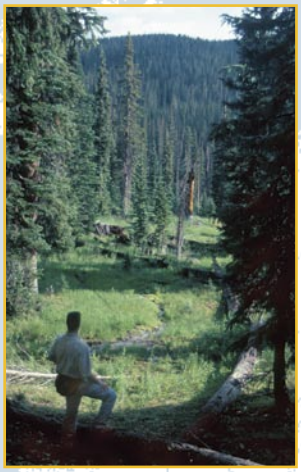
Survey Responses From Region 9: Are We Achieving the Public's Objectives for Forests and Rangelands?

Michelle Haefele, Deborah J. Shields, and Donna L. Lybecker



U.S. Department of Agriculture Forest Service

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Abstract

The survey on values, objectives, beliefs, and attitudes, implemented as a module of the National Survey on Recreation and the Environment, asked over 7,000 respondents nationwide about their *values* with respect to public lands, *objectives* for the management of these lands, *beliefs* about the role the USDA Forest Service should play in fulfilling those objectives, and *attitudes* about the job the agency has been doing. This report—one of a series of similar regional reports—shows respondents from the East (USDA Forest Service Region 9: Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, Wisconsin) are somewhat more strongly in favor of preserving the natural resources of forests and grasslands through such policies as no timber harvesting or no mining than respondents from the rest of the United States, and slightly less inclined toward making the permitting process easier. Nationwide, as in the East, the most important objective was conserving and protecting forests and grassland watersheds.

Other reports in the series *Are We Achieving the Public's Objectives for Forests and Rangelands?*

- *Survey Responses From Region 3* (Arizona and New Mexico) RMRS-GTR-156
- *Survey Responses From Region 5* (California and Hawaii) RMRS-GTR-157
- *Survey Responses From Region 8* (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, Virginia) RMRS-GTR-158
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Introduction

The mission of the USDA Forest Service is twofold: caring for the land and serving people. Because personal satisfaction is an individual concept with multiple facets, providing high quality customer service and achieving high levels of customer satisfaction can be as complex and challenging tasks as is managing for healthy ecosystems.

A person's attitudes about the Forest Service are often influenced by the nature and outcomes of his or her interactions with Forest Service employees. Were they polite, knowledgeable, helpful, professional? Was the process straightforward, efficient, prompt, and fair? Was the desired outcome achieved, such as acquiring a fuelwood permit or getting information on day hikes? Although traditional customer satisfaction surveys do a good job of collecting this type of information, they tend to focus on delivery of services to specific classes of "users" (permittees, applicants for timber sales or grazing allotments, etc.), and are not designed to capture the preferences and attitudes of the broader public.

In addition to personal interactions with the Forest Service, people's perceptions of the agency are also influenced by their attitudes about how and toward what end we manage the land. The agency and various segments of the public have both general, and in some cases quite detailed, objectives related to the health of forests and rangelands, how we should manage those lands, and the activities that should be allowed to take place on them. If stakeholders observe that an objective they deem important is not being fulfilled, their satisfaction with the Forest Service may be lower, regardless of the quality of their interactions with individual Forest Service employees or their experience with agency protocols. Gaining an understanding of the public's objectives and their consistency with agency objectives, or lack thereof, can provide useful input to the strategic planning process.

The agency's goals and objectives are embodied in the 2000 Strategic Plan. Information on the public's goals and objectives has been collected through an ongoing survey entitled "The American Public's Values, Objectives, Beliefs, and Attitudes Regarding Forests and Rangelands" (hereafter VOBA). The VOBA survey asked respondents about their environmental values as they relate to public lands, their objectives for the management of forests and rangelands in general, as well as those managed by the Forest Service, their beliefs about whether it is the role of the Forest Service to fulfill those objectives, and their attitudes about the performance of the agency in fulfilling these objectives.[1] This report describes the public's values, objectives, beliefs, and attitudes for and toward the USDA Forest Service, with particular focus on Region 9, the Eastern Region.[2]

Methodology

Objectives Hierarchy

The VOBA survey's objectives, and related belief and attitude statements, do not ask respondents about their opinions of the goals in the Forest Service Strategic Plan. Nor do they ask for an individual's reaction to the Chief's Agenda or Leadership Team priorities. Rather, the VOBA survey's objectives statements were developed during a series of 80 focus group meetings conducted with members of various stakeholder groups as well as individuals throughout the country. As such, they represent the main objectives for land management as they were presented to us by the public.

An objectives hierarchy constructed for each group indicated goals each group or individual had for the management of forests and rangelands, and how they would like to see each goal or objective achieved. These objectives ranged from the very abstract strategic level to the more focused or applied means level (see figure 1).

Within the Objectives Hierarchy, the strategic level objective is an abstract objective. Fundamental level objectives represent a context specific application of strategic objectives. End- state fundamental objectives represent the desired state of the world. Fundamental means objectives capture the methods by which the desired end-state should be achieved.

VOBA Statements

The objectives elicited from all the focus groups were pooled, duplications eliminated, and overlaps reorganized. The 30 remaining items formed the fundamental

[1] For more detailed information on the survey, see Shields, D., M. Martin, W. Martin, and M. Haefele. 2002. *Survey Results of the American Public's Values, Objectives, Beliefs, and Attitudes Regarding Forests and Grasslands.* Gen. Tech. Rep. RMRS-GTR-95. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

[2] The Easter Region consists of: CT, DE, IL, IN, IA, ME, MD, MA, MI, MN, MO, NH, NJ, NY, OH, PA, RI, VT, WV, and WI.

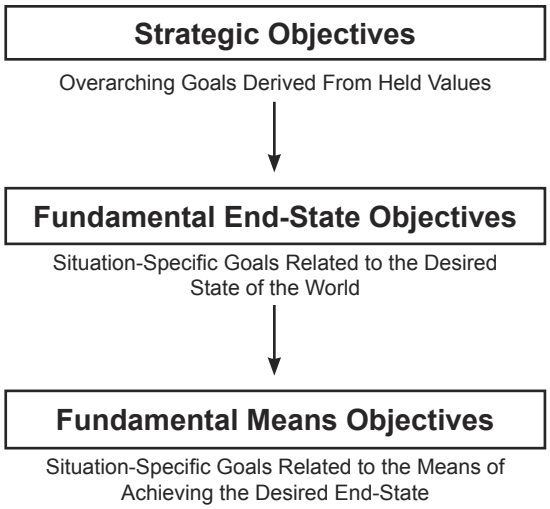

Figure 1—Objectives Hierarchy.

objectives that indicate both end-state preferences and the means by which they should be achieved. Each correlates to one of the strategic objectives. Five strategic level objectives were consistently revealed by the focus group participants: Access, Preservation/Conservation, Economic Development, Education, and Natural Resource Management.

The belief and attitude statements tier down directly from these objectives. For example, an objective might be "more hiking days." The corresponding belief question asks whether the respondent believes that providing more hiking days is an appropriate role for the USDA Forest Service. The attitude question would then elicit input on the respondent's perception of how well the agency is doing at providing hiking days.

The Public Lands Values were developed using approximately 200 items that, through a series of iterations using both student and adult samples around the United States, were reduced to 25 items. These items were designed to focus on values that people hold for the environment in general and public lands in particular. They have been tested on four National Forests in Colorado (Arapaho, Roosevelt, Pike, and San Isabel) using various traditional and non-traditional stakeholder groups. Past research and testing have shown that responses to the Public Lands Values can be arranged into two categories: Socially Responsible Individual Values (SRIV) and Socially Responsible Management Values (SRMV).

The survey utilizes the objectives, beliefs, attitudes, and values statements by asking respondents to indicate their level of agreement or approval for each. Level of agreement or approval is indicated on a scale from one to five. The objectives scale items are anchored by 1=not at all important and 5=very important. The Value and Belief scale items are anchored by 1=strongly disagree and 5=strongly agree. The Attitude scale items are anchored by 1=very unfavorable and 5=very favorable.

The value scale in the VOBA survey differs from other value survey instruments in that it focuses on values associated with public lands. It is applicable at multiple spatial scales, and in addition to being used in the national VOBA survey, has been applied at the National Forest scale. Conversely, objectives may be applicable only at the regional or national scale, be location specific, or be meaningful at multiple scales. The VOBA survey objectives are applicable to the management of forests and rangelands at a broad geographic scale. Many of the objectives are also meaningful at the regional level. However, the public may have additional objectives specific to their home region that are not captured in the existing national survey instrument.

Data Collection

The survey was implemented as a module of the National Survey on Recreation and the Environment (NSRE) with a sample size of 7,069 nationwide and 3,203 in Forest Service Region 9. (The number of responses in any Forest Service Region is a function of the overall VOBA sampling design.) For each State the size of the sample was a proportional to its population. The data were collected between late 1999 and early 2000. The NSRE is a random telephone survey administered for the Forest Service by the University of Tennessee.[3] In addition to the VOBA questions, respondents were asked about their recreational behaviors and about basic demographic information. Due to a limited amount of time available for each phone interview, each individual was asked to respond to only a portion of the full set of VOBA questions. Each respondent was asked about one fundamental objective from each of the five strategic level objective categories. Due to this split sampling design, each of items in the objectives, beliefs and attitude scales has fewer than the full 3,203 respondents.

The overall goal of this split sampling design was to control interview time with respondents, yet collect analytically valuable information. This not only lowers costs, but also reduces respondent burden, which should lead to fewer non-responses and therefore to a better

[3] One drawback of a telephone survey such as the NSRE is that it will not adequately represent the views of segments of the population who do not have access to or who choose not to have telephones.

sample quality.[4] To ensure high confidence levels, the full national survey was designed so that there was a minimum of 700 responses for each question. This design generates response numbers for each question that are adequate to support multivariate statistical analysis, and provides a high level of confidence in the results. In Region 9 the response numbers for each question ranged from 302 to 1,054. As a result of this smaller sample size for Region 9, there is a somewhat greater chance the results do not fully reflect the precise demographics of the Region; however, the sample size is still large enough to give a relatively high level of confidence in the results.

Finally, it is important to note that the wording of the statements within the VOBA was designed with public lands in mind. Because of this, there are statements that may raise questions concerning the appropriateness of the language for private lands. In other words, the language used many not be applicable to some types of private land use concerns, making it less appropriate to draw overarching conclusions about general land management. For example, the objective, "Developing and maintaining continuous trail systems that cross both public and private land for motorized vehicles such as snowmobiles or ATVs," is written with public land managers in mind. A similar objective, written from the perspective of private landowners, might say something like, "Coordinating with public and private actors in order to support and maintain continuous trail systems that cross both public and private land for motorized vehicles." Although the wording for many of the objectives do not present this concern, it is necessary to remain aware that respondents may be thinking solely of public lands instead of both public and private lands when responding to some of the objectives.

Results for Region 9: Objectives, Beliefs, and Attitudes

The results from the Region 9 respondents to the VOBA national survey are broken down into the set of objectives the public feels are the most important, not important, and moderately important. We examine the public's level of consensus for rating each objective within these groups, the extent to which the public feels that it is the job of the Forest Service to fulfill the objective, and examine the perception of agency performance in fulfilling it. A subsequent section presents the Region 9 responses to the Public Lands Values Scale. Region 9 respondents are also compared with those from the rest of the United States.

Objectives Identified as Important

For this report, a mean response of 4.00 or greater (out of a possible 5) indicates an objective is important to the respondents in Region 9. Thus, 14 of the original 30 objectives have been identified as being important to the people of Region 9.

Core Important Objectives

Of the 14 important objectives, 5 have been further singled out as "core" objectives for the public in Region 9 (table 1). These core important objectives exhibit very high means (4.00 or greater), and in addition have low standard deviations (s.d.) (less than 1.00), indicating that the public is generally in agreement that these objectives are important.[5] For each of these five objectives we have included a histogram that compares the distribution of responses for the importance of the objective, the agency role, and customer satisfaction. In each case there is agreement that the objective is important. There is less agreement that the USDA Forest Service is the appropriate party to fulfill the objective, although the means do indicate that the majority believe this to be so. There is less agreement still about the evaluation of the agency's performance in fulfilling the objective. Two of the objectives in this group rate agency performance as favorable; two rate it as less than favorable.

