American Customer Satisfaction Index

U.S. Department of Agriculture
Forest Service R&D
Customer Satisfaction Study

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FEDERAL CONSULTING GROUP
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ACSI
American Customer Satisfaction Index™

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Chapter I

Introduction & Methodology

a. Introduction

The American Customer Satisfaction Index (ACSI) is the 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. Since 1994, the ACSI has measured satisfaction, its causes, and its effects, for seven economic sectors, 41 industries, more than 200 private sector companies, two types of local government services, the U.S. Postal Service, and the Internal Revenue Service. ACSI has measured more than 100 programs of federal government agencies since 1999. This allows benchmarking between the public and private sectors and provides 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 public trust).

The ACSI is produced through a partnership of the University of Michigan Business School, CFI Group, and the American Society for Quality.

b. Overview of ACSI Methodology

The model on page 16 illustrates the multi-equation, cause and effect econometric model that the ACSI uses. Data that are used to run the model comes from surveys of customers of each measured company/agency. For private sector industries, company scores for the satisfaction index and other model components are weighted by company revenues to produce industry indices. Industry indices are weighted by industry 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. For the public sector (i.e., the federal government agencies), each agency is weighted by the budget expended on activities for the chosen customer segment to produce a federal government ACSI score. The ACSI for the private sector is updated on a rolling basis, with data collected each quarter from 1-2 sectors to replace data from the prior year. Each company or agency is measured annually. ACSI scores for industry and government sectors can be viewed at www.theacsi.org.

Every federal government agency serves many segments of the public and interacts with both internal and external users. For the first year of ACSI measurement, each agency was asked to identify a major customer segment central to its mission for which to measure satisfaction and the causes and effects of satisfaction. In the years following the initial measurement, government agencies continue to focus on customer segments of similar importance in their studies of customer satisfaction.

USDA Forest Service R & D can use the scores (in circles) and impacts (in rectangles) from the model shown on page 16 to target areas for improvement that will have the greatest leverage on Customer Satisfaction and desired outcomes.

The model (on page 16) provides the following information:

(1) *Component Scores* – indicate how well Forest Service R & D is performing in those areas that were evaluated in the questionnaire such as Staff, Services, Product Content, etc. These are areas that drive satisfaction.
(2) *Component Impacts* – indicate the amount of influence each component area (Staff, Services, Product Content, etc.) has on satisfaction.
(3) *Customer Satisfaction Index* – indicates overall customer satisfaction with the products and services of the Forest Service R & D.
(4) *Outcome Scores* – indicate the likelihood of Forest Service R & D customers to engage in behaviors that are desirable, such as Recommending Forest Service R & D or having confidence in the products and services of R & D.
(5) *Outcome Impacts* – indicate the influence that customer satisfaction has on the likelihood of customers to engage in desirable behaviors (recommending Forest Service R & D, having confidence in the products and services of R & D, etc.)

Component Scores

CFI Group worked in collaboration with the Forest Service R & D to identify those areas (or components) to be evaluated in the questionnaire. These areas were thought to be important to the customer experience. CFI Group uses a multiple-item approach to measuring quality and performance. Thus, after identifying the areas or components, a series of questions were developed to evaluate each area. These questions evaluated different attributes of a component. For example in order to evaluate the performance of Staff, respondents answered three items, 'Courteousness', 'Knowledge' and 'Timeliness in responding.' Respondents are asked to rate each item on a 1-10 scale with "1" being "poor" and "10" being "excellent." CFI Group converts the mean responses to these items from a 1 to 10 scale to a 0-100 scale for reporting purposes. This is a simple algebraic conversion using the following equation *((mean score – 1) x (100/9)).* Thus a mean of '1' converts to a '0' and a mean of '10' converts to '100.'

Attribute scores are the mean (average) respondent scores to each individual question that was asked in the survey. A component score is derived from the optimally weighted average of the individual attribute ratings given by each respondent to the questions presented in the survey. It is *optimal* because the weights for the product and service quality experience measures are derived based on the maximization of relationships (i.e., the correlations) between the various experience measures with customer satisfaction and future behavior. The way the system works is that the weights for all of the measures in the measurement model are "adjusted" so that the correlations between the variables along the cause and effect pathways in the measurement system are maximized.

Component (Satisfaction Drivers) Impacts

In order to derive the impact that each component areas has on customer satisfaction, a model is developed with each of the component areas included and regressed against satisfaction, which is in turn regressed against outcomes. Impacts can be thought of as the regression coefficients for each component.

Because CFI develops a predictive model, impacts are reported as the change in satisfaction that would occur given an increase in that component of 5-points.

For example, if the score for Product Content increased by 5 points (81 to 86), Customer Satisfaction would increase by the amount of its impact, 1.2 points, (from 72 to 73.2). Similarly, if Customer Satisfaction were to increase by 5 points, Outcomes such as 'Recommend' or 'Future Use' would increase by the amount of the impact Satisfaction has on those components. For example, a 5-point increase in Satisfaction would increase the score for recommend by its 4.2 impact. Impacts are additive. Thus, if multiple areas were to each improve by 5 points the related improvement in satisfaction will be the sum of the impacts.

As with scores, impacts are also relative to one another. A low impact does not mean a component is unimportant. Rather, it means that a five-point change in that one component is unlikely to result in much improvement in Satisfaction at this time. Therefore, components with higher impacts are generally recommended for improvement first, especially if scores are lower for those components.

Customer Satisfaction Index

The Customer Satisfaction Index is a weighted average of three questions, SAT1, SAT2 and SAT3, in the questionnaire in Appendix A. The questions are answered on a 1-10 scale and converted to a 0-100 scale for reporting purposes. The three questions measure: Overall satisfaction (SAT1); Satisfaction compared to expectations (SAT2); and Satisfaction compared to an 'ideal' organization (SAT3). The model assigns the weights to each question in a way that maximizes the ability of the index to predict changes in agency outcomes (at the right of the model on page 16).

Outcome Scores

Outcomes are measured by a single question and ask about behaviors and attitudes that are driven by the respondents' satisfaction. These scores are simply the mean score for the item converted to a 0 to 100 scale for reporting purposes. The following four outcomes were included in the model: How willing would you be to recommend Forest Service Research and Development products and services to your colleagues? (OUTCOME1), How likely are you to use Forest Service Research and Development products and services in the future? (OUTCOME2), How confident are you in using the products and services provided by Forest Service Research and Development? (OUTCOME3) and How much of a difference do the products and services provided by Forest Service Research and Development make to you in your ability to successfully carry out your work? (OUTCOME4).

Outcome Impacts

As key drivers impact satisfaction, satisfaction also impacts outcomes. The impact that satisfaction has on outcomes is reported in the model on page 16. The numbers provided in the outcome rectangles represent the impact that will result in a 5-point increase in satisfaction. For example, a 5-point increase in Satisfaction would increase the score for 'Recommend' by its impact 4.2.

c. Customer Segment Choice

This report is about customer perceptions of satisfaction with the U.S. Department of Agriculture Forest Service R & D. Organizational segments studied include: Federal, State and Local agencies, Education (K-12 and College/University), Business/Commercial, Tribal Governments and Non-Profits. No a priori quotas were established for any of the segments. Analysis was performed for those segments where sufficient data was collected to allow for statistically significant findings.

d. Customer Sample and Data Collection

The U.S.D.A. Forest Service R& D provided CFI Group with a list of 10,897 valid customer names and e-mail addresses. Data were collected via e-mail invitation from April 19, 2006 through May 19, 2006. A total of 1,800 customers responded for a response rate of 16.5%. For respondents to be eligible for the survey they had to have used products and/or services from Forest Service R&D more than once a year and could not be an employee within Forest Service Research and Development. Of the 1,800 respondents, 75 indicated they had worked in the Forest Service R&D, and 422 did not use the products and/or services at least once a year. Another 37 responses were incomplete and could not be used for analysis. Thus a total of 1,266 responses were used in analysis and modeling. This constitutes a usable response rate of 11.6%

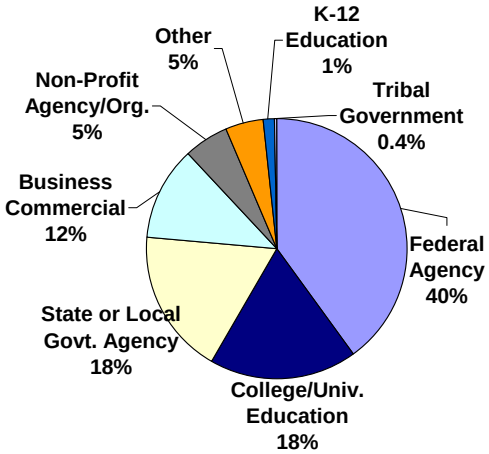
e. Questionnaire

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

f. Customer Background

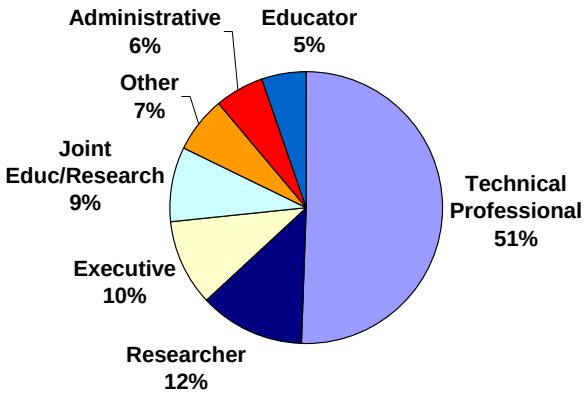
A summary of the respondents' background is provided in this section. Complete Information about the respondents' background is provided in the tables in Appendix B, Responses to Non-Modeled questions. Forty percent of the respondents were from a Federal Agency and 18% were from a State or Local government agency. Another 18% were from academia (College/University) and 12% were from business or commercial organizations.

Organization (Demo1.1)



N=1,266

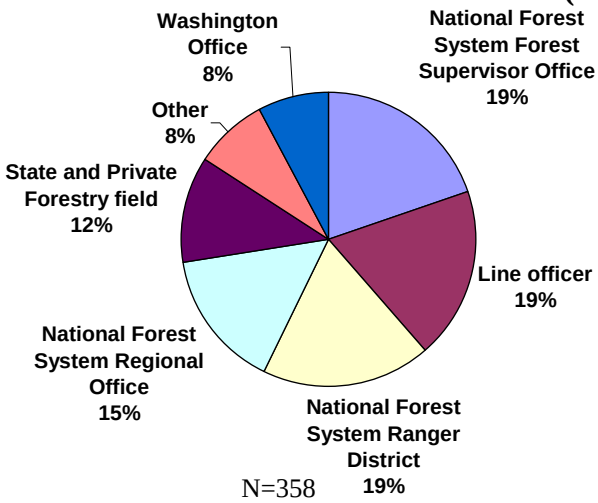
Primary Role (Demo2)



N=1,266

As for the respondents' primary role at their organization, half (51%) were technical/professionals. One-quarter of respondents (26%) were educators and/or researchers. Twelve percent classified themselves as researchers; 9% classified themselves as joint education/research and 5% as educators. Ten percent of the respondents were executives. Of those respondents (n=505) who worked for the Federal Government, 71% (n=433) worked for the Forest Service. Of those 433 respondents, who worked for the Forest Service, 17% worked for R & D and hence were ineligible for the survey. The positions for the eligible Forest Service respondents are shown below.

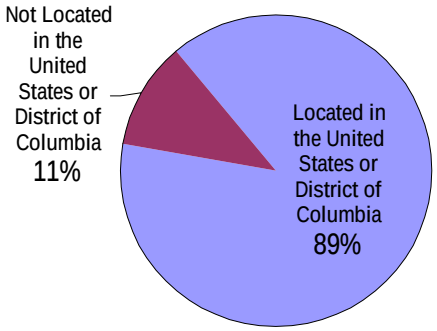
Position within USDA Forest Service (Demo1.4)



N=358

Most of the respondents (89%) were located in the U.S. or District of Columbia. California, Oregon, Colorado, Pennsylvania and Washington accounted for one-third of the respondents. Below are listed the states that represented at least 2% of the respondents. Collectively, these 20 states account for almost three-quarters (73%) of respondents.

Located in U.S. (Demo3)



N=1,266

In which state are you located (Demo3.1)

State	Percentage
California	10.4%
Oregon	6.1%
Colorado	5.9%
Pennsylvania	5.1%
Washington	5.0%
Idaho	4.3%
New Mexico	3.2%
Alaska	2.9%
Utah	2.9%
Georgia	2.7%
Minnesota	2.7%
Wisconsin	2.7%
Washington DC	2.6%
Ohio	2.6%
Arizona	2.5%
Montana	2.4%
New York	2.2%
North Carolina	2.2%
West Virginia	2.2%
Virginia	2.1%
All Others	27.4%

N=1,121

Respondents were asked about which Forest Service R & D organization units that they contacted and how frequently they contact them. Pacific Northwest Station and Rocky Mountain Research Station are the only organizational units that were contacted by a majority of the respondents over the past year. The Institute of Tropical Forestry had the fewest amount of contacts from respondents with only 11% contacting the unit over the past year.

How frequently do you contact each of the following Forest Service R&D organizational units for information and/or assistance? (Use2)

Forest Products Laboratory (FLP)	
Quarterly or more often	10%
Every six months or less	27%
Never	63%
Washington Office (HQ)	
Quarterly or more often	14%
Every six months or less	26%
Never	60%
Int. Institute of Tropical Forestry (IITF)	
Quarterly or more often	2%
Every six months or less	9%
Never	89%
North Central Research Station (NC)	
Quarterly or more often	16%
Every six months or less	26%
Never	59%
Northeastern Research Station (NE)	
Quarterly or more often	21%
Every six months or less	22%
Never	57%
Pacific Northwest Research Station (PNW)	
Quarterly or more often	27%
Every six months or less	30%
Never	43%
Pacific Southwest Research Station (PSW)	
Quarterly or more often	20%
Every six months or less	26%
Never	54%
Rocky Mountain Research Station (RMR)	
Quarterly or more often	34%
Every six months or less	27%
Never	38%
Southern Research Station (SRS)	
Quarterly or more often	22%
Every six months or less	24%
Never	54%

N=1,266

With the exception of Recreation, a majority of respondents sought information for each of the program areas listed below. For many of the topic/program areas close to one-third of the respondents (or more) sought information on at least a quarterly basis. Resource Management and Use and Resource Data and Analysis were topics most frequently sought.

How frequently do you seek information an/or assistance pertaining to each of the following topic/program areas? (Use3)

Invasive Species	
Quarterly or more often	36%
Every six months or less	37%
Never	27%
Resource Data and Analysis	
Quarterly or more often	41%
Every six months or less	37%
Never	22%
Recreation	
Quarterly or more often	15%
Every six months or less	31%
Never	54%
Resource Management and Use	
Quarterly or more often	44%
Every six months or less	34%
Never	22%
Water and Air	
Quarterly or more often	32%
Every six months or less	35%
Never	34%
Wildland Fire	
Quarterly or more often	33%
Every six months or less	35%
Never	32%
Wildlife and Fish	
Quarterly or more often	29%
Every six months or less	36%
Never	35%

N=1,266

g. Benchmarking

Selected benchmarks are provided on page 10 of this report. These include comparable Federal agencies involved in information-providing services. Scores and commentary for the most recent Federal Government ACSI results are also available at www.customerservice.gov and www.theacsi.org. Additional benchmarking information and other useful resources, such as opportunities for sharing best practices with other agencies, can be found at www.customerservice.gov as well.

h. Confidence Intervals

At an aggregate level, 1,266 responses produce a confidence interval of approximately +/- 1 point for scores reported on a 0 to 100 scale at a 90% level of confidence. This is the approximate confidence interval around the aggregate level responses for most questions in this report. In addition to aggregate level analysis an analysis by segment is provided. Segment sizes that are used in analysis vary. The following are approximations of confidence intervals based on sample size and the typical standard deviation (20 points) for responses at the 90% confidence level.

For Samples of …	*Confidence Interval at 90% Level of Confidence is …*
50	+/- 4.7
75	+/- 3.8
100	+/- 3.3
150	+-/ 2.7
250	+/- 2.1
500	+/- 1.5
1000	+/- 1.0

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 defines the outcomes most important to it for the customer segment measured. Each agency also identifies the principal activities that interface with its customers. The model provides predictions of the impact of these activities on customer satisfaction.

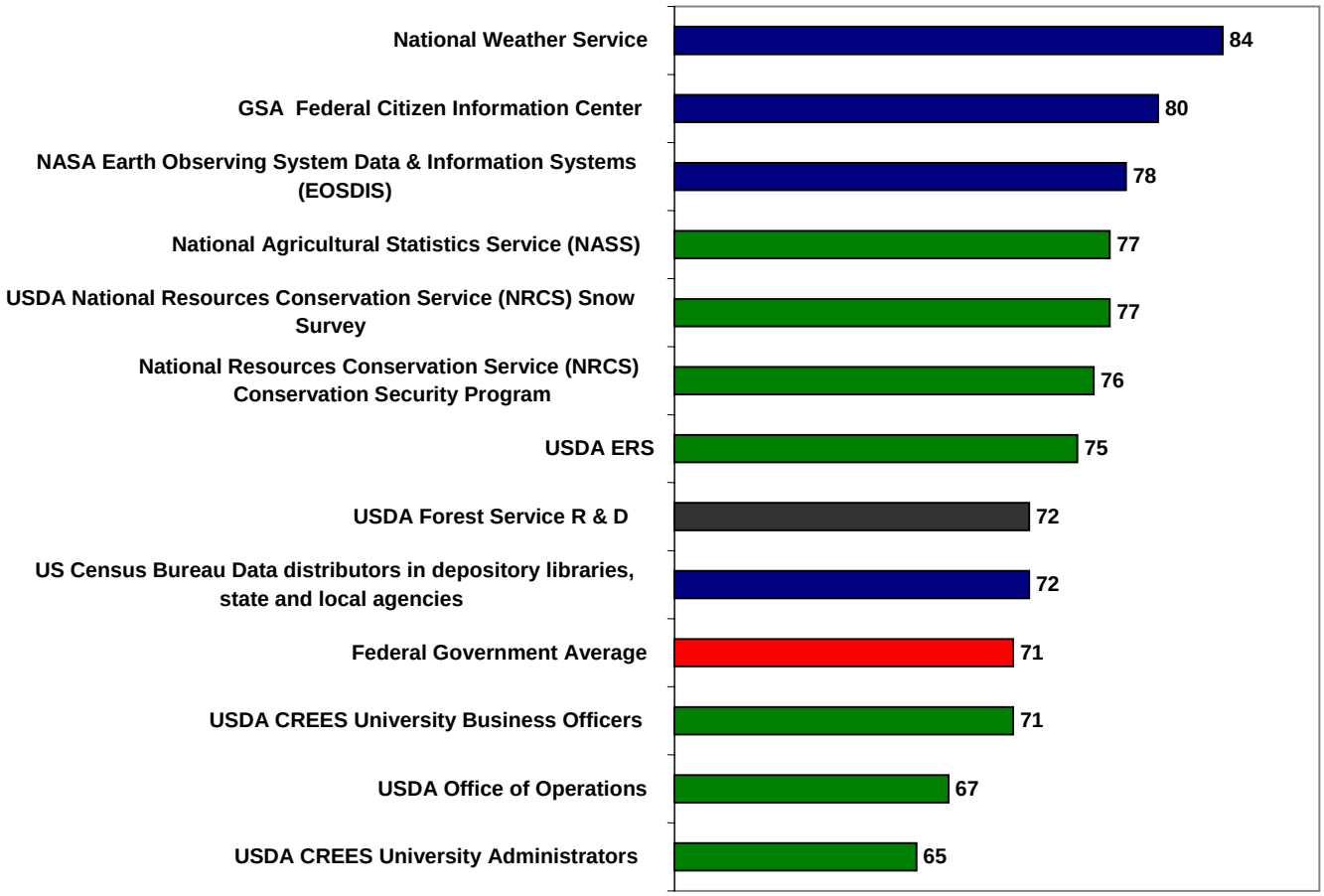
The 2006 U.S. Department of Agriculture Forest Service R&D Customer Satisfaction model, illustrated on page 16, should be viewed as a cause and effect model that moves from left to right, with satisfaction (ACSI) in the middle. The rectangles are multi-variable components that are measured by survey questions. The numbers in the lower right corners of the rectangles represent the strength of the effect of the component on the left to the one to which the arrow points on the right. These values represent "impacts." The larger the impact value, the more effect the component on the left has on the one on the right. The meanings of the numbers shown in the model are the topic of the rest of this chapter.

b. Customer Satisfaction (ACSI)

The 2006 Customer Satisfaction Index (CSI) for USDA Forest Service R&D is 72 on a 0-100 scale. This is one point higher than the current national ACSI of 71 for the federal government. However, this score is not statistically significant from the national average for the federal government.

The following chart provides satisfaction scores for comparable federal agencies that are in an information-providing role as well as other USDA scores. While Forest Service R & D is on par with the federal government, it scores below other USDA information-providers and other information-providing agencies. For the chart below, differences in scores of 3 points or greater are statistically significant at a 90% level of confidence.

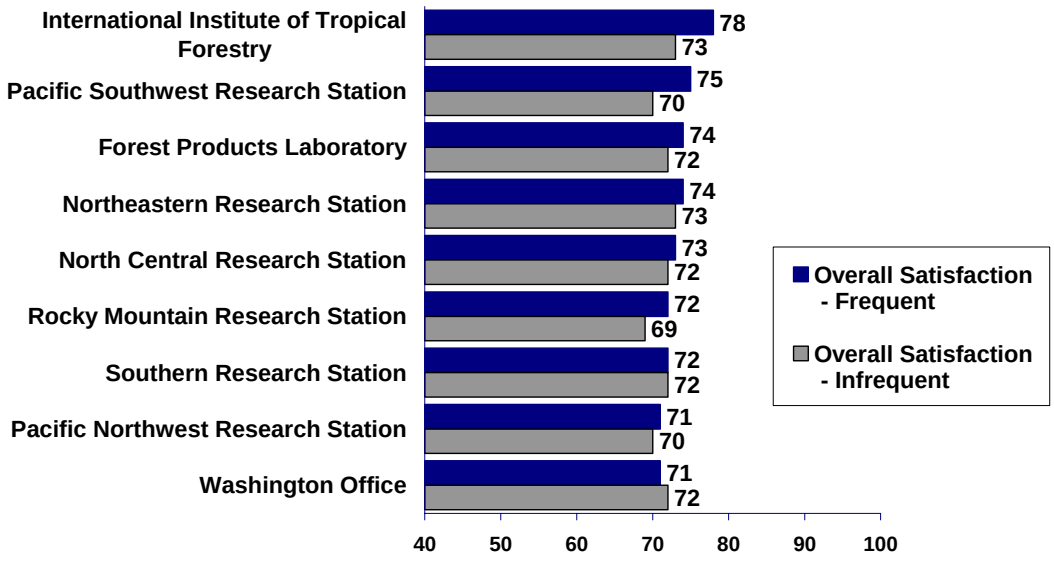
Federal Government Agency Satisfaction Benchmarks – Information Providers



USDA Forest Services R & D was interested in differences in satisfaction by frequency of contacting organizational units and frequency of seeking information. Respondents were categorized as frequent or infrequent. A determination was made by USDA Forest Service R & D based on the distribution of respondents to categorize those who have at least quarterly contact or usage as a "frequent" user. Those who had less frequent contact or use were categorized as "infrequent."

Customers who contact organizational units frequently (at least once a quarter) are in most cases no more satisfied than those who contact the units infrequently (every six months or less often). In only two instances was there a significant different between infrequent and frequent contactors. The five-point difference between infrequent and frequent users of Pacific Southwest and the three-point difference between infrequent and frequent users of Rocky Mountain are significant at a 90% level of confidence, with frequent users being more satisfied in both cases. No other differences with respect to frequency of contact are significant. Note that low sample size restricts the ability to determine significant differences for International Institute of Tropical Forestry.

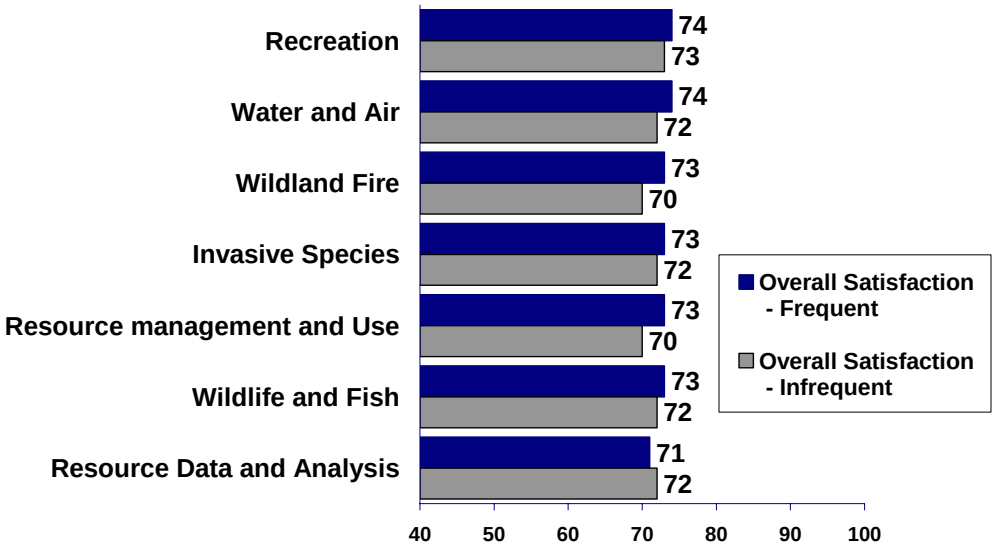
Satisfaction by Frequency of Contacting Organizational Units



A comparison of those customers who seek information on program areas frequently (at least once a quarter) and those who seek information infrequently (every six months or less often) shows that for the most part there is little difference in satisfaction between the groups. The three-point difference between infrequent and frequent users of Wildland Fire and Resource management and Use are significant at a 90% level of confidence with frequent users being more satisfied. No other differences are significant.

