



American Customer Satisfaction Index

Report on

**U.S. ARMY CORPS OF ENGINEERS
(USACE)**

DEPARTMENT OF DEFENSE

December 2002

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Chapter I

Introduction & Methodology

a. Introduction

This report is on customer satisfaction of residents of the United States who have visited an Army Corps of Engineers lake or river for the purpose of recreation in the past two years. The methodology used for this study is that of the American Customer Satisfaction Index (ACSI) which combines survey input with cause and effect modeling to produce indices of satisfaction, and the drivers and outcomes of satisfaction.

Since 1994, the American Customer Satisfaction Index has been a national indicator of customer evaluations of the quality of goods and services available to U.S. residents. It is the only uniform, cross-industry/government measure of customer satisfaction. It produces indices of satisfaction, its causes and effects, for seven economic sectors, 38 industries, 190 private sector companies, two types of local government services, and the U.S. Postal Service. ACSI allows benchmarking between the public and private sectors, and for each customer segment, between one year's results and the next. While using a common methodology, ACSI produces information unique to each agency on how its activities that interface with the public affect the satisfaction of customers. The effects of satisfaction are estimated, in turn, on specific objectives (such as loyalty in the agency).

This study is produced by the National Quality Research Center at the University of Michigan Business School, CFI Group, and the Federal Consulting Group.

Typically, ACSI researchers will warn that a lag time exists between a company or agency inaugurating an improvement in a program and users becoming both aware of the improvement and evaluating it favorably. Certainly, favorable publicity about a change can impact customer perceptions, but government agencies rarely have public relations and advertising budgets to communicate changes they make.¹ Moreover, negative events or publicity can cause customer satisfaction to drop, and typically have more downward effect than positive events have upward effect. Government agencies are familiar with the effects of controversial Congressional hearings about their work. Thus, the individual agency should keep in mind the potential impact widely communicated events over the past 12 months – both negative and positive – may have had on their customer satisfaction score.

¹ Some exceptions would be the U.S. Army for recruiting, the U.S. Postal Service, and the recent Census Bureau campaign for the 2000 census.

The user needs to take into account that some of the changes expressed in the model are too small to be meaningful, as measurement has some variability. With the survey sample size and modeling methodology used for ACSI, a rise or drop of less than 3 points is not necessarily a change for better or for worse. If an index registers 74 in 2001, but 72 in 2002, the change may be real, but it can also be the result of sampling error. However, if agencies continue to measure their customers' satisfaction over a multi-year period, they will be able to detect trends – hopefully, a rise in satisfaction as agencies become more responsive to the needs and interests of their customers.

The best use agencies can make of their 1999-2002 studies, however, is for learning how customers evaluate the activities they do, then identifying which of these activities has the most impact on the perception of the quality they deliver. This research is a tool with which to prioritize future efforts to improve quality and, through quality, customer satisfaction and the desired outcome – in this case, Visitor Trust in U.S. Army Corps of Engineers lakes and rivers.

b. Overview of ACSI Methodology

ACSI uses a tested, multi-equation, econometric model. The models used for paper filers this year are shown as Figures 1 and 2. Inputs into the cause and effect model come from a survey of tax filers who made their 2001 returns on paper forms. For private sector industries, company scores for satisfaction (ACSI) and other model components are weighted by company revenues to produce industry indices. Industry indices are weighted by revenues to produce economic sector indices. The sector indices, in turn, are weighted by the sector's contribution to the Gross Domestic Product (GDP) to produce the national ACSI. Similarly, each government agency is weighted by the budget expended on its activities for the measured customer segment to produce a Public Administration sector ACSI.

The ACSI is updated on a rolling basis with data from two or more economic sectors collected each quarter and used to replace data collected the prior year. Similarly, each government agency is measured annually, and the government-wide score is updated annually in mid-December (December 16, 2002).

Each federal government agency serves many segments of the public, both those internal to government and external users. For the ACSI measurement, each agency was asked to identify a major customer user segment, central to its mission, for which to measure satisfaction, and the causes and effects of that satisfaction.

c. Customer Segment Choice

U.S Army Corps of Engineers (USACE) chose as its customer segment residents of U.S. who have visited an Army Corps of Engineers lake or river for the purpose of recreation in the past two years.

d. Customer Sample

Replicate, national, random-digit-dial samples of telephone households were selected for screening. Random-digit-dial (RDD) assures inclusion of both listed and unlisted telephones in proportion to the number of filled numbers in each area code and exchange.

At each household, the adult to be interviewed was selected as the individual who had a birthday closest to the date of interview. That adult was then asked if he or she had visited a recreation lake or river site within the past two years. If that adult said, "Yes," he or she was then asked, "What is the name of the area you visited most recently and in what state was that?" The site was matched against a computerized database of all USACE sites accessible to the interviewer. The site identified by the respondent was compared with this database to assure that the visited site was an actual USACE site. The list of sites visited in the survey is shown at the beginning of Appendix B.

Using the above procedure, two hundred and forty-nine (249) interviews were completed.

e. Questionnaire and Interviewing

The questionnaire used is shown in Appendix A. It was designed to be agency-specific in terms of activities and outcomes, and introductions to the questionnaire and to specific question areas. However, it follows a format common to all federal agency questionnaires, one that allows cause and effect modeling using the ACSI model.

Customer interviews were conducted by telephone between mid November and early December, 2002, by the professional interviewers of Market Strategies, Inc. working under monitored supervision from a central phone room. Interviewers used CATI (computer-assisted-telephone-interviewing) terminals programmed for the specific questionnaire.

f. Customer Responses

Customer responses to all questions are shown as frequency tables in Appendix B. Appendix B also shows the means of all scaled questions.

A demographic profile of those who responded to the USACE survey shows that 42.1% are males, 57.9% females. By age, 11.1% are under 25; 11.8% are 25-34; 23.3% are 35-44; 27.3% are 45-54; 17% are 55-64 and 9.5% are 65 or over.

Education levels are: 12.2% have post-graduate education; 22.8% are college graduates; 37% have some college or associate degree; 23.6% are high school graduates and 4.3% have less than a high school diploma.

Ethnically, 3.6% are Hispanic, Latino or Spanish. Racially, 89.3% are white; 4.4% African American; 2% American Indian/Alaskan; less than 1% Asian and 4% report "other race."

63.9% have household incomes of \$60,000 or lower; 9.3% have incomes of \$100,000 or higher and 13.2% report incomes of less than \$20,000.