Watershed protection—The VOBA objective deemed the most important by respondents in Region 9 is the conservation and protection of lands that are the source of our water resources. This objective has a mean of 4.76 and further a standard deviation of 0.67, indicating wide agreement about the importance of this objective. Protect-

[4] For more information on split sampling designs, see for example, Raghunathan, T.E. and Grizzle, J.E. 1995. "A Split Questionnaire Survey Design," *Journal of the American Statistical Association*, 90: 54-63.

[5] General agreement about the importance of these objectives is revealed with the standard deviation. The standard deviation is defined as the average amount by which scores in a distribution differ from the mean; it offers an indication of the spread of the data. For example, when looking at the importance of a given objective, the standard deviation reveals how tightly all the responses are clustered around the mean score for the stated objective. This helps to reveal if there are extreme responses or if most respondents agreed on their rating.

Table 1--Core important objectives for Region 9.

OBJECTIVE	Is this an important objective for you? *(1=not at all important, 5=very important)*	Do you believe that fulfilling this objective is an appropriate role for the USDA Forest Service? *(1=strongly disagree, 5=strongly agree)*	How favorably do you view the performance of the USDA Forest Service in fulfilling this objective? *(1=very unfavorably, 5=very favorably)*
Conserving and protecting forests and grasslands that are the source of our water resources, such as streams, lakes, and watershed areas.	4.76 *0.67*[a] 530[b]	4.65 *0.77* 579	3.86 *1.04* 449
Developing volunteer programs to improve forests and grasslands (for example, planting trees, or improving water quality).	4.53 *0.85* 545	4.57 *0.84* 565	3.71 *1.19* 401
Protecting ecosystems and wildlife habitats.	4.60 *0.87* 642	4.65 *0.77* 534	3.91 *1.08* 550
Informing the public about recreation concerns on forests and grasslands such as safety, trail etiquette, and respect for wildlife.	4.52 *0.92* 490	4.58 *0.81* 466	3.88 *1.14* 523
Informing the public on the potential environmental impacts of all uses associated with forests and grasslands.	4.42 *0.99* 499	4.46 *0.91* 451	3.44 *1.23* 410

[a] Standard deviation

[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

ing watersheds is viewed as an appropriate role for the USDA Forest Service (mean=4.65), but with slightly less consensus (s.d.=.77). Agency performance in fulfilling this objective is rated as somewhat favorable, but with still less agreement (mean=3.86, s.d.=1.04). This decreasing consensus from the importance of the objective to the evaluation of agency performance can be seen in figure 2, which shows the distribution responses or scores.

Programs—Region 9 respondents see the development of volunteer programs to improve forests and grasslands as the second core objective (mean=4.53). A low standard deviation (0.85) is an indication of a high level of agreement about the importance of this objective. Respondents in Region 9 also see the development of such volunteer programs as an appropriate role for the USDA Forest Service, also with a high degree of consensus (mean=4.57, s.d.=0.84). Agency performance is seen as somewhat favorable, but with less agreement (mean=3.71, s.d.=1.19). See figure 3 for the results of this objective.

Protecting ecosystems—The respondents in Region 9 feel that protecting ecosystems and wildlife habitat is also a core objective (figure 4). This objective has a mean importance of 4.60, with a standard deviation of 0.87, indicating wide agreement about the importance of such protection. The provision of protection for ecosystems is seen as an appropriate role for the agency and again, this is also widely agreed upon (mean=4.65, s.d.=0.77). Agency performance is viewed by Region 9 residents as somewhat favorable, but with less agreement (mean=3.91, s.d.=1.08).

Informing the public—Two objectives on providing public information are core to the residents of Region 9. The first is informing the public about recreation concerns (figure 5). This objective has a mean of 4.52 and a standard deviation of 0.92, indicating wide agreement about the importance of such information. Respondents in Region 9 also feel that it is appropriate for the USDA Forest Service to provide this information (mean=4.58,

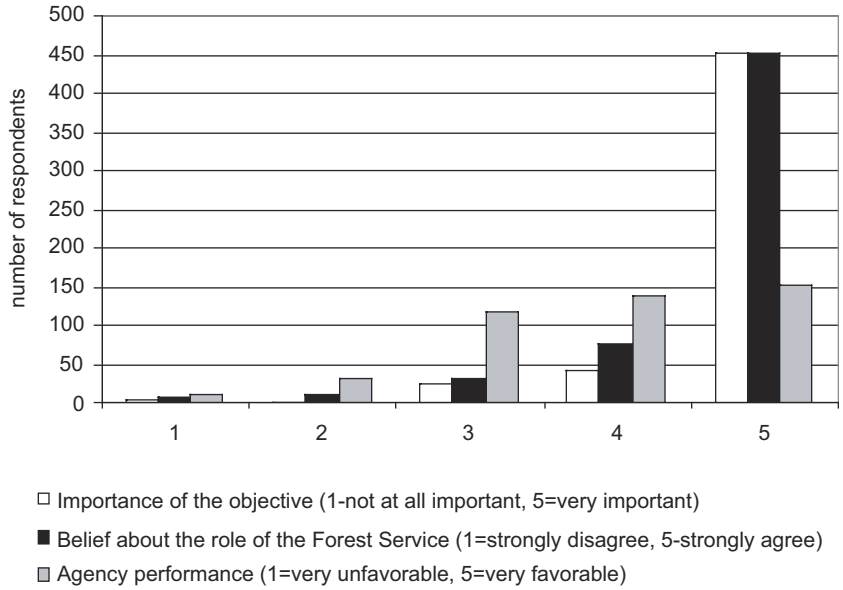

Figure 2—Distribution of Objective, Belief, and Attitude scores for: Conserving and protecting forests and grasslands that are the source of our water resources, such as streams, lakes, and watershed areas.

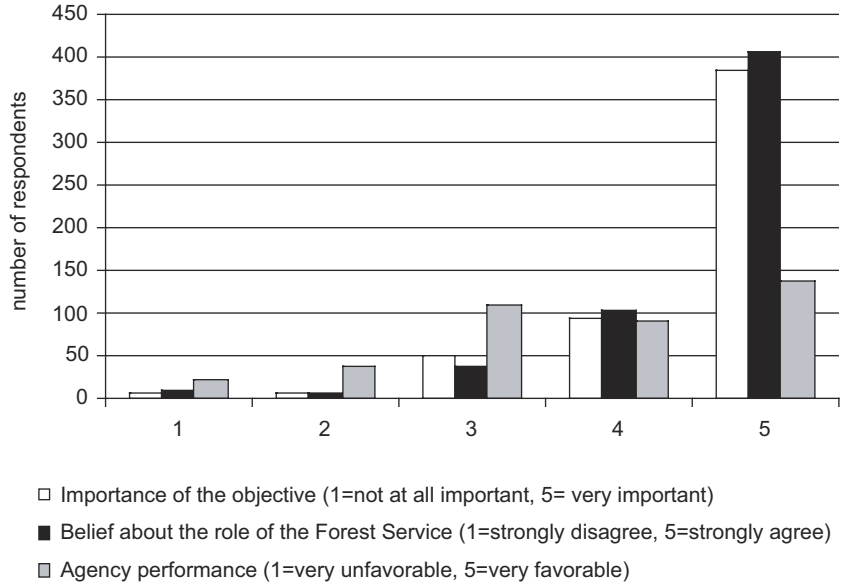

Figure 3—Distribution of Objective, Belief, and Attitude scores for: Developing volunteer programs to improve forests and grasslands (for example, planting trees, or improving water quality).

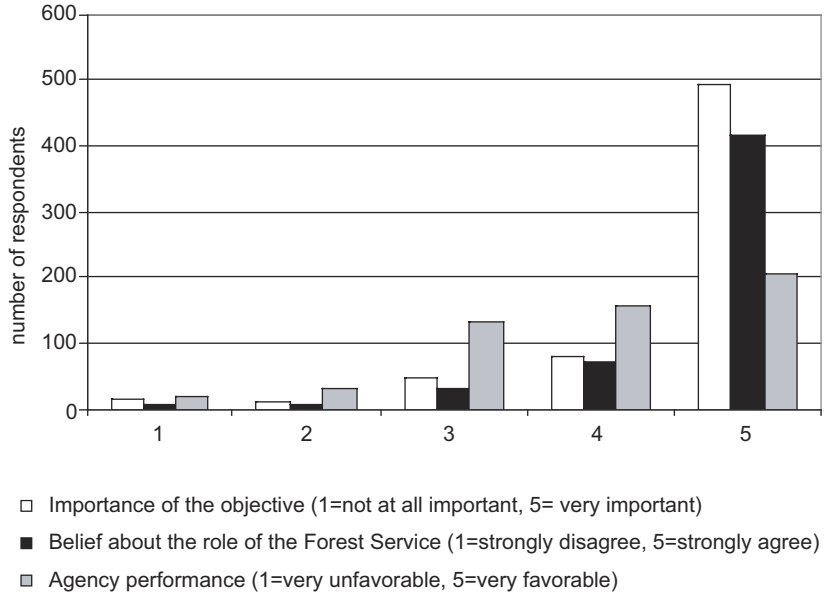

Figure 4—Distribution of Objective, Belief, and Attitude scores for: Protecting ecosystems and wildlife habitats.

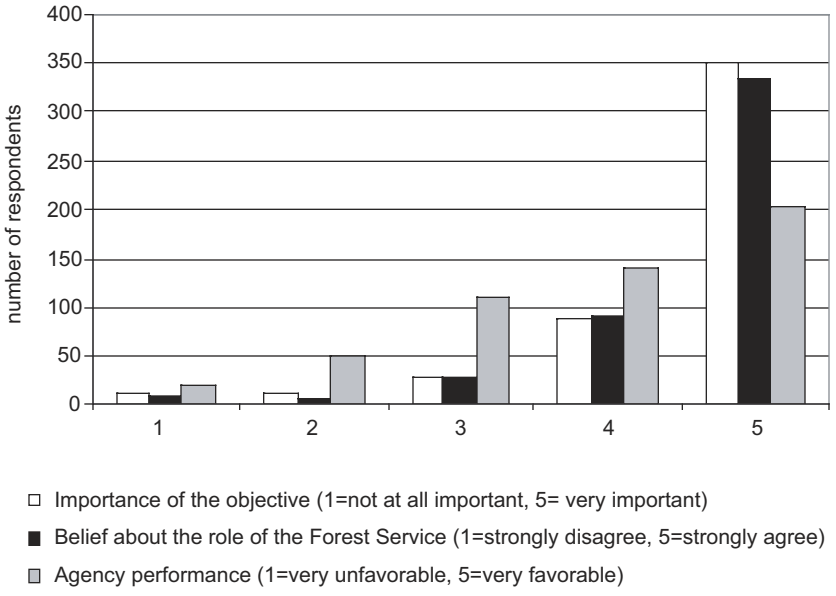

Figure 5—Distribution of Objective, Belief, and Attitude scores for: Informing the public about recreation concerns on forests and grasslands such as safety, trail etiquette, and respect for wildlife.