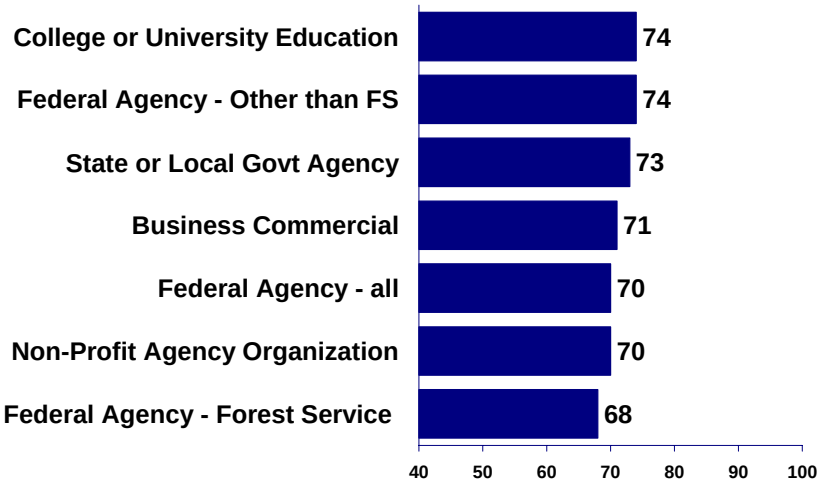
There is a slight difference in satisfaction of frequent users when comparing scores among Strategic Program Areas (SPAs). Differences in satisfaction of 3 or more points among groups of frequent users are significant at a 90% level of confidence. Thus, Resource Data and Analysis frequent users (71) are less satisfied than Water and Air (74) and Recreation (74) frequent users.

Satisfaction by Frequency of Seeking Information on SPAs



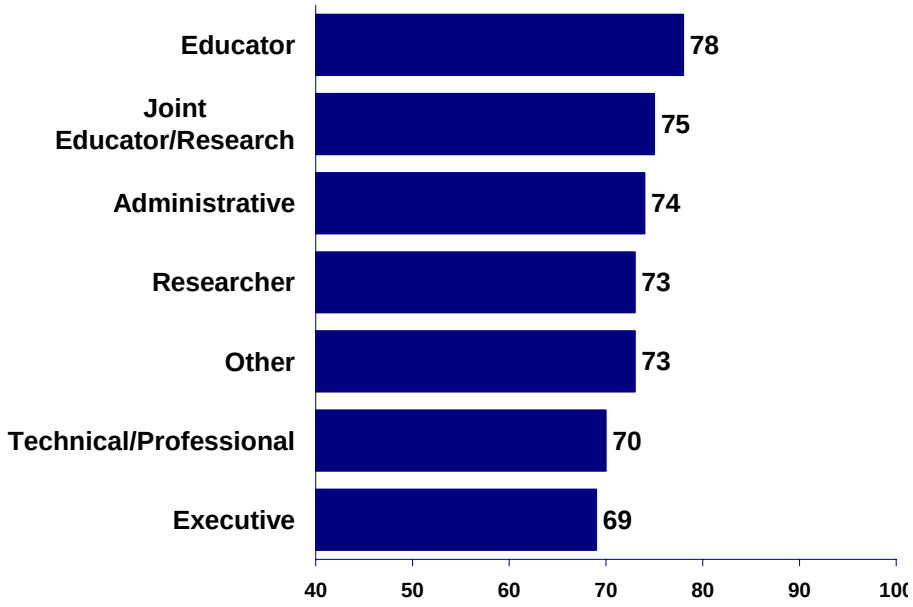
Comparing satisfaction by respondent organization shows that State and Local agency respondents had higher satisfaction than Federal agency respondents. However, within Federal Agency respondents, those who did not work for the Forest Service scored satisfaction 74, while those working for Forest Service scored their satisfaction with the products and services of R&D a significantly lower at a 68. Colleges and universities also had higher satisfaction than Federal agency (and in particular Forest Service) respondents. The three and four point differences in the respective comparisons are statistically significant at a 90% level of confidence.

Satisfaction by Organization

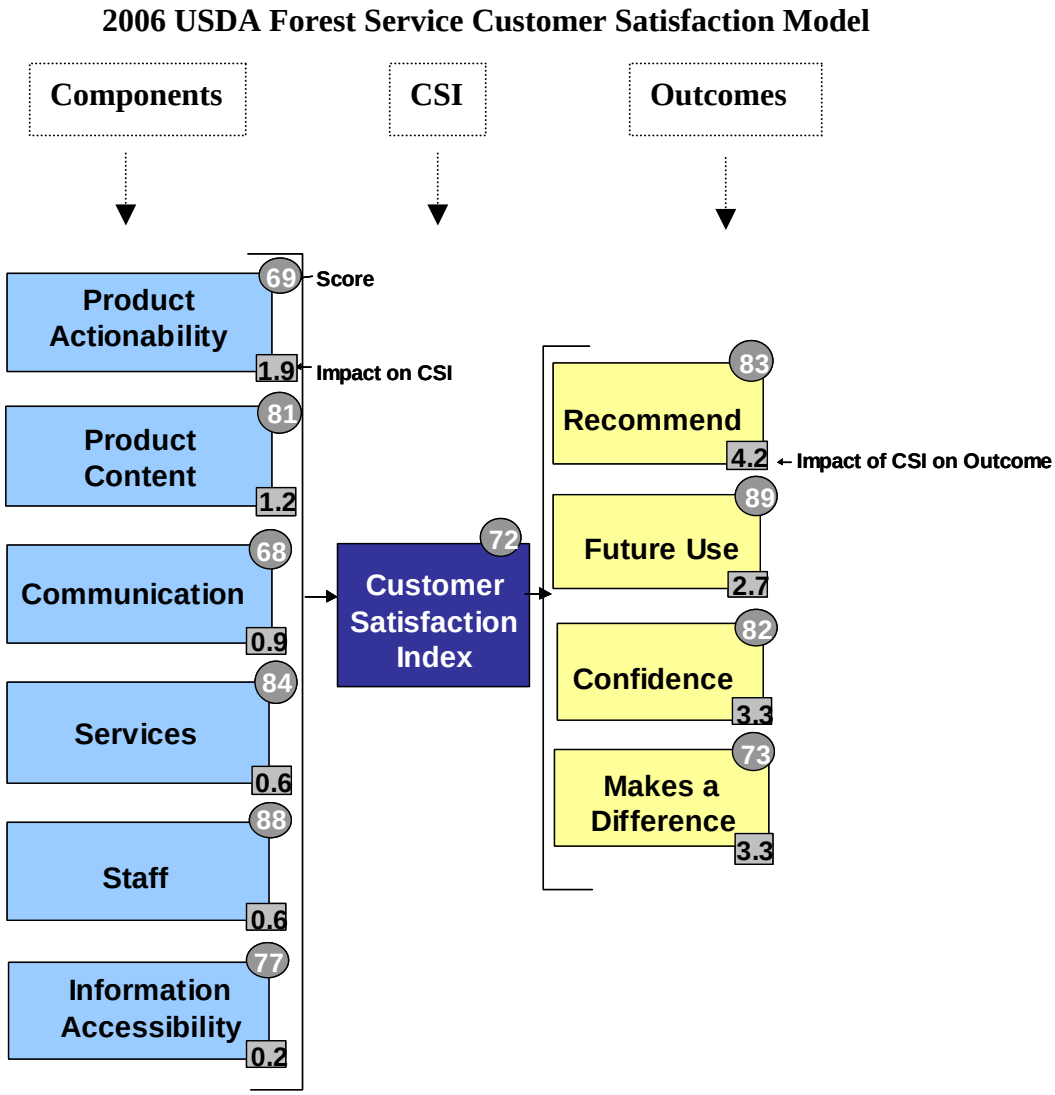


Researchers (73), educators (78) and joint researcher/education (75) respondents had higher satisfaction with Forest Service R&D than executives (69) and technical/professionals (70).

Satisfaction by Primary Role



c. Customer Satisfaction Model



USDA Forest Service R & D can use the scores (in circles) and impacts (in rectangles) from the model shown above to target areas for improvement that will have the greatest leverage on Customer Satisfaction and desired outcomes.

Attribute scores are the mean (average) respondent scores to each individual question that was asked in the survey. Respondents are asked to rate each item on a 1-10 scale with "1" being "poor" and "10" being "excellent." CFI Group converts the mean responses to these items to a 0-100 scale for reporting purposes. It is important to note that these scores are averages, not percentages. The score is best thought of as an index, with 0 meaning "poor" and 100 meaning "excellent." These scores are provided in the following section of the report.

A component score is the weighted average of the individual attribute ratings given by each respondent to the questions presented in the survey. A score is a relative measure of performance for a component, as given for a particular set of respondents. In the model illustrated above,

scores for attributes ‘Courteousness’, ‘Knowledge’ and ‘Timeliness in responding’ are combined to create the component score for ‘Staff’.

Impacts should be read as the effect on the subsequent component if the initial driver (component) were to be increased or decreased by five points. For example, if the score of Product Content increased by 5 points (81 to 86), Customer Satisfaction would increase by the amount of its impact, 1.2 points, (from 72 to 73.2). Similarly, if Customer Satisfaction were to increase by 5 points, Outcomes such as ‘Recommend’ or ‘Future Use’ would increase by the amount of the impact Satisfaction has on those components. For example, a 5-point increase in Satisfaction would increase the score for recommend by its impact 4.2. Impacts are additive. Thus, if multiple areas were to each improve by 5 points the related improvement in satisfaction will be the sum of the impacts.

As with scores, impacts are also relative to one another. A low impact does not mean a component is unimportant. Rather, it means that a five-point change in that one component is unlikely to result in much improvement in Satisfaction at this time. Therefore, components with higher impacts are generally recommended for improvement first, especially if scores are lower for those components.

c. Drivers of Customer Satisfaction

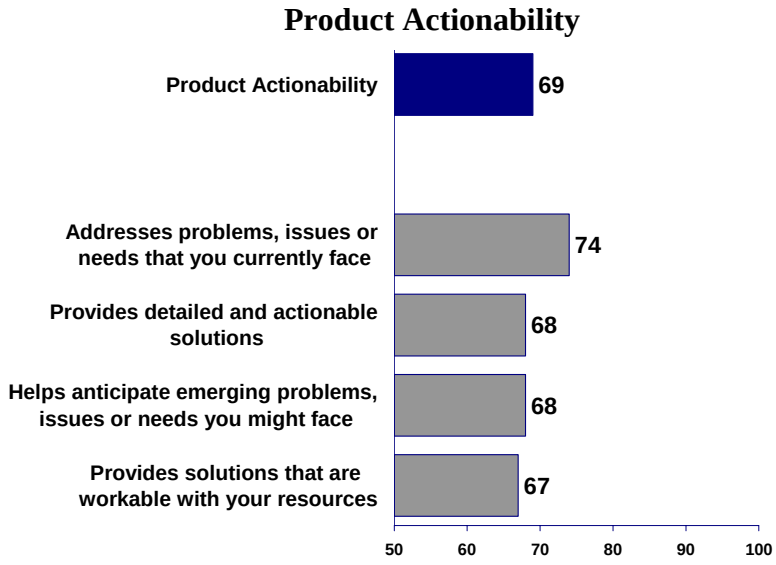
The U.S.D.A. Forest Service R & D customer satisfaction model contains six component areas or 'drivers of satisfaction.' The performance in these areas and the effect each area has on customer satisfaction is detailed in this section of the report.

A note on interpreting scores in this section: Given the large sample size at the aggregate level, differences in scores of 1 point will be statistically significant (at a 90% level of confidence). Be careful not to interpret all statistically significant differences as being substantive or meaningful from an operational standpoint. In comparing scores of items within a component look for differences of at least 3 to 5 points to be meaningful.

Product Actionability

Impact 1.9

Product Actionability (i.e. Relevance and Quality) has the highest impact on customer satisfaction with an impact of 1.9. This component included four questions (RELEV1. – RELEV4.). Respondents gave higher ratings to the information being topical with a score of 74 for 'Addresses problems, issues or needs that you currently face.' However, respondents gave lower ratings to the information providing 'detailed and actionable solutions' (68), 'anticipating emerging problems' (68) and 'solutions that are workable with your resources' (67).



Product Actionability n=1,254

Educational organizations and state or local government agencies found the products to be more actionable than did respondents from Federal agencies or business/commercial organizations. State or local government agencies (72) and college/university (73) respondents scored the attribute 'Product Actionability' significantly higher (at 90% level of confidence) than Federal agency or business/commercial respondents (67).

Note: Determinations of statistical significance were made from pairwise comparisons between scores by organization – Federal Agency, State or Local Government Agency, College/University and Business/Commercial groups had sufficient sample for pairwise comparisons to identify significant differences at a 90% level of confidence.

Product Actionability by Organization

	Federal Agency	State or Local Government Agency	College/ Univ. Education	Business/ Commercial	Non-Profit Agency/ Organization	Other
Product Actionability	**67**	**72**	**73**	**67**	**67**	**76**
Addresses problems, issues or needs that you currently face	72	76	77	73	72	79
Provides detailed and actionable solutions	65	72	71	65	64	75
Provides solutions that are workable with your resources	65	68	71	65	66	74
Helps anticipate emerging problems, issues or needs you might face	64	70	71	66	66	77
Sample Size	**505**	**231**	**232**	**147**	**69**	**62**
Distribution	**40%**	**18%**	**18%**	**12%**	**5%**	**5%**

For 'Product Actionability' the following pairwise comparisons of scores by Organization yielded the following significant differences:
Pooled variance was used in each case to determine significant differences between sample means.
- Difference between Federal Agency (67) and State/Local Government Agency (72) is significant at a 90% level of confidence.
-Difference between Federal Agency (67) and College/University (73) is significant at a 90% level of confidence.
-Difference between Business/Commercial (67) and State/Local Government Agency (72) is significant at a 90% level of confidence.
-Difference between Business/Commercial (67) and College/University (73) is significant at a 90% level of confidence.

A further analysis of Federal Agency workers shows that those who work for Forest Service find the products less actionable than do those who work in other Federal Agencies. The largest gaps, between Forest Service and non-Forest Service scores for Product Actionability are in addressing problems (7 points) and anticipating problems (8 points).

Product Actionability by Organization – Federal Agency Work for Forest Service

	Yes - Work for Forest Service	No - Work for Forest Service
Product Actionability	65	71
Addresses problems, issues or needs that you currently face	70	77
Provides detailed and actionable solutions	64	69
Provides solutions that are workable with your resources	64	68
Helps anticipate emerging problems, issues or needs you might face	62	70
Sample Size	358	147
Distribution	71%	29%

All differences shown in the table above between 'Yes- Work for Forest Services' and 'No-Work for Forest Service' are significant at a 90% level of confidence.

Likewise, those respondents who were executives (65) or in a technical/professional (68) role tended to rate Product Actionability lower than those involved with education (75), research (71) or both (73). Product Actionability scores for all three of the later groups are significantly higher (at a 90% level of confidence) than the scores for executives and technical/professionals.

Product Actionability by Primary Role

	Researcher	Educator	Joint Educator/ Research	Executive	Technical/ Professional	Administrative	Other
Product Actionability	**71**	**75**	**73**	**65**	**68**	**74**	**72**
Addresses problems, issues or needs that you currently face	76	79	76	70	73	76	76
Provides detailed and actionable solutions	69	73	71	62	67	74	72
Provides solutions that are workable with your resources	69	74	70	62	66	71	70
Helps anticipate emerging problems, issues or needs you might face	68	76	71	64	66	74	71
Sample Size	**158**	**67**	**111**	**132**	**640**	**75**	**83**
Distribution	**12%**	**5%**	**9%**	**10%**	**51%**	**6%**	**7%**

For 'Product Actionability' the following pairwise comparisons of scores by Primary Role yielded the following significant differences:

Pooled variance was used in each case to determine significant differences between sample means.

- Pairwise comparison between Executive score (65) and each of the following scores: Researcher (71), Joint Educator/Research (73) and Educator (75) are significant at a 90% level of confidence.

- Pairwise comparison between Technical/Professional score (68) and each of the following scores: Researcher (71), Joint Educator/Research (73) and Educator (75) are significant at a 90% level of confidence.

Also worth noting, while Forest Service workers tended to score Product Actionability lower, within Forest Service, National Forest System Ranger District staff rated it the highest. Their Product Actionability score (73) is significantly higher than the scores of all other Forest Service positions.

Product Actionability by position within Forest Service

	Line officer	NFS Regional Office staff	NFS Forest Supervisor Office staff	NFS Ranger District staff	State and Private Forestry field staff	Washington Office staff	Other
Product Actionability	**65**	**62**	**64**	**73**	**64**	**58**	**65**
Addresses problems, issues or needs that you currently face	68	67	68	79	67	65	68
Provides detailed and actionable solutions	63	62	62	70	64	56	65
Provides solutions that are workable with your resources	63	62	61	73	62	60	62
Helps anticipate emerging problems, issues or needs you might face	64	56	62	70	63	53	60
Sample Size	**67**	**54**	**71**	**67**	**42**	**28**	**29**
Distribution	**19%**	**15%**	**20%**	**19%**	**12%**	**8%**	**8%**

For 'Product Actionability' the following pairwise comparisons of scores by Position yielded the following significant differences:

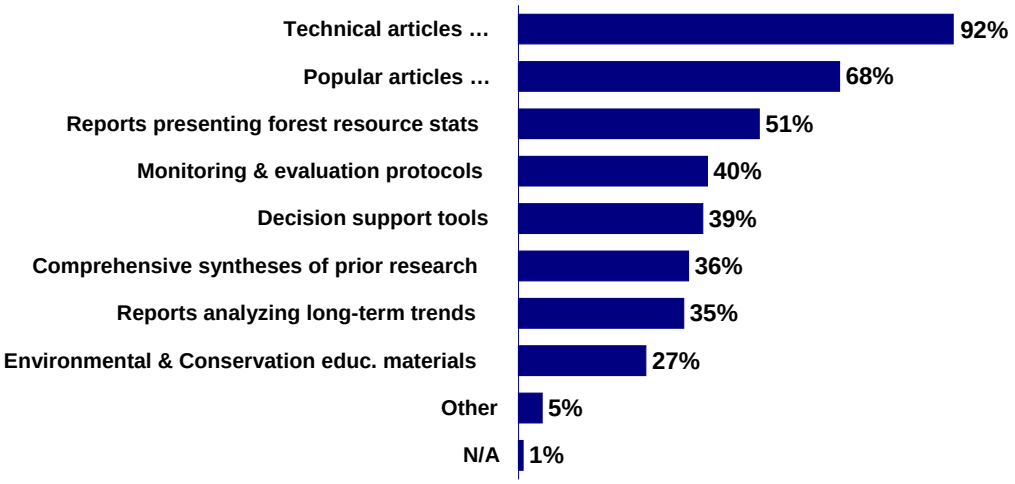
Pooled variance was used in each case to determine significant differences between sample means.

- Pairwise comparison between NFS Ranger District staff score (73) and each of the following scores: Line officer (65), NFS Regional Office Staff (62), NFS Forest Supervisor Office Staff (64), State and Private Forestry Field Staff (64) and Washington Office Staff (58) are significant at a 90% level of confidence.

Product Content
Impact 1.2

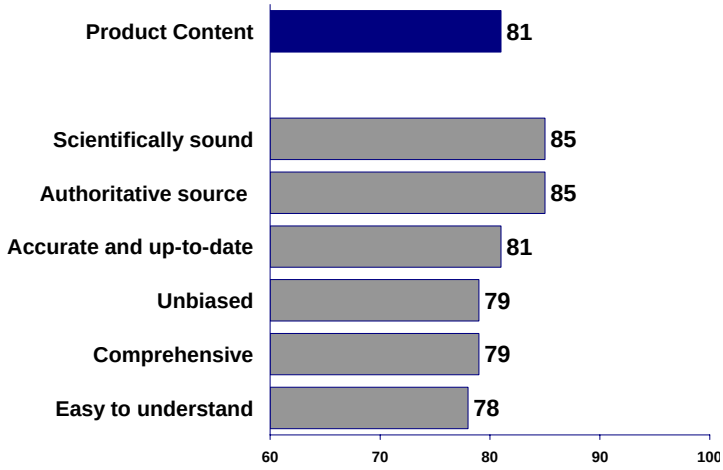
Respondents were asked about the products they used. Those indicating they had used at least one product were asked to evaluate the product content with 6 questions (INFO1- INFO6). Nearly all respondents (92%) had used technical articles/reports describing research methods and results. Over two-thirds (68%) had used popular articles/reports/newsletters highlighting research results and half (51%) had used reports presenting current forest resource statistics. Usage for the remaining products that were listed is shown on the chart below.

Products Used by Respondents (Use 4.1)



Product Content was one of the bigger drivers of customer satisfaction with an impact of 1.2. It was also an area of high performance with a score of 81 for the component. In particular, respondents found the information from the Forest Service R & D to be scientifically sound and an authoritative source. They scored each of these items 85. Respondents gave slightly lower marks to the content being easy to understand, comprehensive and unbiased with scores in the high 70's for these items.

Product Content



Product Content n=1,249

There were no significant differences between organizations in how they rated the component Product Content overall. However, college/university respondents did find the information to be easier to understand than other respondents. College/University respondents' score of 81 for 'easy to understand' is significantly higher (at a 90% level of confidence) than the scores for this item for the other four organization types as shown in the chart below.

Product Content by Organization

	Federal Agency	State or Local Government Agency	College/ Univ. Education	Business/ Commercial	Non-Profit Agency/ Organization	Other
Product Content	**81**	**82**	**82**	**79**	**78**	**86**
Accurate and up-to-date	82	81	83	76	78	85
Easy to understand	77	76	81	77	71	85
Scientifically sound	84	86	84	84	85	87
Authoritative source (provided by subject matter experts)	85	86	84	83	82	89
Unbiased	79	79	79	76	76	84
Comprehensive	78	80	79	77	77	85
Sample Size	**505**	**231**	**232**	**147**	**69**	**62**
Distribution	**40%**	**18%**	**18%**	**12%**	**5%**	**5%**

For 'Easy to understand' the following pairwise comparisons of scores by Organization yielded the following significant differences:

Pooled variance was used in each case to determine significant differences between sample means.

- Pairwise comparison between College/University Education score (81) and each of the following scores: Federal Agency (77), State/ Local government agency (76), Business/Commercial (77) and Non-Profit Agency (71) are significant at a 90% level of confidence.

When comparing scores by primary role, it is the executives (73) and technical/professional respondents (76) who give lower ratings to 'easy to understand.' Both groups scored 'easy to understand' significantly lower than researchers (80), educators (84) or educator/researchers (82) did.

Product Content by Primary Role

	Researcher	Educator	Joint Educator/ Research	Executive	Technical/ Professional	Administrative	Other
Product Content	**80**	**85**	**83**	**80**	**81**	**85**	**82**
Accurate and up-to-date	80	86	83	78	81	84	82
Easy to understand	80	84	82	73	76	80	78
Scientifically sound	83	88	84	84	85	89	86
Authoritative source (provided by subject matter experts)	83	89	84	84	84	88	86
Unbiased	77	80	81	79	78	84	76
Comprehensive	78	85	81	78	78	82	80
Sample Size	**158**	**67**	**111**	**132**	**640**	**75**	**83**
Distribution	**12%**	**5%**	**9%**	**10%**	**51%**	**6%**	**7%**

For 'Easy to understand' the following pairwise comparisons of scores by Primary Role yielded the following significant differences:

Pooled variance was used in each case to determine significant differences between sample means.

- Pairwise comparison between Executives score (73) and each of the following scores: Researcher (80), Educator/Researcher (82) and Educator (84) are significant at a 90% level of confidence.

- Pairwise comparison between Technical/Professional score (76) and each of the following scores: Researcher (80), Educator/Researcher (82) and Educator (84) are significant at a 90% level of confidence.

Those who access information from the Forest Service R & D by requesting hard copies gave higher ratings to 'easy to understand' with a score of 81 for this item which is significantly higher (at a 90% level of confidence) than the scores for those accessing information by all other methods. In particular, a 5-point gap exists in 'easy to understand' with those getting information from direct contact and a 6-point gap with those getting information from attending conferences. There are no significant differences among any of the other items when comparing scores for Product Content by method of accessing information.