Chapter II

ACSI Results

a. Model Indices

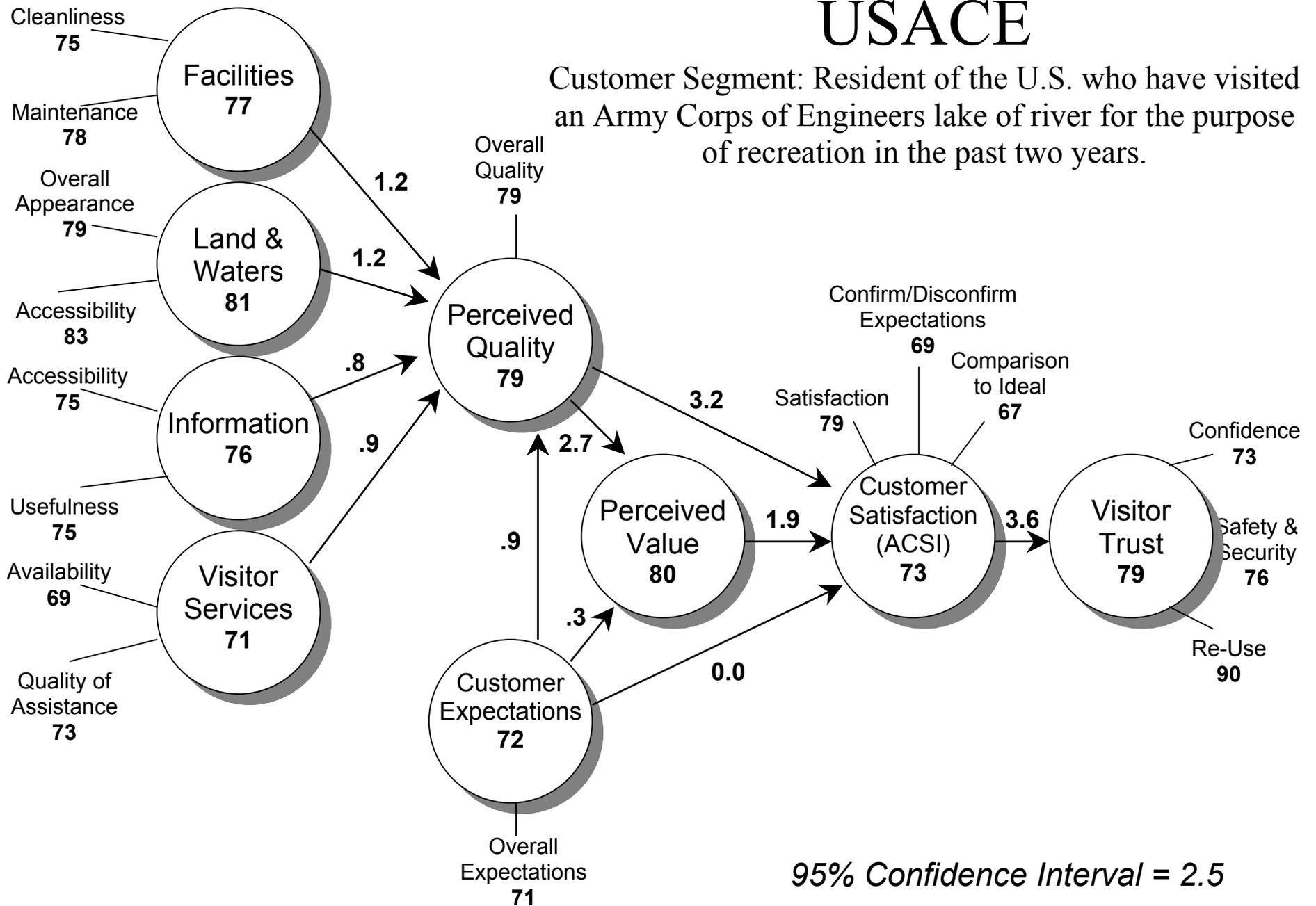
The government agency ACSI model is a variation of the model used to measure private sector companies. Both were developed at the National Quality Research Center of the University of Michigan Business School. Whereas the model for private sector, profit-making, companies measures Customer Loyalty as the principal outcome of satisfaction (measured by questions on repurchase intention and price tolerance), each government agency defined the outcome most important to it for the customer segment measured. Each agency also identified the principal activities that interface with its customers. The effects of these activities on customer satisfaction/dissatisfaction are estimated by the model.

Thus the model, shown in Figure 1 for USACE, should be viewed as a cause and effect model that moves from left to right, with Customer Satisfaction (ACSI) in the middle. The circles are multi-variable components that are measured by multiple questions (question topics are shown at the tips of the small arrows). The large arrows connecting the components in the circles represent the strength of the effect of the component on the left to the one to which the arrow points on the right. These arrows represent "impacts." The larger the number on the arrow, the more effect the component on the left has on the one on the right.

The 2002 USACE model for residents of the U.S. who have visited an Army Corps of Engineers lake or river for the purpose of recreation in the past two years is shown as Figure 1. The meanings of the numbers shown in the model are the topic of the rest of this chapter.

Figure 1 USACE

Customer Segment: Resident of the U.S. who have visited an Army Corps of Engineers lake of river for the purpose of recreation in the past two years.



95% Confidence Interval = 2.5

b. Satisfaction: ACSI

The ACSI is a weighted average of three questions, Q11, Q12, and Q13, in the questionnaire in Appendix A. The questions are answered on 1-10 scales, but the weighted average is transposed and reported as an index on a 0-100 scale.² The three questions measure: Overall satisfaction (Q11); Fallen short of or exceeded expectations (Q12); and Comparison to an ideal (Q13). The model does the weighting to maximize the effect of satisfaction on the agency outcome at the bottom right of the model in Figure 1.

The 2002 Customer Satisfaction (ACSI) score for residents of the U.S. who have visited an Army Corps of Engineers lake or river for the purpose of recreation in the past two years is 73 on a 0-100 scale. This is a 2-point increase over last year's Customer Satisfaction (ACSI) score of 71. While the ACSI methodology only considers a change of 3 points statistically significant, this 2-point increase might very well indicate an upwards trend for USACE. Furthermore, this score is slightly higher than the national ACSI score for private sector services of 71.6 as of the end of the third quarter of 2002 and slightly above the 2002 Federal government index of 70.2.

c. Drivers of Satisfaction

In conjunction with ACSI researchers, USACE identified four activities that interface with its visitors for measurement. These are the same four "drivers" of satisfaction selected for the first USACE study. These drivers are: Facilities, measured by questions on the cleanliness (Q2) and overall maintenance (Q3) of USACE facilities; Land & Water, measured by questions on the overall appearance (Q4) and the accessibility (Q5) of the lakes and waters at USACE sites; Information, measured by questions on the accessibility (Q6) and usefulness (Q7) of information USACE provided to visitors; and Visitor Services, measured by questions on the availability (Q8) and quality (Q9) of assistance provided visitors to USACE sites. The indices for each of the three activities are weighted averages of these questions.

Three other components are major drivers of satisfaction. The first is the customer's expectations of the overall quality of USACE as an agency with which to do business -- expectations prior to use or, for longer term users, prior to recent use (Q1). The second is his/her perception of the overall quality of USACE as an agency with which to do business after having had experience doing such business. (Q10). The third is the customer's perceptions of the value of the product and services received -- including both the customer's perceptions of the price given the quality (Q10a), and the quality given the price (Q10b).

² The confidence interval for this agency's customer segment is plus or minus 2.5 points on a 0-100 scale at the 95% confidence level.

Table 1: Drivers of Satisfaction		
Activities That Drive Satisfaction:		
	2002	2001
FACILITIES	77	73
LAND & WATERS	81	79
INFORMATION	76	71
VISITOR SERVICES	71	66
Major Drivers of Satisfaction		
PERCEIVED VALUE	80	NM
CUSTOMER EXPECTATIONS (Anticipated Quality)	72	69
PERCEIVED QUALITY (Experienced Quality)	79	76

As the above table indicates, USACE registers significant increases for each of its drivers of satisfaction this year from last, with the lone exception being the Lands & Waters component (which is up only 2 points). In short, visitors to USACE lakes or rivers are more pleased with certain key services and “products” available at these sites this year than they were last year.

Among the four USACE-identified activities which drive satisfaction, Land & Waters again scores the highest at 81 (compared to 79 last year). However, given the relatively small increase in this variable when compared to the gains registered by the other components, Land & Waters no longer stands out amongst the drivers of satisfaction. In fact, in this year’s USACE study, the spread between the highest and lowest driver of satisfaction has narrowed to 10 points (between Land & Waters and Visitors Services), down from 13 last year. In effect, USACE customers are beginning to rate the quality of Visitor Services, Information and Facilities closer to the high ratings they give Land & Waters. Of the two variables which comprise the Land & Waters component score, respondents scored the overall appearance of the land and waters (79) lower than the accessibility of the land and waters (83).³

This year, the Facilities component registered a significant 4-point increase, moving up to 77 from last year’s 73. The Facilities component is again the second-highest scoring driver of satisfaction in USACE’s model. Visitors find these facilities reasonably clean and well maintained; both drivers score similarly at 75 and 78, respectively.

