most of the survey questions about additional services (e.g., hotels, RV parks, storage, restaurants, shopping centers, casinos) were of interest to a relatively small percent of the visitors, but it is important that the community and private investors remember that a small percent of a large group of 1.2 million visitors constitutes a substantial demand and potential economic impact.

From a BLM perspective, visitors are highly satisfied with their ISDRA visit. In terms of changes from the 1993 study, today visitors are older, more educated, more interested in information, and more visitors are of Hispanic background.

It is apparent that many people want the ISDRA to simply remain as it is with no new improvements or services. But there are many people who

are interested in additional improvements and services (e.g., water, trash cans, reservations, rangers, interpretation). It is important to remember that a small percent of a large group of 1.2 million visitors may constitute a substantial change. For example, shifting 15% of visitation from a holiday to non-holiday period is a significant number, or getting the support of 15% of the visitors to take their trash home is significant.

The survey asked questions about some innovative management tools. There is mixed support for these ideas. For example, Glamis visitors are the least interested in differential fees while there is much higher support at Gecko and Dune Buggy. Portable showers appear to be of greater interest to Glamis and Wash Road area visitors, and less so to Gecko visitors. The point is that any new management program might best be targeted initially visitors to specific units.

Of most important to the UDG and BLM is the fact that the 2006 visitors rate their recreation experience very high.

Because of the quality of their visits, their long-term experience and loyalty to ISDRA, and their information, both UDG and BLM have an opportunity to use information/education as a key management tool to help sustain the natural resources of ISDRA, and thus, the benefits that ISDRA provides to its visitors and local communities.

## **Appendices**

Appendix A – Brawley

Appendix B – El Centro

Appendix C – Blythe/Palo Verde

Appendix D – Yuma

Appendix E – Zip Codes

Appendix F – Original Survey Instrument

## Appendix A. A Descriptive Profile of the 2005 – 2006 ISDRA Visitors Typically Driving Through Brawley (n=126)

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1. Please estimate how many times you have visited the ISDRA in the past 12 months?                      Average = 5.4 times                      Range = 1-20
  
2. Estimate how many total days you have spent at the ISDRA in the past 12 months?                      Average = 18.6                      Range = 2-120
  
3. On a typical trip to ISDRA in the past year, how many people did you normally transport in your vehicle including yourself?  
Average = 3.7                      Range = 1-12
  
4. How many years ago did you first visit the ISDRA?  
Average = 14 years ago    Range = 0-40
  
6. How often do you stop in any of the local communities listed in Question 4?  
(*Check one*)

Never	3%	Occasionally	25%
Always	50%	Frequently	21%
  
7. What overnight accommodations do you typically use when visiting the ISDRA?    (*Check one*)

9%	Tent camping at ISDRA
48%	Toy-hauler at ISDRA
6%	Truck, truck with camper, or van at ISDRA
35%	Motor home at ISDRA
0%	Motel/hotel/RV park near Yuma
0%	Motel/hotel/RV park near Brawley
0%	Motel/hotel/RV park near El Centro
2%	Other
1%	None, I am typically a day-use visitor
  
8. What area of ISDRA do you most often spend the night? (*Check one*)

1%	Mammoth Wash	2%	Buttercup/Grays Well
0%	North Algodones Dunes Wilderness	6%	Dune Buggy Flat



14%	Glamis Flats/vendor area	9%	Roadrunner/Keyhole CG
41%	Wash Road/Rail Road	3%	Cement Flats
2%	Ogilby Area	22%	Gecko Road
0%	Osborne Overlook	2%	Other

9. Check all the following activities that you participated in on your most recent visit to ISDRA? (Check all that apply)

37%	Drive motorcycles	25%	Walking
52%	Drive rails/dune buggies	9%	Hiking
45%	Drive 4-wheel vehicles	24%	Reading
84%	Drive quads (4 wheelers)	67%	Visiting friends/family
32%	Watching special events and races	61%	Taking pictures
32%	Shopping in the local communities	70%	Shopping at vendors
5%	Other		

10. Which one of the activities listed in Question #9 above did you consider your primary activity or most important reason for visiting the ISDRA?

6%	Drive motorcycles	0%	Walking
24%	Drive rails/dune buggies	0%	Hiking
6%	Drive 4-wheel vehicles	0%	Reading
55%	Drive quads (4 wheelers)	6%	Visiting friends/family
1%	Watching special events and races	0%	Taking pictures
0%	Shopping in the local communities	0%	Shopping at vendors
2%	Other		

11. What information about ISDRA would you like before your next visit to ISDRA? (Check all that apply)

25%	OHV safety information	19%	Desert ecology information
31%	First aid information	21%	Watchable wildlife information
51%	Weather information	17%	History/cultural resources info
17%	Tread Lightly	36%	ISDRA management rules
60%	ISDRA area maps	48%	RV dump locations
3%	Other		

12. What information about the local communities would you like before your next visit to ISDRA? (Check all that apply)

- |     |   |     |                                 |
|-----|---|-----|---------------------------------|
| 11% | Special community events                | 4%  | Movies, pools, and play centers |
| 14% | Shopping centers                        | 42% | OHV vehicle services/parts      |
| 23% | Restaurants and bars                    | 18% | Local information of fun things |
| 35% | Other recreation sites within 50 miles  | 21% | Coupons for special savings     |
| 33% | Locations to get potable drinking water | 7%  | Hotels, motels, and RV parks    |
| 25% | OHV towing out of the dunes             | 37% | RV gas and repairs              |
| 5%  | Casinos and gaming locations            | 3%  | Other                           |

13. We would like to know how to make your next visit to ISDRA more enjoyable. Please consider each of the following ideas and indicate how desirable each would be by checking the appropriate box.

<i><b>Possible ways to improve your next visit to ISDRA</b></i>	<i>Not at all desirable</i>	<i>Slightly desirable</i>	<i>Moderately desirable</i>	<i>Very desirable</i>	<i>Extremely desirable</i>
Add more trash containers	5%	18%	24%	29%	25%
Require visitors to take home their trash	42%	15%	11%	9%	22%
Offer more nature interpretive programs	43%	28%	23%	4%	2%
Enforce rules and regulations	8%	20%	27%	25%	21%
Have more rangers and patrol	20%	19%	27%	20%	14%
Provide more emergency medical services	5%	14%	32%	29%	21%
Provide more information about local businesses/services/parks/events/shopping	29%	32%	31%	5%	3%
Have more private long-term RV and vehicle storage areas nearby ISDRA	45%	25%	20%	4%	7%
Have some camp areas at ISDRA available through an advanced reservation	41%	12%	15%	11%	20%

system					
Maintain a high quality website with information about ISDRA and the communities	5%	7%	22%	27%	39%
Have nearby showers provided by the private sector	35%	19%	17%	9%	19%
Increase number of portable toilets	24%	20%	21%	12%	22%
Improve the road grading	14%	14%	31%	15%	25%
Increase number of fully developed RV parks within a few miles of ISDRA	37%	22%	20%	7%	15%
Charge a lower fee for visitors on weekdays and non-holidays	21%	12%	17%	12%	38%

15. Please estimate how many hours per day, on average, you spent away from your camp out in the dunes on your most recent visit doing such activities as driving, sightseeing, watching others, hiking, photography, or picnicking?

Average = 6.2 hours away from camp out in the dunes per day  
Range = 0 – 75 hours away from camp out in the dunes per day

16. Check how you prefer to stay informed about ISDRA? (*Check all that interest you*)

- 10% I do not need any information
- 69% Read an ISDRA internet website
- 0% Visit the local chamber of commerce
- 11% Talk with the on-site camp hosts
- 31% Talk with rangers at your campsite
- 22% Visit the Ranger Station
- 3% Contact local BLM office
- 2% Contact local tourism welcome center
- 35% Read signs and kiosks
- 37% Read literature and brochures
- 41% Read the *Welcome to the Dunes* newspaper
- 2% Other

17. Overall, how would you rate the quality of your recreation experience on your most recent visit to ISDRA? (*Circle one*)

<i>Very poor</i>						<i>Excellent</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
0%	1%	1%	7%	24%	30%	37%

18. In 2003, BLM contracted the development of a business plan. One of the questions answered in the business plan was "How much does BLM need to charge each vehicle in order to recover the cost of managing the area?" After extensive research, the contractor recommended the fee for each primary vehicle be \$30 per week for non-holiday weekends, \$60 per week for holiday weekends, and \$180 for a season permit. If BLM implemented this plan, how likely is it that you would begin to visit ISDRA on non-holiday weekends? (Check one)

not at all = 21%      moderately = 20%      somewhat = 20%      very = 20%  
 extremely = 20%

21. How many highway miles is ISDRA from your home?

Average = 203 miles      Range = 3-600 miles

22. What is your gender?

Male = 70%      Female = 30%

23. What is your age?

Average = 40 years      Range = 19-74 years

24. What was your total household income (before taxes) in 2004? (Check one)

2%	Less than \$20,000	22%	\$80,000 to 99,999
4%	\$20,000 to 39,999	17%	\$100,000 to 119,999
18%	\$40,000 to 59,999	18%	\$120,000 or more
19%	\$60,000 to 79,999		

25. What is the highest level of education you have completed? (Check one)

2%	Some high school or less	18%	College graduate
21%	High school graduate or GED	6%	Some graduate school
10%	Post high school business or trade school	5%	Advanced graduate degree
37%	Some college		

26. In what race or ethnic group would you place yourself? (*Check one*)

- 2% American Indian or Alaskan Native
- 2% Asian
- 1% Black or African American
- 16% Hispanic, Latino, or Spanish
- 0% Native Hawaiian or Pacific Islander
- 79% White
- 1% Other

## Appendix B. A Descriptive Profile of the 2005 – 2006 ISDRA Visitors Typically Driving Through El Centro (n=79)

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1. Please estimate how many times you have visited the ISDRA in the past 12 months?  
Average = 7.1 times      Range = 2 - 37 times
  