Product Content by Method of Accessing Information

	Requesting hard copies	Download publications from web	Attending Conferences	Direct Contact	Other
Product Content	**83**	**81**	**80**	**81**	**81**
Accurate and up-to-date	83	81	79	81	80
Easy to understand	81	78	75	76	79
Scientifically sound	86	84	85	85	83
Authoritative source (provided by subject matter experts)	86	85	84	85	85
Unbiased	79	78	79	79	78
Comprehensive	81	79	79	79	79
Sample Size	**192**	**539**	**114**	**382**	**39**
Distribution	**15%**	**43%**	**9%**	**30%**	**3%**

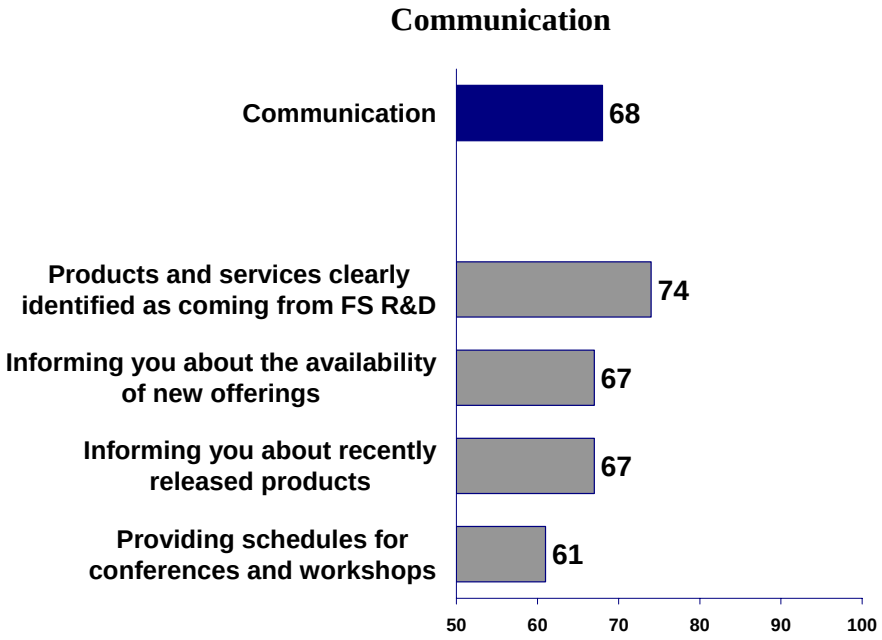
For 'Easy to understand' the following pairwise comparisons of scores by Method of Accessing Information yielded the following significant differences:

Pooled variance was used in each case to determine significant differences between sample means.

- Pairwise comparison between Requesting Hard Copies score (81) and each of the following scores: Download publications from the web (78), Attending Conferences (75) and Direct Contact (76) are significant at a 90% level of confidence.

Communication
Impact 0.9

Communication, with a score of 68, was the lowest rated area for Forest Service R & D. This component was comprised of 4 questions (COM1-COM4). Respondents gave the most positive ratings to items being clearly identified as coming from Forest Service R & D (74). However, respondents gave lower ratings to the Forest Service R & D informing customers about both the availability of new product and service offerings and recently released articles/reports and newsletters. The lowest performing item was providing schedules for conferences and workshops (61).



Communication n=1,243

Those accessing information by requesting hard copies (which account for 15% of respondents) were less critical of Forest Service R & D informing them about new articles and new product and service offerings then those accessing information by downloading it from the web, attending conferences or by direct contact. The 6 to 8-point differences are statistically significant at a 90% level of confidence. Also of note, those who claim that attending conferences is their primary method of accessing information gave 'providing schedules for conferences and workshops' a higher rating (68) than all other groups did.

Communication by Method of Accessing Information

	Requesting hard copies	Download publications from web	Attending Conferences	Direct Contact	Other
Communication	**71**	**66**	**68**	**67**	**68**
Informing you about the availability of new product and service offerings	73	66	66	65	66
Informing you about recently released articles/reports/newsletters	73	66	66	67	66
Providing schedules for conferences and workshops	60	58	68	63	64
Products and services being clearly identified as coming from FS R&D	74	73	75	75	75
Sample Size	**192**	**539**	**114**	**382**	**39**
Distribution	**15%**	**43%**	**9%**	**30%**	**3%**

For 'Informing you about the availability of new product and service offerings' the following pairwise comparisons of scores by Method of Accessing Information yielded the following significant differences:
Pooled variance was used in each case to determine significant differences between sample means.
- Pairwise comparison between Requesting Hard Copies score (73) and each of the following scores: Download publications from the web (66), Attending Conferences (66) and Direct Contact (65) are significant at a 90% level of confidence.

Federal agency respondents (40% of all respondents) gave particularly low ratings to the Forest Service R & D 'providing schedules for conferences and workshops' with a score of 57. Within Federal Agencies, those working for Forest Service rated Communication lower than those working in other agencies. Forest Service workers rated products being clearly identified as coming from Forest Service R & D 10 points lower than those who are with another Federal Government agency.

Communication by Organization

	Federal Agency	State or Local Government Agency	College/ Univ. Education	Business/ Commercial	Non-Profit Agency/ Organization	Other
Communication	**65**	**70**	**70**	**67**	**66**	**73**
Informing you about the availability of new product and service offerings	65	69	69	64	64	73
Informing you about recently released articles/reports/newsletters	66	68	69	67	64	75
Providing schedules for conferences and workshops	57	66	64	62	62	66
Products and services being clearly identified as coming from FS R&D	71	75	76	76	75	79
Sample Size	**505**	**231**	**232**	**147**	**69**	**62**
Distribution	**40%**	**18%**	**18%**	**12%**	**5%**	**5%**

For 'Providing schedules for conferences and workshops' the following pairwise comparisons of scores by Organization yielded the following significant differences:

Pooled variance was used in each case to determine significant differences between sample means.

- Pairwise comparison between Federal Agency score (57) and each of the following scores: State/Local Government Agency (66), College/University Education (64), and Business/Commercial (62) are significant at a 90% level of confidence.

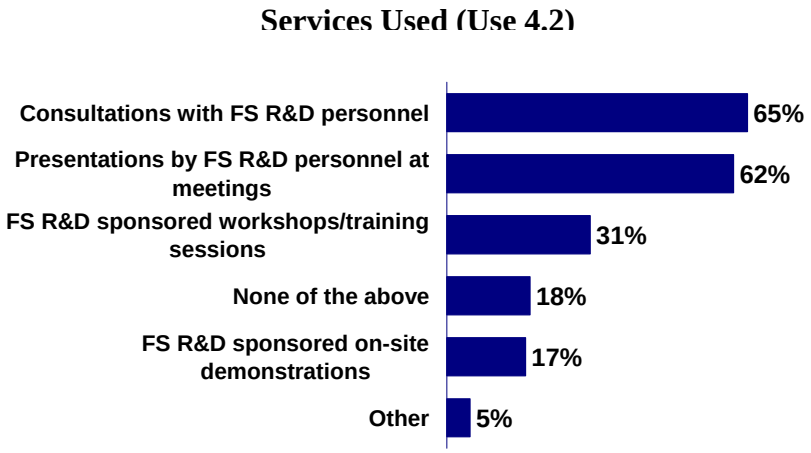
Communication by Organization – Federal Agency Work for Forest Service

	Yes - Work for Forest Service	No - Work for Forest Service
Communication	63	71
Informing you about the availability of new product and service offerings	63	70
Informing you about recently released articles/reports/newsletters	64	70
Providing schedules for conferences and workshops	55	63
Products and services being clearly identified as coming from FS R&D	68	78
Sample Size	358	147
Distribution	71%	29%

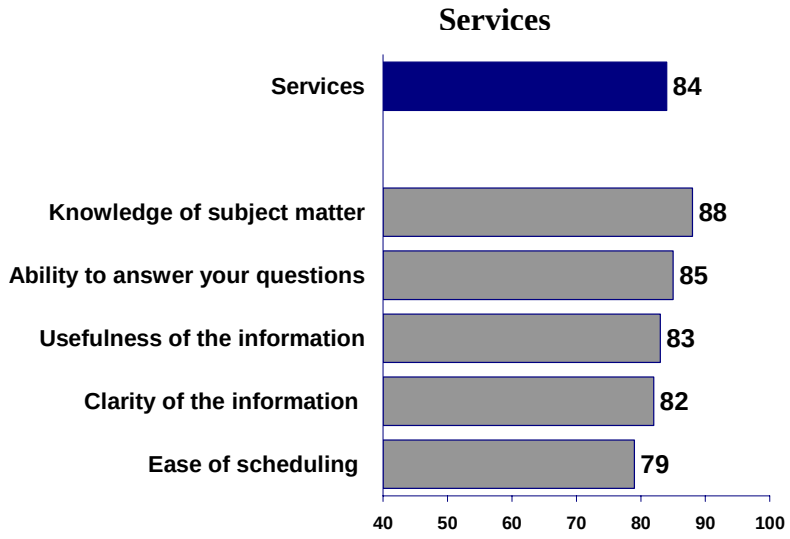
All differences shown in the table above between 'Yes- Work for Forest Services' and 'No-Work for Forest Service' are significant at a 90% level of confidence.

Services
Impact 0.6

Customers who mentioned using one or more of the Forest Service R&D services were asked to evaluate them. Close to two-thirds of respondents had consultations (65%) with Forest Service R&D or had attended a presentation (62%). Nearly one-third (31%) mentioned attending FS R&D sponsored workshops or training sessions.



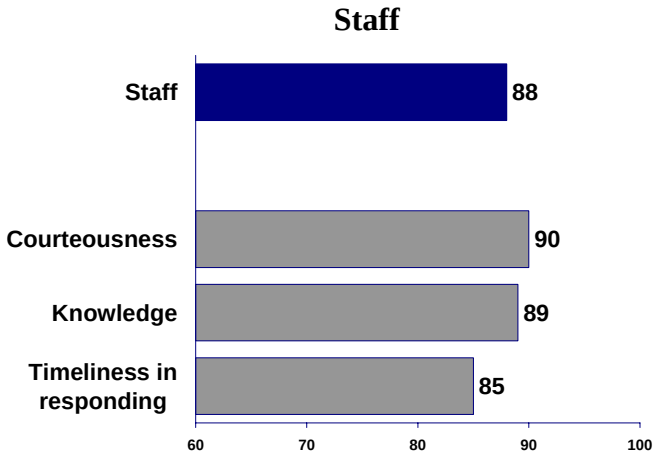
Services was one of the highest rated areas with a score of 84. Five questions were asked to measure Services (PRES1 – PRES5). Respondents thought most highly of the 'knowledge of subject matter' (88) and 'ability to answer questions' (85) during presentations, workshops, and other services. Respondents found the information to be useful and clear. The most problematic area in services involved scheduling, which still scored 79.



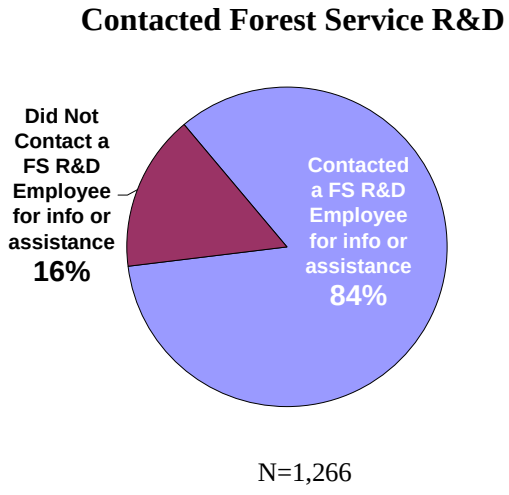
Services n=1,009

Staff
Impact 0.6

Those 84% of respondents who contacted Forest Service R&D for information or assistance were asked to evaluate the staff. Staff was the highest rated area (88) of all components. Respondents thought the staff for Forest Service R&D was courteous (90), knowledgeable (89) and timely in their response (85). These three questions were STAFF2-STAFF4 on the questionnaire. Staff has an impact of 0.6 on customer satisfaction.



Staff n=1,063

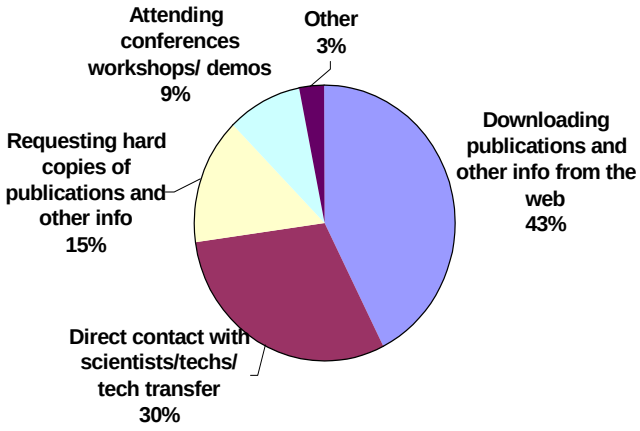


N=1,266

Accessibility
Impact 0.2

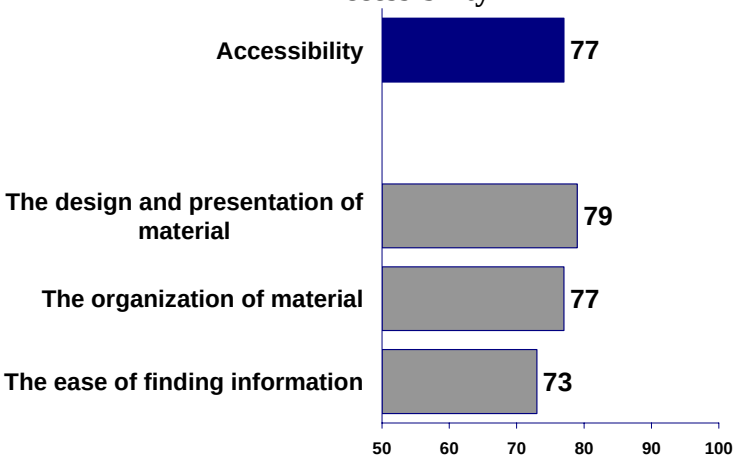
The most preferred method of accessing products and services from Forest Service R&D was through downloading from the web with 43% mentioning this method. Another 30% have direct contact with scientists, technicians and technology transfer specialists as their primary method of access and 15% request hard copies as the main method of access. Accessibility has a low impact on satisfaction (0.2), meaning that an improvement in this area will not produce a significant increase in customer satisfaction. Customers gave higher ratings to the design and the organization of the material, and slightly lower ratings to the ease of finding material.

Method of Accessing Products and Services (ACC1)



N=1,266

Accessibility



For Accessibility n=1,259

Those customers who typically accessed information by either requesting hard copies or by direct contact with scientists/technicians and technology transfer specialists, or attending conferences rated Accessibility higher than those who downloaded publications from the web.

Accessibility by Method of Accessing Information

	Requesting hard copies	Download publications from web	Attending Conferences	Direct Contact	Other
Accessibility	**80**	**73**	**78**	**79**	**82**
The ease of finding information	77	67	76	77	80
The organization of material	81	73	80	79	84
The design and presentation of material	83	78	79	80	82
Sample Size	**192**	**539**	**114**	**382**	**39**
Distribution	**15%**	**43%**	**9%**	**30%**	**3%**

For 'Accessibility' the following pairwise comparisons of scores by Method of Accessing Information yielded the following significant differences:
Pooled variance was used in each case to determine significant differences between sample means.
- Pairwise comparison between Download publications from the web score (73) and each of the following scores: Requesting Hard Copies (80), Attending Conferences (78) and Direct Contact (79) are significant at a 90% level of confidence.

e. Outcomes of Customer Satisfaction

In addition to measuring drivers of satisfaction, USDA Forest Service R&D measured four outcomes. All items were rated on a scale from 1 to 10. The following are means scores reported on a 0 to 100 scale.

Recommend FS R&D products and services to colleagues
At an aggregate level, respondents rated their likelihood to recommend the products and services of Forest Service R& D to colleagues 83. Those at universities or colleges (85) and State and Local agencies (85) were more likely to recommend FS R&D than those at a business (80) or Federal agency (80) and in particular with Federal respondents with Forest Service R & D (79).

Likely to use FS R&D products and services in the future
At an aggregate level, respondents rated their likelihood to use the products and services of Forest Service R& D in the future 89. University or college respondents (91) and State and Local agency respondents (91) were more likely to use the products and service in the future compared to Federal agencies (86).

Confident in using products and services from FS R&D
Respondents rated their confidence in the products and services of Forest Service R&D 82.

How much of a difference do products and services from FS R&D make in ability to successfully carry out work
Overall, this item scored a 73. However, educators and researchers and those educational organizations and State and Local agencies felt the products made more of a difference than those in commercial organizations and Federal agencies.

f. Other Questions

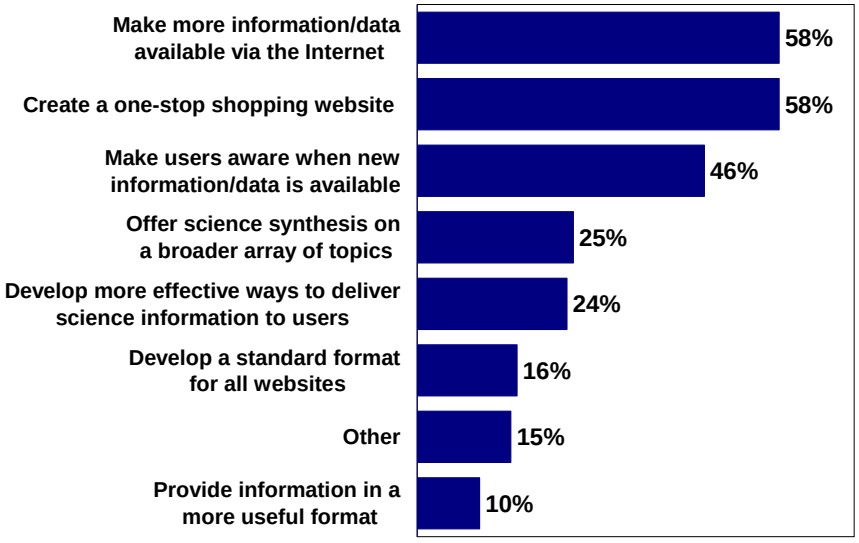
Those respondents who indicated that they did not use Forest Service R & D products more than once a year were asked why they did not make more use of the products and services provided by FS R&D. The most mentioned response was 'Other 'with nearly half (49%) of the respondents selecting that choice. Many of the 'Other' comments mentioned that a lack of awareness was the reason they had not used the FS R&D products and services more often. The verbatim comments from the respondents who selected 'Other' are provided in the back of the report in the Appendix. Almost one-third (31%) of the respondents who do not use FS R&D products more than once a year mentioned the products/service not being relevant to the problems they face. Only 14% of these respondents mentioned the format of the products/services as the reason why they do not use them more often. Quality was rarely mentioned. Only 8 respondents (2%) mentioned quality as the reason they do not use the products/services more often.

USE 1.2. 'Please describe the reason why you don't make more use of the products and services provided by Forest Service Research and Development (FS R &D)?

	N	Percent
Have only a passing interest in natural resouces	16	4%
Products/services not relevant to problems I face	131	31%
Quality of products/services provided leave something to be desired	8	2%
Products/services not in a form I can readily utilize	60	14%
Other	207	49%
TOTAL	**422**	**100%**

Customers were asked which areas Forest Service R&D should focus on to improve its service. The majority of respondents wanted more information available via Internet (58%) and a one-stop shopping website (58%). Close to half of respondents (46%) wanted Forest Service R&D to make users aware when new information/data is available. The percentages of respondents who selected other available choices are shown on the chart below.

IMPROVE1. Forest Service Research and Development is looking for ways to improve its service. Please indicate the area(s) you think are most important for FS R&D to focus on in order to improve customer service? (Select no more than 3 choices)



Chapter III

Summary and Recommendations

Overall, customers rated their satisfaction with the products and services of Forest Service R&D (72) on par with the Federal Government average (71) and just below some of the other USDA agencies such as NRCS, NASS and ERS that scored in the mid 70s to mid 80s.

The groups that were the most satisfied were those with Educational organizations, State and Local government and Federal Agencies other than Forest Service. Federal Agency respondents from Forest Service and business respondents had the lowest satisfaction. With respect to roles, educators and researchers were among the most satisfied, while executives and technical/professionals were among the least satisfied.

Frequency of use did not have a strong relationship with satisfaction; in most cases those who used products frequently were not significantly more satisfied than those who use them infrequently. Comparing satisfaction by SPAs and Organizational units contacted found a few statistically significant differences in each comparison, however, no particular SPA or Organizational unit stood out as outperforming or underperforming the others.

The following summarizes each of the six areas that were evaluated on the survey:

- Product Actionability (referred to as 'relevance and quality' on the survey) was the area that had the highest impact on satisfaction. This area is an opportunity for improvement, as it was one of the lower scoring areas. Customers gave higher ratings to the products being on topic with the issues they face. However, they gave lower ratings to the solutions being detailed, actionable and workable with their resources and anticipating issues they may face.

- Product Content was a key driver of satisfaction and a strength for FS R&D. Customers found the products to be scientifically sound, accurate and up-to-date and saw U.S.D.A. Forest Service R & D as an authoritative source.

- Communication is another opportunity for Forest Service R&D to improve. It was the lowest rated area and has a moderately high impact on satisfaction. Customers would like to be better informed about the availability of new products and recently released articles. They also would like schedules to be more readily available for workshops.

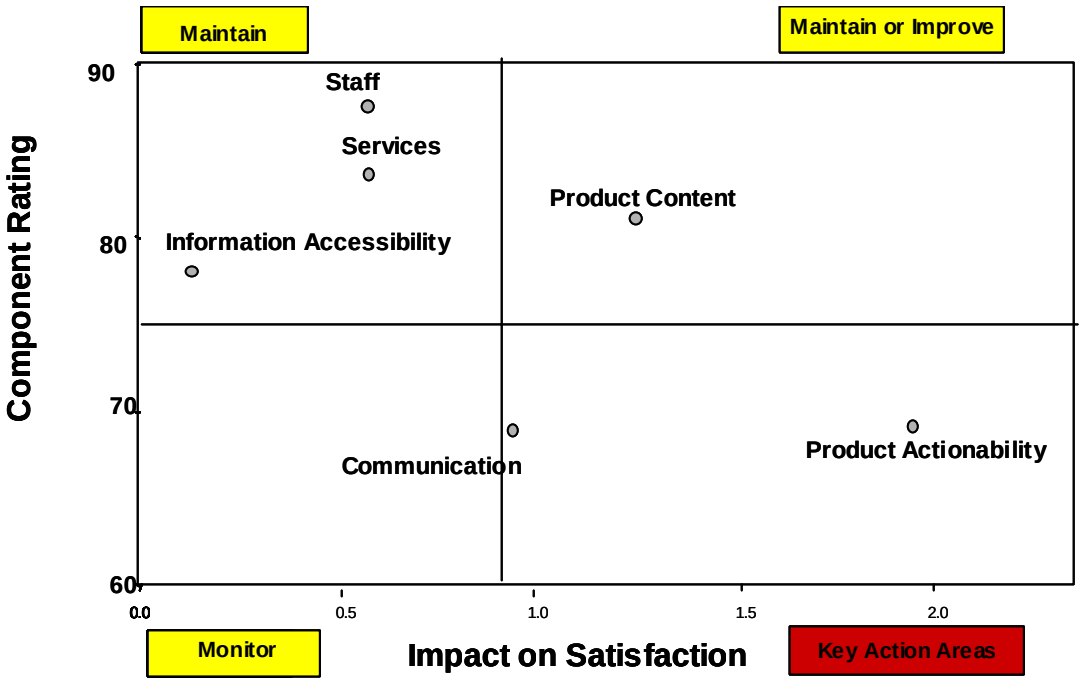
- Services was also strength. Respondents found Forest Service R&D to be subject experts, who were able to provide them with clear, useful information and answer their questions. Consultations with R&D personnel and presentations were the most popular services.

- Staff was another strength for FS R&D, and an area with modest impact on satisfaction. Respondents found the staff to be courteous, knowledgeable and timely in responding. Most respondents (84%) had contacted FS R&D for assistance.

- Downloading publications from the web was the most preferred method of accessing information. However, those customers who requested hard copies rated Accessibility higher than those downloading publications from the web. While Accessibility has a low impact on customer satisfaction, those 43% who access information via the web would like better ease of finding information.