Information has the third highest score at 76, up a large and statistically significant 5 points from last year’s study. After this large gain, Information is now rated nearly as well by USACE’s

³ While in the past we have reported the variable scores that combine to produce the component scores as means for all respondents, this year we have changed this practice and begun reporting adjusted scores for each question. This practice facilitates better comparison between variables and between the variables and the component scores themselves. The formula used to adjust the means is as follows: $(\text{mean}-1)/9 * 100 = \text{adjusted score}$. Thus, last year’s mean of 8.1 for overall appearance of land and waters would now be reported as an adjusted score of 79, last year’s mean for accessibility of land and waters of 8.2 would now be reported as an adjusted 80, and so forth. This formula can be reversed to produce means (i.e. $(80/100) * 9 + 1 = 8.2$), and the raw means are listed in Appendix B.

visitors as are the facilities and the conditions of the land and water. Respondents rate the information provided by the Army Corps of Engineers, such as visitor information and signs, both relatively accessible and useful (each scores 75).

Visitor Services has the lowest score of any of the drivers of satisfaction at 71, but it too registers a large 5 point increase over last year. Respondents rate the availability of visitor services (69) slightly below quality of assistance (73) they receive from visitor services.

A new component added to the model this year is the Perceived Value component. Typically excluded from Federal government agency models, but a central measurement in the private sector ACSI model, the Perceived Value component measures customer perceptions of the value of the goods or services received (both price in relation to quality and quality in relation to price). In this instance, customers are being asked to evaluate the value of USACE recreational site fees. This important driver of satisfaction scores an 80 for USACE. This is a statistically significant 7 points higher than the current private sector Perceived Value aggregate score of 73. In short, visitors to USACE sites believe they are both getting a lot out of what they pay and paying a small amount for what they are getting.

Finally, both Customer Expectations (the quality of products and services the customer anticipates receiving) and Perceived Quality (the quality of products and services the customer actually experienced) register statistically significant 3-points gains this year. This outcome is to be expected, given that Customer Expectations scores significantly below Perceived Quality. As customers visit USACE sites over time and find greater quality of products and services than they had anticipated, they will adjust their expectations to match this prior experience. In effect, USACE visitors are receiving greater quality from these recreational sites than they had anticipated, and are therefore expecting more on their next visit. What USACE must be mindful of, however, is that with higher expectations comes a greater need to meet the demands of the visitor; any slippage in experienced quality will certainly be met with lower Perceived Quality scores and lower Customer Satisfaction (ACSI) scores.

d. Outcomes of Customer Satisfaction

Customer Complaints

USACE personnel decided not to measure customer complaints this year, and thus no analysis is possible. However, considering the exceptionally low 1.1% of respondents who had indicated that they complained to USACE in last year's study, little meaningful analysis would probably have been possible this year as well.

Visitor Trust

The outcome USACE wants from satisfied customers is Visitor Trust. Visitor Trust for this modeling was measured by three questions: how confident are you that the Army Corps of Engineers will do a good job in the future of providing recreational sites on lakes and rivers? (Q15); how safe

and secure do you feel visiting a USACE recreational site (Q15a); and how likely is it that you will visit an Army Corps of Engineers recreation site again in the future? (Q16).

The index of Visitor Trust is 79 on a 0-100 scale. This is the same score USACE received in last year's study. Moreover, this score is 6 points higher than the overall satisfaction score and a relatively high index for Trust. Visitors indicate that they are reasonably confident that USACE will do a good job in the future (score of 73). Moreover, visitors feel relatively safe and secure while visiting USACE recreational sites (score of 76) Finally, the index for Visitor Trust is pushed considerably higher due to visitors indicating they are very likely to again visit USACE recreational sites (score of 90). A conversion of the re-use question indicates that 82.5% will use the service again, which is a high re-use proportion for any product or service in the private or public sector.

e. Using the Model

Now, it is time to look again at the model for USACE in Figure 1 to examine the multivariate components in context, and to look at the effects, or "impact" of each component on subsequent components.

In this year's study, Land & Water and Facilities have an equal impact on Perceived Quality, both registering a 1.2. While these equal impacts indicate that customers see an equally strong relationship between quality and each of these two components, the Facilities component scores lower (77 compared to 81). Simply put, a lower rated component is typically easier to improve than a component which customers already rate high, and thus Facilities would be an ideal area for improvement efforts.⁴

Impact scores should be read as the effect on the subsequent component if the component at the tail of the arrow were to be improved by 5 points. Thus if Facilities were improved by 5 points (from 77 to 82), Perceived Quality would go up from 79 to 80.2. Customer Satisfaction (ACSI) would, in turn increase by 1.0 to become 74.⁵

Perceived Quality has a very strong impact on satisfaction. A 5-point improvement in quality would raise satisfaction by 3.2 points to a 75.5. In turn, Customer satisfaction has a strong impact on visitor trust (3.8).

⁴ These suggestions are in large part hypothetical, and are derived only from the logic of the ACSI methodology. It is incumbent on each agency to decide in which area improvement efforts should be focused, as improvement expenditures are typically not stable across different measured activities. Nevertheless, *holding improvement costs constant*, Facilities provides the area where improvement efforts should yield the greatest return in positive customer perceptions for USACE's investment.

⁵ The computation is: Impact of Perceived Quality on ACSI (Impact of Land and Water on Perceived Quality/5) or $3.2(1.2/5)=.8$ + Impact of Perceived Value on ACSI (Increase in Perceived Value from Perceived Quality/5) or $1.9(.6/5)=.2$. $.8+.2=1$.

f. Summary

In large part, USACE should be very pleased with its gains this year over last. The data collected this year indicates that customers saw statistically significant improvement in nearly every driver of satisfaction (with the lone exception of Land & Waters, which was up 2 points). Customers were particularly more pleased this year with the quality of assistance and availability of Visitor Services and the accessibility and usefulness of Information when compared with last year. Both of these drivers registered large 5-point increases.

A new component taken from the ACSI private sector model, Perceived Value, was included in USACE's model this year. Debuting with a score of 80, customers indicate that they rate the value of USACE lakes and rivers quite high. Given this component's strong impact on Customer Satisfaction (particularly as an intermediary between Perceived Quality and Customer Satisfaction), this component is very instructive. In short, should USACE continue to provide a similar value, satisfaction will remain steady. Should USACE need to raise fees or costs, or decrease the range or quality of services offered, however, a negative impact on Customer Satisfaction (ACSI) might result.

USACE's Customer Satisfaction (ACSI) was up 2 points this year. While ACSI methodology does not necessarily consider this a significant increase, given the increases in the drivers of satisfaction this 2-point swing probably does reflect a greater level of customer satisfaction with USACE lakes and rivers. Should USACE sustain improvements in the quality of services measured, future measurement should reveal whether this increase was in fact real.

USACE should focus on the Visitor Services component towards increasing its Customer Satisfaction (ACSI) score. This variable is the lowest scoring driver of satisfaction in the model, and while it does not have the largest impact on Perceived Quality of any component in the model, its impact is relatively high (.9). Moreover, given this component's relatively low score, it should be easier to increase with concerted effort, and thus to affect an appreciable increase in Perceived Quality. Of the two variables comprising this component, the availability of Visitor Services scores the lowest, and may provide the best area to focus improvement efforts.

All things considered, USACE has performed admirably over the past 12 months and should work to sustain and institutionalize any improvement efforts made.

APPENDIX A
SURVEY QUESTIONNAIRE

**2002 ACSI Questionnaire for
U.S. Army Corps of Engineers (USACE)
Department of Defense**

Scn33a. The United States Government manages several types of recreational lake and river sites for vacationing, sightseeing, hiking, fishing, boating, education and other recreational uses. In the past two years have you visited any recreation lake or river site?

- 1 Yes
- 2 No (TERMINATE)
- 98 Don't know (TERMINATE)
- 99 Refused (TERMINATE)

Scn33b. What is the name of the area you visited most recently and in what state was that?