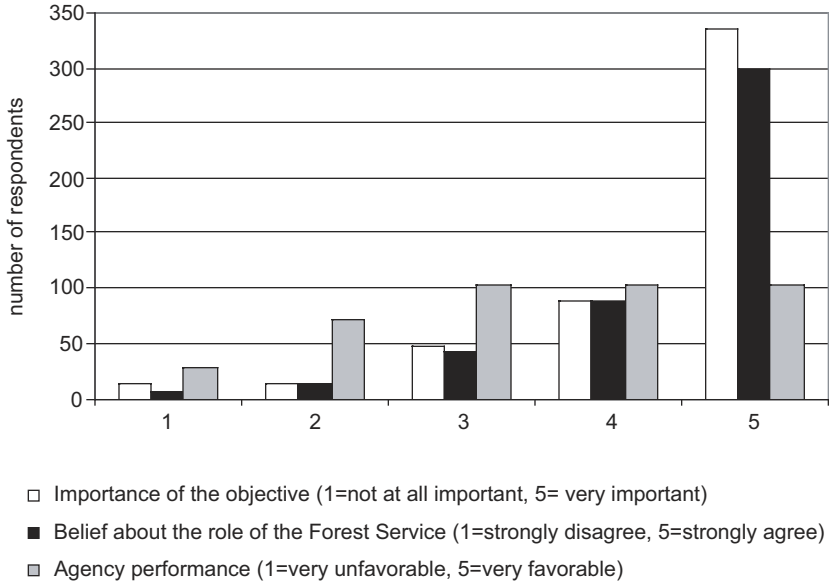

Figure 6—Distribution of Objective, Belief, and Attitude scores for: Informing the public on the potential environmental impacts of all uses associated with forests and grasslands.

s.d.=0.81), and that the agency is doing a somewhat favorable job (mean= 3.88, s.d.=1.14).

Region 9 respondents also feel that it is important to provide information about the environmental impacts of uses of forests and grasslands (figure 6). This objective has a mean importance of 4.42, and a standard deviation of 0.99. Respondents in Region 9 see this as an appropriate role for the Forest Service (mean=4.46, s.d.=0.91) and see the performance of the agency as somewhat favorable (mean=3.44, s.d.1.23).

Other Important Objectives

Table 2 shows the results for the other objectives that respondents in Region 9 identified as important. Although these issues had means over 4.00, the means had higher standard deviations, indicating more diverse responses from the public. The objectives in table 2 are ordered from those with the lowest standard deviation (higher consensus) to those with higher standard deviations (less consensus). As a result, some objectives

Table 2--Other objectives that Region 9 respondents view as important.

OBJECTIVE	Is this an important objective for you? *(1=not at all important, 5=very important)*	Do you believe that fulfilling this objective is an appropriate role for the USDA Forest Service? *(1=strongly disagree, 5=strongly agree)*	How favorably do you view the performance of the USDA Forest Service in fulfilling this objective? *(1=very unfavorably, 5=very favorably)*
Developing volunteer programs to maintain trails and facilities on forests and grasslands (for example, trail maintenance, or campground maintenance).	4.13 *1.05*[a] 445[b]	4.19 *1.06* 495	3.69 *1.11* 367
Encouraging collaboration between groups in order to share information concerning uses of forests and grasslands.	4.23 *1.08* 423	4.25 *1.02* 444	3.59 *1.15* 358
Developing a national policy that guides natural resource development of all kinds (for example, specifies levels of extraction, and regulates environmental impacts).	4.32 *1.09* 553	4.20 *1.12* 447	3.38 *1.25* 402
Preserving the ability to have a "wilderness" experience on forests and grasslands.	4.29 *1.11* 536	4.28 *1.04* 538	3.84 *0.99* 559
Preserving the natural resources of forests and grasslands through such policies as no timber harvesting or no mining.	4.25 *1.12* 586	4.24 *1.14* 561	3.57 *1.22* 487
Allowing for diverse uses of forests and grasslands such as grazing, recreation, and wildlife habitat.	4.05 *1.12* 444	4.04 *1.13* 407	3.69 *1.08* 347
Informing the public on the economic value received by developing our natural resources.	4.08 *1.19* 450	4.02 *1.22* 426	3.24 *1.26* 393
Restricting timber harvesting and grazing on forests and grasslands.	4.01 *1.20* 478	3.99 *1.26* 464	3.33 *1.26* 359
Restricting mineral development on forests and grasslands.	4.07 *1.24* 456	4.04 *1.28* 480	3.40 *1.32* 335

[a] Standard deviation

[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

identified as relatively more important fall lower in the table than objectives identified as relatively less important. In the following section, each of these objectives will be discussed briefly.

Respondents in Region 9 feel that development of volunteer programs to maintain facilities (trail and campground maintenance) are important (mean=4.13), but there is not a high degree of consensus (s.d.=1.05). Residents of Region 9 also feel that development of such programs is an appropriate role for the agency, although again there is a lack of consensus (mean=4.19, s.d.=1.06). The performance of the USDA Forest Service in fulfilling this objective is somewhat favorable (mean=3.69). Again, consensus is limited (s.d.=1.11).

Encouraging collaboration among groups to share information is seen by Region 9 residents as an important objective, although consensus for the assessment is somewhat low (mean=4.23, s.d.=1.08). Respondents feel that the Forest Service is the appropriate entity to fulfill this objective (mean=4.25, s.d.=1.02). Agency

performance is somewhat favorable (mean=3.59) and, as reported with other objectives, consensus drops off in the evaluation (s.d.=1.15).

The third important objective for the residents of Region 9 is the development of a national policy to guide natural resource development. This objective has a mean of 4.32, and a standard deviation of 1.09. Overall, residents in Region 9 report that the Forest Service should be developing such a policy, but there is some disagreement in responses (mean=4.20, s.d.=1.12). Agency performance is somewhat favorable, although there is great disagreement in responses (mean=3.38, s.d.=1.25).

Region 9 respondents see the opportunity to have a "wilderness" experience on forests and grasslands as an important objective (mean=4.29). However, again there is not universal agreement on the rating (s.d.=1.11). These respondents do see the provision of such experiences as a role for the agency, and there is more agreement for this response (mean=4.28, s.d.=1.04). Finally, most respondents in Region 9 agree that the USDA Forest Service is doing a somewhat favorable job in fulfilling this objective (mean=3.84, s.d.=0.99).

The preservation of natural resources through limiting or eliminating policies such as timber harvesting or mining is an important objective for respondents in Region 9 (mean=4.25). As can be expected with this type of issue, there is some disagreement in assessment (s.d.=1.12). The fulfillment of this objective is viewed as an appropriate role for the USDA Forest Service (mean=4.24, s.d.=1.14). The performance of the Forest Service is generally seen as somewhat favorable, but there is a high level of disagreement concerning this evaluation (mean=3.57, s.d.=1.22).

Another objective that Region 9 residents feel is important is allowing for diverse uses of forests and grasslands. This objective has a mean importance of 4.05, with a standard deviation of 1.12, indicating some disagreement about its importance. Respondents also feel that the Forest Service should be fulfilling this objective, although there is some disagreement about this evaluation (mean=4.04, s.d.=1.13).

Informing the public on the economic value received from developing natural resources is an important objective for Region 9 residents, but there is low agreement for this opinion (mean=4.08, s.d.=1.19). Respondents believe that fulfilling this objective is an appropriate role for the agency, but again agreement is low (mean=4.02, s.d.=1.22). The performance of the USDA Forest Service is generally viewed as slightly favorable, although again, this is not universal agreement concerning this (mean=3.24, s.d.=1.26).

Restricting extractive uses of forests and grasslands (timber harvesting and grazing, and mineral development) is important for Region 9 residents. However, as one might expect with extractive use objectives, the level of consensus about these objectives is quite low. Restricting timber harvesting and grazing has a mean importance of 4.01, but a standard deviation of 1.20. Fulfilling this objective is believed by Region 9 respondents to be a somewhat appropriate role for the Forest Service, but again there is low agreement (mean=3.99, s.d.=1.26). The performance of the Forest Service in fulfilling this objective is rated somewhat favorable by Region 9 respondents, but consensus is low (mean=3.33, s.d.=1.26). Restricting mineral development is seen by many Region 9 respondents as an important objective, but there is a high degree of disagreement for this assessment (mean=4.07, s.d.=1.24). The fulfillment of this objective is seen as an appropriate role for the USDA Forest Service, but again, there is a clear lack of consensus (mean=4.04, s.d.=1.28). Agency performance is somewhat favorable according to Region 9 respondents, but there are many who disagree (mean=3.40, s.d.=1.32).

Objectives Identified as Not Important

Although five objectives in the VOBA questionnaire were evaluated as not important to the majority of people in Region 9 (mean importance rating of less than 3.00, with 3.00 the midpoint of the scale, indicating a neutral position) the high standard deviations indicate there are supporters as well (table 3). This is not surprising since these objectives were included in the VOBA survey based upon the input of focus groups, some of which must have included stakeholders with strong preferences for these objectives.

Expanding commercial recreation—Expanding commercial recreation on forests and grasslands is not important to the majority of respondents in Region 9 (figure 7), but there is some disagreement about this assessment (mean=2.88, s.d.=1.30). Respondents do feel that expanding commercial recreation is a somewhat appropriate role for the agency (mean=3.13, s.d.=1.29). Agency performance is rated as somewhat favorable, and there is more agreement about this evaluation than for the role of the agency or the importance of the objective (mean=3.31, s.d.=1.12).

Table 3--Objectives that Region 9 respondents do not view as important.

OBJECTIVE	Is this an important objective for you? *(1=not at all important, 5=very important)*	Do you believe that fulfilling this objective is an appropriate role for the USDA Forest Service? *(1=strongly disagree, 5=strongly agree)*	How favorably do you view the performance of the USDA Forest Service in fulfilling this objective? *(1=very unfavorably, 5=very favorably)*
Expanding commercial recreation on forests and grasslands (for example, ski areas, guide services, outfitters).	2.88 *1.30*[a] 440[b]	3.13 *1.29* 543	3.31 *1.12* 388
Making the permitting process easier for some established uses of forests and grasslands such as grazing, logging, mining, and commercial recreation.	2.60 *1.34* 425	2.59 *1.38* 438	2.93 *1.26* 306
Developing new paved roads on forests and grasslands for access for cars and recreational vehicles.	2.36 *1.34* 457	2.39 *1.39* 494	3.12 *1.24* 360
Expanding access for motorized off-highway vehicles on forests and grasslands (for example, snowmobiling or 4-wheel driving).	2.22 *1.41* 469	2.41 *1.38* 524	2.91 *1.26* 363
Developing and maintaining continuous trail systems that cross both public and private land for motorized vehicles such as snowmobiles or ATVs.	2.71 *1.45* 512	2.88 *1.42* 446	3.23 *1.13* 400

[a] Standard deviation

[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

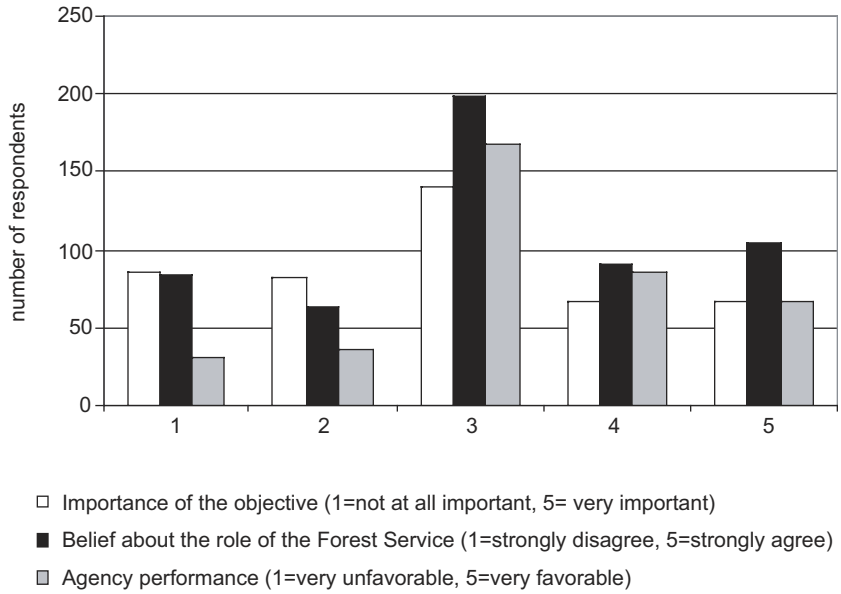

Figure 7—Distribution of Objective, Belief, and Attitude scores for: Expanding commercial recreation on forests and grasslands (for example, ski areas, guide services, or outfitters).