Recommendations to improve customer satisfaction should focus on those areas that are high impact and lower scoring relative to other areas (see chart below) and include the following:

- The first recommendation involves the products and services Forest Service R&D provides its customers. It is important to focus on Product Actionability. Provide customers with more detailed and actionable solutions that can be achieved with the resources they have available. In particular, Technical/professional respondents and executives wanted more actionable solutions.
- The second recommendation is to improve communication to customers about products and services - especially the new offerings and recent releases. Customers would like to be better informed when new products and services are available and when articles, reports or newsletters have been released. Also, customers would like better schedule information about seminars and conferences.
    - — In particular, focus on communications to business/commercial customers and Federal agency customers within Forest Service, as they found the communication about products and services to be most problematic.
    - — Customers who get their information by requesting hard copies do not find communications to be as much of an issue as those who download publications from the web. Focus communication efforts on those accessing information via web.
    - — In general, awareness seemed to be the primary reason why customers do not make more use of the products and services from Forest Service R&D. Verbatim commentary from respondents support this recommendation.
- Making information more accessible is not a high impact area, but those accessing data via the web would like information to be easier to find.



For the most part, the other areas of Forest Service R&D are strengths and the objective should be to maintain the performance in the areas.

- Respondents feel that the Product Content they receive from Forest Service R&D is sound, up-to-date and is coming from an authoritative source. Maintain the performance in providing this type of content.
- Most customers contact the staff and have found it to be a very positive experience. Maintain the courteous, timely manner in responding to customers in Staff performance.
- Services, is also area where Forest Service R & D demonstrates its knowledge to customers. Maintain the performance in providing customers information through services.

APPENDIX A

SURVEY QUESTIONNAIRE

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USDA – Forest Service Research and Development

Customer Satisfaction Survey 2006

The USDA FOREST SERVICE RESEARCH AND DEVELOPMENT (FS R&D) organization is committed to providing you, our customers with products and services that meet your needs. Gathering your feedback helps to ensure that we are delivering on our commitment to you. To this end, we have commissioned the CFI Group, an independent third-party research group, to conduct a survey that asks about your satisfaction with our products and services as well as ways that we can improve our service to you.

The CFI Group will hold confidential your response to the survey. Your response will be combined with information from other respondents for research and evaluation purposes so that we may continue to meet your needs in the future. This brief survey will take approximately 15 minutes of your time.

This survey is authorized by the U.S. Office of Management and Budget Control No. 1505-0191.

Demographics

DEMO1.1 Which of the following best describes the organization you work for?

- Federal Agency (If 'Federal Agency' selected ask DEMO 1.2 else go to DEMO2)
- State or Local Government Agency
- Tribal Government
- College/University Education
- K-12 Education
- Business/Commercial
- Non-Profit Agency/Organization
- Other (please specify)

DEMO1.2. Do you work for the USDA Forest Service?

- Yes (If 'Yes' selected ask DEMO 1.3)
- No (go to DEMO2)

DEMO1.3. Do you work for the Forest Service Research and Development Deputy Area?

- Yes (go to END1)
- No (go to DEMO1.4)

DEMO1.4. Which of the following best describes your position within the USDA Forest Service?

- Line officer
- National Forest System Regional Office staff
- National Forest System Forest Supervisor Office staff
- National Forest System Ranger District staff
- State and Private Forestry field staff
- Washington Office staff
- Other (please specify)

DEMO2. What is your primary role at your organization?

- Researcher
- Educator
- Joint Educator/Research
- Executive
- Technical/Professional
- Administrative
- Other (please specify)

DEMO3. Are you located within the 50 United States or District of Columbia?

- Yes (Go to DEMO3.1)
- No (Go to DEMO3.2)

DEMO3.1. In which state are you located? (Select one from drop-down menu)

DEMO3.2. Please specify your location below: (Open ended)

Usage of Products/Services

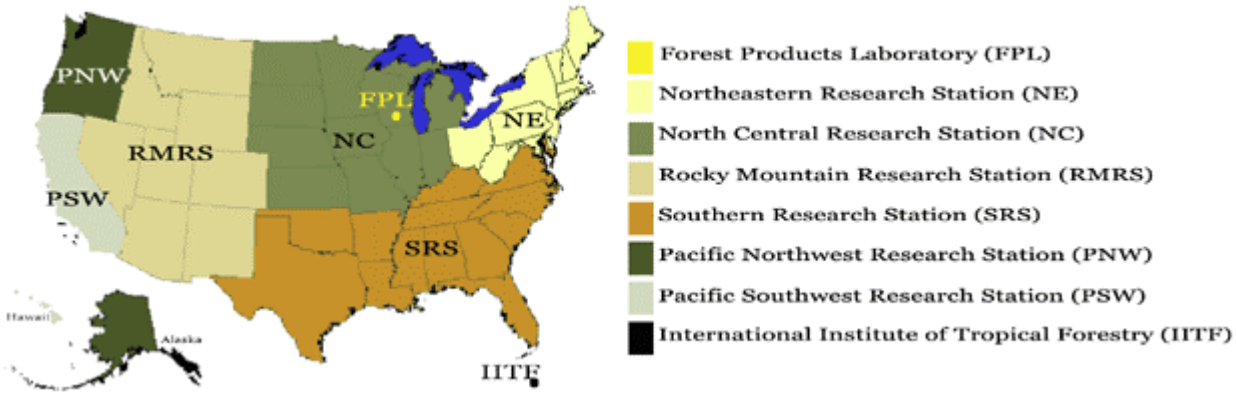
USE1.1 Do you typically use Forest Service Research and Development products and services more than once a year?

- Yes (go to USE2)
- No (ASK USE 1.2 then go to END1)

USE1.2 Please describe the main reason why you don't make more use of the products and services provided by Forest Service Research and Development (FS R&D)? (Check only one)

- Have only a passing interest in natural resource issues.
- The products/services provided by FS R&D are not relevant to the problems I face.
- The quality of the products/services provided by FS R&D leave something to be desired.
- The products/services offered by FS R&D are not provided in a form I can readily utilize.
- Other (please specify)

USE2. How frequently do you typically contact (in person, by phone, via the internet, or by mail) each of the following Forest Service Research and Development organizational units for information and/or assistance?



	Daily	Weekly	Monthly	Quarterly	Every six months or less	Never
Forest Products Laboratory (FPL, HQs in Madison, WI)						
International Institute of Tropical Forestry (IITF, HQs in Rio Peidras, Puerto Rico)						
North Central Research Station (NC, HQs in St. Paul, MN)						
Northeastern Research Station (NE, HQs in Newtown Square, PA)						
Pacific Northwest Research Station (PNW, HQs in Portland, OR)						
Pacific Southwest Research Station (PSW, HQs in Albany, CA)						
Rocky Mountain Research Station (RMRS, HQs in Fort Collins, CO)						
Southern Research Station (SRS, HQs in Asheville, NC)						
Washington Office (National HQs in Washington, DC)						

USE3. How frequently do you seek (in person, by phone, via the internet, or by mail) information and/or assistance pertaining to each of the following topic/program areas?

Topic/Program Area	Daily	Weekly	Monthly	Quarterly	Every six months or less	Never
Wildland Fire (fire, fire effects, fire and fuels management, social/community aspects of fire and fuels management)						
Invasive Species (predict, prevent, and manage invasive insects, plants, and pathogens; restore impacted areas)						
Recreation (management and monitoring of all forms of outdoor						

recreation, including wilderness)						
Resource Management and Use (forest and rangeland management, harvesting, forest products utilization and processing)						
Water and Air (impacts of soils/vegetation on water quality and quantity, air/fire interactions, air and water pollution)						
Wildlife and Fish (sustain species/ecosystems of concern, manage habitats, measure impacts of disturbance)						
Resource Data and Analysis (forest inventory and analysis, assessment, monitoring and evaluation protocols)						

If there are other program areas you use not listed above please specify.

USE4.1. Please indicate which of the following Forest Service Research and Development PRODUCTS you USED during the past year.

- Technical articles/reports describing research methods and results
- Popular articles/reports/newsletters highlighting research results
- Reports presenting current forest resource statistics (e.g. Forest Inventory and Analysis (FIA) Reports)
- Reports analyzing long-term forest and rangeland resource trends (e.g. Resources Planning Act (RPA) Assessments)
- Environmental/Conservation education materials (e.g. The Natural Inquirer)
- Comprehensive syntheses of prior research
- Decision support tools (i.e., computer models/software applications)
- Monitoring/evaluation protocols
- Don't know
- Other (Please specify)

IF ANSWERED 'USE' ANY OF USE 4.1 ASK ALL BELOW

USE4.1.1 Please rate the Forest Service Research and Development PRODUCTS you have used during the past year on a scale from 1 to 10, where "1" means "poor" and 10 means "excellent" in terms of each of the following variables.

INFO1. Accurate and up-to-date
INFO2. Easy to understand
INFO3. Scientifically sound
INFO4. Authoritative source (provided by subject matter experts)
INFO5. Unbiased
INFO6. Comprehensive

USE4.2. Please indicate which of the following Forest Service Research and Development (FS R&D) SERVICES you USED during the past year.

- Presentations by FS R&D personnel at professional and other meetings
- FS R&D sponsored workshops/training sessions
- FS R&D sponsored on-site demonstrations
- Consultations with FS R&D personnel (by phone, e-mail, or in person)
- None of the above
- Other (Please specify)
-

IF ANSWERED 'USE' ANY OF USE 4.2 ASK ALL BELOW

USE 4.2.1 Please rate Forest Service Research and Development SERVICES you used during the past year on a scale from 1 to 10, where "1" means "poor" and 10 means "excellent" in terms of the following variables.

PRES1. Ease of scheduling the event/consultation
PRES2. Clarity of the information presented/provided
PRES3. Usefulness of the information presented/provided
PRES4. Presenter's/consultant's knowledge of subject matter
PRES5. Ability of the presenter/consultant to answer your questions

Accessibility/Format of Products/Services

ACC1. How do you typically access the products and services provided by Forest Service Research and Development? (Select one)

- Requesting hard copies of publications and other information
- Downloading publications and other information from the web
- Attending conferences/workshops/demonstrations
- Direct contact with scientists/technicians/technology transfer specialists
- Other (please specify)

ACC2. Please rate the ease of (ANSWER TO ACC1) on a scale of 1 to 10, where "1" means "poor" and 10 means "excellent."

- ACC3. The ease of finding information
- ACC4. The organization of material
- ACC5. The design and presentation of material

Communication

Please rate Forest Service Research and Development (FS R&D) on a scale from 1 to 10, where "1" means "poor" and 10 means "excellent" on the following …

COM1. Informing you about the availability of new product and service offerings
COM2. Informing you about recently released articles/reports/newsletters
COM3. Providing schedules for conferences and workshops
COM4. Products and services being clearly identified as coming from FS R&D

Relevance and Quality of Products/Services

Please rate how useful the products and services from Forest Service Research and Development are to you for the following purposes. Use a scale from 1 to 10, where "1" means "Not very useful" and 10 means "Very Useful."

RELEV1. Addresses problems, issues or needs that you currently face
RELEV2. Provides detailed and actionable solutions
RELEV3. Provides solutions that are workable with your resources
RELEV4. Helps anticipate emerging problems, issues or needs you might face

Experience With Forest Service R&D Staff

STAFF1. Have you ever directly contacted a Forest Service Research and Development employee (in person, by phone, or by email) for information or some other type of assistance?

- Yes (go to STAFF2)
- No (go to next section)

Please rate the Forest Service Research and Development staff on the following. Use a scale from 1 to 10, where 1 means "Poor" and 10 means "Excellent."

- STAFF2. Courteousness
- STAFF3. Timeliness in responding
- STAFF4. Knowledge

Overall Satisfaction with Forest Service R&D Products/Services

SAT1. Please think of your experiences with Forest Service Research and Development (FS R&D) products and services. Using a 10-point scale on which 1 means "*Very dissatisfied*" and 10 means "*Very satisfied*", how satisfied are you with the services and products provided by FS R&D?

SAT2. 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 the products and services provided by Forest Service Research and Development fallen short of, or exceeded, your expectations?

SAT3. Imagine an ideal forestry research organization. How well do you think the products and services provided by Forest Service Research and Development compares to the ideal you just imagined? Use a 10-point scale on which "1"means "*Not very close to the ideal*," and "10" means "*Very close to the ideal*."

Outcomes

OUTCOME1. Using a 10-point scale on which 1 means "*Not very willing*" and 10 means "*Very willing*", how willing would you be to recommend Forest Service Research and Development products and services to your colleagues?

OUTCOME2. Using a 10-point scale on which 1 means "*Not very likely*" and 10 means "*Very likely*", how likely are you to use Forest Service Research and Development products and services in the future?

OUTCOME3. Using a 10-point scale on which 1 means "*Not very confident*" and 10 means "*Very confident*", how confident are you in using the products and services provided by Forest Service Research and Development?

OUTCOME4. How much of a difference do the products and services provided by Forest Service Research and Development make to you in your ability to successfully carry out your work? Please use a 10-point scale on which 1 means "*No difference at all*" and 10 means *"A great difference*".

Improving Future Service

Improve1. Forest Service Research and Development (FS R&D) is looking for ways to improve its service. Please indicate the area(s) you think are most important for FS R&D to focus on in order to improve customer service? Select no more than three of the choices listed below.

- Make more information/data available via the Internet
- Offer science synthesis on a broader array of topics
- Create a one-stop shopping website through which all FS R&D products and services can be accessed
- Develop more effective ways to deliver science information to users
- Provide information in a more useful format
- Make users aware when new information/data is available
- Develop a standard format for all FS R&D websites
- Other (please specify)

OPENEND1. Do you have any other suggestions concerning how Forest Service Research and Development could better serve you? (Maximum response length is approximately 6000 words.) (Open Ended)

END1. Thank you for your time. USDA Forest Service Research and Development (FS R&D) is specifically looking for information from customers who do not work in the FS R&D deputy area and who typically use services more than once a year. Please hit the next button to go to the end of the survey.

END Thank you for your time. The USDA Forest Service Research and Development will use the feedback to better serve its customers.

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APPENDIX B

NON-MODEL QUESTIONS

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TABLES: NON-MODEL QUESTIONS

(DEMO1.1, 1.2, 1.3, 1.4, 2)

Organization	
Federal Agency	40%
State or Local Government Agency	18%
Tribal Government	0.4%
College/University Education	18%
K-12 Education	1%
Business/Commercial	12%
Non-Profit Agency/Organization	5%
Other	5%
Sample Size (N)	1266
Work for the USDA Forest Service	
Yes	71%
No	29%
Sample Size (N)	505
Work for the Forest Service R&D Deputy Area	
Yes	17%
No	83%
Sample Size (N)	433
Postion at the USDA Forest Service	
Line officer	19%
National Forest System Regional Office staff	15%
National Forest System Forest Supervisor Office staff	20%
National Forest System Ranger District staff	19%
State and Private Forestry field staff	12%
Washington Office staff	8%
Other	8%
Sample Size (N)	358
Primary Role	
Researcher	12%
Educator	5%
Joint Educator/Research	9%
Executive	10%
Technical/Professional	51%
Administrative	6%
Other	7%
Sample Size (N)	1266

TABLES: NON-MODEL QUESTIONS

(DEMO3, 3.1)

Located in the US or District of Columbia	
Yes	89%
No	11%
Sample Size (N)	1266
State	
AL	0.5%
AK	2.9%
AZ	2.5%
AR	0.4%
CA	10.4%
CO	5.9%
CT	0.3%
DC	2.6%
DE	0.4%
FL	1.2%
GA	2.7%
HI	0.9%
ID	4.3%
IL	0.8%
IN	0.8%
IA	0.5%
KS	0.1%
KY	0.5%
LA	1.2%
ME	1.0%
MD	1.5%
MA	1.6%
MI	1.7%
MN	2.7%
MS	0.3%
MO	1.2%
MT	2.4%
NE	0.4%
NV	1.3%
NH	1.2%
NJ	0.6%
NM	3.2%
NY	2.2%
NC	2.2%
ND	0.5%
OH	2.6%
OK	0.4%
OR	6.1%
PA	5.1%
RI	0.2%
SC	1.5%
SD	1.1%
TN	1.4%
TX	1.3%
UT	2.9%
VT	0.8%
VA	2.1%
WA	5.0%
WV	2.2%
WI	2.7%
WY	1.6%
Sample Size (N)	1121

TABLES: NON-MODEL QUESTIONS

(USE1.1, USE4.1, USE 4.2, STAFF1, ACC1)

Do you typically use Forest Research and Development products and services more than once a year	
Yes	75%
No	25%
Sample Size (N)	1688
FS services used during the last year *(Select all that apply)	
Presentations by FS R&D personnel at professional and other	62%
FS R&D sponsored workshops/training sessions	31%
FS R&D sponsored on-site demonstrations	17%
Consultations with FS R&D personnel (by phone, e-mail, or in person)	65%
Other	5%
None of the above	18%
Sample Size (N)	1266
FS products used during the last year *(Select all that apply)	
Technical articles/reports describing research methods	92%
Popular articles/reports/newsletters highlighting research	68%
Reports presenting current forest resource statistics	51%
Reports analyzing long-term forest and rangeland resource	35%
Environmental/Conservation education materials	27%
Comprehensive syntheses of prior research	36%
Decision support tools	39%
Monitoring/evaluation protocols	40%
Other	5%
Don't Know	1%
Sample Size (N)	1266
Directly Contacted Staff for Assistance	
Yes	84%
No	16%
Sample Size (N)	1266
Typically Access Products & Services	
Requesting hard copies of publications and other information	15%
Downloading publications and other information from the web	43%
Attending conferences/workshops/demonstrations	9%
Direct contact with scientists/technicians/technology transfer	30%
Other	3%
Sample Size (N)	1266

TABLES: NON-MODEL QUESTIONS

(USE2)

How frequently do you typically contact … each of the following organizational units for information and/or assistance	
Forest Products Laboratory (FLP)	
Daily	0.2%
Weekly	1%
Monthly	3%
Quarterly	5%
Every six months or less	27%
Never	63%
Sample Size (N)	1266
Washington Office (HQ)	
Daily	0.4%
Weekly	1%
Monthly	4%
Quarterly	8%
Every six months or less	26%
Never	60%
Sample Size (N)	1266
Int. Institute of Tropical Forestry (IITF)	
Daily	0.1%
Weekly	0.2%
Monthly	1%
Quarterly	1%
Every six months or less	9%
Never	89%
Sample Size (N)	1266
North Central Research Station (NC)	
Daily	0.2%
Weekly	2%
Monthly	5%
Quarterly	8%
Every six months or less	26%
Never	59%
Sample Size (N)	1266
Northeastern Research Station (NE)	
Daily	0.5%
Weekly	3%
Monthly	7%
Quarterly	11%
Every six months or less	22%
Never	57%
Sample Size (N)	1266
Pacific Northwest Research Station (PNW)	
Daily	0.5%
Weekly	3%
Monthly	8%
Quarterly	15%
Every six months or less	30%
Never	43%
Sample Size (N)	1266

TABLES: NON-MODEL QUESTIONS

(USE2) Continued

Pacific Southwest Research Station (PSW)	
Daily	0%
Weekly	2%
Monthly	7%
Quarterly	12%
Every six months or less	26%
Never	54%
Sample Size (N)	1266
Rocky Mountain Research Station (RMR)	
Daily	0%
Weekly	3%
Monthly	12%
Quarterly	18%
Every six months or less	27%
Never	38%
Sample Size (N)	1266
Southern Research Station (SRS)	
Daily	0%
Weekly	2%
Monthly	7%
Quarterly	13%
Every six months or less	24%
Never	54%
Sample Size (N)	1266

TABLES: NON-MODEL QUESTIONS

(USE2)

How frequently do you seek information and/or assistance pertaining to the following topic/program areas	
Invasive Species	
Daily	1%
Weekly	4%
Monthly	11%
Quarterly	21%
Every six months or less	37%
Never	27%
Sample Size (N)	1266
Resource Data and Analysis	
Daily	1%
Weekly	6%
Monthly	15%
Quarterly	19%
Every six months or less	37%
Never	22%
Sample Size (N)	1266
Recreation	
Daily	0.2%
Weekly	1%
Monthly	4%
Quarterly	9%
Every six months or less	31%
Never	54%
Sample Size (N)	1266
Resource Management and Use	
Daily	1%
Weekly	6%
Monthly	14%
Quarterly	23%
Every six months or less	34%
Never	22%
Sample Size (N)	1266
Water and Air	
Daily	1%
Weekly	4%
Monthly	9%
Quarterly	18%
Every six months or less	35%
Never	34%
Sample Size (N)	1266
Wildland Fire	
Daily	2%
Weekly	5%
Monthly	8%
Quarterly	18%
Every six months or less	35%
Never	32%
Sample Size (N)	1266
Wildlife and Fish	
Daily	1%
Weekly	4%
Monthly	8%
Quarterly	17%
Every six months or less	36%
Never	35%
Sample Size (N)	1266

APPENDIX C

ATTRIBUTE TABLES BY SELECT SEGMENTS

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ATTRIBUTE TABLE – ALL RESPONDENTS

	All Respondents
Product Content	**81**
Accurate and up-to-date	81
Easy to understand	78
Scientifically sound	85
Authoritative source (provided by subject matter experts)	85
Unbiased	79
Comprehensive	79
Services	**84**
Ease of scheduling the event/consultation	79
Clarity of the information presented/provided	82
Usefulness of the information presented/provided	83
Presenter's/consultant's knowledge of subject matter	88
Ability of the presenter/consultant to answer your questions	85
Communication	**68**
Informing you about the availability of new product and service offerings	67
Informing you about recently released articles/reports/newsletters	67
Providing schedules for conferences and workshops	61
Products and services being clearly identified as coming from FS R&D	74
Product Actionability	**69**
Addresses problems, issues or needs that you currently face	74
Provides detailed and actionable solutions	68
Provides solutions that are workable with your resources	67
Helps anticipate emerging problems, issues or needs you might face	68
Staff	**88**
Courteousness	90
Timeliness in responding	85
Knowledge	89
Accessibility	**77**
The ease of finding information	73
The organization of material	77
The design and presentation of material	79
Customer Satisfaction Index	**72**
Overall Satisfaction	78
Expectations - Expectations	70
Ideal	66
Likelihood to Recommend	**83**
Likelihood to use products and services in future	**89**
Confidence in using products and services	**82**
Difference FS products and services make	**73**
Sample Size	**1,266**
Distribution	**100%**

ATTRIBUTE TABLE – ORGANIZATION

	Federal Agency	State or Local Government Agency	Tribal Government	College/ Univ. Education	K-12 Education	Business/ Commercial	Non-Profit Agency/ Organization	Other
Product Content	**81**	**82**	**78**	**82**	**89**	**79**	**78**	**86**
Accurate and up-to-date	82	81	80	83	88	76	78	85
Easy to understand	77	76	76	81	83	77	71	85
Scientifically sound	84	86	80	84	93	84	85	87
Authoritative source (provided by subject matter experts)	85	86	84	84	91	83	82	89
Unbiased	79	79	81	79	85	76	76	84
Comprehensive	78	80	71	79	89	77	77	85
Services	**83**	**83**	**79**	**85**	**94**	**83**	**83**	**86**
Ease of scheduling the event/consultation	77	77	69	81	85	81	80	83
Clarity of the information presented/provided	81	82	89	84	93	82	82	86
Usefulness of the information presented/provided	82	83	75	85	94	80	81	86
Presenter's/consultant's knowledge of subject matter	88	87	86	88	98	86	85	90
Ability of the presenter/consultant to answer your questions	84	85	72	86	98	86	85	88
Communication	**65**	**70**	**60**	**70**	**65**	**67**	**66**	**73**
Informing you about the availability of new product and service offerings	65	69	56	69	62	64	64	73
Informing you about recently released articles/reports/newsletters	66	68	58	69	62	67	64	75
Providing schedules for conferences and workshops	57	66	56	64	50	62	62	66
Products and services being clearly identified as coming from FS R&D	71	75	86	76	80	76	75	79
Product Actionability	**67**	**72**	**65**	**73**	**75**	**67**	**67**	**76**
Addresses problems, issues or needs that you currently face	72	76	67	77	77	73	72	79
Provides detailed and actionable solutions	65	72	69	71	74	65	64	75
Provides solutions that are workable with your resources	65	68	64	71	73	65	66	74
Helps anticipate emerging problems, issues or needs you might face	64	70	60	71	78	66	66	77
Staff	**87**	**89**	**84**	**88**	**95**	**89**	**89**	**91**
Courteousness	88	91	89	91	94	92	92	93
Timeliness in responding	83	85	78	85	93	86	86	88
Knowledge	89	89	83	88	98	89	89	92
Accessibility	**76**	**77**	**71**	**78**	**86**	**76**	**74**	**80**
The ease of finding information	72	72	69	74	84	73	71	76
The organization of material	76	78	71	78	87	77	74	82
The design and presentation of material	78	80	73	81	87	79	76	82
Customer Satisfaction Index	**70**	**73**	**64**	**74**	**81**	**71**	**70**	**76**
Overall Satisfaction	76	78	76	81	86	76	77	83
Expectations - Expectations	68	71	60	72	81	70	68	72
Ideal	64	68	53	69	76	65	63	71
Likelihood to Recommend	**80**	**85**	**76**	**85**	**86**	**80**	**80**	**89**
Likelihood to use products and services in future	**86**	**91**	**89**	**91**	**90**	**88**	**88**	**94**
Confidence in using products and services	**82**	**84**	**78**	**82**	**89**	**80**	**82**	**87**
Difference FS products and services make	**71**	**74**	**69**	**75**	**75**	**69**	**76**	**76**