(PROGRAMMING NOTE: IF POSSIBLE, WE WANT LISTS FOR SCREENER 33A TO BE SET-UP BY STATE SO TECHS CAN LOOK-UP SITES BY STATE. ALTERNATIVELY, SET-UP ONE LIST THAT TECHS CAN SCROLL THROUGH BY STATE TO FIND WILDLIFE REFUGE SITES)

(CHECK NAME AGAINST ARMY CORPS OF ENGINEERS DATABASE. IF IT MATCHES A NAME OR PLACE, CONTINUE; OTHERWISE, PROBE FOR OTHER SITES OR TERMINATE)

Now, I am going to ask you some questions about the Army Corps of Engineers recreation site with which you have had experience. By experience I mean visiting an Army Corps of Engineers recreation site for sightseeing, camping, fishing, hiking, boating, picnicking, or any other use in the past two years.

Q1. Before you visited the Army Corps of Engineers recreation site, you probably knew something about this site. Now think back and remember your expectations of the overall quality of that recreation site. Please give me a rating on a 10 point scale on which "1" means your expectations were "not very high" and "10" means your expectations were "very high."

How would you rate your expectations of the overall quality of the Army Corps of Engineers recreation site?

[RECORD RATING 1-10]

- 98 Don't know
- 99 Refused

Now, let's think about the facilities at the Army Corps of Engineers recreation site such as restrooms, buildings, trails, roads or paths, picnic grounds, campgrounds...

Q2. How clean were the facilities? Again, we will use a 10 point scale on which "1" means "not very clean" and "10" means "very clean." How clean were the facilities?

[RECORD RATING 1-10]

98 Don't know
99 Refused

Q3. Apart from cleanliness, how would you rate the condition and appearance of the facilities? Using a 10 point scale on which "1" means "poor" and "10" means "excellent," how would you rate the condition and appearance of the facilities?

[RECORD RATING 1-10]

98 Don't know
99 Refused

And next, considering the lands and waters at the Army Corps of Engineers recreation site...

Q4. How would you rate the overall appearance of the lands and waters? Using a 10 point scale on which "1" means "poor" and "10" means "excellent," how would you rate the overall appearance of the lands and waters?

[RECORD RATING 1-10]

98 Don't know
99 Refused

Q5. How accessible were the land and waters? Using a 10-point scale on which "1" means "not at all accessible" and "10" means "very accessible" how accessible were the lands and waters?

[RECORD RATING 1-10]

98 Don't know
99 Refused

And thinking about information provided by the Army Corps of Engineers such as visitor information and signs...

- Q6. How accessible was information about recreational sites managed by the Army Corps of Engineers? Using a 10-point scale on which "1" means "not at all accessible" and "10" means "very accessible" how accessible was information about Army Corps of Engineers recreational sites?

[RECORD RATING 1-10]

98 Don't know
99 Refused

- Q7. How useful was the information you obtained about Army Corps of Engineers recreational sites? Using a 10-point scale on which "1" means "not at all useful" and "10" means "very useful" how useful was information about Army Corps of Engineers recreational sites?

[RECORD RATING 1-10]

98 Don't know
99 Refused

And thinking about the visitor services at the Army Corps of Engineers recreational site you visited...

- Q8. How would you rate the availability of visitor services at that recreational site? Using a 10 point scale on which "1" means "poor" and "10" means "excellent," how would you rate the availability of visitor services?

[RECORD RATING 1-10]

98 Don't know
99 Refused

- Q9. How would you rate the quality of the visitor services in terms of providing useful information and assistance you needed? Using a 10 point scale on which "1" means "very poor quality" and "10" means "very high quality," how would you rate the quality of the visitor services?

[RECORD RATING 1-10]

98 Don't know
99 Refused

Q10. Please consider all your experiences in the past two years with Army Corps of Engineers recreational sites. Using a 10 point scale, on which "1" means "very poor quality" and "10" means "very high quality," how would you rate the OVERALL QUALITY of Army Corps of Engineers recreational sites?

[RECORD RATING 1-10]

98 Don't know
99 Refused

(RANDOMIZE Q10A AND Q10B)

Q10A. (FIRST/NEXT) Given the quality of the Army Corps of Engineers site you visited, how would you rate the recreational fees that you paid? Please use a 10 point scale on which "1" means "very poor price given the quality" and "10" means "very good price given the quality."

[RECORD RATING 1 - 10]: _____

11 Don't know
12 Refused

Q10B. (FIRST/NEXT) Given the recreational fees that you paid when you visited an Army Corps of Engineers site, how would you rate the quality of the recreational site? Please use a 10 point scale on which "1" means "very poor quality given the price" and "10" means "very good quality given the price."

[RECORD RATING 1 - 10]: _____

11 Don't know
12 Refused

Satisfaction includes many things. Let's move on and talk about your overall satisfaction with Army Corps of Engineers recreational sites ...

Q11. First, please consider all your experiences to date with Army Corps of Engineers recreational sites. Using a 10 point scale on which "1" means "very dissatisfied" and "10" means "very satisfied," how *satisfied* are you with Army Corps of Engineers recreational sites?

[RECORD RATING 1-10]

98 Don't know
99 Refused

Q12. Considering all of your expectations, to what extent have Army Corps of Engineers recreational sites fallen short of or exceeded your expectations? Using a 10-point scale on which "1" now means "falls short of your expectations" and "10" means "exceeds your expectations," to what extent have Army Corps of Engineers recreational sites fallen short of or exceeded your expectations?

[RECORD RATING 1-10]

98 Don't know
99 Refused

Q13. Forget the Army Corps of Engineers for a moment. Now, I want you to imagine an ideal agency that provides sites for public recreation on lakes and rivers. (PAUSE) How well do you think the Army Corps of Engineers compares with that ideal agency? Please use a 10- point scale on which "1" means "not very close to the ideal," and "10" means "very close to the ideal."

[RECORD RATING 1-10]

98 Don't know
99 Refused

Q14. Not Asked

Q14A. Not Asked

Q14B. Not Asked

Q15. How confident are you that the Army Corps of Engineers will do a good job in the future of providing recreational sites on lakes and rivers? Using a 10-point scale on which "1" means "not at all confident" and "10" means "very confident," how confident are you that the Army Corps of Engineers will do a good job providing recreational sites?

[RECORD RATING 1-10]

98 Don't know
99 Refused

Q15A. Thinking about safety and security at recreational sites managed by the Army Corps of Engineers, how safe and secure do you feel at Army Corps of Engineers recreational sites? Using a 10-point scale on which "1" means "not at all safe and secure" and "10" means "very safe and secure," how safe and secure do you feel at Army Corps of Engineers recreational sites?

[RECORD RATING 1-10]

98 Don't know
99 Refused

Q16. How likely is it that you will visit an Army Corps of Engineers recreation site again in the future? Using a 10 point scale on which "1" means "very unlikely" and "10" means "very likely," how likely is it that you will visit a Army Corps of Engineers recreation site in the future?

[RECORD RATING 1-10]

- 98 Don't know
- 99 Refused

APPEND NAME OF USACE SITE VISITED

Now, we need to ask a few demographic questions for the ACSI consumer profile...

D1. What is your age, please?

[RECORD NUMBER OF YEARS] _____

- 98 Don't know
 - 99 Refused
-

D2. What is the highest level of formal education you completed? (READ CODES 1-5)

- 1 Less than high school
 - 2 High school graduate
 - 3 Some college or associate degree
 - 4 College graduate
 - 5 Post-Graduate
 - 98 Don't know
 - 99 Refused
-

D3. Are you of Hispanic, Latino or Spanish origin?