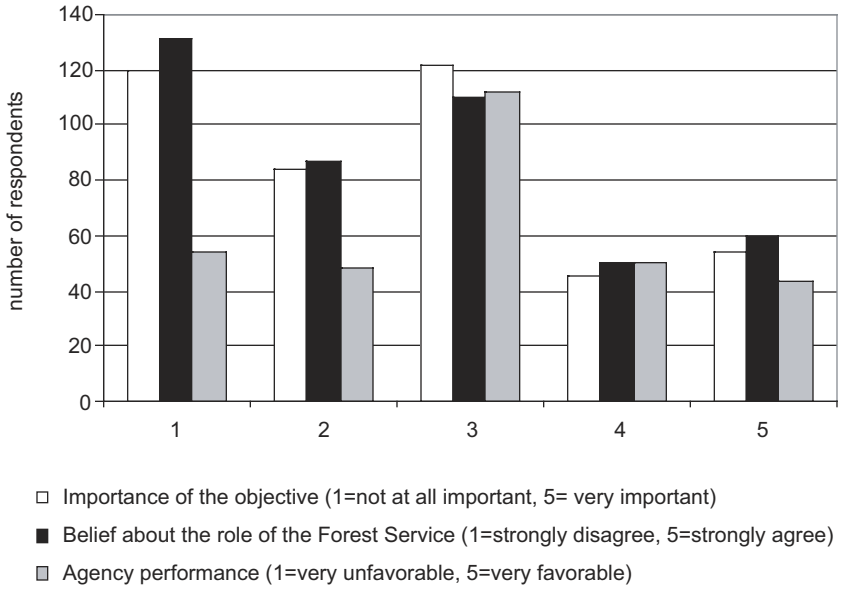

Figure 8—Distribution of Objective, Belief, and Attitude scores for: Making the permitting process easier for some established uses of forests and grasslands such as grazing, logging, mining, and commercial recreation.

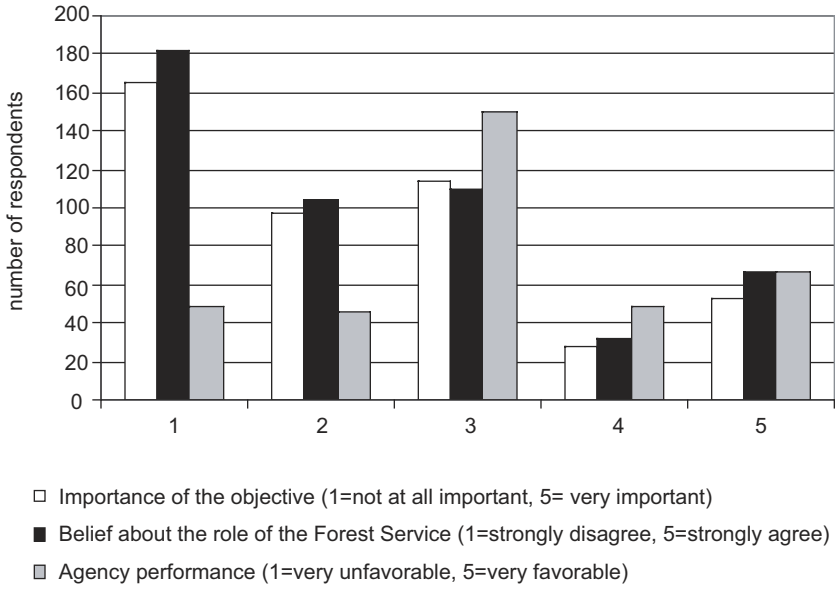

Figure 9—Distribution of Objective, Belief, and Attitude scores for: Developing new paved roads on forests and grasslands for access for cars and recreational vehicles.

Easing the Permitting Process—Many uses of public lands require a permit. Easing the permitting process is not regarded as an important objective for Region 9 residents (figure 8), although this assessment is not universally agreed upon (mean=2.60, s.d.=1.34). Region 9 residents also do not feel that it is the role of the USDA Forest Service to relax the permit procedures (mean=2.59). Yet again there is some disagreement about this evaluation (s.d.=1.38). As with other objectives that are not seen as falling within the purview of the agency, interpretation of the agency's performance can be inconclusive. Here, respondents in Region 9 rate agency performance as less than favorable (mean=2.93), with the usual dissent (s.d.=1.26). It should be noted that the criteria used for this evaluation will differ depending on whether a respondent finds the objective important or feels that it is the role of the agency to fulfill it.

Expanding paved roads—Motorized access often requires paved roads. In spite of this, expanding the number of paved roads on forests and grasslands is not important to the residents of Region 9 (mean=2.36). However, as indicated by the standard deviation (s.d.=1.34) there are some who disagree (figure 9). Expanding paved roads is not viewed as an appropriate role for the Forest

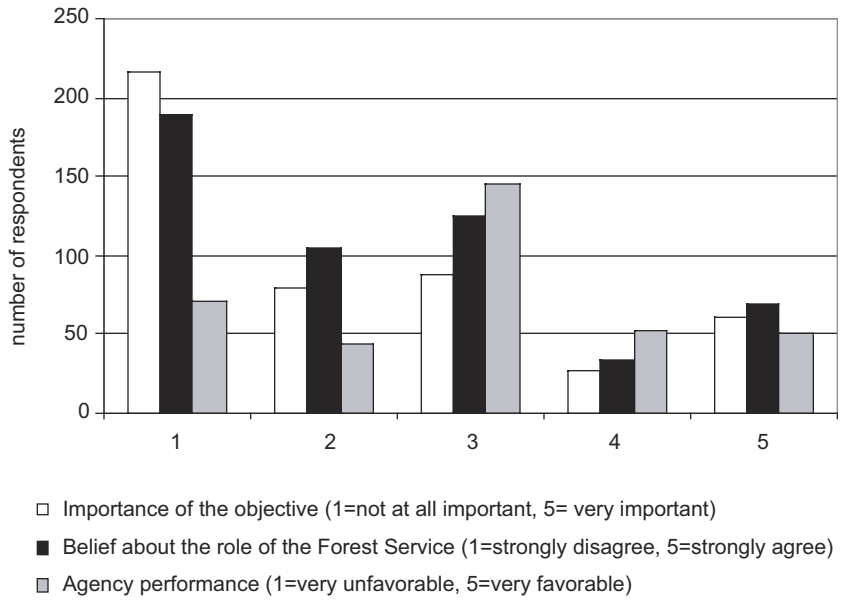

Figure 10—Distribution of Objective, Belief, and Attitude scores for: Expanding access for motorized off-highway vehicles on forests and grasslands (for example, snowmobiling or 4-wheel driving).

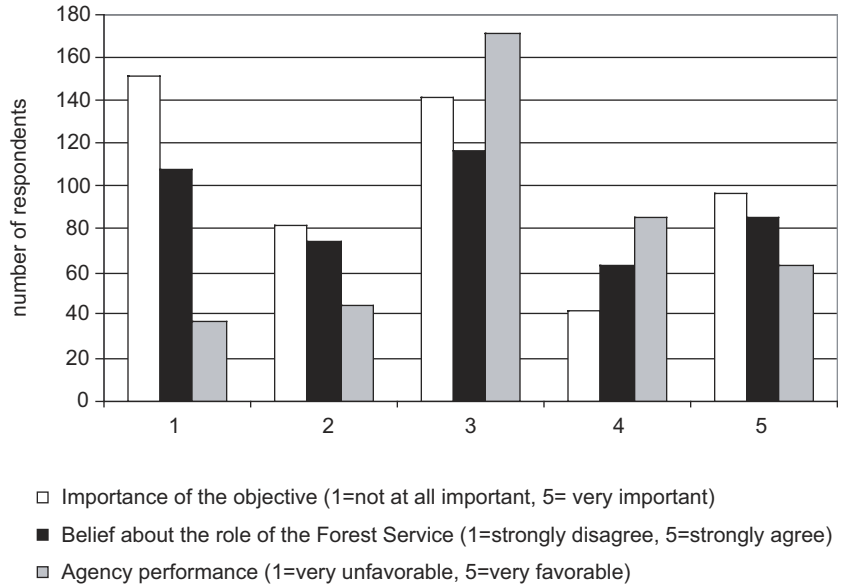

Figure 11—Distribution of Objective, Belief, and Attitude scores for: Developing and maintaining continuous trail systems that cross both public and private land for motorized vehicles such as snowmobiles or ATVs.

Service by most respondents in Region 9 (mean=2.39, s.d.=1.39). The Forest Service is seen by most as doing a somewhat favorable job of expanding roads, although, again, there is dissent with this evaluation (mean=3.12, s.d.=1.24).

Access for motorized vehicles–Motorized recreation is often a controversial use of public lands. The results from Region 9 support this assertion (figure 10). The respondents of Region 9, on the whole, do not find the provision of access for motorized vehicles to be very important (mean=2.22), but there is wide disagreement (s.d.=1.41). Most respondents do not believe that the Forest Service is the appropriate agency to provide motorized access, although again there are a number or respondents who disagree (mean-=2.41, s.d.=1.38). Overall, agency performance is not favorable, but again, there is a great deal of disagreement about this evaluation (mean=2.91, s.d.=1.26).

Developing trail systems—Developing and maintaining a continuous system of trails (crossing public and private lands) for motorized access is not viewed by most Region 9 residents as an important objective (mean=2.71). However, as the standard deviation reveals (1.45), there are those who do view it as important (figure 11). Providing such a trail system is also not seen as an appropriate role for the USDA Forest Service, but

this belief does not have wide agreement (mean=2.88, s.d.=1.42). Agency performance is viewed by many, but certainly not all, as somewhat favorable (mean=3.23, s.d.=1.13).

Objectives Identified as Moderately Important

Table 4 presents the objectives that the respondents within Region 9 feel are somewhat important, or those for which they are more neutral. These objectives all have means between 3.00 and 4.00. As with the less important objectives, all of these also have higher standard deviations, indicating that while most people do not feel strongly about them, a few do. Again, given how the set of objectives were developed, this split in opinions is not surprising. Results for this group of objectives have been organized in table 4 to facilitate a discussion of related issues. For example, objectives that deal either directly or indirectly with resource extraction are grouped together. Within each grouping the objectives are organized in order of decreasing importance (objectives with higher means are listed first, then those with lower means).

Natural resource management—Public input into forest and grassland management decisions is always important to some stakeholders. The form for this input can influence how participation takes place, and how people feel about the process. Many people have advocated using public advisory committees to inform land management decision makers, and to provide input into management decisions. In general, the people of Region 9 find the use of such committees to be somewhat important, but there is substantial variation in assessments for this objective (mean=3.85, s.d.=1.14). Using such committees is believed by Region 9 residents to be an appropriate role for the agency, although there are some who do not agree with this evaluation (mean=3.89, s.d.=1.12). The performance of the USDA Forest Service is viewed as somewhat favorable (mean=3.32, s.d.=1.25).

Issues about natural resource management often arise when local interests are different from national or regional interest. Making management decisions locally as opposed to nationally is seen by Region 9 residents as a somewhat important objective, but there is an apparent lack of consensus for this opinion (mean=3.90, s.d.=1.19). Beliefs about the role the USDA Forest Service should play in fulfilling this objective vary, but overall people see this as an appropriate role for the agency (mean=3.86, s.d.=1.23). Agency performance is viewed as somewhat favorable, with a level of agreement similar to that of the objective's importance and the role the agency should play (mean=3.40, s.d.=1.22).

Increasing the total acreage in the public lands system is also of moderate importance to the respondents in Region 9, but as with the other objectives in this group, there is not a great deal of consensus (mean=3.84, s.d.=1.25). For many, although not all in Region 9, increasing the total acreage in the public land system is seen as an appropriate role for the Forest Service (mean=3.93, s.d.=1.27). Region 9 respondents view agency performance as somewhat favorable (mean 3.44, s.d.=1.13).