2. Estimate how many total days you have spent at the ISDRA in the past 12 months?  
Average = 19.8 days      Range = 2 - 65 days
  
3. On a typical trip to ISDRA in the past year, how many people did you normally transport in your vehicle including yourself?  
Average = 3.4 people      Range = 1 - 11 people
  
4. How many years ago did you first visit the ISDRA?  
Average = 16 years ago      Range = 1 - 39 years ago
  
6. How often do you stop in any of the local communities listed in Question 4?  
(*Check one*)

Never	4%	Occasionally	11%
Always	23%	Frequently	62%
  
7. What overnight accommodations do you typically use when visiting the ISDRA? (*Check one*)

13%	Tent camping at ISDRA
46%	Toy-hauler at ISDRA
9%	Truck, truck with camper, or van at ISDRA
28%	Motor home at ISDRA
0%	Motel/hotel/RV park near Yuma
0%	Motel/hotel/RV park near Brawley
0%	Motel/hotel/RV park near El Centro
4%	Other
1%	None, I am typically a day-use visitor
  
8. What area of ISDRA do you most often spend the night? (*Check one*)

0%	Mammoth Wash	23%	Buttercup/Grays Well
0%	North Algodones Dunes Wilderness	42%	Dune Buggy Flats/ Gordon's Well
9%	Glamis Flats/vendor area	1%	Roadrunner/Keyhole CG

14%	Wash Road/Rail Road	0%	Cement Flats
4%	Ogilby Area	5%	Gecko Road
0%	Osborne Overlook	3%	Other

9. Check all the following activities that you participated in on your most recent visit to ISDRA? (Check all that apply)

47%	Drive motorcycles	22%	Walking
51%	Drive rails/dune buggies	1%	Hiking
54%	Drive 4-wheel vehicles	30%	Reading
80%	Drive quads (4 wheelers)	77%	Visiting friends/family
35%	Watching special events and races	61%	Taking pictures
29%	Shopping in the local communities	56%	Shopping at the ISDRA vendors
5%	Other		

10. Which one of the activities listed in Question #9 above did you consider your primary activity or most important reason for visiting the ISDRA?

13%	Drive motorcycles	0%	Walking
19%	Drive rails/dune buggies	0%	Hiking
9%	Drive 4-wheel vehicles	0%	Reading
49%	Drive quads (4 wheelers)	9%	Visiting with friends and family
0%	Watching special events and races	0%	Taking pictures
0%	Shopping in the local communities	0%	Shopping at the ISDRA vendors
5%	Other		

11. What information about ISDRA would you like before your next visit to ISDRA? (Check all that apply)

22%	OHV safety information	10%	Desert ecology information
29%	First aid information	20%	Watchable wildlife information
53%	Weather information	10%	History/cultural resources info
13%	Tread Lightly information	46%	ISDRA management rules
58%	ISDRA area maps	35%	RV dump locations
3%	Other		

12. What information about the local communities would you like before your next visit to ISDRA? (Check all that apply)

- |     |   |     |                                 |
|-----|---|-----|---------------------------------|
| 14% | Special community events                | 6%  | Movies, pools, and play centers |
| 6%  | Shopping centers                        | 43% | OHV vehicle services/parts      |
| 24% | Restaurants and bars                    | 18% | Local information of fun things |
| 30% | Other recreation sites within 50 miles  | 29% | Coupons for special savings     |
| 19% | Locations to get potable drinking water | 11% | Hotels, motels, and RV parks    |
| 24% | OHV towing out of the dunes             | 29% | RV gas and repairs              |
| 4%  | Casinos and gaming locations            | 1%  | Other                           |

13. We would like to know how to make your next visit to ISDRA more enjoyable. Please consider each of the following ideas and indicate how desirable each would be by checking the appropriate box.

<i>Possible ways to improve your next visit to ISDRA</i>	<i>Not at all desirable</i>	<i>Slightly desirable</i>	<i>Moderately desirable</i>	<i>Very desirable</i>	<i>Extremely desirable</i>
Add more trash containers	13%	20%	22%	24%	22%
Require visitors to take home their trash	43%	18%	4%	10%	25%
Offer more nature interpretive programs	47%	26%	21%	5%	0%
Enforce rules and regulations	8%	18%	44%	17%	14%
Have more rangers and patrol	21%	27%	35%	10%	7%
Provide more emergency medical services	3%	19%	51%	17%	11%
Provide more information about local businesses/services/parks/events/shopping	29%	36%	29%	5%	0%
Have more private long-term RV and vehicle storage areas nearby ISDRA	43%	31%	11%	15%	1%
Have some camp areas at ISDRA	48%	22%	14%	4%	12%



available through an advanced reservation system					
Maintain a high quality website with information about ISDRA and the communities	5%	13%	34%	27%	21%
Have nearby showers provided by the private sector	32%	27%	16%	11%	15%
Increase number of portable toilets	23%	26%	16%	16%	20%
Improve the road grading	7%	26%	25%	16%	27%
Increase number of fully developed RV parks within a few miles of ISDRA	36%	29%	15%	12%	9%
Charge a lower fee for visitors on weekdays and non-holidays	13%	13%	19%	15%	40%

15. Please estimate how many hours per day, on average, you spent away from your camp out in the dunes on your most recent visit doing such activities as driving, sightseeing, watching others, hiking, photography, or picnicking?

Average = 5.3 hours away from camp out in the dunes per day  
Range = 0-12 hours away from camp out in the dunes per day

16. Check how you prefer to stay informed about ISDRA? (*Check all that interest you*)

- 8% I do not need any information
- 67% Read an ISDRA internet website
- 0% Visit the local chamber of commerce
- 8% Talk with the on-site camp hosts
- 11% Talk with rangers your campsite
- 14% Visit the Ranger Station
- 0% Contact local BLM office
- 1% Contact local tourism welcome center
- 27% Read signs and kiosks
- 29% Read literature and brochures
- 51% Read the *Welcome to the Dunes* newspaper
- 5% Other

17. Overall, how would you rate the quality of your recreation experience on your most recent visit to ISDRA? (*Circle one*)

<i>Very poor</i>							<i>Excellent</i>
1	2	3	4	5	6	7	
0%	0%	1%	8%	27%	36%	28%	

18. In 2003, BLM contracted the development of a business plan. One of the questions answered in the business plan was "How much does BLM need to charge each vehicle in order to recover the cost of managing the area?" After extensive research, the contractor recommended the fee for each primary vehicle be \$30 per week for non-holiday weekends, \$60 per week for holiday weekends, and \$180 for a season permit. If BLM implemented this plan, how likely is it that you would begin to visit ISDRA on non-holiday weekends? (*Check one*)

not at all = 15%      moderately = 21%      somewhat = 19%      very = 23%  
 extremely = 22%

21. How many highway miles is ISDRA from your home?

Average = 149 miles      Range = 30-275 miles

22. What is your gender?

Male = 69%      Female = 31%

23. What is your age?

Average = 40 years      Range = 20-65 years

24. What was your total household income (before taxes) in 2004? (*Check one*)

0%	Less than \$20,000	30%	\$80,000 to 99,999
8%	\$20,000 to 39,999	11%	\$100,000 to 119,999
8%	\$40,000 to 59,999	24%	\$120,000 or more
19%	\$60,000 to 79,999		

25. What is the highest level on education you have completed? (*Check one*)

0%	Some high school or less	32%	College graduate
13%	High school graduate or GED	3%	Some graduate school
18%	Post high school business or trade school	5%	Advanced graduate degree

29% Some college

26. In what race or ethnic group would you place yourself? (*Check one*)

0% American Indian or Alaskan Native

1% Asian

0% Black or African American

13% Hispanic, Latino, or Spanish

0% Native Hawaiian or Pacific Islander

83% White

3% Other

## Appendix C. A Descriptive Profile of the 2005 – 2006 ISDRA Visitors Typically Driving Through Blythe/Palo Verde (n=28)

1. Please estimate how many times you have visited the ISDRA in the past 12 months?                      Average = 5.8 times                      Range = 1-19
  
2. Estimate how many total days you have spent at the ISDRA in the past 12 months?                      Average = 18.2                      Range = 2-70
  
3. On a typical trip to ISDRA in the past year, how many people did you normally transport in your vehicle including yourself?  
Average = 4                      Range = 1-23
  
4. How many years ago did you first visit the ISDRA?  
Average = 11 years ago      Range = 1-32
  
6. How often do you stop in any of the local communities listed in Question 4?  
(Check one)

Never	4%	Occasionally	30%
Always	44%	Frequently	22%
  
7. What overnight accommodations do you typically use when visiting the ISDRA? (Check one)

32%	Tent camping at ISDRA
29%	Toy-hauler at ISDRA
4%	Truck, truck with camper, or van at ISDRA
29%	Motor home at ISDRA
0%	Motel/hotel/RV park near Yuma
4%	Motel/hotel/RV park near Brawley
0%	Motel/hotel/RV park near El Centro
4%	Other
0%	None, I am typically a day-use visitor
  
8. What area of ISDRA do you most often spend the night? (Check one)

0%	Mammoth Wash	11%	Buttercup/Grays Well
0%	North Algodones Dunes Wilderness	0%	Dune Buggy Flats/ Gordon's Well

14%	Glamis Flats/vendor area	4%	Roadrunner/Keyhole CG
50%	Wash Road/Rail Road	0%	Cement Flats
0%	Ogilby Area	21%	Gecko Road
0%	Osborne Overlook	0%	Other

9. Check all the following activities that you participated in on your most recent visit to ISDRA? (Check all that apply)

29%	Drive motorcycles	11%	Walking
39%	Drive rails/dune buggies	0%	Hiking
32%	Drive 4-wheel vehicles	21%	Reading
89%	Drive quads (4 wheelers)	89%	Visiting friends/family
50%	Watching special events and races	64%	Taking pictures
29%	Shopping in the local communities	68%	Shopping at the ISDRA vendors
7%	Other		

10. Which one of the activities listed in Question #9 above did you consider your primary activity or most important reason for visiting the ISDRA.