- 1 Yes
 - 2 No
 - 98 Don't know
 - 99 Refused
-

D4. Do you consider your race(s) as: (READ CODES 1-4, ACCEPT UP TO FIVE MENTIONS)

- 1 White
 - 2 Black/African American
 - 3 American Indian/Alaskan
 - 4 Asian
 - 5 Native Hawaiian or Pacific Islander
 - 6 Other Race [VOL]
 - 98 Don't know
 - 99 Refused
-

D5. What was your total annual family income in 2001 before taxes? (READ COODES 1-7)

- 1 Under \$20,000
 - 2 \$20,000 but less than \$30,000
 - 3 \$30,000 but less than \$40,000
 - 4 \$40,000 but less than \$60,000
 - 5 \$60,000 but less than \$80,000
 - 6 \$80,000 but less than \$100,000
 - 7 \$100,000 or more
 - 98 Don't know
 - 99 Refused
-

D6. [RECORD GENDER BY OBSERVATION]

- 1 Male
 - 2 Female
-

APPENDIX B
FREQUENCIES AND MEANS OF SURVEY QUESTIONS

Q1. Before you visited the Army Corps of Engineers recreation site, you probably knew something about this site. Now think back and remember your expectations of the overall quality of that recreation site. Please give me a rating on a 10 point scale on which "1" means your expectations were "not very high" and "10" means your expectations were "very high."

How would you rate your expectations of the overall quality of the Army Corps of Engineers recreation site?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	1.2	1.2	1.2
	2	2	.8	.8	2.0
	3	3	1.2	1.2	3.2
	4	7	2.8	2.8	6.0
	5	26	10.2	10.3	16.3
	6	20	7.9	7.9	24.2
	7	43	16.9	17.1	41.3
	8	94	37.0	37.3	78.6
	9	18	7.1	7.1	85.7
	10	36	14.2	14.3	100.0
Don't know	98	2	.8	Missing	
Total		254	100.0	100.0	

Mean 7.417

Valid cases 252 Missing cases 2

Q2. How clean were the facilities? Again, we will use a 10 point scale on which "1" means "not very clean" and "10" means "very clean." How clean were the facilities?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	1.2	1.2	1.2
	3	4	1.6	1.6	2.9
	4	2	.8	.8	3.7
	5	18	7.1	7.3	11.0
	6	26	10.2	10.6	21.6
	7	32	12.6	13.1	34.7
	8	78	30.7	31.8	66.5
	9	35	13.8	14.3	80.8
	10	47	18.5	19.2	100.0
Don't know	98	9	3.5	Missing	
Total		254	100.0	100.0	

Mean 7.763

Valid cases 245 Missing cases 9

Q3. Apart from cleanliness, how would you rate the condition and appearance of the facilities? Using a 10 point scale on which "1" means "poor" and "10" means "excellent," how would you rate the condition and appearance of the facilities?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	.4	.4	.4
	2	1	.4	.4	.8
	3	1	.4	.4	1.2
	4	7	2.8	2.8	4.0
	5	12	4.7	4.8	8.8
	6	12	4.7	4.8	13.5
	7	41	16.1	16.3	29.9
	8	76	29.9	30.3	60.2
	9	41	16.1	16.3	76.5
	10	59	23.2	23.5	100.0
Don't know	98	3	1.2	Missing	
		-----	-----	-----	
Total		254	100.0	100.0	

Mean 8.048

Valid cases 251 Missing cases 3

Q4. How would you rate the overall appearance of the lands and waters? Using a 10 point scale on which "1" means "poor" and "10" means "excellent," how would you rate the overall appearance of the lands and waters?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	.4	.4	.4
	2	4	1.6	1.6	2.0
	3	4	1.6	1.6	3.6
	4	6	2.4	2.4	5.9
	5	7	2.8	2.8	8.7
	6	14	5.5	5.5	14.2
	7	21	8.3	8.3	22.5
	8	87	34.3	34.4	56.9
	9	37	14.6	14.6	71.5
	10	72	28.3	28.5	100.0
Don't know	98	1	.4	Missing	
		-----	-----	-----	
Total		254	100.0	100.0	

Mean 8.142

Valid cases 253 Missing cases 1

Q5. How accessible were the land and waters? Using a 10-point scale on which "1" means "not at all accessible" and "10" means "very accessible" how accessible were the lands and waters?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	.4	.4	.4
	2	1	.4	.4	.8
	3	3	1.2	1.2	2.0
	4	5	2.0	2.0	4.0
	5	11	4.3	4.3	8.3
	6	14	5.5	5.5	13.8
	7	23	9.1	9.1	22.9
	8	55	21.7	21.7	44.7
	9	37	14.6	14.6	59.3
	10	103	40.6	40.7	100.0
Don't know	98	1	.4	Missing	
		-----	-----	-----	
		Total	254	100.0	100.0

Mean 8.439

Valid cases 253 Missing cases 1

Q6. How accessible was information about recreational sites managed by the Army Corps of Engineers? Using a 10-point scale on which "1" means "not at all accessible" and "10" means "very accessible" how accessible was information about Army Corps of Engineers recreational sites?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	1.2	1.2	1.2
	2	1	.4	.4	1.6
	3	6	2.4	2.4	4.0
	4	4	1.6	1.6	5.6
	5	29	11.4	11.6	17.3
	6	15	5.9	6.0	23.3
	7	29	11.4	11.6	34.9
	8	64	25.2	25.7	60.6
	9	31	12.2	12.4	73.1
	10	67	26.4	26.9	100.0
Don't know	98	5	2.0	Missing	
		-----	-----	-----	
		Total	254	100.0	100.0

Mean 7.783

Valid cases 249 Missing cases 5

Q7. How useful was the information you obtained about Army Corps of Engineers recreational sites? Using a 10-point scale on which "1" means "not at all useful" and "10" means "very useful" how useful was information about Army Corps of Engineers recreational sites?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	5	2.0	2.1	2.1
	2	5	2.0	2.1	4.1
	3	4	1.6	1.7	5.8
	4	5	2.0	2.1	7.9
	5	21	8.3	8.7	16.6
	6	17	6.7	7.1	23.7
	7	29	11.4	12.0	35.7
	8	56	22.0	23.2	58.9
	9	22	8.7	9.1	68.0
	10	77	30.3	32.0	100.0
Don't know	98	12	4.7	Missing	
Refused	99	1	.4	Missing	
		-----	-----	-----	
Total		254	100.0	100.0	

Mean 7.772

Valid cases 241 Missing cases 13

Q8. How would you rate the availability of visitor services at that recreational site? Using a 10 point scale on which "1" means "poor" and "10" means "excellent," how would you rate the availability of visitor services?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	7	2.8	2.9	2.9
	2	4	1.6	1.7	4.6
	3	5	2.0	2.1	6.7
	4	10	3.9	4.2	10.8
	5	23	9.1	9.6	20.4
	6	26	10.2	10.8	31.3
	7	44	17.3	18.3	49.6
	8	51	20.1	21.3	70.8
	9	30	11.8	12.5	83.3
	10	40	15.7	16.7	100.0
Don't know	98	12	4.7	Missing	
Refused	99	2	.8	Missing	
		-----	-----	-----	
Total		254	100.0	100.0	

Mean 7.196

Valid cases 240 Missing cases 14

Q9. How would you rate the quality of the visitor services in terms of providing useful information and assistance you needed? Using a 10 point scale on which "1" means "very poor quality" and "10" means "very high quality," how would you rate the quality of the visitor services?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	4	1.6	1.7	1.7
	2	3	1.2	1.3	2.9
	3	3	1.2	1.3	4.2
	4	8	3.1	3.3	7.5
	5	25	9.8	10.4	17.9
	6	20	7.9	8.3	26.3
	7	31	12.2	12.9	39.2
	8	62	24.4	25.8	65.0
	9	32	12.6	13.3	78.3
	10	52	20.5	21.7	100.0
Don't know	98	13	5.1	Missing	
Refused	99	1	.4	Missing	
	Total	254	100.0	100.0	

Mean 7.571

Valid cases 240 Missing cases 14

Q10. Please consider all your experiences in the past two years with Army Corps of Engineers recreational sites. Using a 10 point scale, on which "1" means "very poor quality" and "10" means "very high quality," how would you rate the OVERALL QUALITY of Army Corps of Engineers recreational sites?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	.4	.4	.4
	3	1	.4	.4	.8
	4	5	2.0	2.0	2.8
	5	14	5.5	5.5	8.3
	6	12	4.7	4.7	13.0
	7	38	15.0	15.0	28.0
	8	77	30.3	30.3	58.3
	9	45	17.7	17.7	76.0
	10	61	24.0	24.0	100.0
	Total	254	100.0	100.0	

Mean 8.122

Valid cases 254 Missing cases 0

Q10A. Given the quality of the Army Corps of Engineers site you visited, how would you rate the recreational fees that you paid? Please use a 10 point scale on which "1" means "very poor price given the quality" and "10" means "very good price given the quality."