Respondents in Region 9 see increasing law enforcement on public lands as a somewhat important objective, but with a low level of consensus (mean=3.83, s.d.=1.27). The fulfillment of this objective is believed by most respondents to be an appropriate role for the USDA Forest Service, and the level of agreement is higher (mean=4.06, s.d.=1.13). Agency performance is rated as somewhat favorable (mean=3.66, s.d.=1.17).

Many public land recreation opportunities are available only to fee-paying users, a source of some controversy in recent years. Paying an entry fee that goes to support public land is an objective that residents in Region 9 feel is somewhat important (mean=3.56), but this objective has very little consensus as can be seen in the high standard deviation (1.29). Implementing an entry fee is believed to be an appropriate role for the agency, although, again, there is disagreement with this assessment (mean=3.63, s.d.=1.28). Overall, the USDA Forest Service is seen as doing a favorable job, but there is not universal agreement for this (mean=3.42, s.d.=1.22).

Allowing public land managers to trade public lands for private lands is a somewhat important objective for Region 9 residents, but this objective is far from universally supported (mean=3.07, s.d.=1.35). The USDA Forest Service is viewed by many within Region 9 as the appropriate agency to fulfill this objective, but there are also many who responded differently (mean=3.25, s.d.=1.41). Agency performance is viewed favorably, with a mean of 3.16 and standard deviation of 1.19.

Access—Wilderness designation is often a subject on which there is little agreement. Region 9 is no exception. While the residents do feel that designation of more wilderness is important (mean=3.98), there is also some disagreement (s.d.=1.21). Many Region 9 residents do believe that such designation is the role of the USDA Forest Service (mean=3.77), but this belief is not widely shared (s.d.=1.35). Agency performance is somewhat

Table 4--Objectives of moderate importance for Region 9.

	Objective	Is this an important objective for you? *(1=not at all important, 5=very important)*	Do you believe that fulfilling this objective is an appropriate role for the Forest Service? *(1=strongly disagree, 5=strongly agree)*	How favorably do you view the performance of the USDA Forest Service in fulfilling this objective? *(1=very unfavorably, 5=very favorably)*
Natural Resource Management	Using public advisory committees to advise on public land management issues.	3.85 *1.14*[a] 409[b]	3.89 *1.12* 400	3.32 *1.25* 312
	Making management decisions concerning the use of forests and grasslands at the local level rather than at the national level.	3.90 *1.19* 370	3.86 *1.23* 453	3.40 *1.22* 328
	Increasing the total number of acres in the public land system.	3.84 *1.25* 411	3.93 *1.27* 380	3.44 *1.13* 302
	Increasing law enforcement efforts by public land agencies on public lands.	3.83 *1.27* 400	4.06 *1.13* 383	3.66 *1.17* 331
	Paying an entry fee that goes to support public land.	3.56 *1.29* 400	3.63 *1.28* 378	3.42 *1.22* 319
	Allowing public land managers to trade public lands for private lands (for example, to eliminate private property within public land boundaries, or to acquire unique areas of land).	3.07 *1.35* 338	3.25 *1.41* 372	3.16 *1.19* 334
Access	Designating more wilderness areas on public land that stops access for development and motorized uses.	3.98 *1.21* 451	3.77 *1.35* 413	3.28 *1.25* 329
	Developing and maintaining continuous trail systems that cross both public and private land for non-motorized recreation such as hiking or cross-country skiing.	3.85 *1.22* 454	3.79 *1.27* 475	3.62 *1.17* 392
	Designating some existing recreation trails for specific uses (for example, creating separate trails for snowmobiling and cross-country skiing, or for mountain biking and horseback riding).	3.74 *1.24* 489	4.00 *1.16* 456	3.64 *1.14* 389
Preservation/ Conservation	Preserving the cultural uses of forests and grasslands by Native Americans and Native Hispanics[#] such as fire wood gathering, herb/berry/plant gathering, and ceremonial uses.	3.79 *1.27* 554	3.71 *1.28* 625	3.33 *1.24* 401

Table 4--*Continued.*

ECONOMIC DEVELOPMENT	Providing natural resources from forests and grasslands to support communities depending on grazing, mining, or timber harvesting.	3.51 *1.33* 440	3.21 *1.38* 432	3.35 *1.14* 431

[a] Standard deviation

[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

[#] The term "Native Hispanic" was used in the survey to differentiate Hispanics born in the US from those who moved to the US. This term was changed to "traditional groups" in the 2003 survey.

favorable, but there is a low level of consensus for this assessment (mean=3.28, s.d.=1.25).

Developing and maintaining a continuous trail system that crosses both private and public land for non-motorized recreation is a somewhat important objective for the residents of Region 9 (mean=3.85). This opinion is not shared by all respondents as can be seen in the high standard deviation (1.22). It is interesting to note that the residents of Region 9 do not find the development of a similar trail system for motorized recreation to be important (see above). The USDA Forest Service is seen as a somewhat appropriate agency to fulfill this objective, although there is some disagreement (mean=3.79, s.d.=1.27). Agency performance is evaluated as somewhat favorable (mean=3.62, s.d.=1.17).

Conflicts between incompatible recreation uses are often an issue on public lands, including those in the National Forest System. One solution would be to designate some trails for specific uses; for example separate trails for cross-country skiing and snowmobiling. Designating such specific use trails is seen as somewhat important to the Region 9 respondents, but there is some disagreement (mean=3.74, s.d.=1.24). Creating such designations for trails is believed by Region 9 residents to be an appropriate role for the Forest Service (mean=4.00), although this belief is not shared by all respondents (s.d.=1.16). Agency performance is generally viewed as somewhat favorable, although this is not a universal assessment (mean=3.64, s.d.=1.14).

Preservation and Conservation

The forests and grasslands in Region 9 have a number of traditional cultural uses by Native Americans. Preserving these cultural uses is seen by residents in the Region as a somewhat important objective (mean=3.79). This opinion is not shared by all within the Region, as can be seen in the large standard deviation (1.27). Providing access for such uses is believed to be a somewhat appropriate role for the Forests Service, but again, this belief is not universal (mean=3.21, s.d.=1.28). Agency performance is rated favorably according to Region 9 respondents, but not necessarily with wide agreement (mean=3.33, s.d.=1.24).

Economic Development

Public land management conflicts often arise due to differing priorities. Communities adjacent to public lands often see these lands as the source of their livelihood, while those more distant prefer that other uses be emphasized. The residents in Region 9 see the provision of resources to dependent communities as a somewhat important objective (mean=3.51). But, as we often see with this group of objectives, agreement on this point is very low (s.d.=1.33). Providing resources to dependent communities is seen as a somewhat appropriate role for the USDA Forest Service, but again, there is low agreement (mean=3.21, s.d.=1.38). Agency performance is somewhat favorable (mean=3.35, s.d.=1.14).

Results for Region 9: Public Lands Values

Previous research using the Public Lands Values Scale has shown that these items consistently fall into two categories, individual values and management values. The first category we have labeled as Socially Responsible Individual Values (tables 5 and 6). For these value statements, a higher mean indicates a higher level of environmental orientation. The second category contains items that deal with the way in which public lands should be

Table 5--Socially responsible individual public lands values for Region 9 with a high degree of consensus among respondents.

VALUES *(1=strongly disagree, 5=strongly agree)*	
I am glad there are national forests even if I never get to see them.	4.77 *0.67* [a] 835 [b]
People should be more concerned about how our public lands are used.	4.69 *0.75* 776
People can think public lands are valuable even if they do not actually go there themselves.	4.66 *0.76* 734
Manufacturers should be encouraged to use recycled materials in their manufacturing and processing operations.	4.63 *0.81* 849
Future generations should be as important as the current one in the decisions about natural resources.	4.63 *0.82* 892
Consumers should be interested in the environmental consequences of the products they purchase.	4.52 *0.87* 777
I am willing to make personal sacrifices for the sake of slowing down pollution.	4.35 *0.93* 765

[a] Standard deviation
[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

managed, called the Socially Responsible Management Values (table 7). These value statements are worded so that a higher value indicates relatively more importance is placed upon human uses of, or commodity production from, forests and grasslands.

Socially Responsible Individual Values

The responses to the Socially Responsible Individual Values will be further broken into two groups; those for which there is a high degree of consensus and those for which the level of agreement is lower (based upon the standard deviation). Most of the means for the values indicate an environmental orientation in the people of Region 9, but for many of the values statements, the standard deviation indicates a low level of agreement.

Socially Responsible Individual Values With a High Degree of Consensus

When Socially Responsible Individual Values for which there is a higher degree of agreement (standard deviation less than 1.00) are placed in order of increasing standard deviation, the order of agreement is almost analogously decreasing (table 5). In other words, the values statements with higher means (indicating a more environmental value orientation) are also those with higher levels of consensus.

Socially Responsible Individual Values With a Low Degree of Consensus

Table 6 shows that values statements with a lower consensus among the respondents again nearly always exhibit the characteristic that higher levels of environmental orientation also correspond to higher consensus (even among these values with low consensus).

Socially Responsible Management Values

None of the Socially Responsible Management Values presented in table 7 show a high level of consensus. As the previous section demonstrates, most people believe in protecting the environment, but disagreement arises about the appropriate methods to achieve such protection. The differences in responses to this set of values

Table 6--Socially responsible individual public lands values for Region 9 with a low degree of consensus among respondents.

VALUES *(1=strongly disagree, 5=strongly agree)*	
Donating time or money to worthy causes is important to me.	4.16 *1.04* [a] 766 [b]
Natural resources must be preserved even if people must do without some products.	4.19 *1.07* 844
I am willing to stop buying products from companies that pollute the environment even though it might be inconvenient.	4.00 *1.10* 764
People should urge their friends to limit their use of products made from scarce resources.	4.14 *1.10* 822
Forests have a right to exist for their own sake, regardless of human concerns and uses.	4.16 *1.14* 805
Wildlife, plants, and humans have equal rights to live and grow.	4.22 *1.20* 783
I have often thought that if we could just get by with a little less there would be more left for future generations.	4.04 *1.20* 725
I would be willing to sign a petition for an environmental cause.	3.92 *1.31* 716
The whole pollution issue has never upset me too much since I feel it's somewhat overrated. [c]	2.79 *1.38* 761
I would be willing to pay five dollars more each time I use public lands for recreational purposes (for example, hiking, camping, hunting).	3.58 *1.42* 920

[a] Standard deviation
[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.
[c] This value statement has been reverse scored to make the responses consistent with the other statements. For a more complete discussion of reverse scoring, please refer to the appendix.

Table 7--Socially responsible management values for public lands in Region 9.

VALUES *(1=strongly disagree, 5=strongly agree)*	
I think that the public land managers are doing an adequate job of protecting natural resources from being overused.	3.08 *1.18* [a] 887 [b]
The government has better places to spend money than devoting resources to a strong conservation program.	2.22 *1.27* 973
The Federal government should subsidize the developing and leasing of public lands to companies.	2.06 *1.32* 973
The decision to develop resources should be based mostly on economic grounds.	2.69 *1.36* 955
The most important role for the public lands is providing jobs and income for local people.	2.84 *1.36* 1070
The main reason for maintaining resources today is so we can use them in the future if we need to.	3.65 *1.40* 962
The primary use of forests should be for products that are useful to humans.	2.60 *1.40* 1054
We should actively harvest more trees to meet the needs of a much larger human population.	2.54 *1.52* 948

[a] Standard deviation
[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

are the basis for the disagreement we see in some of the objectives. Histograms are presented for each of the eight Socially Responsible Management Values (figures 12 through 19).