11%	Drive motorcycles	0%	Walking
15%	Drive rails/dune buggies	0%	Hiking
4%	Drive 4-wheel vehicles	0%	Reading
63%	Drive quads (4 wheelers)	7%	Visiting with friends and family
0%	Watching special events and races	0%	Taking pictures
0%	Shopping in the local communities	0%	Shopping at the ISDRA vendors
0%	Other		

11. What information about ISDRA would you like before your next visit to ISDRA? (Check all that apply)

25%	OHV safety information	7%	Desert ecology information
36%	First aid information	14%	Watchable wildlife information
39%	Weather information	25%	History/cultural resources info
18%	Tread Lightly information	43%	ISDRA management rules
79%	ISDRA area maps	36%	RV dump locations
4%	Other		

12. What information about the local communities would you like before your next visit to ISDRA ? (Check all that apply)

- |     |   |     |                                 |
|-----|---|-----|---------------------------------|
| 14% | Special community events                | 4%  | Movies, pools, and play centers |
| 11% | Shopping centers                        | 36% | OHV vehicle services/parts      |
| 36% | Restaurants and bars                    | 32% | Local information of fun things |
| 21% | Other recreation sites within 50 miles  | 32% | Coupons for special savings     |
| 29% | Locations to get potable drinking water | 18% | Hotels, motels, and RV parks    |
| 36% | OHV towing out of the dunes             | 29% | RV gas and repairs              |
| 11% | Casinos and gaming locations            | 0%  | Other                           |

13. We would like to know how to make your next visit to ISDRA more enjoyable. Please consider each of the following ideas and indicate how desirable each would be by checking the appropriate box.

<i>Possible ways to improve your next visit to ISDRA</i>	<i>Not at all desirable</i>	<i>Slightly desirable</i>	<i>Moderately desirable</i>	<i>Very desirable</i>	<i>Extremely desirable</i>
Add more trash containers	14%	11%	25%	32%	18%
Require visitors to take home their trash	39%	14%	4%	11%	32%
Offer more nature interpretive programs	46%	29%	25%	0%	0%
Enforce rules and regulations	7%	18%	21%	36%	18%
Have more rangers and patrol	19%	19%	22%	26%	15%
Provide more emergency medical services	7%	11%	30%	22%	30%
Provide more information about local businesses/services/parks/events/shopping	41%	30%	22%	0%	7%
Have more private long-term RV and vehicle storage areas nearby ISDRA	36%	29%	7%	11%	18%
Have some camp areas at ISDRA	25%	14%	29%	11%	21%

available through an advanced reservation system					
Maintain a high quality website with information about ISDRA and the communities	4%	0%	25%	32%	39%
Have nearby showers provided by the private sector	36%	25%	7%	18%	14%
Increase number of portable toilets	18%	18%	18%	18%	29%
Improve the road grading	18%	14%	11%	18%	39%
Increase number of fully developed RV parks within a few miles of ISDRA	36%	14%	14%	14%	21%
Charge a lower fee for visitors on weekdays and non-holidays	11%	11%	19%	22%	37%

15. Please estimate how many hours per day, on average, you spent away from your camp out in the dunes on your most recent visit doing such activities as driving, sightseeing, watching others, hiking, photography, or picnicking?

Average = 5.7 hours away from camp out in the dunes per day  
Range = 3-10 hours away from camp out in the dunes per day

16. Check how you prefer to stay informed about ISDRA? (*Check all that interest you*)

- 4% I do not need any information
- 82% Read an ISDRA internet website
- 4% Visit the local chamber of commerce
- 21% Talk with the on-site camp hosts
- 21% Talk with rangers your campsite
- 14% Visit the Ranger Station
- 4% Contact local BLM office
- 4% Contact local tourism welcome center
- 46% Read signs and kiosks
- 50% Read literature and brochures
- 61% Read the *Welcome to the Dunes* newspaper

4% Other

17. Overall, how would you rate the quality of your recreation experience on your most recent visit to ISDRA? (*Circle one*)

<i>Very poor</i>						<i>Excellent</i>
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
0%	0%	0%	11%	29%	18%	43%

18. In 2003, BLM contracted the development of a business plan. One of the questions answered in the business plan was "How much does BLM need to charge each vehicle in order to recover the cost of managing the area?" After extensive research, the contractor recommended the fee for each primary vehicle be \$30 per week for non-holiday weekends, \$60 per week for holiday weekends, and \$180 for a season permit. If BLM implemented this plan, how likely is it that you would begin to visit ISDRA on non-holiday weekends? (*Check one*)

not at all = 11%    moderately = 18%    somewhat = 32%    very = 14%  
extremely = 25%

21. How many highway miles is ISDRA from your home?

Average = 236 miles    Range = 85-900 miles

22. What is your gender?

Male = 68%    Female = 32%

23. What is your age?

Average = 40 years    Range = 22-68 years

24. What was your total household income (before taxes) in 2004? (*Check one*)

4%	Less than \$20,000	15%	\$80,000 to 99,999
0%	\$20,000 to 39,999	15%	\$100,000 to 119,999
26%	\$40,000 to 59,999	15%	\$120,000 or more
26%	\$60,000 to 79,999		


25. What is the highest level on education you have completed? (*Check one*)

4%	Some high school or less	21%	College graduate
21%	High school graduate or GED	11%	Some graduate school



- 4% Post high school business or trade school
- 39% Some college
- 0% Advanced graduate degree

26. In what race or ethnic group would you place yourself? (*Check one*)

- 7% American Indian or Alaskan Native
  - 0% Asian
  - 0% Black or African American
  - 11% Hispanic, Latino, or Spanish
  - 0% Native Hawaiian or Pacific Islander
  - 82% White
  - 0% Other
- 

## Appendix D. A Descriptive Profile of the 2005 – 2006 ISDRA Visitors Typically Driving Through Yuma (n=70)

---

1. Please estimate how many times you have visited the ISDRA in the past 12 months?                      Average = 5 times                      Range = 1-15 times
  
2. Estimate how many total days you have spent at the ISDRA in the past 12 months?                      Average = 15.3 days                      Range = 3-50 days
  
3. On a typical trip to ISDRA in the past year, how many people did you normally transport in your vehicle including yourself?  
Average = 3.5 people                      Range = 1-10 people
  
4. How many years ago did you first visit the ISDRA?  
Average = 11 years ago                      Range = 0-40 years ago
  
6. How often do you stop in any of the local communities listed in Question 4?  
(Check one)

Never	4%	Occasionally	11%
Always	61%	Frequently	23%
  
7. What overnight accommodations do you typically use when visiting the ISDRA? (Check one)

13%	Tent camping at ISDRA
36%	Toy-hauler at ISDRA
10%	Truck, truck with camper, or van at ISDRA
31%	Motor home at ISDRA
1%	Motel/hotel/RV park near Yuma
0%	Motel/hotel/RV park near Brawley
0%	Motel/hotel/RV park near El Centro
4%	Other
4%	None, I am typically a day-use visitor
  
8. What area of ISDRA do you most often spend the night? (Check one)

0%	Mammoth Wash	42%	Buttercup/Grays Well
0%	North Algodones Dunes Wilderness	29%	Dune Buggy Flats/ Gordon's Well
4%	Glamis Flats/vendor area	0%	Roadrunner/Keyhole CG
9%	Wash Road/Rail Road	0%	Cement Flats

11% Ogilby Area	1% Gecko Road
0% Osborne Overlook	4% Other

9. Check all the following activities that you participated in on your most recent visit to ISDRA? (Check all that apply)

17% Drive motorcycles	13% Walking
44% Drive rails/dune buggies	4% Hiking
30% Drive 4-wheel vehicles	17% Reading
90% Drive quads (4 wheelers)	79% Visiting friends/family
41% Watching special events and races	57% Taking pictures
21% Shopping in the local communities	74% Shopping at the ISDRA vendors
6% Other	

10. Which one of the activities listed in Question #9 above did you consider your primary activity or most important reason for visiting the ISDRA?

3% Drive motorcycles	0% Walking
19% Drive rails/dune buggies	0% Hiking
2% Drive 4-wheel vehicles	0% Reading
59% Drive quads (4 wheelers)	13% Visiting with friends and family
0% Watching special events and races	0% Taking pictures
0% Shopping in the local communities	2% Shopping at the ISDRA vendors
2% Other	

11. What information about ISDRA would you like before your next visit to ISDRA? (Check all that apply)

17% OHV safety information	10% Desert ecology information
21% First aid information	11% Watchable wildlife information
41% Weather information	13% History/cultural resources info
13% Tread Lightly information	34% ISDRA management rules
51% ISDRA area maps	36% RV dump locations
9% Other	

12. What information about the local communities would you like before your next visit to ISDRA ? (Check all that apply)

- |     |   |     |                                 |
|-----|---|-----|---------------------------------|
| 16% | Special community events                | 4%  | Movies, pools, and play centers |
| 13% | Shopping centers                        | 31% | OHV vehicle services/parts      |
| 24% | Restaurants and bars                    | 21% | Local information of fun things |
| 21% | Other recreation sites within 50 miles  | 31% | Coupons for special savings     |
| 27% | Locations to get potable drinking water | 11% | Hotels, motels, and RV parks    |
| 21% | OHV towing out of the dunes             | 24% | RV gas and repairs              |
| 4%  | Casinos and gaming locations            | 4%  | Other                           |

13. We would like to know how to make your next visit to ISDRA more enjoyable. Please consider each of the following ideas and indicate how desirable each would be by checking the appropriate box.