Sample Size	**505**	**231**	**5***	**232**	**15***	**147**	**69***	**62***
Distribution	**40%**	**18%**	**0%**	**18%**	**1%**	**12%**	**5%**	**5%**

** Low sample size – results may not be statistically representative of population*

ATTRIBUTE TABLE – PRIMARY ROLE

	Researcher	Educator	Joint Educator/ Research	Executive	Technical/ Professional	Administrative	Other
Product Content	**80**	**85**	**83**	**80**	**81**	**85**	**82**
Accurate and up-to-date	80	86	83	78	81	84	82
Easy to understand	80	84	82	73	76	80	78
Scientifically sound	83	88	84	84	85	89	86
Authoritative source (provided by subject matter experts)	83	89	84	84	84	88	86
Unbiased	77	80	81	79	78	84	76
Comprehensive	78	85	81	78	78	82	80
Services	**84**	**89**	**86**	**82**	**83**	**85**	**84**
Ease of scheduling the event/consultation	82	83	83	77	77	79	81
Clarity of the information presented/provided	83	89	85	81	81	83	84
Usefulness of the information presented/provided	83	89	86	81	82	85	83
Presenter's/consultant's knowledge of subject matter	86	92	90	86	87	89	87
Ability of the presenter/consultant to answer your questions	86	92	86	84	85	86	84
Communication	**71**	**73**	**69**	**64**	**66**	**72**	**69**
Informing you about the availability of new product and service offerings	67	73	69	62	65	71	68
Informing you about recently released articles/reports/newsletters	71	74	68	62	66	72	70
Providing schedules for conferences and workshops	65	64	60	60	59	67	62
Products and services being clearly identified as coming from FS R&D	77	78	74	71	73	79	74
Product Actionability	**71**	**75**	**73**	**65**	**68**	**74**	**72**
Addresses problems, issues or needs that you currently face	76	79	76	70	73	76	76
Provides detailed and actionable solutions	69	73	71	62	67	74	72
Provides solutions that are workable with your resources	69	74	70	62	66	71	70
Helps anticipate emerging problems, issues or needs you might face	68	76	71	64	66	74	71
Staff	**88**	**91**	**89**	**87**	**88**	**88**	**90**
Courteousness	91	92	92	90	89	89	93
Timeliness in responding	86	90	86	83	84	86	85
Knowledge	88	92	89	87	89	89	91
Accessibility	**77**	**84**	**78**	**73**	**76**	**81**	**76**
The ease of finding information	74	80	75	70	72	79	72
The organization of material	78	85	79	74	76	81	76
The design and presentation of material	80	86	81	75	79	83	79
Customer Satisfaction Index	**73**	**78**	**75**	**69**	**70**	**74**	**73**
Overall Satisfaction	80	85	80	74	76	80	81
Expectations - Expectations	72	76	74	67	69	72	71
Ideal	68	73	70	64	64	70	67
Likelihood to Recommend	**84**	**88**	**85**	**79**	**82**	**82**	**87**
Likelihood to use products and services in future	**90**	**91**	**90**	**86**	**88**	**87**	**93**
Confidence in using products and services	**81**	**87**	**81**	**82**	**82**	**83**	**84**
Difference FS products and services make	**76**	**75**	**74**	**69**	**72**	**72**	**75**

Sample Size	**158**	**67**	**111**	**132**	**640**	**75**	**83**
Distribution	**12%**	**5%**	**9%**	**10%**	**51%**	**6%**	**7%**

** Low sample size – results may not be statistically representative of population*

ATTRIBUTE TABLE – ORGANIZATIONAL UNITS CONTACTED

	Forest Products Laboratory	International Institute of Tropical Forestry	North Central Research Station	Northeastern Research Station	Pacific Northwest Research Station	Pacific Southwest Research Station	Rocky Mountain Research Station	Southern Research Station	Washington Office
Product Content	**82**	**83**	**82**	**82**	**81**	**81**	**80**	**82**	**81**
Accurate and up-to-date	81	84	81	81	81	82	81	82	80
Easy to understand	77	81	77	77	78	79	78	78	77
Scientifically sound	86	86	86	86	84	84	84	86	85
Authoritative source (provided by subject matter experts)	86	86	85	86	84	85	83	85	84
Unbiased	80	82	79	81	78	79	77	79	78
Comprehensive	80	81	79	80	78	78	78	79	79
Services	**85**	**85**	**84**	**84**	**83**	**83**	**83**	**84**	**83**
Ease of scheduling the event/consultation	79	76	78	80	77	78	77	78	77
Clarity of the information presented/provided	83	84	82	83	81	82	81	82	82
Usefulness of the information presented/provided	84	85	84	84	82	83	81	83	83
Presenter's/consultant's knowledge of subject matter	88	88	88	88	86	87	87	87	87
Ability of the presenter/consultant to answer your questions	87	88	86	86	84	85	84	85	85
Communication	**68**	**69**	**68**	**68**	**68**	**69**	**68**	**67**	**67**
Informing you about the availability of new product and service offerings	66	70	67	67	67	68	68	67	65
Informing you about recently released articles/reports/newsletters	67	69	67	68	68	69	68	67	66
Providing schedules for conferences and workshops	63	60	62	63	61	61	59	61	62
Products and services being clearly identified as coming from FS R&D	74	75	74	74	75	75	74	73	74
Product Actionability	**70**	**72**	**70**	**72**	**68**	**70**	**68**	**70**	**69**
Addresses problems, issues or needs that you currently face	74	75	74	76	74	75	73	75	74
Provides detailed and actionable solutions	68	70	69	70	66	68	67	69	67
Provides solutions that are workable with your resources	68	70	68	69	66	68	66	68	67
Helps anticipate emerging problems, issues or needs you might face	69	73	68	70	67	68	67	68	68
Staff	**88**	**89**	**88**	**88**	**87**	**87**	**87**	**87**	**87**
Courteousness	91	90	90	90	89	89	89	89	90
Timeliness in responding	84	85	84	85	83	83	84	83	83
Knowledge	89	90	89	90	88	88	88	89	88
Accessibility	**77**	**76**	**76**	**77**	**76**	**76**	**76**	**77**	**76**
The ease of finding information	74	73	72	73	72	72	72	73	72
The organization of material	78	76	76	77	76	76	76	77	76
The design and presentation of material	80	78	79	79	79	80	79	79	78
Customer Satisfaction Index	**72**	**74**	**72**	**74**	**71**	**72**	**71**	**72**	**72**
Overall Satisfaction	78	80	78	80	77	78	77	79	78
Expectations - Expectations	71	71	70	72	69	70	69	70	70
Ideal	66	68	66	68	64	66	65	66	65
Likelihood to Recommend	**84**	**86**	**84**	**85**	**83**	**84**	**82**	**84**	**83**
Likelihood to use products and services in future	**89**	**90**	**90**	**91**	**89**	**90**	**89**	**90**	**89**
Confidence in using products and services	**83**	**84**	**83**	**84**	**82**	**83**	**81**	**83**	**82**
Difference FS products and services make	**75**	**77**	**75**	**76**	**73**	**74**	**72**	**76**	**75**
Sample Size	**463**	**140**	**524**	**550**	**724**	**580**	**780**	**588**	**505**

ATTRIBUTE TABLE – ORGANIZATIONAL UNITS CONTACTED BY FREQUENCY

	Forest Products Laboratory		International Institute of Tropical Forestry		North Central Research Station		Northeastern Research Station		Pacific Northwest Research Station	
	Frequent User	Infrequent User	Frequent User	Infrequent User	Frequent User	Infrequent User	Frequent User	Infrequent User	Frequent User	Infrequent User
Products	**83**	**81**	**86**	**83**	**82**	**81**	**82**	**82**	**80**	**81**
Accurate and up-to-date	80	81	87	83	82	81	82	81	81	81
Easy to understand	79	77	83	80	77	77	77	78	78	77
Scientifically sound	88	85	90	85	86	85	87	85	83	84
Authoritative source (provided by subject matter experts)	86	86	88	85	86	85	87	85	83	85
Unbiased	83	78	85	82	80	79	80	81	77	79
Comprehensive	82	79	85	80	80	79	80	79	78	78
Services	**86**	**84**	**87**	**85**	**85**	**83**	**85**	**84**	**83**	**82**
Ease of scheduling the event/consultation	82	78	84	74	80	76	80	79	77	77
Clarity of the information presented/provided	85	83	85	83	84	81	82	83	82	81
Usefulness of the information presented/provided	85	84	87	85	85	83	84	84	83	81
Presenter's/consultant's knowledge of subject matter	89	88	89	88	89	87	88	87	87	86
Ability of the presenter/consultant to answer your questions	87	86	88	87	86	86	86	85	84	84
Communication	**68**	**68**	**68**	**70**	**67**	**68**	**68**	**68**	**70**	**67**
Informing you about the availability of new product and service offerings	65	67	69	70	66	67	67	68	69	66
Informing you about recently released articles/reports/newsletters	66	67	68	69	67	68	66	69	70	67
Providing schedules for conferences and workshops	65	63	64	59	64	61	65	61	62	59
Products and services being clearly identified as coming from FS R&D	73	75	69	77	73	74	75	73	75	74
Product Actionability	**72**	**69**	**75**	**71**	**71**	**69**	**72**	**71**	**69**	**67**
Addresses problems, issues or needs that you currently face	75	73	77	74	75	74	77	76	74	73
Provides detailed and actionable solutions	70	68	75	69	69	68	70	70	67	65
Provides solutions that are workable with your resources	72	67	76	69	69	67	70	69	67	65
Helps anticipate emerging problems, issues or needs you might face	70	69	74	72	69	67	71	69	68	65
Staff	**89**	**88**	**91**	**88**	**88**	**87**	**89**	**88**	**87**	**87**
Courteousness	91	90	92	90	91	89	91	89	90	88
Timeliness in responding	84	84	89	84	86	83	86	84	83	83
Knowledge	89	90	91	90	89	89	91	89	88	88
Accessibility	**79**	**77**	**78**	**76**	**76**	**76**	**77**	**76**	**76**	**75**
The ease of finding information	75	73	76	72	72	71	73	73	73	71
The organization of material	78	78	77	76	76	76	77	76	76	75
The design and presentation of material	82	79	80	78	79	79	79	79	79	78
Customer Satisfaction Index	**74**	**72**	**78**	**73**	**73**	**72**	**74**	**73**	**71**	**70**
Overall Satisfaction	80	78	84	79	79	77	81	79	78	76
Expectations - Expectations	73	70	75	70	71	70	72	71	69	69
Ideal	67	66	74	67	66	66	68	67	65	64
Likelihood to Recommend	**84**	**84**	**88**	**85**	**84**	**84**	**86**	**84**	**83**	**82**
Likelihood to use products and services in future	**88**	**90**	**92**	**90**	**91**	**90**	**92**	**90**	**91**	**88**
Confidence in using products and services	**83**	**83**	**85**	**84**	**83**	**83**	**85**	**83**	**82**	**82**
Difference FS products and services make	**78**	**73**	**81**	**76**	**77**	**74**	**78**	**75**	**75**	**70**
			*							
Sample Size	**121**	**342**	**27**	**113**	**199**	**325**	**266**	**284**	**342**	**382**
Distribution	**26%**	**74%**	**19%**	**81%**	**38%**	**62%**	**48%**	**52%**	**47%**	**53%**

** Low sample size – results may not be statistically representative of population*

ATTRIBUTE TABLE – ORGANIZATIONAL UNITS CONTACTED BY FREQUENCY (Cont.)

	Pacific Southwest Research Station		Rocky Mountain Research Station		Southern Research Station		Washington Office	
	Frequent User	Infrequent User	Frequent User	Infrequent User	Frequent User	Infrequent User	Frequent User	Infrequent User
Products	**83**	**80**	**81**	**80**	**81**	**83**	**79**	**82**
Accurate and up-to-date	83	80	82	80	81	83	79	81
Easy to understand	81	77	78	77	77	79	75	78
Scientifically sound	86	83	84	83	85	87	84	86
Authoritative source (provided by subject matter experts)	86	84	84	82	84	86	83	85
Unbiased	80	78	78	77	78	81	77	78
Comprehensive	80	77	78	78	79	80	77	80
Services	**85**	**82**	**83**	**82**	**83**	**84**	**83**	**83**
Ease of scheduling the event/consultation	79	77	77	76	79	78	77	78
Clarity of the information presented/provided	84	81	82	80	82	83	80	82
Usefulness of the information presented/provided	85	81	82	80	83	84	83	83
Presenter's/consultant's knowledge of subject matter	89	86	87	86	87	87	87	87
Ability of the presenter/consultant to answer your questions	85	84	85	84	85	85	85	85
Communication	**71**	**67**	**69**	**67**	**68**	**67**	**65**	**68**
Informing you about the availability of new product and service offerings	71	66	69	66	67	66	63	67
Informing you about recently released articles/reports/newsletters	71	67	70	67	69	66	64	68
Providing schedules for conferences and workshops	65	57	60	59	63	59	62	62
Products and services being clearly identified as coming from FS R&D	75	75	74	74	73	73	72	75
Product Actionability	**74**	**67**	**69**	**67**	**70**	**71**	**68**	**70**
Addresses problems, issues or needs that you currently face	78	71	75	71	75	75	73	75
Provides detailed and actionable solutions	72	65	68	65	69	69	66	68
Provides solutions that are workable with your resources	72	64	67	65	68	69	66	68
Helps anticipate emerging problems, issues or needs you might face	72	65	67	66	67	69	66	69
Staff	**89**	**86**	**88**	**86**	**87**	**87**	**86**	**88**
Courteousness	91	88	90	88	89	89	88	90
Timeliness in responding	85	83	84	83	84	83	81	84
Knowledge	90	87	89	87	88	89	87	89
Accessibility	**78**	**75**	**77**	**75**	**77**	**76**	**74**	**77**
The ease of finding information	74	71	73	71	74	71	70	73
The organization of material	78	75	77	75	78	76	74	77
The design and presentation of material	81	79	79	78	79	79	77	79
Customer Satisfaction Index	**75**	**70**	**72**	**69**	**72**	**72**	**71**	**72**
Overall Satisfaction	81	76	78	75	79	79	78	78
Expectations - Expectations	73	68	70	67	70	70	69	70
Ideal	68	65	65	65	66	67	63	66
Likelihood to Recommend	**86**	**82**	**83**	**81**	**85**	**84**	**82**	**84**
Likelihood to use products and services in future	**92**	**88**	**90**	**87**	**91**	**89**	**88**	**90**
Confidence in using products and services	**85**	**81**	**82**	**80**	**83**	**83**	**82**	**82**
Difference FS products and services make	**78**	**71**	**75**	**69**	**76**	**75**	**75**	**74**

Sample Size	**257**	**323**	**433**	**347**	**284**	**304**	**171**	**334**
Distribution	**44%**	**56%**	**56%**	**44%**	**48%**	**52%**	**34%**	**66%**

ATTRIBUTE TABLE – METHOD OF ACCESSING INFORMATION

	Requesting hard copies	Download publications from web	Attending Conferences	Direct Contact	Other
Product Content	**83**	**81**	**80**	**81**	**81**
Accurate and up-to-date	83	81	79	81	80
Easy to understand	81	78	75	76	79
Scientifically sound	86	84	85	85	83
Authoritative source (provided by subject	86	85	84	85	85
Unbiased	79	78	79	79	78
Comprehensive	81	79	79	79	79
Services	**85**	**83**	**82**	**84**	**86**
Ease of scheduling the event/consultation	79	77	79	80	84
Clarity of the information	84	81	81	83	85
Usefulness of the information	84	82	79	84	86
Presenter's/consultant's knowledge of	87	87	87	88	90
Ability of the presenter/consultant to answer	87	84	84	86	88
Communication	**71**	**66**	**68**	**67**	**68**
Informing you about the availability of new	73	66	66	65	66
Informing you about recently released	73	66	66	67	66
Providing schedules for conferences and	60	58	68	63	64
Products and services being clearly	74	73	75	75	75
Product Actionability	**71**	**69**	**67**	**70**	**72**
Addresses problems, issues or needs that	74	73	72	75	80
Provides detailed and actionable solutions	70	67	66	69	70
Provides solutions that are workable with	68	67	64	68	70
Helps anticipate emerging problems, issues or needs you might face	70	67	66	67	69
Staff	**89**	**87**	**88**	**89**	**89**
Courteousness	91	89	89	91	93
Timeliness in responding	86	83	85	86	82
Knowledge	89	88	89	90	92
Accessibility	**80**	**73**	**78**	**79**	**82**
The ease of finding information	77	67	76	77	80
The organization of material	81	73	80	79	84
The design and presentation of material	83	78	79	80	82
Customer Satisfaction Index	**75**	**71**	**69**	**72**	**74**
Overall Satisfaction	81	77	75	78	80
Expectations - Expectations	73	69	67	70	72
Ideal	70	66	64	66	67
Likelihood to Recommend	**85**	**83**	**78**	**82**	**87**
Likelihood to use products and services	**89**	**90**	**85**	**87**	**97**
Confidence in using products and	**84**	**83**	**81**	**81**	**85**
Difference FS products and services	**69**	**73**	**70**	**74**	**81**

Sample Size	**192**	**539**	**114**	**382**	**39***
Distribution	**15%**	**43%**	**9%**	**30%**	**3%**

** Low sample size – results may not be statistically representative of population*

ATTRIBUTE TABLE – SPAs USED

	Wildland Fire	Invasive Species	Recreation	Resource Management and Use	Water and Air	Wildlife and Fish	Resource Data and Analysis
Product Content	**81**	**82**	**82**	**81**	**81**	**81**	**81**
Accurate and up-to-date	81	82	82	80	81	82	80
Easy to understand	77	78	79	77	77	78	77
Scientifically sound	84	85	85	84	85	85	84
Authoritative source (provided by subject matter experts)	84	85	85	84	85	85	84
Unbiased	78	79	78	78	79	79	78
Comprehensive	78	80	80	79	79	79	79
Services	**83**	**84**	**84**	**83**	**84**	**83**	**84**
Ease of scheduling the event/consultation	78	78	77	78	79	78	78
Clarity of the information presented/provided	82	82	82	82	83	82	82
Usefulness of the information presented/provided	82	83	83	82	83	83	83
Presenter's/consultant's knowledge of subject matter	87	88	88	87	88	88	87
Ability of the presenter/consultant to answer your questions	85	85	85	85	86	85	85
Communication	**68**	**68**	**69**	**68**	**68**	**68**	**68**
Informing you about the availability of new product and service offerings	67	67	69	67	68	68	66
Informing you about recently released articles/reports/newsletters	67	68	69	67	68	68	67
Providing schedules for conferences and workshops	61	62	61	61	62	61	62
Products and services being clearly identified as coming from FS R&D	73	74	74	74	74	75	74
Product Actionability	**69**	**70**	**71**	**69**	**70**	**70**	**69**
Addresses problems, issues or needs that you currently face	74	75	75	74	75	75	74
Provides detailed and actionable solutions	68	69	69	68	69	68	68
Provides solutions that are workable with your resources	67	68	68	67	68	67	67
Helps anticipate emerging problems, issues or needs you might face	68	69	70	67	69	68	68
Staff	**88**	**88**	**88**	**88**	**88**	**88**	**88**
Courteousness	90	90	90	90	90	90	90
Timeliness in responding	84	85	84	84	84	84	84
Knowledge	89	89	89	89	89	89	89
Accessibility	**76**	**77**	**77**	**76**	**77**	**77**	**76**
The ease of finding information	72	73	73	72	73	73	73
The organization of material	77	77	77	77	77	77	76
The design and presentation of material	79	80	80	79	79	79	79
Customer Satisfaction Index	**72**	**72**	**73**	**71**	**73**	**72**	**72**
Overall Satisfaction	78	78	79	77	79	78	78
Expectations - Expectations	70	70	72	70	71	70	70
Ideal	66	67	68	66	67	67	66
Likelihood to Recommend	**83**	**83**	**85**	**83**	**84**	**84**	**83**
Likelihood to use products and services in future	**89**	**90**	**90**	**89**	**90**	**90**	**90**
Confidence in using products and services	**82**	**83**	**83**	**82**	**83**	**83**	**82**
Difference FS products and services make	**73**	**73**	**74**	**73**	**74**	**74**	**74**
Sample Size	**864**	**925**	**577**	**987**	**839**	**824**	**983**

ATTRIBUTE TABLE – SPAs USED BY FREQUENCY OF USE

	Wildland Fire		Invasive Species		Recreation		Resource management and Use	
	Frequent User	Infrequent User	Frequent User	Infrequent User	Frequent User	Infrequent User	Frequent User	Infrequent User
Products	**81**	**81**	**81**	**82**	**82**	**82**	**81**	**80**
Accurate and up-to-date	81	80	82	81	83	82	80	80
Easy to understand	76	78	78	78	80	78	77	77
Scientifically sound	84	84	85	86	85	85	85	84
Authoritative source (provided by subject matter experts)	84	85	85	85	86	85	85	84
Unbiased	77	78	78	79	78	79	78	77
Comprehensive	79	78	79	80	80	80	79	78
Services	**84**	**82**	**84**	**83**	**84**	**83**	**84**	**82**
Ease of scheduling the event/consultation	78	77	78	79	78	77	78	77
Clarity of the information presented/provided	83	81	82	82	83	82	82	81
Usefulness of the information presented/provided	84	81	83	82	84	82	83	81
Presenter's/consultant's knowledge of subject matter	88	87	88	87	88	88	88	86
Ability of the presenter/consultant to answer your questions	85	85	86	85	85	85	86	84
Communication	**68**	**67**	**69**	**67**	**69**	**69**	**68**	**67**
Informing you about the availability of new product and service offerings	68	67	68	67	69	70	68	66
Informing you about recently released articles/reports/newsletters	68	67	69	67	68	70	68	66
Providing schedules for conferences and workshops	61	60	63	60	62	60	62	61
Products and services being clearly identified as coming from FS R&D	73	74	74	74	74	74	74	73
Product Actionability	**71**	**68**	**71**	**69**	**73**	**69**	**70**	**68**
Addresses problems, issues or needs that you currently face	76	72	75	74	76	74	75	72
Provides detailed and actionable solutions	69	66	70	68	71	68	68	67
Provides solutions that are workable with your resources	68	65	68	67	70	67	67	66
Helps anticipate emerging problems, issues or needs you might face	70	66	70	67	74	68	68	66
Staff	**89**	**87**	**88**	**88**	**88**	**88**	**88**	**87**
Courteousness	91	88	90	90	90	90	91	89
Timeliness in responding	85	84	85	84	84	84	85	83
Knowledge	90	88	89	89	90	89	89	88
Accessibility	**77**	**76**	**77**	**77**	**77**	**77**	**77**	**76**
The ease of finding information	73	72	73	73	73	73	73	72
The organization of material	77	76	78	77	78	76	77	76
The design and presentation of material	80	78	80	80	79	80	80	78
Customer Satisfaction Index	**73**	**70**	**73**	**72**	**74**	**73**	**73**	**70**
Overall Satisfaction	79	76	79	78	80	78	79	76
Expectations - Expectations	72	69	71	70	73	71	71	68
Ideal	68	64	68	66	68	68	67	65
Likelihood to Recommend	**84**	**82**	**84**	**83**	**85**	**84**	**85**	**80**
Likelihood to use products and services in future	**90**	**89**	**90**	**89**	**91**	**90**	**91**	**86**
Confidence in using products and services	**83**	**82**	**83**	**83**	**84**	**83**	**83**	**81**
Difference FS products and services make	**76**	**71**	**75**	**72**	**77**	**73**	**76**	**69**
Sample Size	**418**	**446**	**460**	**465**	**189**	**388**	**551**	**436**

ATTRIBUTE TABLE – SPAs USED BY FREQUENCY OF USE (Cont.)