Comparison of Region 9 With the Rest of the United States

This final section compares the VOBA results for Region 9 with the results for the rest of the United States. Tables 8 through 11 present the objectives, beliefs about the role of the agency, and customer satisfaction. These are arranged in a manner similar to the previous sections (Core Important Objectives, Other Important Objectives, Unimportant Objectives, and Objectives of Moderate Importance). Table 12 contains comparisons of the Public Lands Values between Region 9 and the rest of the United States. This table is divided into Socially Responsible Individual Values and Socially Responsible Management Values. Discussion will focus on those objectives and values where evaluations show statistically significant differences.

Objectives, Beliefs, and Attitudes

Table 8 reveals that Region 9 does not differ from the rest of the United States regarding the importance of any of the core important objectives, or the attitudes about the performance of the USDA Forest Service in fulfilling them. However, Region 9 respondents believe more strongly than does the rest of the country that the Forest Service should play a role in fulfilling two of these objectives: Conserving and protecting watersheds, and protecting ecosystems and wildlife habitats.

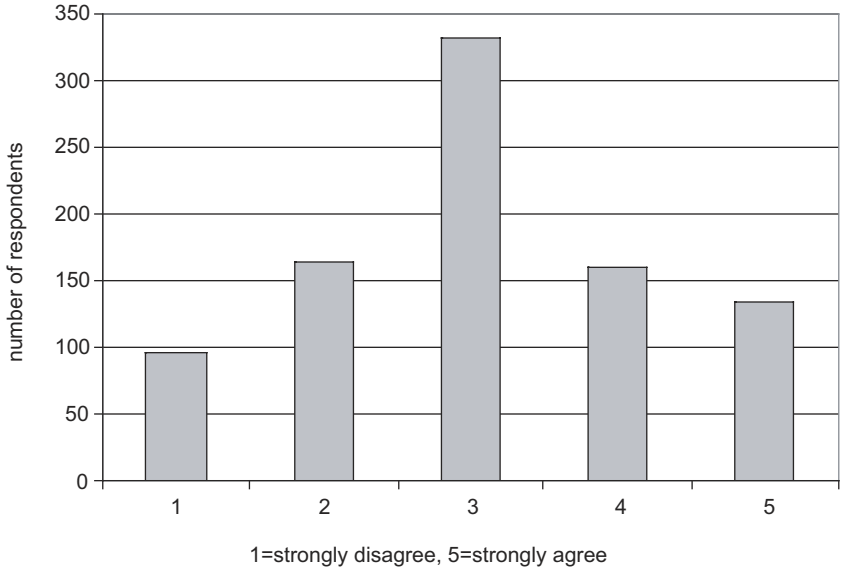

Figure 12—Distribution of responses to: "I think that the public land managers are doing an adequate job of protecting natural resources from being over used."

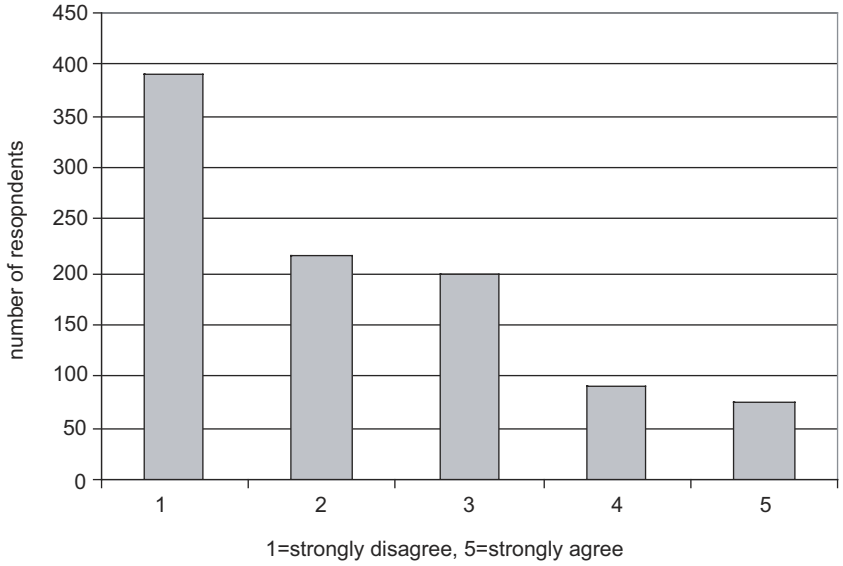

Figure 13—Distribution of responses to: "The government has better places to spend money than devoting resources to a strong conservation program."

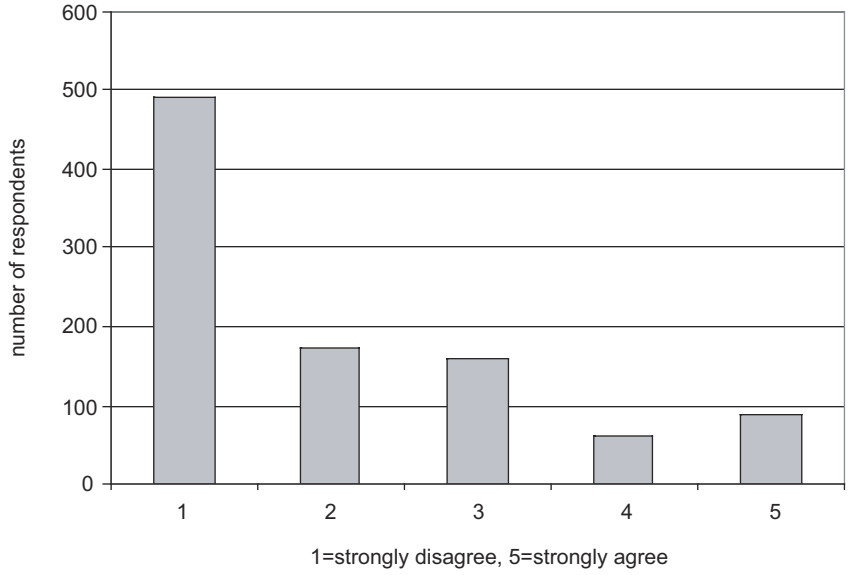

Figure 14—Distribution of responses to: "The Federal government should subsidize the development and leasing of public lands to companies."

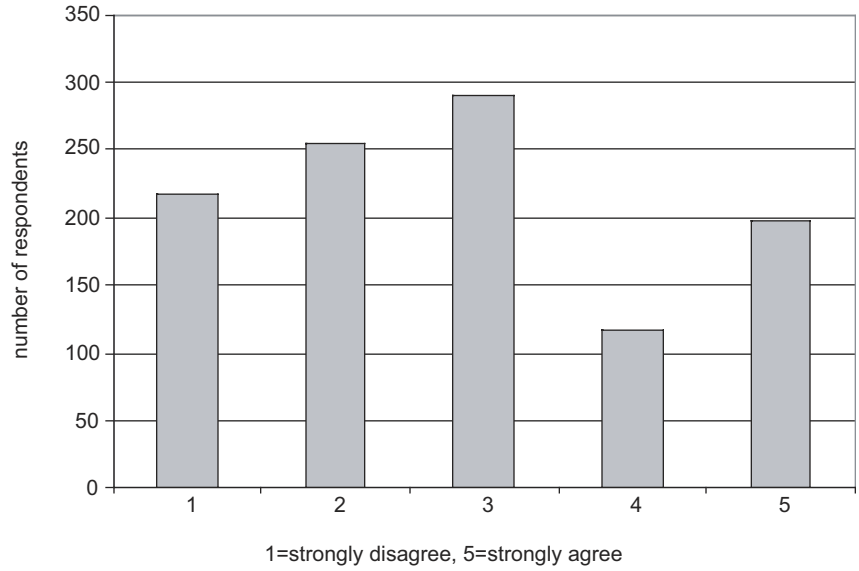

Figure 15—Distribution of responses to: "The decision to develop resources should be based mostly on economic grounds."

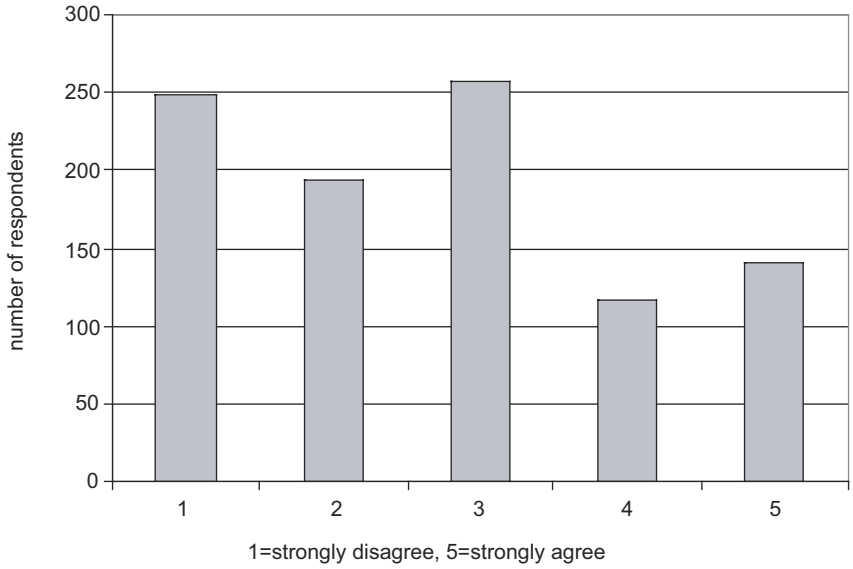

Figure 16—Distribution of responses to: "The most important role for the public lands is providing jobs and income for local people."

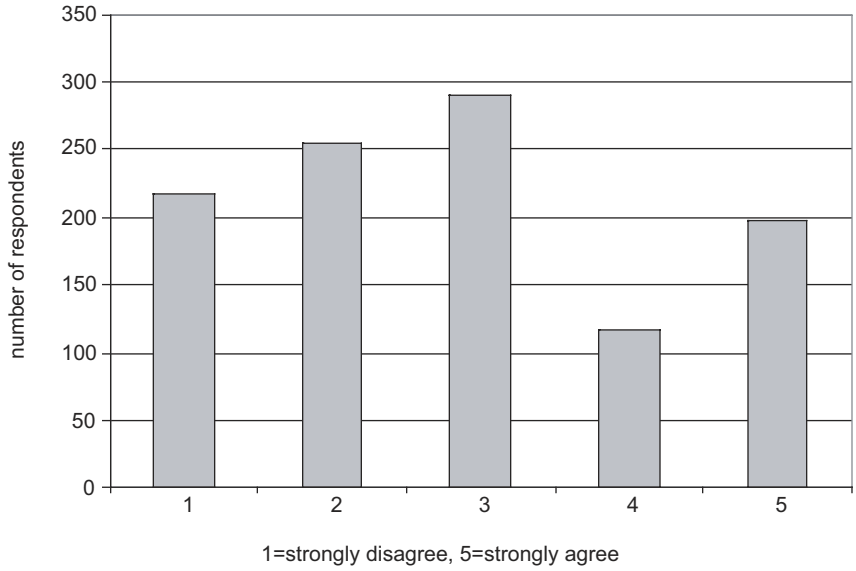

Figure 17—Distribution of responses to: "The main reason for maintaining resources today is so we can use them in the future if we need to."