<i>Possible ways to improve your next visit to ISDRA</i>	<i>Not at all desirable</i>	<i>Slightly desirable</i>	<i>Moderately desirable</i>	<i>Very desirable</i>	<i>Extremely desirable</i>
Add more trash containers	4%	18%	41%	24%	13%
Require visitors to take home their trash	40%	16%	13%	12%	19%
Offer more nature interpretive programs	46%	27%	21%	6%	0%
Enforce rules and regulations	3%	16%	41%	27%	13%
Have more rangers and patrol	17%	21%	41%	8%	14%
Provide more emergency medical services	7%	10%	32%	35%	15%
Provide more information about local businesses/services/parks/events/shopping	32%	28%	25%	9%	6%
Have more private long-term RV and vehicle storage areas nearby ISDRA	52%	21%	20%	3%	5%
Have some camp areas at ISDRA	32%	14%	27%	18%	9%

available through an advanced reservation system					
Maintain a high quality website with information about ISDRA and the communities	9%	5%	33%	24%	29%
Have nearby showers provided by the private sector	30%	15%	18%	19%	18%
Increase number of portable toilets	21%	21%	24%	19%	16%
Improve the road grading	16%	27%	22%	18%	16%
Increase number of fully developed RV parks within a few miles of ISDRA	42%	23%	11%	14%	11%
Charge a lower fee for visitors on weekdays and non-holidays	15%	13%	13%	17%	42%

15. Please estimate how many hours per day, on average, you spent away from your camp out in the dunes on your most recent visit doing such activities as driving, sightseeing, watching others, hiking, photography, or picnicking?

Average = 5.3 hours away from camp out in the dunes per day  
Range = 0-12 hours away from camp out in the dunes per day

16. Check how you prefer to stay informed about ISDRA? (*Check all that interest you*)

- 6% I do not need any information
- 61% Read an ISDRA internet website
- 1% Visit the local chamber of commerce
- 14% Talk with the on-site camp hosts
- 17% Talk with rangers your campsite
- 9% Visit the Ranger Station
- 6% Contact local BLM office
- 0% Contact local tourism welcome center
- 29% Read signs and kiosks
- 44% Read literature and brochures
- 50% Read the *Welcome to the Dunes* newspaper
- 7% Other

17. Overall, how would you rate the quality of your recreation experience on your most recent visit to ISDRA? (*Circle one*)

<i>Very poor</i>							<i>Excellent</i>
1	2	3	4	5	6	7	
4%	0%	3%	9%	30%	31%	23%	

18. In 2003, BLM contracted the development of a business plan. One of the questions answered in the business plan was "How much does BLM need to charge each vehicle in order to recover the cost of managing the area?" After extensive research, the contractor recommended the fee for each primary vehicle be \$30 per week for non-holiday weekends, \$60 per week for holiday weekends, and \$180 for a season permit. If BLM implemented this plan, how likely is it that you would begin to visit ISDRA on non-holiday weekends? (*Check one*)

not at all = 16%    moderately = 20%    somewhat = 24%    very = 21%  
 extremely = 19%

21. How many highway miles is ISDRA from your home?

Average = 249 miles    Range = 12-2,800 miles

22. What is your gender?

Male = 77%    Female = 23%

23. What is your age?

Average = 40 years    Range = 20-76 years

24. What was your total household income (before taxes) in 2004? (*Check one*)

2%	Less than \$20,000	26%	\$80,000 to 99,999
8%	\$20,000 to 39,999	15%	\$100,000 to 119,999
21%	\$40,000 to 59,999	8%	\$120,000 or more
21%	\$60,000 to 79,999		

25. What is the highest level on education you have completed? (*Check one*)

1%	Some high school or less	22%	College graduate
30%	High school graduate or GED	0%	Some graduate school
17%	Post high school business or trade school	3%	Advanced graduate degree
26%	Some college		

26. In what race or ethnic group would you place yourself? (*Check one*)

- 0% American Indian or Alaskan Native
- 0% Asian
- 0% Black or African American
- 9% Hispanic, Latino, or Spanish
- 0% Native Hawaiian or Pacific Islander
- 91% White
- 0% Other



## Appendix E: Zip Code Groupings

### **Orange County, CA (county)**

Population (1990): 2410556

Location: 33.67496 N, 117.77739 W

Zip Code(s): 90620 90621 90623 90630 90631 90680 90715 90720 90740 92610  
92621 92624 92625 92626 92627 92629 92630 92631 92632 92633 92635 92640  
92641 92643 92644 92645 92646 92647 92648 92649 92651 92653 92655 92656  
92657 92660 92661 92662 92663 92665 92666 92667 92668 92669 92670 92672  
92675 92677 92679 92680 92683 92686 92687 92688 92691 92692 92701 92703  
92704 92705 92706 92707 92708 92709 92714 92715 92718 92720 92801 92802  
92804 92805 92806 92807 92808

### **Los Angeles County, CA (county)**

Population (1990): 8863164

Location: 34.18466 N, 118.26198 W

Zip Code(s): 90001 90002 90003 90004 90005 90006 90007 90008 90010 90011  
90012 90013 90014 90015 90016 90017 90018 90019 90020 90021 90022 90023  
90024 90025 90026 90027 90028 90029 90031 90032 90033 90034 90035 90036  
90037 90038 90039 90040 90041 90042 90043 90044 90045 90046 90047 90048  
90049 90056 90057 90058 90059 90061 90062 90063 90064 90065 90066 90067  
90068 90069 90071 90077 90201 90210 90211 90212 90220 90221 90222 90230  
90232 90240 90241 90242 90245 90247 90248 90249 90250 90254 90255 90260  
90262 90265 90266 90270 90272 90274 90277 90278 90280 90290 90291 90292  
90293 90301 90302 90303 90304 90305 90401 90402 90403 90404 90405 90501  
90502 90503 90504 90505 90506 90601 90602 90603 90604 90605 90606 90621  
90631 90638 90640 90650 90660 90670 90701 90704 90706 90710 90712 90713  
90715 90716 90717 90723 90731 90732 90744 90745 90746 90802 90803 90804  
90805 90806 90807 90808 90810 90813 90814 90815 90822 91001 91006 91007  
91010 91011 91016 91020 91024 91030 91040 91042 91101 91103 91104 91105  
91106 91107

### **San Diego County, CA (county)**

Population (1990): 2498016

Location: 33.02056 N, 116.77186 W

Zip Code(s): 91901 91902 91905 91906 91910 91911 91913 91914 91915 91916  
91917 91932 91934 91935 91941 91942 91945 91950 91962 91963 91977 91978  
91980 92003 92004 92007 92008 92009 92014 92019 92020 92021 92024 92025



92026 92027 92028 92029 92036 92037 92040 92054 92055 92056 92057 92059  
92061 92064 92065 92066 92068 92069 92070 92071 92075 92082 92083 92084  
92086 92101 92102 92103 92104 92105 92106 92107 92108 92109 92110 92111  
92113 92114 92115 92116 92117 92118 92119 92120 92121 92122 92123 92124  
92126 92127 92128 92129 92130 92131 92135 92136 92139 92145 92154 92155  
92173 92536 92672

**Riverside County, CA (county)**

Population (1990): 1170413

Location: 33.72791 N, 115.97729 W

Zip Code(s): 91719 91720 91752 91760 92004 92201 92210 92220 92223 92225  
92230 92234 92236 92239 92240 92253 92257 92260 92262 92264 92270 92272  
92274 92276 92280 92282 92320 92324 92373 92399 92501 92503 92504 92505  
92506 92507 92508 92509 92530 92532 92536 92539 92543 92544 92545 92548  
92549 92553 92555 92557 92561 92562 92563 92567 92570 92571 92582 92583  
92584 92585 92586 92587 92590 92591 92592 92595 92596 92675 92808

**San Bernardino County, CA (county)**

Population (1990): 1418380

Location: 34.82825 N, 116.19134 W

Zip Code(s): 91701 91709 91710 91730 91737 91739 91759 91761 91762 91763  
91764 91766 91786 92220 92239 92242 92252 92256 92267 92272 92277 92278  
92280 92284 92301 92304 92305 92307 92308 92309 92310 92311 92314 92316  
92324 92327 92332 92335 92336 92338 92339 92342 92345 92346 92347 92351  
92354 92356 92358 92359 92363 92364 92365 92368 92371 92372 92373 92374  
92376 92392 92394 92397 92399 92401 92404 92405 92407 92408 92409 92410  
92411 93505 93544 93555 93562

## **Appendix F: Unabridged Copy of the 2005-2006 ISDRA Visitor Survey**

**Help us protect the  
Imperial Sand Dunes Recreation Area  
---and WIN a QUAD---**

Dear Duner,

The local communities of El Centro, Brawley, and Yuma recognize the world-class recreation opportunities that the Imperial Sand Dunes Recreation Area (ISDRA) provides thousands of people each year. We wanted to help, so we recently formed a new organization called the United Desert Gateway (UDG). The UDG is partnering with the U.S. Bureau of Land Management to help ensure the stewardship of this unique and special natural resource.

Along with supporting the recent 9<sup>th</sup> Annual ISDRA Cleanup, this 2005---2006 ISDRA Visitor Survey is another example of how the UDG is helping you. This survey is being sent to a small sample of ISDRA visitors. It is voluntary, will only take 15 minutes of your time, and we promise that your answers will be kept confidential. The information will help us better meet your recreational needs and ensure the protection of ISDRA for years to come. Thank you in advance for your thoughtfulness!

Plus, if you complete this survey and send it back to us, you will be entered into the drawing for the quad pictured on page 5 of the enclosed *Welcome to the Dunes* newspaper. Your odds are good and the winner will be drawn in June 2006

The survey results and lucky quad winner will be posted on the UDG website later this summer. If you have questions or concerns, please do not hesitate to contact our survey consultant: Dr. Glenn E. Haas, Professor, Colorado State University, 970-498-9350 or [glenn@cnr.colostate.edu](mailto:glenn@cnr.colostate.edu).