	Water and Air		Wildlife and Fish		Resource Data and Analysis	
	Frequent User	Infrequent User	Frequent User	Infrequent User	Frequent User	Infrequent User
Products	**81**	**81**	**81**	**81**	**80**	**82**
Accurate and up-to-date	81	81	82	81	79	82
Easy to understand	77	78	79	77	75	78
Scientifically sound	84	85	84	85	84	85
Authoritative source (provided by subject matter experts)	85	84	85	84	83	85
Unbiased	78	79	78	79	77	79
Comprehensive	79	79	79	80	78	79
Services	**85**	**83**	**84**	**83**	**83**	**84**
Ease of scheduling the event/consultation	80	77	78	78	78	79
Clarity of the information presented/provided	83	82	82	82	81	83
Usefulness of the information presented/provided	84	82	83	82	83	83
Presenter's/consultant's knowledge of subject matter	89	87	88	88	87	88
Ability of the presenter/consultant to answer your questions	86	85	86	85	85	86
Communication	**67**	**69**	**68**	**68**	**67**	**69**
Informing you about the availability of new product and service offerings	67	68	68	68	65	68
Informing you about recently released articles/reports/newsletters	67	69	68	68	66	69
Providing schedules for conferences and workshops	62	62	61	61	62	61
Products and services being clearly identified as coming from FS R&D	73	75	73	76	73	74
Product Actionability	**72**	**69**	**70**	**70**	**69**	**70**
Addresses problems, issues or needs that you currently face	76	73	75	74	74	74
Provides detailed and actionable solutions	71	67	68	68	67	69
Provides solutions that are workable with your resources	69	66	67	68	66	68
Helps anticipate emerging problems, issues or needs you might face	71	67	69	68	67	69
Staff	**89**	**87**	**89**	**88**	**88**	**89**
Courteousness	91	89	90	90	90	90
Timeliness in responding	85	83	85	84	83	85
Knowledge	90	88	89	89	88	90
Accessibility	**77**	**76**	**77**	**77**	**75**	**78**
The ease of finding information	74	72	73	73	71	75
The organization of material	77	77	77	77	74	79
The design and presentation of material	80	79	80	79	78	80
Customer Satisfaction Index	**74**	**72**	**73**	**72**	**71**	**72**
Overall Satisfaction	80	77	79	78	77	78
Expectations - Expectations	72	70	71	70	70	70
Ideal	68	66	67	66	65	67
Likelihood to Recommend	**85**	**83**	**85**	**83**	**83**	**83**
Likelihood to use products and services in future	**91**	**89**	**91**	**89**	**90**	**89**
Confidence in using products and services	**84**	**82**	**83**	**83**	**82**	**83**
Difference FS products and services make	**77**	**71**	**75**	**73**	**76**	**71**
Sample Size	**402**	**437**	**372**	**452**	**516**	**467**

ATTRIBUTE TABLE – FOREST SERVICE POSITION *

	Line officer	NFS Regional Office staff	NFS Forest Supervisor Office staff	NFS Ranger District staff	State and Private Forestry field staff	Washington Office staff	Other
Product Content	**83**	**81**	**78**	**85**	**81**	**78**	**80**
Accurate and up-to-date	82	82	79	85	82	77	80
Easy to understand	75	78	75	81	75	74	77
Scientifically sound	86	85	83	87	86	80	82
Authoritative source (provided by subject matter experts)	87	84	82	87	87	81	86
Unbiased	83	82	75	82	78	77	75
Comprehensive	81	73	77	84	77	77	76
Services	**84**	**83**	**81**	**86**	**85**	**76**	**79**
Ease of scheduling the event/consultation	77	79	77	80	79	68	75
Clarity of the information presented/provided	81	83	78	86	83	74	76
Usefulness of the information presented/provided	84	84	81	86	83	76	78
Presenter's/consultant's knowledge of subject matter	90	88	87	91	90	81	83
Ability of the presenter/consultant to answer your questions	84	87	83	88	87	77	80
Communication	**67**	**62**	**63**	**64**	**60**	**55**	**64**
Informing you about the availability of new product and service offerings	67	60	66	66	57	53	62
Informing you about recently released articles/reports/newsletters	67	66	66	65	57	55	64
Providing schedules for conferences and workshops	61	52	53	57	56	47	56
Products and services being clearly identified as coming from FS R&D	72	69	67	66	73	60	69
Product Actionability	**65**	**62**	**64**	**73**	**64**	**58**	**65**
Addresses problems, issues or needs that you currently face	68	67	68	79	67	65	68
Provides detailed and actionable solutions	63	62	62	70	64	56	65
Provides solutions that are workable with your resources	63	62	61	73	62	60	62
Helps anticipate emerging problems, issues or needs you might face	64	56	62	70	63	53	60
Staff	**88**	**87**	**87**	**88**	**84**	**84**	**83**
Courteousness	89	89	89	89	85	86	85
Timeliness in responding	83	84	84	84	81	79	79
Knowledge	91	88	87	90	86	86	86
Accessibility	**76**	**74**	**71**	**78**	**75**	**70**	**78**
The ease of finding information	74	69	66	75	73	70	75
The organization of material	78	75	70	78	77	70	78
The design and presentation of material	78	78	76	80	78	71	79
Customer Satisfaction Index	**71**	**64**	**68**	**73**	**67**	**65**	**62**
Overall Satisfaction	77	70	75	78	75	72	67
Expectations - Expectations	70	65	67	72	66	65	61
Ideal	65	56	62	69	60	58	57
Likelihood to Recommend	**79**	**78**	**78**	**82**	**81**	**77**	**77**
Likelihood to use products and services in future	**84**	**83**	**87**	**87**	**87**	**84**	**85**
Confidence in using products and services	**84**	**82**	**81**	**84**	**82**	**78**	**78**
Difference FS products and services make	**67**	**69**	**72**	**76**	**72**	**72**	**73**
Sample Size	**67**	**54**	**71**	**67**	**42**	**28**	**29**
Distribution	**19%**	**15%**	**20%**	**19%**	**12%**	**8%**	**8%**

** Low sample size for all segments shown – results may not be statistically representative of population*

ATTRIBUTE TABLE – FEDERAL AGENCY WORK FOR FOREST SERVICE VERSUS NOT WORK FOR FOREST SERVICE

	Yes - Work for Forest Service	No - Work for Forest Service
Product Content	81	81
Accurate and up-to-date	81	82
Easy to understand	77	79
Scientifically sound	85	83
Authoritative source (provided by subject matter experts)	85	84
Unbiased	79	79
Comprehensive	78	79
Services	83	83
Ease of scheduling the event/consultation	77	78
Clarity of the information presented/provided	81	82
Usefulness of the information presented/provided	82	82
Presenter's/consultant's knowledge of subject matter	88	87
Ability of the presenter/consultant to answer your questions	84	85
Communication	63	71
Informing you about the availability of new product and service offerings	63	70
Informing you about recently released articles/reports/newsletters	64	70
Providing schedules for conferences and workshops	55	63
Products and services being clearly identified as coming from FS R&D	68	78
Product Actionability	65	71
Addresses problems, issues or needs that you currently face	70	77
Provides detailed and actionable solutions	64	69
Provides solutions that are workable with your resources	64	68
Helps anticipate emerging problems, issues or needs you might face	62	70
Staff	87	88
Courteousness	88	89
Timeliness in responding	83	85
Knowledge	88	89
Accessibility	75	78
The ease of finding information	72	74
The organization of material	75	78
The design and presentation of material	77	81
Customer Satisfaction Index	68	74
Overall Satisfaction	74	79
Expectations - Expectations	67	71
Ideal	62	69
Likelihood to Recommend	79	83
Likelihood to use products and services in future	86	88
Confidence in using products and services	82	82
Difference FS products and services make	71	71
Sample Size	358	147
Distribution	71%	29%

APPENDIX D

VERBATIM COMMENTS

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Q. DEMO1.1 Which of the following best describes the organization you work for?

Ambientalist Organization

Australian Science Agency

Beneficial To The Public (In Public Beneficial) Research Organization

Canadian (Bc) Provincial Agency (3 responses)

Canadian Provincial Government (5 responses)

Consultant/Consulting Forester (8 responses)

Due Ad Work On Wildland Fire & Hurricanes Thru USFS

Ecological Consultant

Environmental Consultant

Extension

Federal - Interagency

Foreign Country Agency

Foreign Government

Forest Industry (2 responses)

Forestry Research Repository

Forintek Canada Corp - Canada's National Wood Products Institute

Girls Scouts

Government Of Canada

I Am Retired. I Worked For The USFS Until 5 Years Ago.

I'm A Self-Employed Consulting Forester, So I Guess I Should've Clicked On 'Business/Commercial'

Independent Researcher

Individual

International Institution / Organization, Affiliated To The Un

International Organization

International Research Organization

National Forest Research Institute

National Laboratory

Natural History Museum

News Media

Newsletter For Native Plant Gardeners And Restorationists

Non Timber Forest Experts/Harvesters

Overseas Government (U.K.)

Pensioner. Previously Agri, College Professor

Personal Interest

Private Consultant

Research Agency

Retired (5 responses)

Retired Canadian Executive Who Worked In The Forest Industry

Retired From A State Governmental Agency

Retired From Federal Agency (2 responses)

Retired From Forest Service & University

Retired From Forest Service And Oregon State Univ.

Retired From University

Retired From USDA Forest Service

Retired Personal Interest

Retired State Agency Director

Retired University Professor (2 responses)

Retired Usfs H/ Consultant

Retired/Consultant

Self (2 responses)

Self-Employed

Self-Employed Forestry

Self Employed Public Land Use Advocate

Self-Employed Forestry Consultant

Spanish Research Center Dealing With Environmental Issues

Special District

State Government Agency Outside The U.S.

State Owned Enterprise

Student (2 responses)

Trade Association

University Research

University Research--Silviculture/Ecology

Utility

Water District

Q. DEMO1.4 Which of the following best describes your position within the USDA Forest Service?

Admin

AFMO

ASC

ASC Budget Technician

Center Geneticist, R6 Genetics Resource Program

Combined NFS So Staff And S&PF Staff

Coordinator

Detached Unit

Dispatcher

District Personnel

Enterprise Team

Enterprise Team Co-Owner

Enterprise Team Specialist

Enterprise Unit (2 responses)

Forest Public Affairs Staff Officer

Forest Service Research Work Unit

Forest Technician

Forester

FS Nursery Staff

GS 5 Clerical

Human Resources Specialist

I am a Zoned Regional And Forest Employee

International Programs, Washington Office

Interpretation And Education Specialist

On Detail, Regional Office

Program Director

R5 Re-Invention Lab Enterprise Unit Staff

Rangeland Management Specialist

Recr. Tech

Regional Genetics, Attached To Forest

Regional Nursery Staff

Regional Office State &Amp; Private Forestry

Research

Resource Program Manager

Specialist At Supervisors Office

SPF Regional Office Staff

State And Private Forestry Area Staff (Cover 3 National Forests And 3 BLM Districts)

State And Private Forestry Regional Staff

Step

Supervisor's Office Employee

Technology & Development Staff

Wo Detached Unit

Wo-Detached Contractor

Zone Specialist

Zone Staff For 4 Ranger Districts - Supervised At The So Level

Q. DEMO2 What is your primary role at your organization?

Academic Advisor/Lecturer

Administrative Researcher

Administrative/Professional

Advocate

Agency Program Manager

All (Own Small Business)

All Of The Above (2 responses)

Archaeologist

Board Member

Board Of Directors

Broadcast Meteorologist

Budget Tech

Clerical

Consultant (3 responses)

Consultant - Personal Owned Business

Consulting Arborist

Consulting Forester

Customer Service Rep. & Educator & Administrative

Deputy Superintendent

District Ranger (5 responses)

Drpt Adm/Educator/Researcher

Economist, Pension Investment Manager

Editor And Publisher

Editor/Librarian

Educator

Extension

Field Advisor

Field Forester (2 responses)

Financial Analyst

Fire Operations

Fire Protection

Fm

Forester (2 responses)
Forestry Consultancy
Fundraiser
Graduate Student
I Usually Handle All Of The Above...
Investigator
Land Manager
Legislative
Librarian
Library
Library Manager/Document Selector
Library Technician
Line Officer/Manager Of National Forest (4 responses)
Loan Specialist
Management (4 responses)
Management Conservation
Management/Leadership
Manager (5 responses)
Member Services
Middle Manager
N/A
Natural Resource Management
Natural Resource Protection
Natural Resource Specialist
NFSL Ranger District
None
Outreach
Owner (2 responses)
Park Ranger
Planner
Plant Health Regulatory
Plant Protection Quarantine
Policy

Policy Analyst
Press Office
Program Coordinator
Program Management/Program Manager (4 responses)
Project Manager
Public Affairs
Purchasing
Ranger District
Regulator/Regulatory (2 responses)
Regulator, Monitoring And Research
Relations/Training
Research Manager
Researcher/Standards Writer For Watershed Management
Resource Assistant
Ret. Educator/Researcher
Retired
Retired Professional
Sales Manager
Scientific Advisor
State Lands Management (2 responses)
Student (4 responses)
Supervisory
Technical Standards, Advocacy, Statistics
Technology & Development; Applied Science
Trade Association
Tree Farmer
Volunteer
Volunteer Advocate
Wholesale Wood Products
Wilderness Planner
Wildland Fire Policies

Q. DEMO 3.2. Please specify your location below:

Alberta, Canada (2 responses)

Albuquerque Nm

Argentina (2 response)

Australia (5 responses)

Austria

BC Ministry Of Environment, Victoria Bc, Canada

Bogor, West Java, Indonesia

Brazil (2 responses)

British Columbia, Canada (5 responses)

Canada (6 responses)

Canada, Alberta (7 responses)

Chihuahua, Mexico

Christchurch, New Zealand

Ciemat - A Spanish Research Center Dealing With Pollution Issues

Coldstream, B.C. Canada

Colombia, Antioquia, Medellin

Concepcion, Chile

Cuernavaca, Morelos Mexico

Denmark

Distrito Federal, Mexico

Dublin, Ireland

Estado De México, Mexico

European Union - Czech Republic

Federated State Of Micronesia

Finland

France

Freiburg, Germany

Germany (2 responses)

Greece, Europe

Iran

Italy

Japan (2 responses)

Kamloops, British Columbia, Canada
Katoomba, NSW Australia
Kelowna, British Columbia
Korea, Rep.
Kraków, Poland, Europe
Lakehead University, Thunder Bay, Ontario, Canada
Lisbon, Portugal
Madrid, Spain
Manitoba, Canada
Marshall Islands, Pacific Islands
Medellin - Antioquia - Colombia
Medellin, Colombia
Melbourne, Victoria, Australia
Mexico (3 responses)
Miramichi, New Brunswick, Canada
Munich Germany
Nanjing Forestry University, China
Netherlands, Harderwijk
New Zealand
Nova Scotia, Canada
Ontario, Canada
Ottawa, Canada (3 responses)
Parks Canada - British Columbia
Philippines
Port Klang, Selangor, Malaysia
Portugal
Puerto Rico (5 responses)
Quebec, Canada
Rainforest Academy, Univ. Putra Malaysia, Malaysia
Romania, Bucharest
Santa Fe New Mexico
Santiago Del Estero, Argentina.
Saskatoon, Saskatchewan, Canada

Sault Ste. Marie, Ontario
Scotland (United Kingdom)
Shippagan, New Brunswick, Canada
Slovak Republic
South Africa
Spain (2 responses)
State Of Mexico, Republic Of Mexico
Sudbury, Ontario Canada
Sydney, Australia
Taiwan (4 responses)
Thessaloniki, Greece
Timaru, New Zealand
Toronto, Canada (2 responses)
Town Of Oakville, Ontario Canada
Tsukuba, Ibaraki Prefecture, Japan
Turkey (4 responses)
Turkey/Istanbul
United Kingdom (2 responses)
Universidad De Antioquia, Medellin, Colombia
Universidad De Concepción Chile
University Of Thessaloniki, Thessaloniki, Greece
Guam
Vancouver, British Columbia, Canada (3 responses)
Victoria, Australia
Victoria, British Columbia, Canada (7 responses)
York, UK

Q. USE1.2. Please describe the main reason why you don’t make more use of the products and services provided by Forest Service Research and Development (FS R&D)

Actually, I may use them more than I indicated, but I may not be good at estimating the use or know exactly what FS R&D produces. I may use them more than I realize. The problem may be with how this questionnaire is worded. What is 'deputy area?

Articles are for Professional Development, which I read avidly.

As a line officer I pass the info on to folks I supervise but I don't do much on the groundwork any more.

Budget and limited research issues

Company has not yet explored co-operative relationship.

Deal with people, not acres or trees

Depends on the project I am working on

Did not know of these resources before.

Don’t face problems that need to be elevated to R&D level

Don't hear about them

Don’t know about products and services

Don't know about them

Don't know much about FS R&D (and haven't needed to know)

Don't know services are available...forget the resource is available

Don't know what all of the available products are

Don’t know what is available and where to look for it

Don't know what product/services are available.

Don't know what services they offer

Don’t know what they are

Don't really understand the function, purpose, or services this branch can provide to my position.

Don’t see enough of them maybe better outreach?

Forintek and the USFPL collaborate on North American Issues; in the past few years the USDAFS has not placed priority on wood products research. There have been no opportunities for our US counterparts to collaborate on issues of great importance.

FSR&D is only one facet of our working relationship

Fully retired. Only remain interested in short rotation forestry.

Good stuff; but our work is more varied.

Have no clue as to what products they provide. Lousy marketing, from this old businesswoman's point of view.

Have no idea what FS R&D offers...

Have not been provided these products/services

Have not had the need.

Have reviewed FS R&D products and services from employees that are assigned to the Ranger District.

High interest during US stay and work assignment

I am a recent hire and have not had the chance to interact with the FS R&D yet.

I am alone and can only handle a limited number of projects.

I am extremely busy and am unfamiliar with how to access you services.

I am in a regional office, in a coordination role.

I am not aware of the products and services they provide that are relevant to issues my organization faces

I am not aware of the products produced by the FS

I am not aware of the tools available

I am not aware that they are out there.

I am not totally sure of all the products that FS R &D provide

I am retired

I am unaware of FS R&D products and services

I am unfamiliar with the products they offer.

I am unfamiliar with what you are asking about

I assume specialists on my unit use FS R&D information

I deal more with immediate statewide fishery topics

I do not have frequent need for materials. They are very useful to me.

I do not know everything that FS R&D offers

I do use some of their research papers. I do not know what other products are available that you are referring to.

I don't always remember to use this resource.

I don't even know to what products and services you are referring.

I don't handle these issues...yet.

I don't have time to seek them out

I don't know anything about them and/or their products

I don't know what product and services are available nor do I know how to access them.

I don't know what products exist!

I don't use the FS R&D directly but products that do come out of R&D are used in our area

I don't view spending time in a national forest either teaching or conducting research the use of a product or a service

I have never heard of FS R&D

I have no idea about your products

I have no idea how they can help me

I have no idea what is driving R&D efforts nor how those efforts effect my area of work.

I have no idea what's available. For the few items I know about, there appears to be only a prototype, rather than an item I could order and use.

I have no need.

I have not been aware of these services.

I have not closely followed what products and services are available.

I have occasionally used products from research, but not often

I have only occasional need of FS R&D services.

I help provide some

I honestly don't know anything about you and don't have a clue as to the products and services you provide

I just don't have cause to use them that often or perhaps I'm misunderstanding the question. I do rely on FS research, publications and services from field stations. However I don't identify those sources of products as FS R&D.

I lack sufficient funding to contract additional services by FS R&D.

I manage specialists who are not directly involved in site-specific engineering and design

I may have used them some, but don't know that I have.

I mostly provide information to them.

I occasionally utilize published research; at this point I utilize University Coops and NCASI for research products; I am confident they utilize USFS for some products & services.

I only occasionally need information provided by FS R&D

I order when others need a product

I personally don't; but my specialists do.

I primarily use USDA for search and information retrieval

I think the products are useful and to be honest I am probably using applications and many of the tools I am not sure where they came from

I use them as they are relevant to Ohio wildlife issues

I was unaware of the nature of the products/services

I'm a director, not a researcher or hands-on manager

I'm new on this job and have not determined what will be useful.

I'm not familiar with FS R&D

I'm not familiar with what's offered

I'm not sure what it is they offer or if I use them.

I'm swamped just keeping up w/normal work. No time to look up & around to see what's available.

I'm unaware of the products and services

In my work capacity I do not deal with natural resource issues.

Inconsistencies with the frequency and availability of funding for AK FS R&D services

It all depends on how publications match my interests and goals.

Just starting to use your products

Lack of awareness of products available/difficulty finding what I was looking for

Lack of familiarity with potential products

Lack of good coordinating mechanism between our agencies

Lack of knowledge in what is available and how to get the information

Lack of time

Lack of time to investigate R&D products/services

Lack of time to problem solve

Largely unaware of products/services offered

Limited curriculum

Minimal applicability of projects to our area of interest

Most of the knowledge and resource information is used by my staff instead of by me directly

Most of the products are geared toward elementary and I teach high school

My current work assignments are not closely tied to the business of FS, and I live in a metropolitan area.

My fault...time restrictions...just too busy getting thru the day and attending meetings.

My job is not directly related to the R&D

My position doesn't require products or services provided by R&D, except that every 5 years I am involved in NVUM, which MTDC has helped out greatly with.

My project uses specific results from R&D; when available, I use them; when not specific to me, I don't use them.

My role us usually a supplier rather than a customer relationship.

My staff may use your products, but I am ignorant of how to access them.

My staff would use the information/products rather than me as an administrator

My work in this area is limited

N/A

Need for such services is only about once per year

Need time to integrate the new tools - too busy to learn to use them at present

Never heard of FS R&D; no idea what they do and if any of it is relevant to me
Never heard of products & service
New employee not yet familiar with what R&D has to offer me in completing my job duties.
No era de mi conocimiento, pero me parece que es ideal.
No requirement
No time
No time to explore
No use for their services
Not a purchaser of services/products from anyone
Not acquainted with products and services
Not aware of all the products and services offered
Not aware of all the services and products available
Not aware of products and services offered
Not aware of products or how they would help my unit.
Not aware of products that would be relevant to my work
Not aware of the availability
Not aware of the products and services offered
Not aware of what all is available
Not aware of what FS R&D can offer
Not aware of what services FS R&D provide
Not aware of what they have to offer
Not aware of what they offer.
Not familiar enough with what services they offer
Not familiar with FS R&D services and lack of funding available to me.
Not fully aware of products and services; I don't see much from the USFS about this.
Not in a position to dictate what items are used
Not much need by me.
Not readily aware of all products and services available
Not really familiar with products and services offered and how they apply to our operation.
Not really familiar with the products - use MTDC regularly
Not sure if I do or not--I may very well be using it but not specifically aware of the source
Not sure what products/services are available
Not sure what R&D services are of use to me.

Not sure what they offer

Not sure what your products are

Not sure where to access the information

Not well aware of the products that are available.

Now retired but still active at the College.

Only became aware of the resources recently

Only have limited knowledge of FS R&D products available

Only just beginning to focus on Forest Pests and Pathogens

Opportunities appear limited

Others determine what products and services we need

Our employees use them. I don't personally.

Our work is more closely related to FHM, not R&D.

Probably experience. I have used R+D in the past and still would when a need arises.

Products and services are not relevant to ALL of the problems I face

Products/services provided by FS R&D not always relevant to my work.

R&D lacks resources to address Indian tribes, or those resources are unknown

Retired - Don't have a need for FS R&D

Social sciences is the thing I need most and there just isn't enough of it.

Some use as pertaining to logging

Staff reviews products

The employees I supervise use the services of the Parsons Lab/NE folks extensively so I allow them to make the contacts.

The information received was used to earn a girls scout badge

The issues addressed by FS R&D do not adequately address appeal and litigation issues

The Natural Inquirer only comes out once a year. I'm not familiar with other resources that I can use with my 6th graders.

The products are not advertised when they are available or if further research is needed for achieving the desired results.

The USFS is working against oak conservation in the foothill-forested lands. Their actions and proposed actions are counter to their own documents. They need to revisit their own policies and revise their plans in California.

There is effective program for tech transfer to the field. Employees are operating under information overload and simply do not have the time to seek out and read relevant research.

They don't come into our office very often

This was the first time we utilized these resources - plan to do so again in the future.

Time

Unaware (2 responses)

Unaware of any products and services

Unaware of products/services

Unaware of those products and services

Unaware of what is available

Unknown

Unsure of the products or services provided by FS R&D

Use data as project require. Relatively new to forest management consulting.

Very few of the sources refer to desert concerns

Was not aware of it

We coordinate with Forest Service re. Wildland fire research and fire potential

We use their publications, but have not had to contact them directly.

What are those products and services???

When services are related to our ind. we would use them

Work is project-dependent; not always natural resource related

Q.USE3. If there are other program areas you use not listed above please specify

1. Botany (classif-ident-invent-monitor vascular-non-vasc. plants & lichens); 2. Ecology (classif-map-invent-monitor ecosystems, pot.veg.-soils-landforms-geol-water-etc.); 3. Geology & Minerals; 4. GIS-GPS-Mapping.

Agroforestry - weekly.

Agroforestry; Economic effects of natural resources (NR) on communities; Community participation in ecosystem management; International aspects of NR management, including trade policy.

Also frequently (monthly) look for information on Tech & Development tools (is this part of R&D?)

Any soil quality impact assessments

Areas that are needed for collecting of traditional or ceremonial materials

Biomass Utilization

Botany and native plant materials

Botany, Forest-botany, Ecology, Biology of reproduction of (forest-) plants, etc.

Botany, TES plants

Carbon sequestration, woody biomass

Centre for Urban Forest Research

Collaboration, partnerships, leadership, training

Community development and collaboration

Critical loads, acid deposition

Cultural resource studies

Decision science

Disturbance Ecology - forest insects

Disturbance ecology, Forest Entomology, Forest Pathology

Economic analysis of wood product markets

Economics

Ecosystem processes, landscape ecology, climate change

Ecosystem structure, function in Experimental Forests, weekly if not daily use of data

Education programs & materials directed to the education community or public

Engineering - Roads, Construction, Sign Manufacturing / Minerals - Reclamation

Engineering and construction impacts; rehabilitation techniques

Engineering issues related to structural wood products applications

Entomology and Plant Pathology - Monthly

Environmental Statistics

Erosion modeling

FHM - insects & disease

FIA is the most important program to FS and other land management users

Forest carbon exchange, growth, ecophysiology

Forest entomology and pathology

Forest Genetics and Breeding, Genomics.