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	1.2	1.3	1.3
	2	2	.8	.8	2.1
	3	2	.8	.8	3.0
	4	2	.8	.8	3.8
	5	22	8.7	9.3	13.1
	6	12	4.7	5.1	18.1
	7	34	13.4	14.3	32.5
	8	49	19.3	20.7	53.2
	9	29	11.4	12.2	65.4
	10	82	32.3	34.6	100.0
Don't know	98	15	5.9	Missing	
Refused	99	2	.8	Missing	
		-----	-----	-----	
Total		254	100.0	100.0	

Mean 8.076

Valid cases 237 Missing cases 17

Q10B. Given the recreational fees that you paid when you visited an Army Corps of Engineers site, how would you rate the quality of the recreational site? Please use a 10 point scale on which "1" means "very poor quality given the price" and "10" means "very good quality given the price."

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	.4	.4	.4
	2	2	.8	.8	1.3
	3	2	.8	.8	2.1
	4	3	1.2	1.3	3.3
	5	13	5.1	5.4	8.8
	6	14	5.5	5.9	14.6
	7	31	12.2	13.0	27.6
	8	61	24.0	25.5	53.1
	9	26	10.2	10.9	64.0
	10	86	33.9	36.0	100.0
Don't know	98	14	5.5	Missing	
Refused	99	1	.4	Missing	
		-----	-----	-----	
Total		254	100.0	100.0	

Mean 8.247

Valid cases 239 Missing cases 15

Q11. First, please consider all your experiences to date with Army Corps of Engineers recreational sites. Using a 10 point scale on which "1" means "very dissatisfied" and 10 means "very satisfied," how satisfied are you with Army Corps of Engineers recreational sites?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	3	1.2	1.2	1.2
	2	2	.8	.8	2.0
	3	1	.4	.4	2.4
	4	2	.8	.8	3.1
	5	16	6.3	6.3	9.4
	6	14	5.5	5.5	15.0
	7	31	12.2	12.2	27.2
	8	75	29.5	29.5	56.7
	9	37	14.6	14.6	71.3
	10	73	28.7	28.7	100.0
	Total	254	100.0	100.0	

Mean 8.118

Valid cases 254 Missing cases 0

Q12. Considering all of your expectations, to what extent have Army Corps of Engineers recreational sites fallen short of or exceeded your expectations? Using a 10-point scale on which "1" now means "falls short of your expectations" and "10" means "exceeds your expectations," to what extent have Army Corps of Engineers recreational sites fallen short of or exceeded your expectations?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	5	2.0	2.0	2.0
	2	4	1.6	1.6	3.6
	3	5	2.0	2.0	5.5
	4	5	2.0	2.0	7.5
	5	37	14.6	14.6	22.1
	6	25	9.8	9.9	32.0
	7	36	14.2	14.2	46.2
	8	73	28.7	28.9	75.1
	9	25	9.8	9.9	85.0
	10	38	15.0	15.0	100.0
Don't know	98	1	.4	Missing	
	Total	254	100.0	100.0	

Mean 7.209

Valid cases 253 Missing cases 1

Q13. Forget the Army Corps of Engineers for a moment. Now, I want you to imagine an ideal agency that provides sites for public recreation on lakes and rivers. (PAUSE) How well do you think the Army Corps of Engineers compares with that ideal agency? Please use a 10-point scale on which "1" means "not very close to the ideal," and "10" means "very close to the ideal."

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	11	4.3	4.5	4.5
	2	1	.4	.4	4.9
	3	9	3.5	3.7	8.5
	4	11	4.3	4.5	13.0
	5	26	10.2	10.6	23.6
	6	23	9.1	9.3	32.9
	7	41	16.1	16.7	49.6
	8	63	24.8	25.6	75.2
	9	26	10.2	10.6	85.8
	10	35	13.8	14.2	100.0
Don't know	98	8	3.1	Missing	
		-----	-----	-----	
Total		254	100.0	100.0	

Mean 7.020

Valid cases 246 Missing cases 8

Q15. How confident are you that the Army Corps of Engineers will do a good job in the future of providing recreational sites on lakes and rivers? Using a 10-point scale on which "1" means "not at all confident" and "10" means "very confident," how confident are you that the Army Corps of Engineers will do a good job providing recreational sites?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	10	3.9	4.0	4.0
	2	6	2.4	2.4	6.3
	3	9	3.5	3.6	9.9
	4	6	2.4	2.4	12.3
	5	20	7.9	7.9	20.2
	6	11	4.3	4.4	24.6
	7	32	12.6	12.7	37.3
	8	58	22.8	23.0	60.3
	9	24	9.4	9.5	69.8
	10	76	29.9	30.2	100.0
Don't know	98	2	.8	Missing	
		-----	-----	-----	
Total		254	100.0	100.0	

Mean 7.552

Valid cases 252 Missing cases 2

Q15A. Thinking about safety and security at recreational sites managed by the Army Corps of Engineers, how safe and secure do you feel at Army Corps of Engineers recreational sites? Using a 10-point scale on which "1" means "not at all safe and secure" and "10" means "very safe and secure," how safe and secure do you feel at Army Corps of Engineers recreational sites?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	4	1.6	1.6	1.6
	2	6	2.4	2.4	4.0
	3	3	1.2	1.2	5.1
	4	6	2.4	2.4	7.5
	5	13	5.1	5.1	12.6
	6	20	7.9	7.9	20.6
	7	38	15.0	15.0	35.6
	8	60	23.6	23.7	59.3
	9	35	13.8	13.8	73.1
	10	68	26.8	26.9	100.0
Don't know	98	1	.4	Missing	
		-----	-----	-----	
Total		254	100.0	100.0	

Mean 7.806

Valid cases 253 Missing cases 1

Q16. How likely is it that you will visit an Army Corps of Engineers recreation site again in the future? Using a 10 point scale on which "1" means "very unlikely" and "10" means "very likely," how likely is it that you will visit an Army Corps of Engineers recreation site in the future?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1	1	.4	.4	.4
	2	5	2.0	2.0	2.4
	3	4	1.6	1.6	4.0
	4	1	.4	.4	4.3
	5	10	3.9	4.0	8.3
	6	3	1.2	1.2	9.5
	7	7	2.8	2.8	12.3
	8	29	11.4	11.5	23.7
	9	14	5.5	5.5	29.2
	10	179	70.5	70.8	100.0
Don't know	98	1	.4	Missing	
		-----	-----	-----	
Total		254	100.0	100.0	