Thanks so much,  
Nicole Nicholas Gilles, President  
United Desert Gateway  
P.O. Box 1613  
El Centro, CA 92244

## 2005–2006 ISDRA Visitor Survey

1. Please estimate **how many times** you have visited the ISDRA in the past 12 months?  
# \_\_\_\_\_

2. Estimate **how many total days** you have spent at the ISDRA in the past 12 months?  
# \_\_\_\_\_

3. On a typical trip to ISDRA in the past year, how many **people did you normally transport** in your vehicle including yourself? # \_\_\_\_\_ people

4. How many years ago **did you first visit** the ISDRA? # \_\_\_\_\_ years ago

5. Which community do you **typically drive through** to visit the ISDRA? (*Check one*)

\_\_\_\_\_ Brawley

\_\_\_\_\_ Blythe/Palo Verde

\_\_\_\_\_ El Centro

\_\_\_\_\_ Yuma

\_\_\_\_\_ Calexico

\_\_\_\_\_

Other: \_\_\_\_\_

6. How often do you **stop in any of the local communities** listed in Question 4? (*Check one*)

\_\_\_\_\_ Never

\_\_\_\_\_ Occasionally

\_\_\_\_\_ Frequently

\_\_\_\_\_ Always

7. What **overnight accommodations do you typically use** when visiting the ISDRA?  
(*Check one*)

\_\_\_\_\_ Tent camping at ISDRA

\_\_\_\_\_ Motel/hotel/RV park near Yuma

\_\_\_\_\_ Toy-hauler at ISDRA

\_\_\_\_\_ Motel/hotel/RV park near Brawley

\_\_\_\_\_ Truck, truck with camper, or van at ISDRA

\_\_\_\_\_ Motel/hotel/RV park near El Centro

\_\_\_\_\_ Motor home at ISDRA

\_\_\_\_\_ Other: \_\_\_\_\_

\_\_\_\_\_ None, I am typically a day-use visitor

8. What area of ISDRA do you **most often spend the night**? (*Check one*)

- |   |   |
|---|---|
| <input type="checkbox"/> Mammoth Wash                     | <input type="checkbox"/> Buttercup/Grays Well           |
| <input type="checkbox"/> North Algodones Dunes Wilderness | <input type="checkbox"/> Dune Buggy Flats/Gordon's Well |
| <input type="checkbox"/> Glamis Flats/vendor area         | <input type="checkbox"/> Roadrunner/Keyhole CG          |
| <input type="checkbox"/> Wash Road/Rail Road              | <input type="checkbox"/> Cement Flats                   |
| <input type="checkbox"/> Ogilby Area                      | <input type="checkbox"/> Gecko Road                     |
| <input type="checkbox"/> Osborne Overlook                 |   |
| <input type="checkbox"/> Other: _____                     |   |

9. Check all the following **activities that you participated in** on your most recent visit to ISDRA? (*Check all that apply*)

- |   |  |
|---|--|
| A. <input type="checkbox"/> Drive motorcycles                 | H. <input type="checkbox"/> Walking                          |
| B. <input type="checkbox"/> Drive rails/dune buggies          | I. <input type="checkbox"/> Hiking                           |
| C. <input type="checkbox"/> Drive 4-wheel vehicles            | J. <input type="checkbox"/> Reading                          |
| D. <input type="checkbox"/> Drive quads (4 wheelers)          | K. <input type="checkbox"/> Visiting with friends and family |
| E. <input type="checkbox"/> Watching special events and races | L. <input type="checkbox"/> Taking pictures                  |
| F. <input type="checkbox"/> Shopping in the local communities | M. <input type="checkbox"/> Shopping at the ISDRA vendors    |
| G. <input type="checkbox"/>                                   |  |

Other: \_\_\_\_\_

10. Which one of the activities listed in Question #9 above did you consider **your primary activity** or most important reason for visiting the ISDRA? Choose your primary activity, and then insert it's corresponding letter here: \_\_\_\_\_ (for example, C = drive 4-wheel vehicles)

11. What **information about ISDRA** would you like before your next visit to ISDRA?  
(Check all that apply)

- |   |   |
|---|---|
| <input type="checkbox"/> OHV safety information                   | <input type="checkbox"/> Desert ecology information                 |
| <input type="checkbox"/> First aid information                    | <input type="checkbox"/> Watchable wildlife information             |
| <input type="checkbox"/> Weather information                      | <input type="checkbox"/> History and cultural resources information |
| <input type="checkbox"/> Tread Lightly/Leave No Trace information | <input type="checkbox"/> ISDRA management rules and regulations     |
| <input type="checkbox"/> ISDRA area maps                          | <input type="checkbox"/> RV dump locations                          |
| <input type="checkbox"/> Other: _____                             |   |

12. What **information about the local communities** would you like before your next visit to ISDRA ?  
(Check all that apply)

- |  |  |
|--|--|
| <input type="checkbox"/> Special community events centers        | <input type="checkbox"/> Movies, pools, and play               |
| <input type="checkbox"/> Shopping centers                        | <input type="checkbox"/> OHV vehicle services and parts        |
| <input type="checkbox"/> Restaurants and bars                    | <input type="checkbox"/> Local information of fun things to do |
| <input type="checkbox"/> Other recreation sites within 50 miles  | <input type="checkbox"/> Coupons for special savings           |
| <input type="checkbox"/> Locations to get potable drinking water | <input type="checkbox"/> Hotels, motels, and RV parks          |
| <input type="checkbox"/> OHV towing out of the dunes             | <input type="checkbox"/> RV gas and repairs                    |
| <input type="checkbox"/> Casinos and gaming locations            | <input type="checkbox"/> Other:                                |
| _____  |  |

13. We would like to know how to make **your next visit to ISDRA more enjoyable**. Please consider each of the following ideas and indicate how desirable each would be by checking the appropriate box.

<i>Possible ways to improve your next visit to ISDRA</i>	<i>Not at all desirable</i>	<i>Slightly desirable</i>	<i>Moderately desirable</i>	<i>Very desirable</i>	<i>Extremely desirable</i>
Add more trash containers					
Require visitors to take home their trash					
Offer more nature interpretive programs					
Enforce rules and regulations					
Have more rangers and patrol					
Provide more emergency medical services					
Provide more information about local businesses/services/parks/events/shopping					
Have more private long-term RV and vehicle storage areas nearby ISDRA					
Have some camp areas at ISDRA available through an advanced reservation system					
Maintain a high quality website with information about ISDRA and the communities					
Have nearby showers provided by the private sector					
Increase number of portable toilets					
Improve the road grading					
Increase number of fully developed RV parks within a few miles of ISDRA					
Charge a lower fee for visitors on weekdays and non-holidays					

14. Please estimate **how much money you spent** on your most recent visit to ISDRA? There are two parts to this question:

- In **column A**, include the amount of money you spent or spent by other members of your group traveling with you. Please include the money spent while (a) at home preparing for the trip, (b) enroute to ISDRA, (c) during your stay at ISDRA, and (d) while returning home.
- In **column B**, please estimate what percent of each type of expense was spent within 50 miles of ISDRA.

<i><b>Types of Expenses</b></i>	<i><b>Column A</b></i> <i><b>Total amount of money spent</b></i> <i><b>on most recent trip to ISDRA</b></i>	<i><b>Column B</b></i> <i><b>Percent of these monies</b></i> <i><b>spent within 50 miles of</b></i> <i><b>ISDRA (within about 1</b></i> <i><b>hour drive of ISDRA)</b></i>
Overnight camping permit	\$	%
Motels, hotels, RV parks, resorts	\$	%
Restaurants and bars	\$	%
Groceries and supplies	\$	%
Gasoline and oil	\$	%
Vehicle maintenance and repair	\$	%
Entertainment and recreation entrance fees (e.g., bowling, swim pools, casinos)	\$	%
Souvenirs and clothing	\$	%
Other expenses: (write in below)	\$	%
<b>Total Dollars Spent on your Most Recent Visit to ISDRA</b>	<b>\$</b>	<b>100%</b>





19. On the last page of this survey (page 8), there is space to say what might be on your mind. Please share with us your thoughts, suggestions, or concerns about the Dunes. This is your chance to speak to the United Desert Gateway and the Bureau of Land Management. Thank you.

Please answer a few remaining questions about your personal background. Again, this information is confidential and will be used to help UDG and the BLM to understand our visitors and how to improve our services.

20. What is your home zip code? \_\_\_\_\_

21. How many highway miles is ISDRA from your home? # \_\_\_\_\_ highway miles

22. What is your gender? \_\_\_\_\_ male \_\_\_\_\_ female

23. What is your age? \_\_\_\_\_

24. What was your total household income (before taxes) in 2004? (*Check one*)

- |   |   |
|---|---|
| <input type="checkbox"/> Less than \$20,000 | <input type="checkbox"/> \$80,000 to 99,999   |
| <input type="checkbox"/> \$20,000 to 39,999 | <input type="checkbox"/> \$100,000 to 119,999 |
| <input type="checkbox"/> \$40,000 to 59,999 | <input type="checkbox"/> \$120,000 or more    |
| <input type="checkbox"/> \$60,000 to 79,999 |   |

25. What is the highest level on education you have completed? (*Check one*)

- |  |   |
|--|---|
| <input type="checkbox"/> Some high school or less                  | <input type="checkbox"/> College graduate         |
| <input type="checkbox"/> High school graduate or GED               | <input type="checkbox"/> Some graduate school     |
| <input type="checkbox"/> Post high school business or trade school | <input type="checkbox"/> Advanced graduate degree |
| <input type="checkbox"/> Some college                              |   |

26. In what race or ethnic group would you place yourself? (*Check one*)

- |  |  |
|--|--|
| <input type="checkbox"/> American Indian or Alaskan Native | <input type="checkbox"/> Hispanic, Latino, or Spanish        |
| <input type="checkbox"/> Asian                             | <input type="checkbox"/> Native Hawaiian or Pacific Islander |
| <input type="checkbox"/> Black or African American         | <input type="checkbox"/> White                               |
| <input type="checkbox"/> Other: _____                      |  |

**What is on your mind?**

**Thank you very much!!! Please fold this survey lengthwise and mail it in the enclosed postage-paid envelope.**

**United Desert Gateway Task Order #2-\_\_\_\_\_**

# Part 2

# **An Analysis of the Economic Impact of the Visitors to the Imperial Sand Dunes Recreation Area**

June 2007

Prepared for:  
United Desert Gateway  
P.O. Box 1613  
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## Report Highlights

During the busy season (October 2005 to May 2006), visitors to the ISDRA region spent a mean of \$415.0 million on their trips (\$1,182.37 mean expenditure times 350,000 primary vehicle visits). This includes expenditures inside and outside the region.