Forest Genetics, plant physiology, forest pathology, seed biology, etc.

Forest Health (entomology) - monthly or more

Forest Health (Forest insects and diseases) weekly

Forest Health Monitoring (2 responses)

Forest Health Technology Enterprise Team-- superb mapping efforts

Forest Health (2 responses)

Forest history, e.g. Robert Curtis's work, W.I. Stein's work etc.

Forest insect and disease influences on other resources

Forest Insects and Disease

Forest Management Service Center/FVS Group - weekly

Forest Pathology and Forest Entomology.

Forest Products - Monthly

Forest Products Data & analysis

Forest Products Utilization Research, FPL RWU's

Forest sustainability (may be included under Resource Data & Analysis)

Forest Vegetation Simulator (FVS) (monthly)

FPL Program Areas in Utilization and Marketing

Fuel model development for NJ pine barren

Fungal and algal growth on wood

FVS software technical from unit at Fort Collins

Genetic resources of forest trees

Genetics - every six months or less

Genetics & Pathology

Genetics, tree improvement, molecular biology

Global Change

GPS community base stations

Growth & Yield

Heritage resources

Historical, Cultural Resources

Housing - wood frame

HTIRC, Purdue University

Human Dimensions of Natural Resource Management

I am a researcher at the Hubbard Brook Experimental Forest. So I use your resources constantly, but I'm not sure I 'contact you for information or assistance.

I am usually looking for electronic copies of GTRs, and other resource management publications.

I liaise with your research scientists involved with watershed sediment load studies.

I try to get help with problems with NED-1, SILVAH, and soon NED-2.

I use the online document request facilities out of the RMRS library in FT Collins extensively.

Information management; science-policy interface

Information on pressure treated wood

Insect and Disease Information and specialists monthly

Insect and disease

International cooperation and exchange of info, which in fact is my main interest

Interpretation, communication

It has been awhile but, for whatever program category, I would contact the USFS more often if I had more time...

Main interest is in urban forestry

Minerals

Modeling, statistics

Native bark beetles, remote sensing, GIS

Native insect and disease biology and management

Native insects and pathogens

Native Pest Management

Native Plants

Native species - grasses. Protocols for growing, harvesting and seed cleaning

No

Non-Process Metals Management

Non-timber products, plant chemistry, forest restoration.

Pacific Southwest Remote Sensing Lab

Personnel.

Plant pathology, population genetics, silviculture, restoration, rare plants

Programs related to carbon cycle and climate research

Quantitative/modeling

Rangeland plant materials development

Rare plants - falls under wildlife? Prescribed fire - under resource management and use?

Reforestation topics

Remote Sensing Applications Center

Remote Sensing research activities as they apply to Forest Inventory, software development. Also, frequent Internet searches for data and research on soils and geology

Remote sensing.

Research Natural Areas

Research pertaining to Sudden Oak Death

Research Publications on Non Timber Forest Products, regionally and nationally

Resource Planning and Policy

Rocky Mountain Shrubland Sciences Lab, weekly

Scenic assessment and other social programs

Silviculture and Genetics programs

Social Science - Human Dimensions of Natural Resource Mgmt.

Social science and urban natural resources management

Socio-economic aspects of forest management

Soil biology; soil carbon; soil management

Soils directly as a resource (productivity, fire impacts, erosion, etc.), not simply soil impacts on other resources

Specifically, matters relating to protective area management

State & Private Alaska

Sudden Oak Death and other diseases

Urban and Community Forestry - STRATUM.

Urban and Community Forestry Research - quarterly

Urban ecology; landscape change; social science

Urban ecosystems

Urban forestry - monthly

Urban forestry and social sciences

Urban forestry best practices - this is the key

Urban forestry research - McPherson's lab and Nowak's

Urban forestry (5 responses)

USFS, PSW, PNW, RMRS Tree Improvement; PSW Inst of Forest Genetics

Vegetation mapping

Water quality monitoring

Watershed management (2 responses)

Wood Preservation and Protection - Sam Williams Group at the Forest Products Lab

Wood research

Wood science & adhesion science at the forest Products lab

Wood Surface Chemistry research and papers

Wood use in construction and material properties

Wood Utilization

Woody Biomass

Q. USE4.1. Please specify which of the following Forest Service Research and Development products you used during the past year?

Aerial Survey Data on forest pests and disease

Annual Report, news releases

Biomass and Ecosystem Services

Census information for field plots

Consultation regarding research into community-based termite control

Contacting FS researchers directly to discuss work being done and their findings in fields related to my work

Cooperative research

Cooperative research between my research group and FPL

Counsel re: lumber standards from Forest Products laboratory

Current research on local mortality issues

Dangerous Travelers, a video on invasives

Data (e.g., FIA's FIADB)

Databases of FIA plot information

Discussions with staff

Economic report on the construction/housing market

Economics, markets for forest products

Ecoregion descriptions

Electronic copies of technical reports/articles

Email or dialogue directly with researchers

Engineering Tech Reports, Tech Tips, Misc. Publications, Agricultural Handbooks

Face to face communications, digital products over Internet

FIA data/database (2 responses)

FIA mapmaker

FIA raw data for analysis

FIADB data

Field guide ex. Field guide to native Oak species

Forest Insect and Disease Leaflets (FIDL)

Forest plant nursery

Forest Products Lab, Madison

General technical reports are especially useful, as well as all the fire programs

I cannot recall but I'm sure there's something!

Invasive plant fact sheets

Invasive plant field guides - Most contact is through Durham, NH

Invasive species

Journal Articles

Journal research articles

Maps of species distributions for non-native forest insects and diseases

Monthly analysis of housing starts, periodic wood products presentations

Newsletters

NFGEL

Personal communication with researchers

Personal contact for co-op research project procedures

Personal contact with researchers from the Northeast Research Station, Bartlett Exp. Forest

Phone calls, field visits, email

Photoseries for Forest Fuels

PNW Monitoring of the NW Forest Plan, esp. social and economic monitoring

Professional counsel from research scientists and staff

R&D budget information, such as charts

Reforestation techniques

Regional I&D reports and USFS web sites

Regulated areas that are used for gathering of traditional and ceremonial materials

Rely principally on long-term records of many ecosystem components

Report on tourism and recreation in the State Forests as well in national parks

Reports of forest biomass carbon and soil carbon research

Rocky Mountain Research Station Publication Lists

Science findings (PNW Research)

Scientific papers on forest insects

Silvah, Silvoh

STREAM website references and links, RMRS library website & literature requests

Technical pubs of many kinds in area of silviculture, ecology, disturbances, management

The Redding Silviculture Lab, Bob Powers and other PSW-Redding staff, has provided numerous consultations and formal presentations regarding long-term soil productivity maintenance issues.

Urban forest effects model

Use the wildland fire statistics (National Fire News) and historical wildfire statistics

Verbal expertise or advice for a specific problem

We are continuously in dialogue with USFS concerning the development of international wildland fire policies

Weather prediction systems

Web-based systems such as ecoSmart

Wood Handbook (2 responses)

Q. USE4.2. Please specify which of the following Forest Service Research and Development services you used during the past year?

Accumulated literature related to red pine silviculture

Because I filter and process our WO-OC Inbox ... I don't know...I refer many email inquiries to this Site and I do lots of research from this Site

Books

Classes taught by USFS and BLM

Collaboration with former students on research projects

Collaboration with FS researchers on resource based studies

Contact with Forest Management Service Center

Contact with former colleague

Data

Earth Systems Institute, Landscape Dynamics and Forest Management, Report FMRS-GTR-101-CD

Editorial cooperation for journal Urban Forestry and Urban Greening

E-mail publications of scientific research

E-publications (including web-based and listserv subscription publications)

Files of presentations, proceedings of workshops, abstracts and pictures of demonstrations

FS PSW Recreation Research Update Newsletter

FS R&D publications and products

FS R&D review of draft products I have written

I can't determine whether you're talking about attending meetings/workshops or using published proceedings/conference

I don't have time to go back to the list of presenters for all that I attended this past year to see if any of the presenters are specifically from FS R&D... this survey is beginning to be like an actual homework assignment!

I was a guest researcher for 6 months

I work directly with FS R&D personnel on projects of mutual concern

I would use more but my boss doesn't let me travel or attend workshops

Information Packages

Interaction through Maryland Forest Service

Interaction with retired Forest Service researchers (emeritus scientist, small contracts)

Internet and newsletters

Internet publications

Internet requests for research publications and computer models/software

Jointly organized meetings / conferences

Learning I-Tree

Library services--monthly lists of technical literature available, and Table of Contents summaries from journals I select.

Literature Searches

Local research station personnel

Make use of web site (National Fire News) data weekly to daily

Master Tree Farmer

Modeling and analysis for Forest Plan revision

Mostly I accessed older reports/ there is currently VERY little worthwhile research being done in my area of interest though much was done in the past.

My schedule didn't allow me to go to the training session and demonstrations; otherwise, I would have attend some

NEPA documents

NSRE data, and NVUM data

On line materials

On line publications (2 responses)

Ordering FS publications

Papers

Participation in the Joint Forest Products / Coatings Committee

Partner in R&D project

Printed or on-line material

Project collaboration

Provided peer review of PNW station documents

Publications (6 responses)

Publications by mail and email/ websites

Published research papers

Read reports relevant to my field - working with and educating public

Reports I have contracted for through NFGEL

Research in the utilization of forest products. Technical reports and stats.

Research, web, publications

Rocky Mountain Research Station Publication Lists

Team participation in landscape scale projects

Technical reports

USFPL lab meeting with industry in Madison WI

Web publications

Weekly consultations on ecosystem research results

WEPP interface

Your websites and research articles

How do you typically access the products and services provide by the Forest Service Research and Development?

A combination of all of the above

A combination of downloading and hard copies

All four above/all of the above (13 responses)

All of the above methods are used Direct Contact with individuals is most important

Both Internet downloads and getting data directly from researchers

Both options 1 & 2

Both. I call, consult, discover you have a publication I was unaware of, and request it. They are great as far as they go with what is covered.

Contacting people and downloading. I don't do one more than the other. Both are used equally.

Contacting the scientists, email, web visits, hardcopy articles

Depending on the material, all of the above at any given time

Depends on the product or service. if I want a report, I'll download it and also request an original hard copy. If I want a consultation, I'll call the scientist directly.

I refer people to this Site so they can either download pubs or request hard copies and/or find other information that they may need on this Site

I typically do all except attend conferences/workshops/demonstrations

I use a combination of hard copies and web downloads

I use a fairly even mix of both downloads and direct contact

I use all access methods and use them a lot

I use all of these in equal measure depending on which is most suitable at for the time and the question

I use them all, selecting a 'typically' is not useful for me, it depends on what for and how many

Mailings from PNW, FPL, etc. 'Science Findings' and such

Mailings from PNW

Mostly by obtaining publications from previous years

Presentations at Leadership Meetings

Receive thru e-mail the Recreation Research Update newsletter

The website and talking to the people that we know in the Forest Service [Name Deleted] and [Name Deleted] have been great

Typically I use all of these methods from time to time

Use all four methods about equally

Usually receive complimentary copies of newest pubs via US Mail

Q. OPENEND1 Do you have any other suggestions concerning how Forest Service Research and Development could better serve you?

1). Insure that the individual providing the technology transfer knows how to do technology transfer. 2) Please make the Web Sites more users friendly. 3) A synthesis of research information by subject matter in a central location. 4) Researchers should spend some time applying their models or theories. 5) Researchers in each of the Stations should talk with their counterparts in the other stations. 6) For this questionnaire, it is not fair to place the researcher, technician and the technology transfer folks in the same questions.

1.) Do not try to monopolize forest research - encourage expanding forest research to non-Forest Service institutions. 2. Assure that FS R&D researchers fulfill contracted deliverables and adhere to timelines.

1- Don't consider us as customers, we are citizens. FSRD are public servants, not providers of market goods or commodities 2- Recognize that what and how you study something or whether you study it are not value neutral decisions. While science is arguably the best way we have of understanding the world, it is not entirely an unbiased endeavor, in spite of assumptions tend intent, to the contrary. 3- Studies that are less high tech and specialized--more on the order of the 'naturalist' tradition of the late 1800s and early 1900s--are equally valid and empirical. Looking at the big picture is important. An interdisciplinary approach is important.

1.) Focus research on questions brought forth by natural resources managers. 2) Fully integrate into adaptive management processes.

1.) FSR&D should more clearly coordinate its activities with those of private sector R&D, academia, NGO organizations, and other federal labs. It often appears that FSR&D operates in a vacuum, competes for attention on the same research questions, or otherwise is out of touch with its peers. FSR&D rarely acknowledges the participation and contribution of outside cooperators in its developments and results.

1.) Maintain high standards of excellence and leadership. This is recognized internationally. 2) Enhance capacity in social and economic aspects of sustainable forest management. The biophysical has been and is a good niche, but better balance is needed. 3) 'Science you can use' is more than tech transfer; it is paradigm shift that could lead to a more vital and dynamic leadership role for the USFS in the both the domestic and international forest conservation community. Complex issues such as climate change, invasive, landscape restoration, energy security, and emerging markets for ecosystem services all require strong policy and management linkages. 4) Continue to enhance communications capacity of people and products. Critical for success and future competitiveness for limited public and private research investment. 5) Recruit and maintain young talent. Congratulations on making the effort to conduct this survey. Hope you/we can make the results count.

1.) Provide funding or incentives for industry to develop additional carriers for gypsy moth pheromones in the multi-million dollar STS program. The present situation of subsidizing only one company (Hercon) and setting up speed-bumps to prevent development by other companies, has created a sole-source supplier for pheromone delivery systems = high cost. 2.Conduct more

research on the use of new bioregional pesticides to control forest pest insects. Bt's against sawflies, beetles, borers.

1. Reduce protectionist bias in research 2. Connect science to real field applications 3. Relate findings to relevant field application 4. More focus on 'balance of harms': Are short-term impacts less or more than long-term benefits? 5. Greater emphasis on communicating huge progress in resource protection over the decades of past century [context of time] 6. Connect findings to the greater range of previous findings 7. Context of findings within previously dispelled hypotheses 8. Connect findings to real world field applications 9. Get away from the annoying bias of over-emphasizing environmental harm 10. Expand work on demonstrating the environmental benefits of active forest management 11. Expand work with rationalizing managed landscapes that meet domestic needs of American society--including resource outputs such as timber supply.

1. Reorganize away from land-grant universities; sometimes it seems that our research stations are mere extensions of those universities and so limited to the things those universities are concerned about. Often other colleges and universities are excluded. Connections to land grant institutions should not be severed, just de-emphasized. This is necessary in order to: 2. Address major resource-mgmt. concerns even if not 'researchable'; 3. Project-oriented rather than RWU-oriented, projects defined by regular, organized interaction with NFS at several levels (Regional/Forest/District); 4. Field offices in SO's or Districts (Service Centers), and a more directly Applied Science approach. 5. Better cooperative relationships w/NFS scientists on common projects, even if (especially if) they are located at a distance from FSR&D centers. These cooperative relationships part of work plans of both. 6. Ecosystem based, considering interactions among forest vegetation, non-forest vegetation, geology, soils, landform, water, animal and plant communities, etc. 7. More research in: rangelands, alpine, riparian, wetlands, rare plants, taxonomic botany, population ecology of animals and plants. Of course these would be focused on the applied aspects of these fields. 8. Better integration of Inventory and Monitoring with NFS needs in these areas. Right now, FSR&D is almost completely disconnected with NFS in these areas -- recent publications are a good indication of that. 9. Work with NFS (AND OTHER AGENCIES, state and federal) to re-design/reform NRIS and other National inventory systems to make them useable to both NFS and FSR&D (an enormous job, I know, but it's broken now). 10. One or more informal journals (or publication series) for data and reports for which peer-review is not appropriate or not desired (probably web-published). 11. Access to literature and document delivery is very, very good! Excellent service in these areas!

1.) Reverse the alarming decline in capacity to conduct research. 2. Reverse the centralization of research into fewer but larger Stations, and into the Washington office. The strength and attractiveness (including its political support) for research and all other Forest Service programs have always come from their decentralized nature. 3. Describe research programs in problem solving terms that the public can understand, not in esoteric scientific terms that researchers so frequently use. For example, instead of studying 'disturbance ecology', why not 'the effects of fire, insects and disease on forest health'?

1.) Take another look at whether it makes sense to so severely reduce research on what would be called 'traditional topics' (e.g., growth and yield, commercial forestry, etc.). 2.) Think about ways to capture and make available for analysis all the data that has been gathered by FS, universities, and other institutions over the last 6 decades. There's a gold mine of stuff sitting in

offices in various formats that may be lost forever as this generation retires and the USFS shifts its priorities.

1. USFS research should clearly focus on activities that non-Federal bureaus cannot do or not do as well. For example, long-term studies at ecosystem or landscape scale capitalizing more on the Experimental Research sites along with cooperative sites in the National Forest System. Historically, this was a strong point with Forest Service research but not anymore? 2. With budget constraints focus more on national and regional priorities in research to give USFS personnel a better perspective as to their future with the organization. 3. I've worked cooperatively in research with the USFS for 20+ years. The overhead (bureaucratic positions) appears to have grown considerably. With steady or more likely declining budgets are these positions necessary especially to supervise USFS researchers? Now it appears many if not most project leaders are little more than administrators of very small research budgets, likely a reflection of too many 'overseers'. 4. I think it should be mandatory that research administrators in the Forest Service have personal experience in research especially below the top levels where other considerations might have more validity. However, at least at the Research Station level this should be a requirement. 5. The USFS research function appears infatuated with new buildings. With level or declining budgets in the past, present, and likely near future, and an absence of much new money, the cost of such buildings (labs etc) generally comes out of someone's research budget someplace in the USFS! While buildings might please some local congressperson, does it benefit the Forest Service in any manner? 6. Many of the USFS natural resource policies are quite dated. Another long-term commitment could be made to objectively reassess those policies and consider fundamentally new approaches through both natural and social science research and research application. 7. I am not an advocate of the Federal Government conducting applied science types of study since many within the universities and consulting firms are more flexible and capable in doing such. However, the National Forest System has many issues that come up that are common among Forests within a given region or ecosystem. A consolidated research approach, generally applied research, by Forest Service personnel might be most efficient in such instances, and could develop some good relations with National Forest Systems personnel. 8. With the funding trend, it seems more and more Federal scientists are competing directly with university and private researchers for funding. I think this is a very risky strategy to pursue especially with the composition of the Congress during the last two decades. I think a better strategy would be to reinforce (rebuild?) professional confidence in those external organizations that typically did lobby for Forest Service research, set some priorities involving Forest Service research activities that do not compete directly with universities or the private sector, and provide some operating budget to carry out the activities. With the complexity of issues facing the integrity of the National Forest System, and public lands in general, this should not be hard to do. Then set up a 5-year strategic research personnel plan and clearly discuss with personnel that do not fit the priorities what their options are.

A National FIA program rather than a confederation of regional programs. National data sets, with consistent implementation of same responding to national needs.

A newsletter that comes to the subscribed users in a periodic manner would be nice and useful.

Active working groups.

Actually answering emails and phone calls in a timely manner. Being able to answer my questions or point me to someone who can. Documentation of methods and analyses in language that can be understood by those of us not in the forest service - for example, getting external input on documentation documents. Involving more organizations outside of the FS to provide input on data, research and product usage so that these programs and products can fit the needs of these users more.

Additional focus needs to make in the industrial forestry sector. Analysis on non-industrial timberland owners trends, future, objectives, changes.

Address topics that are more relevant to actively managed lands.

Again, some highly productive researchers have recently lost their jobs. If administrators cannot keep the most critical resource (the researchers) in an R&D organization, they aren't doing their jobs.

Again, the accounting and reimbursement system badly needs to be fixed. When I first collaborated with the Forest Service years ago the typical reimbursement time was two or three weeks, now it is two or three months! This makes it very hard for collaborators from small organizations to work with the RMRS. Projects with RMRS are not possible without extensive private funding sources because of these extensive funding delays. This is in know way a reflection of RMRS staff who do the most to assist, but it is a fundamental problem with an organization that appears to be understaffed and drowning in ever increasing administration.

Almost everything has been said with the previous answers. However, since I have this opportunity, I would like to report the following problem: Many publications that are downloadable from FS web sites are incomplete, because of errors that occurred during the process of scanning the documents. Every now and then single/several pages are missing, sometimes more, sometimes less affecting the usability of the documents. Reporting such errors does not necessarily result in subsequent delivery of the missing pages!

Any additional synthesis of research directed at clarifying management alternatives would be helpful and, I believe, very well received. Managers usually cannot wait until all of the research results are in.

As a former champion of the R&D program, after almost 20 years of trying to integrate them into on the ground, ongoing forest management needs for my program, I am totally disheartened at the results, or lack of same, that have been achieved both within our forest's programs and direction. We have spent endless amounts of time and dollars over this period trying to support research programs, inventorying and collecting data for them at regional and inter-regional scales, seldom if ever to see any benefit or tangible results emerge on the ground... in our own programs or for our own resources. The FS R&D program seems to have given the term, 'Living in an Ivory Tower' new and greater meaning than ever before. To the extent of being in ivory towers on other planets...! At times, even in distant solar systems or even galaxies. Not to detract from the worth or value of work they do, but if one were to ask one simple question... 'So What?' other than this study concludes more study is necessary, quite often there is no other answer. It is as if they and their work (not to mention that of other entities like USGS Research) are their own agency, with their own means, purposes and ends. Attending workshops and professional

meetings, one primarily witnesses hallway walls plastered with poster displays of all the latest R&D 'studies'.... as if the whole purpose of our existence as an agency is to produce papers... to study problems and resources, rather than solve and manage them. To the degree that the whole mind-set for success to biologists throughout the agency is to publish papers, rather than accomplishing tangible changes and improvements, develop programs that generate results, on the ground, for the resources we manage and the American public. So what?

As a member of the wood industry Agenda 2020 Wood Products Subcommittee that meets with FPL staff in Madison, I suggest that the Forest Service provide meeting attendees with information on what has actually been accomplished since the previous meeting to address industry suggestions and concerns.

As a state DNR research scientist I would like to see more collaboration between our agencies. Bringing funding and expertise together from both of our agencies would better address the concerns of the forestry and conservation community and accomplish more objectives with less duplication.

As an Urban Forester for a large California city. I rely on the data provided by the Western Center for Urban Forest Research regularly. Areas of particular interest include air quality, cost/benefit analysis, and simple, and easy to use power point presentations regarding the benefits of urban trees, among others. I am very concerned that USFS may elect to refocus station efforts towards interface areas and that managers such as myself may not have ready access to current information and research. WCUFR is the single most important point of information that I use to justify our urban forest efforts and the need to consider that amenity as an integral part of city infrastructure. Scientists and staff are readily available to answer questions or to direct me to other data. The station is an immeasurable help in performing my job and influencing decision makers.

As in all organizations, there is a wide range of ability and willingness to help among staff. It is sometimes unclear what different scientists' areas of expertise and interest are and whom we should go to with questions. It would be helpful to have a listing of all staff and their areas of interest, since it appears that some are more willing (or available) to help with management issues/questions.

As in previous comment, place greater research emphasis on issues important to managers. Develop additional collaborative (research and management) efforts. Locate more research sites on National Forests. Make transfer of information between scientists and forest specialists a higher priority. This could be facilitated by increased interaction (workshops, field trips, etc.) between researchers and forest personnel. Somehow the 'sphere of influence' of most researchers needs to be expanded. Some in Research community have already done this. Most others seem not to realize that they work for the Forest Service. Making 'older' literature (FS publications) available on the internet would be valuable.

As previously stated, set-up an R&D task force to solve a problem and involve everyone from practitioners to senior researchers, at the same table, and right from the get-go on the solution(s) to that problem(s). This has been a successful approach to handling natural resource questions, and problems, in my experience, it appears to work very well in other fields as well. It works as a group decision-making body. Having said this, now think of the opposite of the group

decision-making model and you have what sometimes passes as good, practical research. Enough said.

As stated on previous question: Do not focus only on the continuous United States. Alaska has received some attention recently from the JFSP. But several 'national' systems developed by the Forest Service exclude Alaska/Hawaii or use methods that do not meet our needs (Example WIMS does not generate CFFDRS indices that are a better fit from some areas of the country, Blue Skies and associated Centers does not include AK. AK has to directly pay for Greenness data users in the lower 48 do not. Why should Alaska have to pay for what was announced as a National system? Please do not allow any system developed by USDA research that is not truly national be labeled so. It is certainly misleading and inaccurate. If the USDA Forest Service research centers were established to provide research for USDI and others it should do this regardless of the degree of influence the USDA FS has in that geographic area. Also there appears to be interring research station politics that may result in some users not receiving research results or data.

Ask your customers about our research priorities to ensure the work you are doing is meeting the highest priorities.