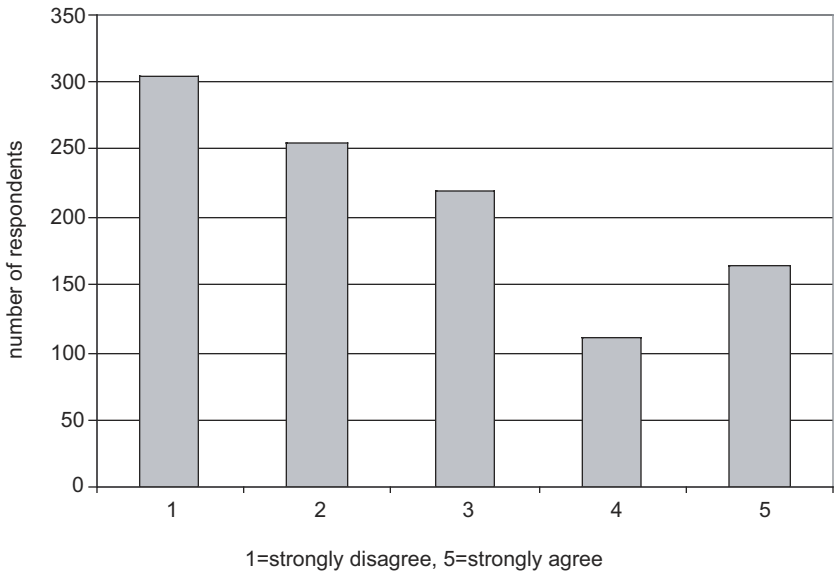

Figure 18—Distribution of responses to: "The primary use of forests should be for products that are useful to humans."

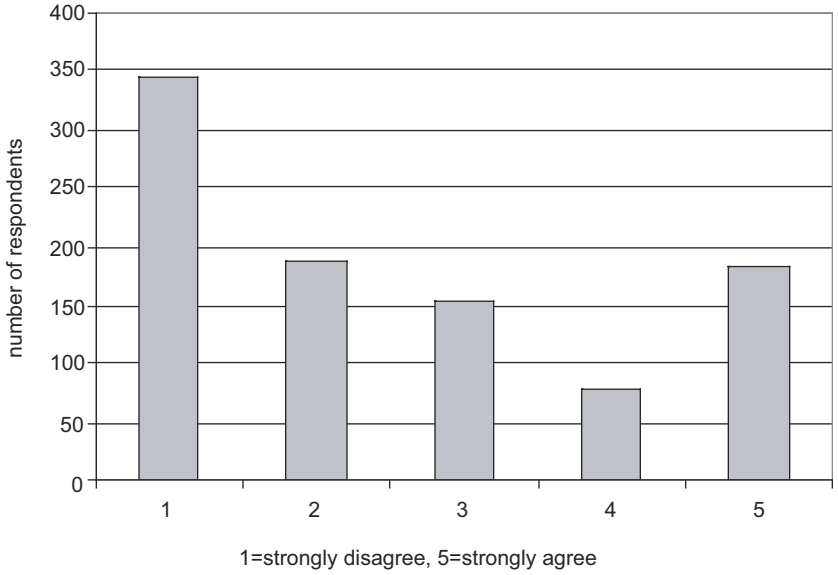

Figure 19—Distribution of responses to: "We should actively harvest more trees to meet the needs of a much larger human population."

Table 9 reveals that Region 9 respondents place a greater importance on both the development of a national natural resource policy and the preservation of natural resources through restriction of extractive uses than does the rest of the United States. The standard deviations for both of these objectives are also lower for Region 9 than for the rest of the country. Region 9 respondents also believe more strongly than the rest of the United States that the USDA Forest Service should be the agency to reduce the levels of extractive uses, and that the Forest Service should specifically restrict mineral development.

As seen in table 10, although respondents from both Region 9 and the rest of the United States believe that easing the permitting process is unimportant, Region 9 respondents find this objective to be even less important than does the rest of the United States. Region 9 respondents also believe that expanding commercial recreation is an appropriate role for the USDA Forest Service, while respondents from the rest of the United States do not.

Of the 11 moderately important objectives in table 11, 3 show differences between the responses from Region 9 and those of the rest of the country. Region

Table 8--Comparison of core important objectives, beliefs, and attitudes – Region 9 and the rest of the United States.

OBJECTIVE	Is this an important objective for you? (1=not at all important, 5=very important)			Do you believe that fulfilling this objective is an appropriate role for the USDA Forest Service? (1=strongly disagree, 5=strongly agree)			How favorably do you view the performance of the USDA Forest Service in fulfilling this objective? (1=very unfavorably, 5=very favorably)		
	Region 9	Rest of US	Sig.diff.-R9/rest US	Region 9	Rest of US	Sig.diff.-R9/rest US	Region 9	Rest of US	Sig.diff.-R9/rest US
Conserving and protecting forests and grasslands that are the source of our water resources, such as streams, lakes, and watershed areas.	4.76 *0.67*[a] 530[b]	4.69 *0.80* 797		4.65 *0.77* 579	4.56 *0.87* 827	*	3.86 *1.04* 449	3.82 *1.14* 745	
Developing volunteer programs to improve forests and grasslands (for example, planting trees, or improving water quality).	4.53 *0.85* 545	4.54 *0.88* 750		4.57 *0.84* 565	4.47 *0.97* 759		3.71 *1.19* 401	3.72 *1.18* 554	
Protecting ecosystems and wildlife habitats.	4.60 *0.87* 642	4.52 *0.93* 880		4.65 *0.77* 534	4.49 *0.96* 788	**	3.91 *1.08* 550	3.81 *1.12* 708	
Informing the public about recreation concerns on forests and grasslands such as safety, trail etiquette, and respect for wildlife.	4.52 *0.92* 490	4.56 *0.87* 677		4.58 *0.81* 466	4.48 *0.96* 688		3.88 *1.14* 523	3.86 *1.20* 727	
Informing the public on the potential environmental impacts of all uses associated with forests and grasslands.	4.42 *0.99* 499	4.36 *0.99* 673		4.46 *0.91* 451	4.43 *0.95* 684		3.44 *1.23* 410	3.39 *1.30* 603	

[a] Standard deviation

[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

*, **, *** Differences between the means are statistically significant at $\alpha = 0.05$, 0.01, and 0.001 respectively, based on a t-test.

9 respondents place greater importance on designating more wilderness areas, on continuous trail systems for non-motorized recreation, and on increasing the total number of acres in the public lands system. Additionally, for each of these objectives Region 9 respondents are more inclined to believe that the USDA Forest Service is the appropriate entity to fulfill these objectives.

Public Lands Values

Table 12 reveals six values (three from the Socially Responsible Individual Values and three from the Socially Responsible Management Values) where responses from Region 9 are significantly different from those from the rest of the United States. For nearly all of the Socially Responsible Individual Values, the means for Region 9 are higher and the standard deviations are lower than for the rest of the United States, whether the differences are statistically significant or not. This suggests that there is a higher level of environmental orientation for Region 9 than within the rest of the United States. For nearly all of the Socially Responsible Management Values, the means and standard deviations are also lower for Region 9 than for the rest of the country. This indicates that respondents from the rest of the United States put greater value on the extraction and use of natural resources than do the respondents from Region 9. Thus, there is a greater ecocentric orientation among the respondents from Region 9 than for the rest of the United States.

Table 9--Comparison of other important objectives, beliefs, and attitudes – Region 9 and the rest of the United States.

OBJECTIVE	Is this an important objective for you? (1=not at all important, 5=very important)			Do you believe that fulfilling this objective is an appropriate role for the USDA Forest Service? (1=strongly disagree, 5=strongly agree)			How favorably do you view the performance of the USDA Forest Service in fulfilling this objective? (1=very unfavorably, 5=very favorably)		
	Region 9	Rest of US	Sig.diff.-R9/rest US	Region 9	Rest of US	Sig.diff.-R9/rest US	Region 9	Rest of US	Sig.diff.-R9/rest US
Developing volunteer programs to maintain trails and facilities on forests and grasslands (for example, trail maintenance, or campground maintenance).	4.13 *1.05*[a] 445[b]	4.17 *1.05* 662		4.19 *1.06* 495	4.20 *1.02* 670		3.69 *1.11* 367	3.73 *1.15* 590	
Encouraging collaboration between groups in order to share information concerning uses of forests and grasslands.	4.23 *1.08* 423	4.20 *1.10* 643		4.25 *1.02* 444	4.16 *1.06* 623		3.59 *1.15* 358	3.54 *1.13* 543	
Developing a national policy that guides natural resource development of all kinds (for example, specifies levels of extraction, and regulates environmental impacts).	4.32 *1.09* 553	4.16 *1.22* 742	*	4.20 *1.12* 447	4.12 *1.17* 661		3.38 *1.25* 402	3.47 *1.21* 591	
Preserving the ability to have a "wilderness" experience on forests and grasslands.	4.29 *1.11* 536	4.17 *1.10* 805		4.28 *1.04* 538	4.18 *1.13* 821		3.84 *0.99* 559	3.88 *1.04* 842	
Preserving the natural resources of forests and grasslands through such policies as no timber harvesting or no mining.	4.25 *1.12* 586	4.07 *1.29* 773	**	4.24 *1.14* 561	4.05 *1.33* 782	**	3.57 *1.22* 487	3.62 *1.24* 682	
Allowing for diverse uses of forests and grasslands such as grazing, recreation, and wildlife habitat.	4.05 *1.12* 444	4.05 *1.08* 686		4.04 *1.13* 407	4.06 *1.12* 552		3.69 *1.08* 347	3.66 *1.09* 502	
Informing the public on the economic value received by developing our natural resources.	4.08 *1.19* 450	3.97 *1.26* 662		4.02 *1.22* 426	3.97 *1.20* 645		3.24 *1.26* 393	3.18 *1.31* 593	
Restricting timber harvesting and grazing on forests and grasslands.	4.01 *1.20* 478	3.91 *1.29* 664		3.99 *1.26* 464	3.90 *1.34* 607		3.33 *1.26* 359	3.28 *1.31* 587	
Restricting mineral development on forests and grasslands.	4.07 *1.24* 456	3.94 *1.31* 636		4.04 *1.28* 480	3.86 *1.39* 643	*	3.40 *1.32* 335	3.23 *1.38* 593	

[a] Standard deviation

[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

*, **, *** Differences between the means are statistically significant at $\alpha = 0.05$, 0.01, and 0.001 respectively, based on a t-test.

Table 10--Comparison of unimportant objectives, beliefs, and attitudes – Region 9 and the rest of the United States.

OBJECTIVE	Is this an important objective for you? (1=not at all important, 5=very important)			Do you believe that fulfilling this objective is an appropriate role for the USDA Forest Service? (1=strongly disagree, 5=strongly agree)			How favorably do you view the performance of the USDA Forest Service in fulfilling this objective? (1=very unfavorably, 5=very favorably)		
	Region 9	Rest of US	Sig.diff.-R9/rest US	Region 9	Rest of US	Sig.diff.-R9/rest US	Region 9	Rest of US	Sig.diff.-R9/rest US
Expanding commercial recreation on forests and grasslands (for example, ski areas, guide services, outfitters).	2.88 *1.30*[a] 440[b]	2.86 *1.31* 637		3.13 *1.29* 543	2.94 *1.40* 755	*	3.31 *1.12* 388	3.41 *1.18* 500	
Making the permitting process easier for some established uses of forests and grasslands such as grazing, logging, mining, and commercial recreation.	2.60 *1.34* 425	2.83 *1.43* 639	**	2.59 *1.38* 438	2.70 *1.47* 696		2.93 *1.26* 306	2.98 *1.28* 461	
Developing new paved roads on forests and grasslands for access for cars and recreational vehicles.	2.36 *1.34* 457	2.40 *1.38* 653		2.39 *1.39* 494	2.51 *1.43* 639		3.12 *1.24* 360	3.14 *1.25* 564	
Expanding access for motorized off-highway vehicles on forests and grasslands (for example, snowmobiling or 4-wheel driving).	2.22 *1.41* 469	2.30 *1.40* 660		2.41 *1.38* 524	2.43 *1.38* 748		2.91 *1.26* 363	2.98 *1.30* 463	
Developing and maintaining continuous trail systems that cross both public and private land for motorized vehicles such as snowmobiles or ATVs.	2.71 *1.45* 512	2.82 *1.38* 770		2.88 *1.42* 446	2.76 *1.45* 677		3.23 *1.13* 400	3.18 *1.25* 537	

[a] Standard deviation

[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

*, **, *** Differences between the means are statistically significant at $\alpha = 0.05$, 0.01, and 0.001 respectively, based on a t-test.