It is approximated that the dollars spent directly in the ISDRA region is between \$181.4 million and \$320.7 million during the busy season (October 2005 to May 2006).

Assuming that visitors spend the majority of their dollars in the gateway cities they travel through to get to the ISDRA region, between:

- \$72.6 and \$128.3 million was spent in Brawley;
- \$47.2 to \$83.4 million in El Centro;
- \$16.3 to \$28.9 million in Blythe/Palo Verde;
- \$41.7 to \$73.8 million in Yuma.

The three highest mean expenditures by category for each gateway city were:

### Brawley

- Vehicle maintenance and repair — \$730.56
- Retail sales — \$238.60
- Gas and oil — \$162.50

### El Centro

- Gasoline and oil — \$143.44
- Groceries and supplies — \$133.50
- Vehicle maintenance and repair — \$65.91

### Blythe-Palo Verde

- Vehicle maintenance and repair — \$203.33
- Retail sales — \$210.00
- Groceries and supplies — \$195.00

### Yuma

- Entertainment and recreation entrance fees — \$130.00
- Groceries and supplies — \$124.12
- Gasoline and oil — \$123.57

## Introduction

The following report analyzes the economic data from a survey conducted on visitor activity in the Imperial Sand Dune Recreation Area (ISDRA). It was prepared in coordination with a larger study sponsored by the United Desert Gateway. The data for this study were collected over a five month period from November 2005 to May 2006, in which there were over 1.12 million visitors to the dune area. From the full sample of 315 surveys returned, there were 300 surveys used for the calculation of the economic impact. The number was reduced as there were some outlying numbers provided by the respondents that would have skewed the results if they had been included. There were also a number of surveys which contained incomplete information.

At the time of the writing of this report, the total number of visitors to the area in 2005-06 was unknown but from past data, it is known that the majority of the trips are made to the area from October to May. In 2005–2006, there were a total of 1.4 million visitors during the eight month period. In order to calculate the number of vehicle visits the number of visitors was divided by 4 passengers per vehicle. This is the number of passengers per vehicle indicated by those surveyed. Therefore, it is estimated that there were 350,000 vehicle visits during this time period.

The data from the survey were inputted and analyzed using SPSS. The mean, median, minimum, maximum, range, and total dollars spent were calculated for the total region and for the individual gateway cities. For the region, cross correlations of the dollars spent to the percentage of these dollars spent in the region were conducted. For the individual gateway cities, a cross correlation of the total dollars spent was linked to the question regarding the percentage of funds spent in the local area. This provided an overall look at the flow of visitor funds to the region and the cities.

## Total Economic Impact of ISDRA Visitors

To begin the analysis of the data, Table 1 provides an overview of the amount of dollars spent by the 300 visitors who answered the survey and a breakdown on what they spent the majority of their funds. The highest aggregate total expenses (\$58,490) were accrued in the purchase of gasoline and oil for vehicles. The expenditures with the highest mean costs were for vehicle maintenance and repair at \$287. It was in this category that the greatest range in expenditures was also found with individuals paying a minimum of \$5.00 and a maximum of \$10,000.

The second part of Table 1 shows a breakdown of the number of visitors surveyed by how they spent part of their visit dollars per the different categories. The next row shows the number of the visitors who indicated how they spent the dollars by category in the ISDRA region. The number of visitors who spent 100 percent of their dollars per category in the region is displayed next and this is followed by the percentage of the visitors who spent 100 percent of their dollars in the region. The final row provides the mean percent of dollars spent in the region for each category. These last two rows are used to weigh the total dollars spent by the dune visitors on their trips.

The total dollars spent by the dune visitors include all locations, including their homes, stops along the way, etc. These total dollars are weighted for the visitors who spend 100 percent of their visit dollars in the region and mean percentage of the dollars spent in the region.

The total mean dollars spent by the ISDRA visitors during the five month survey period was \$330.0 million (280,000 vehicle visits times the mean expenditure of \$1,182.37). For the eight busiest months (October to May with 1.4 million visitors), a total of \$415.0 million was spent by those visiting the dunes. Of course, not all of these dollars were spent in the region. These are the total dollars spent by the visitors on their trips and include expenditures at their homes and in transit to the dunes. The region is defined as 50 miles within the ISDRA. In order to understand the economic impacts directly in the region, the total is weighted for the number of visitors who spent 100 percent of their dollars for each particular category. These visitors spent approximately \$144.2 million during the five month period in which the survey was taken, and approximately \$181.4 million from October to May. The one issue with these numbers is that they do not include those who spent a partial amount of their dollars in the region. So, when a final calculation is conducted again and total dollars are weighted for the mean percentage of dollars spent per category in the region then approximately \$255.1 million was spent from November to May, and approximately \$320.7 million was spent from October to May.



**Table 1: Breakdown of Expenditures by Visitors and Percentage of Visitor Dollars Spent in the ISDRA Region**

n = 300

	Type of Expenditures										Weighted Total <sup>1</sup>	Weighted Total <sup>2</sup>
	Overnight Camping Permits	Motels, Hotels, RV Parks, Resorts	Restaurants and Bars	Groceries and Supplies	Gasoline and Oil	Vehicle Maintenance and Repair	Entertainment and Recreation Entrance Fees	Souvenirs and Clothing	Retail Sales	Total		
Mean \$	\$ 28.40	\$ 112.64	\$ 58.78	\$ 171.41	\$ 202.39	\$ 287.99	\$ 87.38	\$ 71.08	\$ 162.30	\$ 1,182.37	\$ 516.71	\$ 913.70
Median \$	\$ 25.00	\$ 100.00	\$ 45.00	\$ 150.00	\$ 200.00	\$ 100.00	\$ 90.00	\$ 50.00	\$ 100.00	\$ 860.00	\$ 392.27	\$ 657.31
Minimum \$	\$ 3.00	\$ 6.00	\$ 10.00	\$ 10.00	\$ 25.00	\$ 5.00	\$ 20.00	\$ 10.00	\$ -	\$ 89.00	\$ 42.76	\$ 70.10
Maximum \$	\$ 300.00	\$ 300.00	\$ 500.00	\$ 1,500.00	\$ 900.00	\$ 10,000.00	\$ 200.00	\$ 390.00	\$ 700.00	\$ 14,790.00	\$ 4,589.74	\$ 11,388.11
Range \$	\$ 297.00	\$ 294.00	\$ 490.00	\$ 1,490.00	\$ 875.00	\$ 9,995.00	\$ 180.00	\$ 400.00	\$ 700.00	\$ 14,721.00	\$ 4,562.25	\$ 11,336.59
Total \$	\$ 7,100.00	\$ 1,577.00	\$ 11,463.00	\$ 48,510.00	\$ 58,490.00	\$ 39,743.00	\$ 1,835.00	\$ 15,637.00	\$ 3,733.00	\$ 188,088.00	\$ 60,583.80	\$ 131,457.52
Total number of visitors who indicated they spent dollars in this category	250	14	195	283	289	138	21	220	23	300	n/a	n/a
Number of visitors who stated they spent the dollars in the region	184	14	170	158	224	50	16	186	19	n/a	n/a	n/a
Number of visitors who spent 100% of their dollars in the region	168	14	122	58	60	34	13	168	13	n/a	n/a	n/a
Those who spent \$ in this category -- spent 100% of dollars in ISDRA region	67.2%	100.0%	62.6%	20.5%	20.8%	24.6%	61.9%	76.4%	56.5%	n/a	n/a	n/a
Mean percent of dollars spent in region	95.2%	100.0%	86.6%	56.4%	60.4%	78.7%	93.1%	92.9%	80.2%	n/a	n/a	n/a

<sup>1</sup> Weighted by percent who spent 100% in the region

<sup>2</sup> Weighted by the Mean percent of dollars spent in the region.

Source: Author's calculations from UDG survey.

## Impact to Local Gateway Cities

If we assume that the majority of the dollars spent in the region are spent in the gateway communities, then the economic impact to the local cities could be estimated. A question on the survey specifically asked individuals: Which community do you typically drive through to visit the ISDRA? Forty percent indicated Brawley, 26 percent El Centro, 23 percent Yuma, and nine percent traveled through Blythe/Palo Verde. From these percentages, the data shows that \$72.6 and \$128.3 million was spent in Brawley; \$47.2 to \$83.4 million in El Centro; \$41.7 to \$73.8 million in Yuma; \$16.3 to \$28.9 million in Blythe/Palo Verde. This calculation makes a fairly large assumption though that these dollars are spent in the local cities that the respondent traveled through. Using this assumption, the next set of tables further examines the spending trends by visitors in the gateway cities.

Two tables for each gateway city have been developed. The first analyzes the dollars spent in the community cross-tabulated by those who indicated they spent their funds on the specific categories. Obviously, the number of surveys analyzed under this method is less than the total sample of 300. Percentages were then calculated by these numbers to show how many of those who indicated they spent money in a particular community spent 100 percent of the funds in the ISDRA region.

The second table for each city provides the number of dollars spent by those who answered the question: How often do you stop in any of the local communities? This sample is close to the total surveys analyzed as 298 out of the 300 answered this question in one form or another. Percentages for those who frequently or always stop in the local communities were calculated. Though neither of these tables provides an exact amount for the dollars spent in the local communities, they do provide insight into the spending trends of visitors to the region by the gateway city they travel through.

### Brawley

Brawley had the largest number of ISDRA visitors traveling through its community. Table 2 provides the percentage of those who spent 100 percent of their visitor dollars in the region. The dollars in the expenditure categories are calculated by the total number of responses by category. Data are then provided to indicate how many of the total number of responses were by individuals who answered they spent 100 percent of their funds in the local community.