Mean 9.059

Valid cases 253 Missing cases 1

D1. What is your age, please?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	18	3	1.2	1.2	1.2
	19	2	.8	.8	2.0
	20	3	1.2	1.2	3.2
	21	4	1.6	1.6	4.7
	22	6	2.4	2.4	7.1
	23	5	2.0	2.0	9.1
	24	5	2.0	2.0	11.1
	25	2	.8	.8	11.9
	26	4	1.6	1.6	13.4
	27	2	.8	.8	14.2
	28	2	.8	.8	15.0
	29	3	1.2	1.2	16.2
	30	3	1.2	1.2	17.4
	31	1	.4	.4	17.8
	32	3	1.2	1.2	19.0
	33	3	1.2	1.2	20.2
	34	7	2.8	2.8	22.9
	35	4	1.6	1.6	24.5
	36	4	1.6	1.6	26.1
	37	6	2.4	2.4	28.5
	38	6	2.4	2.4	30.8
	39	8	3.1	3.2	34.0
	40	5	2.0	2.0	36.0
	41	9	3.5	3.6	39.5
	42	5	2.0	2.0	41.5
	43	6	2.4	2.4	43.9
	44	6	2.4	2.4	46.2
	45	11	4.3	4.3	50.6
	46	4	1.6	1.6	52.2
	47	7	2.8	2.8	54.9
	48	10	3.9	4.0	58.9
	49	6	2.4	2.4	61.3
	50	5	2.0	2.0	63.2
	51	4	1.6	1.6	64.8
	52	11	4.3	4.3	69.2
	53	8	3.1	3.2	72.3
	54	3	1.2	1.2	73.5
	55	5	2.0	2.0	75.5
	56	7	2.8	2.8	78.3
	57	3	1.2	1.2	79.4
	58	6	2.4	2.4	81.8
	59	2	.8	.8	82.6
	60	5	2.0	2.0	84.6
	61	2	.8	.8	85.4
	62	5	2.0	2.0	87.4
	63	3	1.2	1.2	88.5
	64	5	2.0	2.0	90.5
	65	4	1.6	1.6	92.1
	66	2	.8	.8	92.9
	67	1	.4	.4	93.3
	68	3	1.2	1.2	94.5

D1. What is your age, please?

	69	1	.4	.4	94.9
	70	2	.8	.8	95.7
	72	1	.4	.4	96.0
	73	1	.4	.4	96.4
	74	2	.8	.8	97.2
	76	2	.8	.8	98.0
	77	2	.8	.8	98.8
	78	3	1.2	1.2	100.0
Refused	99	1	.4	Missing	
		-----	-----	-----	
	Total	254	100.0	100.0	

Mean 45.451

Valid cases 253 Missing cases 1

D2. What is the highest level of formal education you completed?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Less than high school	1	11	4.3	4.3	4.3
High school graduate	2	60	23.6	23.6	28.0
Some college or associate degree	3	94	37.0	37.0	65.0
College graduate	4	58	22.8	22.8	87.8
Post-Graduate	5	31	12.2	12.2	100.0
		-----	-----	-----	
	Total	254	100.0	100.0	

Valid cases 254 Missing cases 0

D3. Are you of Hispanic, Latino or Spanish origin?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
No	0	243	95.7	96.4	96.4
Yes	1	9	3.5	3.6	100.0
Refused	99	2	.8	Missing	
		-----	-----	-----	
	Total	254	100.0	100.0	

Valid cases 252 Missing cases 2

D401. Do you consider your race(s) as:

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
White	1	225	88.6	89.3	89.3
Black/African American	2	11	4.3	4.4	93.7
American Indian/Alaska Native	3	5	2.0	2.0	95.6
Asian	4	1	.4	.4	96.0
Other	6	10	3.9	4.0	100.0
Refused	99	2	.8	Missing	
		-----	-----	-----	
	Total	254	100.0	100.0	

Valid cases 252 Missing cases 2

D5. What was your total annual family income in 2001?

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Under \$20,000	1	30	11.8	13.2	13.2
20K-30K	2	22	8.7	9.7	22.9
30K-40K	3	30	11.8	13.2	36.1
40K-60K	4	63	24.8	27.8	63.9
60K-80K	5	43	16.9	18.9	82.8
80K-100K	6	18	7.1	7.9	90.7
\$100,000 or more	7	21	8.3	9.3	100.0
Don't know	98	6	2.4	Missing	
Refused	99	21	8.3	Missing	
		-----	-----	-----	
	Total	254	100.0	100.0	

Valid cases 227 Missing cases 27

D6. Gender

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Male	1	107	42.1	42.1	42.1
Female	2	147	57.9	57.9	100.0
		-----	-----	-----	
	Total	254	100.0	100.0	

Valid cases 254 Missing cases 0

Site Visited

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
Alabama River Lakes Claiborne - ALABAMA	1	9	3.5	3.5	3.5
Black Warrior and Tombigbee Lakes - ALABAMA	4	2	.8	.8	4.3
Chena River Lakes - ALASKA	5	2	.8	.8	5.1
Beaver Lake - ARKANSAS	6	7	2.8	2.8	7.9
Blue Mountain Lake - ARKANSAS	7	1	.4	.4	8.3
Bull Shoals Lake - ARKANSAS	8	2	.8	.8	9.1
Degray Lake - ARKANSAS	11	4	1.6	1.6	10.6
Dequeen Lake - ARKANSAS	12	1	.4	.4	11.0
Greers Ferry Lake - ARKANSAS	15	5	2.0	2.0	13.0
Lake Greeson - ARKANSAS	17	1	.4	.4	13.4
Lake Ouachita - ARKANSAS	18	3	1.2	1.2	14.6
Millwood Lake - ARKANSAS	19	1	.4	.4	15.0
Norfork Lake - ARKANSAS	22	1	.4	.4	15.4
Wilbur D. Mills Lock and Dam -AR River Nav Sys - ARKANSAS	30	1	.4	.4	15.7
Alamo Lake - CALIFORNIA	31	1	.4	.4	16.1
Carbon Canyon Dam - CALIFORNIA	34	1	.4	.4	16.5
Eastman Lake - CALIFORNIA	35	2	.8	.8	17.3
Hansen Dam - CALIFORNIA	37	2	.8	.8	18.1
Lake Mendocino - CALIFORNIA	41	2	.8	.8	18.9
New Hogan Lake - CALIFORNIA	45	1	.4	.4	19.3
Pine Flat Lake - CALIFORNIA	47	2	.8	.8	20.1
Success Lake - CALIFORNIA	54	2	.8	.8	20.9
Bear Creek Lake - COLORADO	56	2	.8	.8	21.7
Chatfield Lake - COLORADO	57	1	.4	.4	22.0
Cherry Creek Lake - COLORADO	58	2	.8	.8	22.8
John Martin Dam - COLORADO	59	2	.8	.8	23.6
Mansfield Hollow Lake - CONNECTICUT	65	1	.4	.4	24.0
Lake Okeechobee and Waterway - FLORIDA	71	1	.4	.4	24.4
Lake Seminole - FLORIDA	72	1	.4	.4	24.8
Allatoona Lake - GEORGIA	74	6	2.4	2.4	27.2
Hartwell Lake - GEORGIA	77	1	.4	.4	27.6
Lake Sidney Lanier - GEORGIA	78	1	.4	.4	28.0
West Point Project - GEORGIA	82	1	.4	.4	28.3
Albeni Falls Dam and Lake Pend Oreille - IDAHO	83	1	.4	.4	28.7
Carlyle Lake - ILLINOIS	85	4	1.6	1.6	30.3
Rend Lake - ILLINOIS	91	3	1.2	1.2	31.5
Brookville Lake - INDIANA	93	2	.8	.8	32.3
Patoka Lake - INDIANA	102	1	.4	.4	32.7
Coralville Lake - IOWA	104	1	.4	.4	33.1
Lake Red Rock - IOWA	105	2	.8	.8	33.9
Mississippi River Pools 11-22 (10 l&d) - IOWA	106	2	.8	.8	34.6
Rathbun Lake - IOWA	107	1	.4	.4	35.0
Saylorville Lake - IOWA	108	1	.4	.4	35.4