Table 11--Comparison of moderately important objectives, beliefs, and attitudes – Region 9 and the rest of the United States.

OBJECTIVE	Is this an important objective for you? (1=not at all important, 5=very important)			Do you believe that fulfilling this objective is an appropriate role for the USDA Forest Service? (1=strongly disagree, 5=strongly agree)			How favorably do you view the performance of the USDA Forest Service in fulfilling this objective? (1=very unfavorably, 5=very favorably)		
	Region 9	Rest of US	Sig.diff.-R9/rest US	Region 9	Rest of US	Sig.diff.-R9/rest US	Region 9	Rest of US	Sig.diff.-R9/rest US
Using public advisory committees to advise on public land management issues.	3.85 *1.14*[a] 409[b]	3.84 *1.17* 561		3.89 *1.12* 400	3.87 *1.18* 527		3.32 *1.25* 312	3.32 *1.13* 408	
Making management decisions concerning the use of forests and grasslands at the local level rather than at the national level.	3.90 *1.19* 370	4.03 *1.14* 547		3.86 *1.23* 453	3.99 *1.20* 650		3.40 *1.22* 328	3.40 *1.29* 477	
Designating more wilderness areas on public land that stops access for development and motorized uses.	3.98 *1.21* 451	3.75 *1.34* 624	**	3.77 *1.35* 413	3.59 *1.44* 678	*	3.28 *1.25* 329	3.29 *1.24* 572	
Developing and maintaining continuous trail systems that cross both public and private land for non-motorized recreation such as hiking or cross-country skiing.	3.85 *1.22* 454	3.64 *1.30* 679	**	3.79 *1.27* 475	3.59 *1.33* 650	*	3.62 *1.17* 392	3.57 *1.14* 528	
Designating some existing recreation trails for specific uses (for example, creating separate trails for snowmobiling and cross-country skiing, or for mountain biking and horseback riding).	3.74 *1.24* 489	3.63 *1.37* 631		4.00 *1.16* 456	3.87 *1.18* 625		3.64 *1.14* 389	3.53 *1.19* 575	
Increasing the total number of acres in the public land system.	3.84 *1.25* 411	3.55 *1.40* 554	***	3.93 *1.27* 380	3.75 *1.36* 573	*	3.44 *1.13* 302	3.38 *1.26* 507	
Increasing law enforcement efforts by public land agencies on public lands.	3.83 *1.27* 400	3.92 *1.18* 562		4.06 *1.13* 383	3.99 *1.19* 591		3.66 *1.17* 331	3.64 *1.26* 461	
Preserving the cultural uses of forests and grasslands by Native Americans and Native Hispanics such as fire wood gathering, herb/berry/plant gathering, and ceremonial uses.	3.79 *1.27* 554	3.78 *1.30* 800		3.71 *1.28* 625	3.61 *1.33* 838		3.33 *1.24* 401	3.44 *1.20* 619	
Paying an entry fee that goes to support public land.	3.56 *1.29* 400	3.63 *1.32* 535		3.63 *1.28* 378	3.66 *1.30* 598		3.42 *1.22* 319	3.57 *1.25* 496	
Providing natural resources from forests and grasslands to support communities depending on grazing, mining, or timber harvesting.	3.51 *1.33* 440	3.57 *1.32* 666		3.21 *1.38* 432	3.28 *1.34* 644		3.35 *1.14* 431	3.35 *1.18* 613	
Allowing public land managers to trade public lands for private lands (for example, to eliminate private property within public land boundaries, or to acquire unique areas of land).	3.07 *1.35* 338	3.13 *1.40* 500		3.25 *1.41* 372	3.19 *1.37* 494		3.16 *1.19* 334	3.14 *1.24* 461	

[a] Standard deviation

[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

*, **, *** Differences between the means are statistically significant at $\alpha = 0.05$, 0.01, and 0.001 respectively, based on a t-test.

Table 12--Comparison of socially responsible individual values - Region 9 and the rest of the United States.

VALUES *(1=strongly disagree, 5=strongly agree)*	Region 9	Rest of US	Significant difference between Region 9 and the rest of the US
I am glad there are national forests even if I never get to see them.	4.77 *0.67* [a] 835 [b]	4.72 *0.77* 1214	
People should be more concerned about how our public lands are used.	4.69 *0.75* 776	4.64 *0.81* 1040	
People can think public lands are valuable even if they do not actually go there themselves.	4.66 *0.76* 734	4.59 *0.87* 1089	
Manufacturers should be encouraged to use recycled materials in their manufacturing and processing operations.	4.63 *0.81*[a] 849[b]	4.66 *0.79* 1149	
Future generations should be as important as the current one in the decisions about natural resources.	4.63 *0.82* 892	4.55 *0.87* 1214	**
Consumers should be interested in the environmental consequences of the products they purchase.	4.52 *0.87* 777	4.46 *0.91* 1075	
I am willing to make personal sacrifices for the sake of slowing down pollution.	4.35 *0.93* 765	4.37 *0.95* 1069	
Donating time or money to worthy causes is important to me.	4.16 *1.04* 766	4.20 *1.00* 1065	
Natural resources must be preserved even if people must do without some products.	4.19 *1.07* 844	4.02 *1.23* 1171	***
I am willing to stop buying products from companies that pollute the environment even though it might be inconvenient.	4.00 *1.10* 764	3.92 *1.20* 1102	
People should urge their friends to limit their use of products made from scarce resources.	4.14 *1.10* 822	4.12 *1.13* 1210	
Forests have a right to exist for their own sake, regardless of human concerns and uses.	4.16 *1.14* 805	4.08 *1.21* 1147	
Wildlife, plants, and humans have equal rights to live and grow.	4.22 *1.20* 783	4.09 *1.33* 1018	**
I have often thought that if we could just get by with a little less there would be more left for future generations.	4.04 *1.20* 725	4.04 *1.23* 1027	
I would be willing to sign a petition for an environmental cause.	3.92 *1.31* 716	3.86 *1.38* 1066	
The whole pollution issue has upset me, since I feel it's not overrated. [c]	2.79 *1.38* 761	2.71 *1.41* 1090	
I would be willing to pay five dollars more each time I use public lands for recreational purposes (for example, hiking,	3.58 *1.42* 920	3.48 *1.47* 1291	

Table 12--*Continued.*

camping, hunting).			
I think that the public land managers are doing an adequate job of protecting natural resources from being overused.	3.08 *1.18*[a] 887[b]	3.09 *1.19* 1277	
The government has better places to spend money than devoting resources to a strong conservation program.	2.22 *1.27* 973	2.27 *1.34* 1377	
The Federal government should subsidize the developing and leasing of public lands to companies.	2.06 *1.32* 973	2.18 *1.39* 1358	**
The decision to develop resources should be based mostly on economic grounds.	2.69 *1.36* 955	2.70 *1.35* 1330	
The most important role for the public lands is providing jobs and income for local people.	2.84 *1.36* 1070	2.98 *1.42* 1510	***
The main reason for maintaining resources today is so we can use them in the future if we need to.	3.65 *1.40* 962	3.74 *1.36* 1350	
The primary use of forests should be for products that are useful to humans.	2.60 *1.40* 1054	2.74 *1.39* 1358	***
We should actively harvest more trees to meet the needs of a much larger human population.	2.54 *1.52* 948	2.59 *1.53* 1395	

[a] Standard deviation

[b] Sample size for each item (n). The sample sizes for each item are less than the full 3203 sample since each respondent was asked only a portion of the 115 VOBA questions due to time limitations.

[c] This values statement has been reverse scored to make the responses consistent with the other statements. For a complete discussion of reverse scoring, please refer to the appendix.

*, **, *** Differences between the means are statistically significant at $\alpha = 0.05$, 0.01, and 0.001 respectively, based on a t-test.

Appendix

Survey Design and Implementation

The design of the VOBA survey began with focus groups and interviews. Between September 1999 and June 2000 over 80 focus groups and individual interviews were conducted across the lower 48 states. These interviews concentrated on 3 topics; 1) issues related to the use of public lands in general and forests and rangelands in particular, 2) the objectives (or goals) of the group (or individual) regarding the use, management, and conservation of the forests and rangelands, and 3) the role of the Forest Service in the use, management, and conservation of the forests and rangelands.

Based upon the results of the focus groups and interviews, an objectives hierarchy was constructed for each group of stakeholders. These hierarchies indicate what each group or individual was attempting to achieve, and how they would achieve each goal or objective. These objectives ranged from the abstract strategic level to the more focused or specific means level. The means level objectives are at the bottom of the hierarchy, while the strategic objective is at the top. Fundamental objectives between the means level and the strategic-level completed the hierarchies. Therefore, the strategic level objective is an abstract objective that can be achieved by more specific fundamental level objectives, which are in turn achieved by means level objectives. (See figure 1.)

Each of the objectives hierarchies was confirmed with its respective group so as to ensure that it accurately reflected their goals and objectives. A combined objectives hierarchy was then constructed that included all the objectives stated by each group or individual interviewed. The result was a hierarchy that covered five strategic-level objectives related to access, preservation/conservation, commodity development, education, and natural resource management. These 5 strategic level objectives were supported by 30 fundamental objectives.

The 30 fundamental-level objectives were used to develop 30 objectives statements that were used in the National Survey of Recreation and the Environment (NSRE). The NSRE is a national survey administered via telephone interviews. The 30 objectives statements were divided into 5 groups based upon the strategic level objectives the focus groups had identified. During the telephone interviews, each respondent was asked one statement from each of the five strategic-level groups to obtain a statistically valid sample for each statement and for each strategic-level group.

As noted above, the survey of the American public's values, objectives, beliefs, and attitudes was conducted as a module within the NSRE. Questions about respondents' recreation behavior comprise the bulk of the interview. However, the results presented here are based solely on the questions in the VOBA Module of the survey and the demographic questions. Participants were asked to respond to the VOBA questions using a five-point scale. The objectives questions are anchored with 1=not at all important to 5=very important. Beliefs are anchored with 1=strongly disagree to 5=strongly agree and attitudes are anchored with 1=very unfavorable to 5=very favorable. Each of these three scales consists of 30 items. The 25 items in the 'values' scale are anchored with 1=strongly disagree and 5=strongly agree.

Reverse Scoring

When the VOBA survey was designed, care was taken to avoid the appearance of an instrument that was biased toward or against a specific position. To do this the "direction" of the scale varied. For example, for one item in a "strongly agree" response might indicate a conservation/preservation orientation, while for another item the same response might indicate a development orientation. While this is useful to increase the acceptance of the instrument and subsequent response rates, it creates problems when items with the opposite direction are grouped.

To compare two or more items that have the opposite direction, it is necessary to make the items move in the same direction. To illustrate this we will use an example. Suppose we want to examine the overall preference for sweets as indicated by the preference for ice cream and pie. We have two scale items. For each, 1 indicates "strongly disagree" and 5 indicates "strongly agree" as in

the Public Lands Values scale. To avoid the appearance of bias toward or against sweets, the two items move in opposite directions: “I like ice cream” and “I don’t like pie.” Clearly a person who likes all sweets will answer 5 to the first item and 1 to the second. Conversely, someone who does not like sweets will answer 1 to the first and 5 to the second. If these items were grouped, it would be more useful for research if the two items were scored to indicate preference for sweets either with a higher response for both items (or lower, either way would work). So, to re-score, we choose one of the items—in this example we’ll choose the second—and reverse the scoring. Thus an answer of 5 to “I don’t like pie” becomes a 1 (and we can reword the item as “I like pie”). An answer of 4 becomes 2, 3 remains the same (neutral), 2 becomes 4, and 1 becomes 5. This in effect creates a new item that corresponds in direction to “I like ice cream.” Now we have an indication of each respondent’s preference for sweets. Higher numbers for each item indicate a higher preference for sweets, while lower numbers indicate lower preference. A similar re-scoring was done for certain items in the VOBA in order to more accurately characterize overall preferences for item groups.

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