The category with the largest mean and total expenditures was for vehicle maintenance and repair. Visitors spent a mean of \$730.56 on vehicle maintenance but only nine of the 19 (47 percent) of the visitors indicated that they spent 100 percent of these funds in the region.

The expenditure categories with the highest percentage of dollars spent in the region were hotels, motels, RV parks and resorts—100 percent; souvenirs and clothing—90 percent; overnight camping permits—90 percent; entertainment and recreation entrance fees—75 percent. The mean dollars spent in these categories though were low, \$137.50 for hotels, motels, RV parks and resorts; \$67.21 for souvenirs and clothing; and \$29.42 for overnight camping permits.

More importantly are the percentages that show what was spent outside the region. Only 30 percent of the gas and oil expenditures were spent exclusively in the region, which is understandable as the visitors do travel in from other regions. This might be a difficult indicator for the community to change.

Looking at the expenditures for groceries and supplies though, only 39 percent of those who spend 100 percent of their dollars in the region spend them on this category. These two expenditure categories were also fairly high with a mean of \$162.50 spent on oil and gas, and \$142.39 spent on groceries and supplies. The question for the local community leaders becomes what could be done to capture more of these dollars locally?

Table 3 shows the number of visitors who stop frequently or always in the local communities and the percentage of their expenditures by category. The good news is that there are a high percentage of visitors who stated they stop in the local communities either frequently or always, between 71 to 100 percent of the respondents. The dollar amounts listed in this table are for all those who indicated they stopped or did not stop in the local communities. As this includes a greater number of visitors, the amounts are also greater for those who spend 100 percent of their funds in the region. This shows that there is a fairly large leakage of dollars not coming into the community from the dune visitors. Again, the question to local governments and businesses should be how can they capture more of these dollars spent by visitors to enjoy a local natural resource?

These basic concepts are applicable to each of the gateway cities. Therefore, the review of the other cities will focus on a comparison between the cities as this provides further insight into the spending trends of the visitors.

### El Centro

As seen in Table 4, El Centro had similar percentages to Brawley for the expenditure categories of those who spent 100 percent of their visitor dollars in the region. The largest difference found between the two cities was for vehicle maintenance and repair. The amount of money spent on vehicle maintenance repair was much lower in El Centro compared to Brawley, a mean of \$65.91 in comparison to \$730.56, but the percentage of individuals spending 100 percent of these funds was much larger, 79 percent in comparison to 47 percent. Continuing with a comparison of Tables 2 and 4, El Centro had a larger percentage of visitors who spent part of their funds on restaurants and bars than in Brawley, 83 percent in El Centro compared to 65 percent in Brawley.

The percentage of visitors who stopped frequently or always in the local communities was a bit higher in El Centro than in Brawley, as seen in Tables 3 and 5. For each expenditure category found in Table 5, more than 84 percent of those who drove through El Centro indicated that they stopped frequently or always in the local communities. In Brawley, as previously mentioned, the percentages ranged from 71 to 100 percent, with the majority of the categories being between 71 and 83 percent.

### Blythe-Palo Verde

The responses of those traveling through Blythe-Palo Verde differ from what has been seen thus far in Brawley and El Centro. Table 6 provides a breakdown of those who responded they spent money in the different expenditure categories and the number and percentage of those who indicated they spent 100 percent of their funds in the local communities. In four of the expenditure categories, permits, motels, vehicle maintenance, and entertainment, 100 percent of the respondents indicated they spent 100 percent of the funds in local communities. At the other extreme, only 18 percent of the visitors who spent 100 percent of their funds in the community spent it on gasoline and oil.

In comparing the expenditures in Blythe-Palo Verde to the other gateway cities, those traveling through this city had the highest expenditures for groceries and supplies. The mean dollar amount for groceries and supplies by those traveling through this city was \$195.00.

### Yuma

Yuma is the final gateway city that is analyzed as found in Tables 8 and 9. Visitors traveling through Yuma had higher expenditures on mean than the other gateway cities, specifically in the categories of restaurants and bars, and entertainment and recreation. Of those who indicated that they spent money on entertainment, 100 percent stated they spent it in the local communities. The percentage of visitors that spent 100 percent of their visitor dollars in the community and the percentage of those who stop frequently or always are similar to the percentages found in El Centro. This is most probably due to the services available in both communities.

### Conclusion

The ISDRA visitors spend a significant amount of money on their trips to the region. The challenge for the local communities is to capture more of those dollars locally. This can be done through better outreach to the visitors and offering deals or incentives at local establishments. As discussed in the full report by Dr. Haas, decision makers in the gateway cities should provide additional information and incentives to the visitors through the website and the UDG *Welcome to the Dunes* newspaper.

**Table 2: Expenditures by Visitors Who Spent 100 Percent of Funds in Local Communities, Brawley**

n=119

	Type of Expenditures									
	Overnight Camping Permits	Motels, Hotels, RV Parks, Resorts	Restaurants and Bars	Groceries and Supplies	Gasoline and Oil	Vehicle Maintenance and Repair	Entertainment and Recreation Entrance Fees	Souvenirs and Clothing	Retail Sales	
Mean \$	\$ 29.42	\$ 137.50	\$ 50.52	\$ 142.39	\$ 162.50	\$ 730.56	\$ 76.67	\$ 67.21	\$ 238.60	
Median \$	\$ 25.00	\$ 137.50	\$ 50.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 90.00	\$ 50.00	\$ 200.00	
Minimum \$	\$ 5.00	\$ 125.00	\$ 12.00	\$ 10.00	\$ 40.00	\$ 10.00	\$ 40.00	\$ 20.00	\$ 3.00	
Maximum \$	\$ 100.00	\$ 150.00	\$ 150.00	\$ 425.00	\$ 500.00	\$ 5,800.00	\$ 100.00	\$ 250.00	\$ 700.00	
Range \$	\$ 95.00	\$ 25.00	\$ 138.00	\$ 415.00	\$ 460.00	\$ 5,790.00	\$ 60.00	\$ 230.00	\$ 697.00	
Total \$	\$ 1,824.00	\$ 275.00	\$ 2,122.00	\$ 3,275.00	\$ 4,225.00	\$ 6,575.00	\$ 230.00	\$ 4,100.00	\$ 1,193.00	
Total visitors in this category	69	2	65	59	86	19	4	68	8	
Number of visitors who spent 100% of funds in region	62	2	42	23	26	9	3	61	5	
Percent of visitors who spent 100% of funds in region	90%	100%	65%	39%	30%	47%	75%	90%	63%	

Source: Author's calculations from UDG survey.

**Table 3: Expenditures of Visitors Who Stop Frequently or Always in Local Communities, Brawley**

n=298

	Type of Expenditures									
	Overnight Camping Permits	Motels, Hotels, RV Parks, Resorts	Restaurants and Bars	Groceries and Supplies	Gasoline and Oil	Vehicle Maintenance and Repair	Entertainment and Recreation Entrance Fees	Souvenirs and Clothing	Retail Sales	
Mean \$	\$ 27.89	\$ 116.67	\$ 54.05	\$ 178.00	\$ 219.29	\$ 367.50	\$ 116.00	\$ 70.00	\$ 161.44	
Median \$	\$ 25.00	\$ 125.00	\$ 50.00	\$ 200.00	\$ 200.00	\$ 100.00	\$ 100.00	\$ 50.00	\$ 100.00	
Minimum \$	\$ 5.00	\$ 75.00	\$ 15.00	\$ 10.00	\$ 30.00	\$ 5.00	\$ 25.00	\$ 10.00	\$ -	
Maximum \$	\$ 100.00	\$ 150.00	\$ 150.00	\$ 800.00	\$ 600.00	\$ 5,800.00	\$ 200.00	\$ 400.00	\$ 700.00	
Range \$	\$ 95.00	\$ 75.00	\$ 135.00	\$ 790.00	\$ 570.00	\$ 5,795.00	\$ 175.00	\$ 390.00	\$ 700.00	
Total \$	\$ 2,092.00	\$ 350.00	\$ 3,351.00	\$ 14,240.00	\$ 17,324.00	\$ 13,230.00	\$ 580.00	\$ 4,550.00	\$ 1,453.00	
Total visitors in this category	102	3	81	109	111	46	6	88	11	
Number of visitors who stop frequently or always	75	3	62	80	79	36	5	65	9	
Percent of visitors who stop frequently or always	74%	100%	77%	73%	71%	78%	83%	74%	82%	

Source: Author's calculations from UDG survey.

**Table 4: Expenditures of Visitors Who Spent 100 Percent of Funds in Local Communities, El Centro**

n=77

	Type of Expenditures									
	Overnight Camping Permits	Motels, Hotels, RV Parks, Resorts	Restaurants and Bars	Groceries and Supplies	Gasoline and Oil	Vehicle Maintenance and Repair	Entertainment and Recreation Entrance Fees	Souvenirs and Clothing	Retail Sales	
Mean \$	\$ 24.81	\$ 62.40	\$ 50.45	\$ 133.50	\$ 143.44	\$ 65.91	\$ 56.00	\$ 62.49	\$ 43.33	
Median \$	\$ 25.00	\$ 50.00	\$ 40.00	\$ 112.50	\$ 130.00	\$ 50.00	\$ 50.00	\$ 45.00	\$ 50.00	
Minimum \$	\$ 3.00	\$ 6.00	\$ 10.00	\$ 10.00	\$ 25.00	\$ 10.00	\$ 25.00	\$ 12.00	\$ 30.00	
Maximum \$	\$ 104.00	\$ 150.00	\$ 175.00	\$ 400.00	\$ 300.00	\$ 100.00	\$ 90.00	\$ 250.00	\$ 50.00	
Range \$	\$ 101.00	\$ 144.00	\$ 165.00	\$ 390.00	\$ 275.00	\$ 90.00	\$ 65.00	\$ 238.00	\$ 20.00	
Total \$	\$ 1,042.00	\$ 312.00	\$ 1,665.00	\$ 1,335.00	\$ 2,295.00	\$ 725.00	\$ 280.00	\$ 2,812.00	\$ 130.00	
Total visitors in this category	47	5	40	38	59	14	6	50	3	
Number of visitors who spent 100% of funds in region	42	5	33	10	16	11	5	45	3	
Percent of visitors who spent 100% of funds in region	89%	100%	83%	26%	27%	79%	83%	90%	100%	

Source: Author's calculations from UDG survey.