BRAND	Site Visited					
	Tuttle Creek Lake - KANSAS	124	1	.4	.4	35.8
	Wilson Lake - KANSAS	125	2	.8	.8	36.6
	Barkley Lock and Dam Lake					
	Barkley - KENTUCKY	126	1	.4	.4	37.0
	Barren River Lake - KENTUCKY	127	1	.4	.4	37.4
	Buckhorn Lake - KENTUCKY	128	1	.4	.4	37.8
	Cave Run Lake - KENTUCKY	130	3	1.2	1.2	39.0
	Green River Lake - KENTUCKY	134	1	.4	.4	39.4
	Kentucky River <4 locks>					
	- KENTUCKY	137	4	1.6	1.6	40.9
	Laurel River Lake - KENTUCKY	138	2	.8	.8	41.7
	Nolin River Lake - KENTUCKY	142	2	.8	.8	42.5
	Paintsville Lake - KENTUCKY	143	1	.4	.4	42.9
	Rough River Lake - KENTUCKY	144	2	.8	.8	43.7
	Wolf Creek Dam Lake Cumberland					
	- KENTUCKY	146	3	1.2	1.2	44.9
	Caddo Lake - LOUISIANA	149	1	.4	.4	45.3
	Ouachita-Black Rivers (4 l&d, Columbia Pool) - LOUISIANA	151	1	.4	.4	45.7
	IWW Delaware R to Chesapeake Bay					
	C + D Canal - MARYLAND	165	1	.4	.4	46.1
	St. Marys River - MICHIGAN	171	1	.4	.4	46.5
	Duluth-Superior Harbor					
	- MINNESOTA	172	5	2.0	2.0	48.4
	Mississippi River Headwaters					
	Lakes Project - MINNESOTA	176	1	.4	.4	48.8
	Mississippi River Pool Number 1					
	- MINNESOTA	177	1	.4	.4	49.2
	Mississippi River Pool Number 5					
	- MINNESOTA	182	1	.4	.4	49.6
	Mississippi River Pool Number 6					
	- MINNESOTA	184	1	.4	.4	50.0
	Mississippi River Pool U+L					
	St. Anthony Falls - MINNESOTA	188	1	.4	.4	50.4
	Enid Lake - MISSISSIPPI	191	2	.8	.8	51.2
	Okatibbee Lake - MISSISSIPPI	193	3	1.2	1.2	52.4
	Sardis Lake - MISSISSIPPI	194	1	.4	.4	52.8
	Clarence Cannon Dam and Mark					
	Twain Lake - MISSOURI	197	1	.4	.4	53.1
	Harry S Truman Dam and Reservoir					
	- MISSOURI	199	3	1.2	1.2	54.3
	Longview Lake - MISSISSIPPI	201	1	.4	.4	54.7
	Smithville Lake - MISSOURI	206	1	.4	.4	55.1
	Table Rock Lake - MISSOURI	208	6	2.4	2.4	57.5
	Franklin Falls Dam					
	- NEW HAMPSHIRE	230	2	.8	.8	58.3
	Otter Brook Lake					
	- NEW HAMPSHIRE	232	4	1.6	1.6	59.8
	Abiquiu Dam - NEW MEXICO	234	1	.4	.4	60.2
	Cochiti Lake - NEW MEXICO	235	1	.4	.4	60.6
	Santa Rosa Dam and Lake					
	- NEW MEXICO	239	1	.4	.4	61.0

BRAND	Site Visited					
B. Everett Jordan Dam and Lake						
- NORTH CAROLINA	244	3	1.2	1.2	62.2	
Falls Lake - NORTH CAROLINA	246	1	.4	.4	62.6	
Garrison Dam Lake Sakakawea						
- NORTH DAKOTA	250	1	.4	.4	63.0	
Alum Creek Lake - OHIO	253	1	.4	.4	63.4	
Atwood Lake - OHIO	254	1	.4	.4	63.8	
Berlin Lake - OHIO	257	1	.4	.4	64.2	
Charles Mill Lake - OHIO	261	1	.4	.4	64.6	
Deer Creek Lake - OHIO	264	1	.4	.4	65.0	
Dillon Lake - OHIO	266	1	.4	.4	65.4	
Mosquito Creek Lake - OHIO	273	1	.4	.4	65.7	
New Cumberland Locks and Dam						
<Ohio River> - OHIO	274	1	.4	.4	66.1	
Tappan Lake - OHIO	280	1	.4	.4	66.5	
Arcadia Lake - OKLAHOMA	286	1	.4	.4	66.9	
Broken Bow Lake - OKLAHOMA	288	2	.8	.8	67.7	
Canton Lake - OKLAHOMA	289	2	.8	.8	68.5	
Eufaula Lake - OKLAHOMA	292	3	1.2	1.2	69.7	
Hugo Lake - OKLAHOMA	297	1	.4	.4	70.1	
Kaw Lake - OKLAHOMA	299	1	.4	.4	70.5	
Pine Creek Lake - OKLAHOMA	304	1	.4	.4	70.9	
Skiatook Lake - OKLAHOMA	307	1	.4	.4	71.3	
Tenkiller Ferry Lake - OKLAHOMA	308	4	1.6	1.6	72.8	
Bonneville Lock and Dam - OREGON	314	1	.4	.4	73.2	
Cottage Grove Lake - OREGON	315	1	.4	.4	73.6	
Foster Lake - OREGON	322	2	.8	.8	74.4	
Green Peter Lake - OREGON	323	1	.4	.4	74.8	
Lost Creek Lake - OREGON	327	3	1.2	1.2	76.0	
Beltzville Lake - PENNSYLVANIA	333	1	.4	.4	76.4	
Kinzua Dam and Allegheny Reservoir						
- PENNSYLVANIA	345	4	1.6	1.6	78.0	
Raystown Lake - PENNSYLVANIA	363	2	.8	.8	78.7	
Youghiogheny River Lake						
- PENNSYLVANIA	369	2	.8	.8	79.5	
J. Strom Thurmond Lake						
- SOUTH CAROLINA	370	5	2.0	2.0	81.5	
Cottonwood Springs Lake						
- SOUTH DAKOTA	373	1	.4	.4	81.9	
Oahe Dam Lake Oahe						
- SOUTH DAKOTA	376	3	1.2	1.2	83.1	
Center Hill Lake - TENNESSEE	377	2	.8	.8	83.9	
Dale Hollow Lake - TENNESSEE	380	3	1.2	1.2	85.0	
J. Percy Priest Dam and Reservoir						
- TENNESSEE	381	1	.4	.4	85.4	
Old Hickory Lock and Dam						
- TENNESSEE	382	3	1.2	1.2	86.6	
Addicks Dam - TEXAS	383	1	.4	.4	87.0	
Belton Lake - TEXAS	387	3	1.2	1.2	88.2	
Canyon Lake - TEXAS	389	1	.4	.4	88.6	
Grapevine Lake - TEXAS	393	1	.4	.4	89.0	
Joe Pool Lake - TEXAS	395	1	.4	.4	89.4	

BRAND	Site Visited					
	Sam Rayburn Reservoir - TEXAS	404	2	.8	.8	90.2
	Texoma Lake - TEXAS	407	6	2.4	2.4	92.5
	Union Village Dam - VERMONT	418	1	.4	.4	92.9
	Gathright Dam-Lake Moomaw - VIRGINIA	420	2	.8	.8	93.7
	John H. Kerr Dam and Reservoir - VIRGINIA	421	1	.4	.4	94.1
	North Fork of Pound River Lake - VIRGINIA	423	1	.4	.4	94.5
	Philpott Lake - VIRGINIA	424	1	.4	.4	94.9
	Lake Washington Ship Canal - WASHINGTON	429	1	.4	.4	95.3
	Beech Fork Lake - WEST VIRGINIA	436	1	.4	.4	95.7
	Bluestone Lake - WEST VIRGINIA	437	1	.4	.4	96.1
	Pike Island Locks and Dam <Ohio River> - WEST VIRGINIA	446	1	.4	.4	96.5
	Stonewall Jackson Lake - WEST VIRGINIA	450	1	.4	.4	96.9
	Summersville Lake - WEST VIRGINIA	451	2	.8	.8	97.6
	Eau Galle Flood Control Project - WISCONSIN	455	1	.4	.4	98.0
	Sturgeon Bay and Lake Michigan Ship Canal - WISCONSIN	456	5	2.0	2.0	100.0
	Total		----- 254	----- 100.0	----- 100.0	

Valid cases 254 Missing cases 0