**Table 5: Expenditures of Visitors Who Stop Frequently or Always in Local Communities, El Centro**

n=298

	Type of Expenditures									
	Overnight Camping Permits	Motels, Hotels, RV Parks, Resorts	Restaurants and Bars	Groceries and Supplies	Gasoline and Oil	Vehicle Maintenance and Repair	Entertainment and Recreation Entrance Fees	Souvenirs and Clothing	Retail Sales	
Mean \$	\$ 30.85	\$ 62.40	\$ 59.76	\$ 175.15	\$ 186.92	\$ 127.57	\$ 82.86	\$ 62.06	\$ 43.33	
Median \$	\$ 25.00	\$ 50.00	\$ 40.00	\$ 150.00	\$ 160.00	\$ 50.00	\$ 90.00	\$ 50.00	\$ 50.00	
Minimum \$	\$ 3.00	\$ 6.00	\$ 10.00	\$ 10.00	\$ 25.00	\$ 10.00	\$ 25.00	\$ 12.00	\$ 30.00	
Maximum \$	\$ 300.00	\$ 150.00	\$ 220.00	\$ 1,500.00	\$ 900.00	\$ 1,100.00	\$ 200.00	\$ 200.00	\$ 50.00	
Range \$	\$ 270.00	\$ 144.00	\$ 210.00	\$ 1,490.00	\$ 875.00	\$ 1,090.00	\$ 175.00	\$ 188.00	\$ 20.00	
Total \$	\$ 1,635.00	\$ 312.00	\$ 2,450.00	\$ 11,385.00	\$ 12,150.00	\$ 4,720.00	\$ 580.00	\$ 2,917.00	\$ 130.00	
Total visitors in this category	63	5	44	77	77	44	8	53	3	
Number of visitors who stop frequently or always	53	5	41	65	65	37	7	47	3	
Percent of visitors who stop frequently or always	84%	100%	93%	84%	84%	84%	88%	89%	100%	

Source: Author's calculations from UDG survey.



**Table 6: Expenditures of Visitors Who Spent 100 Percent of Funds in Local Communities, Blythe-Palo Verde**  
n=28

	Type of Expenditures									
	Overnight Camping Permits	Motels, Hotels, RV Parks, Resorts	Restaurants and Bars	Groceries and Supplies	Gasoline and Oil	Vehicle Maintenance and Repair	Entertainment and Recreation Entrance Fees	Souvenirs and Clothing	Retail Sales	
Mean \$	\$ 22.41	\$ 87.50	\$ 59.17	\$ 195.00	\$ 126.67	\$ 203.33	\$ 60.00	\$ 85.29	\$ 210.00	
Median \$	\$ 25.00	\$ 87.50	\$ 30.00	\$ 175.00	\$ 100.00	\$ 100.00	\$ 60.00	\$ 50.00	\$ 210.00	
Minimum \$	\$ 5.00	\$ 75.00	\$ 10.00	\$ 100.00	\$ 80.00	\$ 20.00	\$ 60.00	\$ 20.00	\$ 20.00	
Maximum \$	\$ 50.00	\$ 100.00	\$ 200.00	\$ 400.00	\$ 200.00	\$ 490.00	\$ 60.00	\$ 400.00	\$ 400.00	
Range \$	\$ 45.00	\$ 25.00	\$ 190.00	\$ 300.00	\$ 120.00	\$ 470.00	\$ -	\$ 380.00	\$ 380.00	
Total \$	\$ 381.00	\$ 175.00	\$ 1,065.00	\$ 1,170.00	\$ 380.00	\$ 610.00	\$ 60.00	\$ 1,791.00	\$ 420.00	
Total visitors in this category	17	2	22	13	17	3	1	22	3	
Number of visitors who spent 100% of funds in region	17	2	18	6	3	3	1	21	2	
Percent of visitors who spent 100% of funds in region	100%	100%	82%	46%	18%	100%	100%	95%	67%	

Source: Author's calculations from UDG survey.

**Table 7: Expenditures of Visitors Who Stop Frequently or Always in Local Communities, Blythe-Palo Verde**  
n=298

	Type of Expenditures									
	Overnight Camping Permits	Motels, Hotels, RV Parks, Resorts	Restaurants and Bars	Groceries and Supplies	Gasoline and Oil	Vehicle Maintenance and Repair	Entertainment and Recreation Entrance Fees	Souvenirs and Clothing	Retail Sales	
Mean \$	\$ 23.93	\$ 87.50	\$ 60.31	\$ 191.25	\$ 218.89	\$ 431.67	\$ 60.00	\$ 91.72	\$ 140.00	
Median \$	\$ 25.00	\$ 87.50	\$ 40.00	\$ 160.00	\$ 222.50	\$ 100.00	\$ 60.00	\$ 50.50	\$ 140.00	
Minimum \$	\$ 5.00	\$ 75.00	\$ 10.00	\$ 50.00	\$ 80.00	\$ 20.00	\$ 60.00	\$ 30.00	\$ 20.00	
Maximum \$	\$ 50.00	\$ 100.00	\$ 200.00	\$ 400.00	\$ 400.00	\$ 2,500.00	\$ 60.00	\$ 400.00	\$ 400.00	
Range \$	\$ 45.00	\$ 25.00	\$ 190.00	\$ 350.00	\$ 320.00	\$ 2,480.00	\$ -	\$ 370.00	\$ 380.00	
Total \$	\$ 335.00	\$ 175.00	\$ 965.00	\$ 3,060.00	\$ 3,940.00	\$ 3,885.00	\$ 60.00	\$ 1,651.00	\$ 420.00	
Total visitors in this category	22	2	22	25	26	12	1	25	3	
Number of visitors who stop frequently or always	14	2	16	16	18	9	1	18	3	
Percent of visitors who stop frequently or always	64%	100%	73%	64%	69%	75%	100%	72%	100%	

Source: Author's calculations from UDG survey.

**Table 8: Expenditures of Visitors Who Spent 100 Percent of Funds in Local Communities, Yuma**  
n=68

	<b>Type of Expenditures</b>									
	Overnight Camping Permits	Motels, Hotels, RV Parks, Resorts	Restaurants and Bars	Groceries and Supplies	Gasoline and Oil	Vehicle Maintenance and Repair	Entertainment and Recreation Entrance Fees	Souvenirs and Clothing	Retail Sales	
Mean \$	\$ 28.68	\$ 120.00	\$ 115.19	\$ 124.12	\$ 123.57	\$ 106.88	\$ 130.00	\$ 75.11	\$ 60.00	
Median \$	\$ 25.00	\$ 120.00	\$ 55.00	\$ 80.00	\$ 125.00	\$ 107.50	\$ 150.00	\$ 50.00	\$ 50.00	
Minimum \$	\$ 8.00	\$ 40.00	\$ 15.00	\$ 10.00	\$ 40.00	\$ 40.00	\$ 20.00	\$ 10.00	\$ 30.00	
Maximum \$	\$ 150.00	\$ 200.00	\$ 500.00	\$ 300.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 250.00	\$ 100.00	
Range \$	\$ 142.00	\$ 160.00	\$ 485.00	\$ 290.00	\$ 160.00	\$ 160.00	\$ 180.00	\$ 240.00	\$ 70.00	
Total \$	\$ 1,176.00	\$ 240.00	\$ 2,995.00	\$ 2,110.00	\$ 1,730.00	\$ 855.00	\$ 520.00	\$ 2,629.00	\$ 180.00	
Total visitors in this category	44	2	39	43	55	11	4	40	5	
Number of visitors who spent 100% of funds in region	41	2	26	17	14	8	4	35	3	
Percent of visitors who spent 100% of funds in region	93%	100%	67%	40%	25%	73%	100%	88%	60%	

Source: Author's calculations from UDG survey.

**Table 9: Expenditures of Visitors Who Stop Frequently or Always in Local Communities, Yuma**  
n=298

	Type of Expenditures									
	Overnight Camping Permits	Motels, Hotels, RV Parks, Resorts	Restaurants and Bars	Groceries and Supplies	Gasoline and Oil	Vehicle Maintenance and Repair	Entertainment and Recreation Entrance Fees	Souvenirs and Clothing	Retail Sales	
Mean \$	\$ 26.68	\$ 120.00	\$ 75.27	\$ 166.39	\$ 206.09	\$ 513.60	\$ 85.00	\$ 62.77	\$ 177.50	
Median \$	\$ 25.00	\$ 120.00	\$ 50.00	\$ 150.00	\$ 200.00	\$ 90.00	\$ 60.00	\$ 50.00	\$ 130.00	
Minimum \$	\$ 8.00	\$ 40.00	\$ 15.00	\$ 10.00	\$ 40.00	\$ 25.00	\$ 20.00	\$ 10.00	\$ 50.00	
Maximum \$	\$ 150.00	\$ 200.00	\$ 500.00	\$ 500.00	\$ 700.00	\$ 10,000.00	\$ 200.00	\$ 250.00	\$ 400.00	
Range \$	\$ 142.00	\$ 160.00	\$ 485.00	\$ 490.00	\$ 660.00	\$ 9,975.00	\$ 180.00	\$ 240.00	\$ 350.00	
Total \$	\$ 1,254.00	\$ 240.00	\$ 2,785.00	\$ 8,985.00	\$ 11,335.00	\$ 12,840.00	\$ 340.00	\$ 2,699.00	\$ 710.00	
Total visitors in this category	56	3	42	63	66	32	6	47	6	
Number of visitors who stop frequently or always	47	2	37	54	55	25	4	43	4	
Percent of visitors who stop frequently or always	84%	67%	88%	86%	83%	78%	67%	91%	67%	

Source: Author's calculations from UDG survey.

**End of Report**