Back in the heavy commodity production day research was closely tied into to helping sort out the 'agricultural model' (for example, how to grow more trees faster.) Although that is no longer the business we are in, there did seem to be clearer connection between Research and the challenges we faced in National Forest Systems. As Ecosystem Management became the guiding model (to the betterment of the Agency) there has been, unfortunately, a less clear connection between the Research arm and the rest of us. As I mentioned above, there seem to be a lot of researchers pursing a variety of issues (some big some little, some relevant some irrelevant) without an overall game plan for R and D. There are big issues facing the agency such as trend of land condition, reality of sustainability, T&E species issues, etc. R&D needs as more central role.

Based on my somewhat limited experience with Forest Service R&D, it seems as though much of the research is focused on projects that are not very important to on-the-ground forestry, EXCEPT for the FIA program. Again, I have limited experience, so I simply may be ignorant of the other efforts underway in R&D.

Because I am in Alaska I don't expect to have a personal relationship with many of the scientists at research stations in the lower 48. However it would be nice to have research that specifically applied to northern boreal forests - since they are not big timber producing forests and the population that lives near them isn't large, I don't think they get much coverage - but are still equally important ecologically and it would be great to see more projects focused on them.

Better access to FIA plots data, in some form.

Better distribution of material into the 'Industrial World' would be helpful.

Canada is a good place to look for a better model. Their research programs are more cutting edge and are designed to help managers do a better job of management. Their publications are easy to use and understand (ex. cone collection manual). The Paw’s Science updates are excellent.

Would like to see more on how to manage forests with climate change, invasive and urbanization - these are going to happen - how should we me modifying our practices? A higher percentage of the work research does needs to be applied research. In other words research needs to be more relevant to managers.

Challenges to forestry are significant and under-appreciated by the public and even by foresters & the forest industry. Forest fragmentation and sustainability of forest benefits are serious issues we are not effectively dealing with. Research should help us identify problems and solutions at all levels. As a consultant, I deal with private landowners and forest industry and I struggle to prevent loss of forestland and the declining quality of forests within the private sector. I rely on Forest Service research on silviculture and combating invasive species and strive toward 'sustainable' forestry. Public education is always important as well.

Clarifying my previous comment: 'Raise scientific standards, Submit more results to peer reviewed journals, Less intellectual inbreeding - interact with/catch up with results in other fields'. There are some fine researchers and wonderful people in the research stations. However, in my opinion, the landscape is characterized more by the following: -Repeated examples in smoke emissions, LANDFIRE fuel mapping, fire behavior, communication technology, ecology, remote sensing where 'research' performed is perfecting the oil lamp, rather than recognizing that the rest of the world has moved onto electricity and light bulbs. This could be improved by more interactions with external academic conferences and participation in peer reviewed journals. Fire is by nature an interdisciplinary research area - it is essential that people actively and humbly seek knowledge from other disciplines. -Awards are given for 'advances' that are not only twenty years behind state of the art but scientifically unsound, and unpalatable. Twenty-year-old modeling technology is awarded and paraded as a great advancement. LANDFIRE, a massive 10-yr project, is promoted as the answer to the lack of information on fuel characteristics, but the wealth of remote sensing data going into it is dumped down to produce input for old, outdated models, rather than looking at what LANDFIRE can do for up and coming technology. This can be improved by moving from the traditional Technical Report-based system to one that is more open to scrutiny and peer review by the academic community. -Insistence by F.S. researchers that Forest Service is the only agency authorized agency to conduct forestry/fire research. This wrong-headed interpretation of a previous authorization of congress is interpreted to mean this domain is the sole territory of the USFS. Steps are being taken to encourage more interaction with other agencies (and these should not just be the land management agencies - the National Science Foundation is charged with funding scientific research across all disciplines). The agency should consider that other entities might be the natural leaders in some areas. -Joint Fire Science Program, as the primary (perhaps only, except for odd grants from NSF, NASA, and NOAA) mechanism for funding fire research, is unable to address problems that require long-term fundamental cracking-the-code science. Its over-emphasis on fuels has neglected other more varying factors (less understood by the program sponsors) contributing to huge firefighting bills such as atmospheric effects. This can be aided by more education of research managers/grant agencies and openness to new ideas and researchers. -The lack of accountability of station researchers for funds they have been granted is a great deterrent to future investment. The number of sources from which I have been told that grants to stations have repeatedly produced nothing, and the money applied to other non-related projects should be a great cause of concern. -Propaganda campaign of research bureaucrats that Forest Service R&D is all that is going on (despite over $10M/year investment by other agencies), and that it's cutting edge and the best available. Meanwhile, cutting edge research and

technology is not by and large coming from the USFS but from other agencies (not necessarily land management), academia and other sectors. There is an opportunity for leveraging what others are doing, rather than ignoring it and hoping it will go away. -Moaning among researchers about the levels of research funding, compared to the agency operational firefighting budget. No doubt this contributes to the ferocious territorial defenses of research areas and squabbling over funding. However, it is important to recognize that this state results from ineffective technology transfer and the operational side's assessment that research isn't delivering what they need. This arises from lack of involvement of the decision makers in the development of decision support systems. Decision makers must also commit to learning more about research so that they can informally evaluate what research is proposed. Cooperation between the research and operational components can always be strengthened. -I honesty think the people in charge of prioritizing and evaluating research and awarding grants have not been given enough background information to intelligently evaluate and make an informed judgment on proposals they are reviewing. More responsibility for educating oneself beyond what one's own agency provides would help enable critical evaluation. These characteristics are not specific to this agency or any application area, however, the territorial, hateful dysfunctional behavior, and willful ignorance are unmatched in any application area I have worked in.

Collocate and integrate more with National Forest System.

Compliment and cooperate with private professionals rather than compete with private professionals.

Concentrate more R&D on Urban Forestry.

Consult with biologists/land managers to help develop monitoring protocol & to provide statistical analysis guidance. Partner with and standardize monitoring, research, and land management with other federal agencies (FWS, BLM, etc).

Continue moving forward with the 'Portfolio' concept and implement procedures to ensure local lab 'turf' issues are resolved.

Continue to put older publication on the Internet.

Convince the politicians that 'the Healthy Forest Initiative' is anything but!

Couple thoughts on survey, partly to see if I answered appropriately: - question re requesting publications seems to be about the publications, not requesting them. I understand interest in putting stuff on web, but I've been disappointed how quickly print runs have run out in last couple years. Pubs like Rainbow Series that will be on my shelf and used for years, just don't crack it as a clipped stack of papers. You ask re expectations. Mine of this organization have developed over time and are very high, so the extent to which they are met is biased for me. I am disappointed how much time seems to be spent on computerized decision tools. From my point of view a computer model is the last place I'd go to make decisions about, for example, where to put fuel treatments. Yes, I want to use best available science to evaluate the alternatives. But it's seldom as simple as boiling it down to a few replicable criteria. Politics sometimes is decisive, and I use the term in a non-derogatory way that includes community wishes. Then there are little complications. One unit would be great to harvest but the potential

haul road has a really tight turn and we aren't sure whether the road will be built. Another unit's fuels are really scabby, so it's for burning but a low priority. The list of special cases goes on and on. Perhaps most importantly, I have come to trust experienced professional judgment over decision models in virtually every case (definitely including NFMAS and its latest new version!) An experienced professional intuitively incorporates so much more. They need the info on which to make their judgment, and that is a really key place for research. Also disappointing is the apparently increasing emphasis on providing information in readily digestible formats. When I go for an update, I skim the recent pubs or I go to a conference or when I am at a burn I shoot the breeze with colleagues. When I have a specific q, I want the detailed research papers. Don't please waste your time on dumping it down for us! It may look helpful but to me it isn't. Finally, as a former USFS employee, I found the ability to access library services to find old non-Station literature invaluable. How often have I wished for it since! I know you can't be the world's library, but sometimes you are by far the best source. I am a professional still working in wild land fire, just not a federal employee and affiliated with an odd agency. Could that be enough? I am thinking of a search on which I spent over a full day when I add up the special trips, etc. I wanted the original articles from which a computer model of smoke production was built. I made two trips to the local university's library. It turned out they didn't have the publications that far back. Our excellent municipal library said they could find it in a cross-library search. I got back a note the publication didn't exist. I made a personal trip to the station library. They were missing the key volume. They couldn't take a special request to get it from elsewhere because I'm no longer an employee. I still don't have it, and I need it for my job. This is my most extreme case, but there have been others much more mundane where the station library would have been so skilled and useful to me if they were funded to spend a little time on non-employees who don't conveniently fit in little boxes for affiliates. This is a list of concerns, but my overwhelming single comment is how much I appreciate being able to get current, sound scientific information readily from this group, especially in person when I have arcane questions. Thank you!

Create an R&D website for all your groups into one, not by region buried in the mix.

Cuts by Congress are leading to severe shortages in staffing, training, and research funding support. These reductions are harming natural resource management for decades to come.

Develop more cooperative projects with state forestry agencies.

Develop more of a partnership relationship with The National Technology and Development program and their 60 years of experience and process in delivering technology to the field, and their connections and relationships with the FS Field Units.

Develop on-going process to gather and evaluate field user needs for future development. Synthesize, synthesize, synthesize info we already have (not only USFS research, but any related to particular fields of study). Invest in science delivery/technology transfer.

Develop stronger partnerships with other federal R&D conservation agencies, such as the USDI Park Service and US Geological Survey.

Digitize more legacy data, particularly records that can help in analyzing changes and trends in species distribution, community composition and response to disturbances, and habitat productivity/change, etc.

Do all that is necessary to adequately staff and fund R&D to maintain your position as the premier natural resource research organization in the US.

Do not neglect forest biology and basic processes when ranking research projects.

Easier way to determine which expert to talk to regarding a particular issue.

Economic figures are important to the NIPO landowner. Make sure our recommendations are practical.

Either dramatically scale back the entire organization nationwide or start getting focused on producing relevant research that's responsive to current management problems. There are a few 'bright' spots in FS R&D including: FIA Climate Modeling at Oregon State University, or other Climate related work (Birdseye, . . .).

Eliminate potential bias by various personnel. Some of your biologists push their agenda's too much. Try to keep it a little more to the middle of the road.

Emphasis on technology transfer - individual training sessions from researchers to forest managers on the new items and products developed.

Employ more scientists; reopen state and field research stations. With centralization, relevance and contacts with scientists have decreased. Can't overemphasize that dismantling field stations has decreased relevance of FSR&D.

Encourage as well as make it more administratively straightforward for Forest Service scientists to cooperate with the academic and international scientific community.

Expedite the technical transfer of science to users through tech. transfer specialists. The Forest Service needs to do a better job of using FS Research results to affect national public policy and to influence cooperative federal agency actions. My point is that Forest Service Research and Development is not just for external users but should shape internal Forest Service action.

FIA data should be more readily available, delivered in a more timely fashion.

FIA/RPA growth/harvest data (especially for hardwoods) has a major problem. Major differences. Not credible.

Focus on the basics. FIA should view data delivery to the public as the most important function. While improvements have been recently made, many more are needed.

For me the question isn't, is there good knowledge and products coming from research? -- Absolutely. The challenge is how do field personnel find the time and resources to apply the knowledge, particularly 1st applications. Technology transfer and application needs to continue

to be emphasized. Another fundamental frustration, again only secondarily related to research, is the political ability to apply advancing technology or research. We may finally know how to find the answer, but the answer it yields may not be politically acceptable, and un-implement able. Perhaps social considerations need to at least be part of the dialog.

Forest Inventory and Analysis website is not designed well. I 'accidentally' stumbled across the page that actually accesses the FIA data. It should not be listed under 'Mapping' tools. Suppose/FVS needs some work. The documentation is written for an IT person, not for a practicing forester. The file structure is cumbersome compared to commercial G&Y models.

Forest Product Lab is doing a superb job. Hopefully their fuel grants can keep at efforts that small operators can apply.

Forest Service leads other agencies in knowledge creation. I use it in my research and teaching!

Forest Service R&D needs to provide science to solve problems. Presently, much of the info is not applied and does not provide potential solutions and options. The research seems to beat around the bush and does not get to the answer of the question. I have also found that the administrators within Forest Service research, whether Washington office or at the various research Stations do not have a strong research background and thus do not provide the structure needed by the scientists to provide resources and administration to answer basic questions using the scientific method. Particularly, the team approach to many projects has some benefits, but tends to homogenize the research approaches providing, at best, general information, not the specific information needed by the public or resource managers.

Forest Service R&D should maintain a strong academic and scientific orientation, but needs to focus research on the current and future issues important to the National Forest System. Research and development should integrate itself more closely with the technical problem solvers in the National Forest System.

Forest Service Research and Development needs to incorporate a mix of basic research and applied research. Current emphasis seems heavier on basic research, but USFS has an applied mandate that universities do not. Thus the balance should be (in my judgment) tipped the other way. For example, research on what set of characteristics makes successful invasion by a hypothetical insect or plant more likely seems to me less important than comparative research on the effectiveness of different control and intervention approaches. Also needed is a heavier focus on policy analysis and on the economic impacts of different forest issues.

Forest Service Research could better serve the management community by taking a synoptic view of research activities in general. Forest Service Research has the potential to fill a void existing in the university research system. Universities typically undertake short-term small-scale research designed to generate publications within periods corresponding with graduate students' curricula. These institutions lack incentives or rewards for cooperation among faculty, disciplines, and departments, or for the most part conducting research of importance to society in general. FS Research could conceivably fill this void by complementing university research and emphasizing long-term, large to small-scale integrated research programs. Integration could include more than disciplines working together, it could include the research and management branches of the agency working together. For example, NFS is required to analyze, disclose and

then monitor effects of management. Management activities have associated costs, as well as benefits. f research and management worked together, they could develop a well-conceived, cost-effective experimental design for installing and replicating treatments. Treatments could include routine NFS activities such as prescribed burning, manipulating landscape patterns to reduce fire risk, timber sales, ecosystem restoration, or control of invasive species. A concerted effort between these two branches of the Forest Service could help meet management goals of analyzing and monitoring effects of multiple-use management to ensure sustained environmental and social services, and research's goals of testing hypotheses, improving or developing and disseminating new knowledge, and publishing. Costs for treatments could be incurred by NFS, costs for developing an experimental design and analyzing data following treatments could be incurred by Research, and costs for sampling to establishing baselines and then monitor and evaluate effects of management could be mutually supported by both branches. Long-term research could be expanded beyond experimental forests; effectiveness of inventory and monitoring could be improved and costs reduced, as well as costs for research; certainty of projected outcomes of management in forest and project planning strengthened; and principles of adaptive management could be implemented as research results became available and management practices continued or altered based on outcomes.

Forest Service Research is doing a very good job as far as I can tell being a National Forest System employee.

Forest Service Research needs MPRE funding and personnel to provide long term research and inter action with users. Research Forest and Facilities should not become more centralized. Research efforts are best when interaction with users is readily available. Forest Service Research is the best in the United States. It must be maintained at that level. Keep politics out of it!

FPL plays an invaluable role in support of the American Lumber Standard System, and especially aiding the Board of Review of the ALS, on which I serve. It is vital to the ALS System that the FPL role continues to be staffed and supported. As a retired FS research administrator, with no current role in the administration of FS Research, I would at least suggest that the agency be mindful of organizational history and culture and the reasons for it. I sense a move toward more centralization -- a change that may seem more cost-effective, but likely not to pay off in the long run.

From a management perspective it is important to have researches opinion on certain decisions regardless of where the science or lack there of is at. Therefore, encouraging and supporting research to offer opinions before the stats are in because typically they have an idea of how the research outcome but are reluctant to give any their opinion on immediate strategies needed to implement a project as it relates to their work. Additionally, knowing about long term research that has been in effect for more than 10 years is very relevant to current conservation strategies but are often not publish or summarized. Such works would be informative. Keep up the good work and I'll do the same.

FS foresters have nearly stopped practicing forestry. Research finding aren't being implemented on national forests if harvest is involved. Break the logjam!

FS R & D could better serve me and the American public by providing Forest Inventory and Analysis with the financial resources needed to deliver its Congressionally mandated mission--a fully-implemented annual forest inventory across all ownerships in all 50 states, with data available 6 months after collection and state-level reports every 5 years. Analysis and reporting of time-sensitive inventory, growth, and removals data need to be given higher priority within R&D in general, and this type of information needs to be PUBLISHED in a more timely manner by the research stations. R&D could also better serve the American public and me by focusing on products and services that create measurable increases in the ability of National Forest Systems to deliver a continuous supply of timber and long-term sustainability. Energy and money expended developing uses for small-diameter trees would be better spent developing information and methods to help national forests become reliable suppliers of timber while managing for desired environmental conditions. Uses for and utilization of wood fiber are not today's problems; decreasing availability of wood fiber from over-stocked national forests at high risk to fire and insects are major problems currently and for the foreseeable future.

FS R and D do a very good job with the resources available to it. However, it would be helpful if there were more work done in the social sciences, and also more work on timber forest products.

FS R&D is critical primarily because they have the corner on the market- no one else provides forestry-related information as effectively. Integration across forestry community with an emphasis on other researchers and educators could be enhanced.

FS R&D should annually survey the Federal Agencies in their area to find out about their research needs. The Regional and Washington FS office should provide funds to the FS R&D to help meet these research needs - similar to USGS BRD.

FS R&D Southern Research Station does not assist R8 National Forest System enough. We have tremendous needs on National Forest lands and require research assistance from SRS but the majority of our requests are not being addressed. We work for the same agency, and it seems logical to me that R&D would be and should be assisting the NFS all they can, but that is not the case. NFS seems to be at the bottom of their customer list. This is very disappointing. We need to integrate more extensively.

FS Research and Development in our areas has been very successful by their involvement with federal, state and other agencies in seeking out the needs for research and development needs. FS Scientists have been very effective in being participants along with forest managers in planning and assisting in providing research input to projects. Their close association with all participants in fuel reduction and forest restoration efforts has developed credibility with scientists and their information. They have been active participants in the Front Range of Colorado fuels and ecological restoration programs.

FS Research does very creditable science. Tech Transfer aspects of getting those results out to users and some additional synthesis to help users and the public put the results in the proper perspective is still needed.

FS Research should be more collaborative with University and other research organizations. The FS can only do some forms of research. Some forms of research can be done as well or better

(more efficiently) by universities. FS Research should focus on what others cannot do and fulfill a role of helping others do better what they can do more accurately and efficiently.

FSR has fallen into a deep hole and I am not certain you will be able to find your way out. The Deputy Area lacks focus and is incapable of delivering the products and services practitioners need to do their job. The talent pool, particularly in the headquarters office is in shambles and the VMPR unit lacks anyone who can competently provide leadership in making good science accessible to the folks within and outside the agency that need solid science to facilitate forest vegetation treatments to provide for the long-term stewardship of our forests. [NAME DELETED] would surely shake his head in sad wonder as to how we could have fallen so far and hard. Buck up, tool up, and get focused on helping us with the solid science we need to responsibly manage the resource.

Funding. Often I find the research stations are willing to help with Forest inventory needs to meet NEPA requirements (as it relates to Mgmt Indic. species and Federal listed species). However, if the host Forest does not have funding specifically earmarked to the Research Station or does not want to send funding to the Research Station then the benefits of the research station are remote and unavailable. Without the earmark for funding the host forest is tempted to 'low-ball' survey needs in order to use funding where shortfalls in more popular programs are identified. It would be better for the Research Stations to maintain direct control over needed survey needs to meet NEPA requirements for Forests so funding can be directly applied & controlled. Another option would be to allow each Forest to identify projected survey funding (target) needs in out year planning to meet anticipated NEPA analysis needs. However the funds and survey targets would then be the responsibility of the Research Station with a deliverable date of product report to the Forest. The survey targets then become the funded responsibility of the Research Station. Using this option would prevent Forest Line Management from raiding the funds needed for surveys.

Generally I find the information and research to be effective in its presentation of findings. I often am challenged with finding the type of information I need, and most often can best find a report or paper by Googling the full name of the report. The problem is that I need to know the full name to begin with. The external credibility of the research tends to be quite high unless it conflicts with the policy direction of the Forest Service leadership or the Administration. In those instances the USFS research can get buried or discredited by its own leadership. Not only is this a gross disservice to the many employees and scientists that have worked to develop the material but also it does not serve the mission of the agency. Not being an agency employee I am unaware on how well the information and research is distributed to agency employees. It seems that many employees in the field may not be able to access, be made aware of or use the research as it becomes available. This results in poor project planning, waste of agency and employee resources and harmful impacts to the forest resource. I do appreciate the work of the R and D department. I believe the USFS should highlight their work better in the public and the press. This is an area where the USFS strives to serve the public and the agency leadership could do more to support it public ally.

Get older, historical & legacy publications online for reference.

GIS data should be made available at the same website as the publications, even if it is a link(s) through to other site(s).

Give me a way somewhere on the website for each of the labs to know how and when I can be involved in helping to determine what is worked on in the next several years. I would very much like to engage in what business questions is the focus of future work. Thanks, [NAME DELETED].

Greater emphasis on climate change research, especially impacts of climate change on ecosystem function, integrating climate change into national forest management plans, and potential of forest carbon sequestration to mitigate carbon emissions.

Greater interaction between R&D and NFS at the field level would be beneficial to both land managers and researchers.

Greater research efforts need to be put into using satellite imagery in conjunction with FIA plot information so that national forest level inventory information can be obtained to a greater level of precision -- hopefully to help get away from the need for compartment and stand level inventories.

Have a convenient way to ask questions or to bring up concerns to see if there has been research conducted on the topic. A way to look at back issues of out of print publications on the internet.

Have information more readily accessible on the internet. Have more information on control of invasive species in fact sheets.

Hire and better support additional research scientists and reduce the number of administrators, especially at the middle and higher grades. I performed a simple linear regression of the number of USDA-FS research scientists by year using official information as of 2003. The statistically significant linear model predicts that there will be zero scientists in June 2014, should the trend continue? I would cynically add that there would still be many assistant directors for research and support staff who will object when the last scientist tries to turn out the lights. The quality of research being done in my areas of entomology and pathology is excellent, but far too little of it is being done by too few severely overworked scientists. To my knowledge, there are two research forest pathologists and four research forest entomologists in the entire combined Rocky Mountain Research Station. Recently, a productive RMRS research pathologist was inexplicably cut, placed on the WRAPS list, and ended-up in Alaska somehow reclassified as an entomologist! The RMRS claims a 5:1 support-staff to scientist ratio, so did they cut 5 support positions to go with this loss of a pathologist? I doubt it. No amount of repackaging, tech transfer, glossy popular publications or staff reorganization will counter the devastating effect of constant reductions in the number of and financial support for USDA-FS research scientists. It would help if the review panels exercised real power and actually downgraded or punished scientists who are not sufficiently productive or who pursue lines of inquiry that are not mission-oriented to the agency, but that is minor compared with the cuts that have been happening for so long. My job is to use and to get land managers to apply the knowledge that the research community has produced. The library services are VITAL to me --- those folks do so much with so little --- yet the cuts continue there, too. There will be no progress possible in my work without enough research scientists and library staff. Especially given the forest health problems we have in the west, how can there be so few folks to help us? Research can yield results that are not politically desirable, can produce facts that are distasteful --- I ask the USDA-FS research

leadership to strive to build acceptance of this reality, to argue for an open, honest constituency for the role of science in decision making, to expose incomplete or improper information used for 'science-based' decisions that select only research results that support pre-existing political positions and exclude undesirable facts, to try to restore our good reputation. If successful, perhaps Congress and the President will stop slowly strangling what was once the greatest of forestry research organizations. If the cuts keep coming, turn out the lights and let them try to see in the dark...maybe then the value of supporting FS research will be clear.

Hire more student interns for summer employment - get the word out that there are good jobs with the Forest Service out there!

I am a geneticist and I work almost exclusively with geneticists in the FS, in particular in the PNW, PSW, and southern stations. I have done so for over 25 years. These units have seen continuously declining support and their R&D efforts have suffered. The PSW station (Institute of Forest Genetics) has been significantly diminished in stature and effectiveness through retirements, staff leaving, and mismanagement. The other sites are vital but under funded. The role of the FS in conducting long-term, field oriented research has essentially been eliminated, and that is the only place such work seems to be able to thrive. I have used the [NAME DELETED] lab a good deal and they are fantastic. I strongly support their continued presence and growth. As an outsider my perception of FS R&D management is that it is poor, on average. I have heard any number of horror stories, even taken with a grain of salt. Bureaucracy seems to stifle science and creativity much more often than it supports it. Most people I know in academia and corporate research would avoid transfer to the FS because of the difficulties encountered in doing R&D there. I fear that is where the greatest problems exist (not with the scientists per se), and where the greatest gains can be made with change. But then, I am a scientist first, manager second.

I am always concerned that FS Research Administration plays too great a role in determining the kinds of projects that research scientists can be involved in. Restricting research so that all products must have a riparian focus, or a global climate change component, or must be 'important at a landscape scale' are administratively imposed limitations that restrict the good work done by FS researchers. Research priorities should not be determined by the latest political buzzword, and five-year plans and centrally planned goals and objectives should have been eliminated when the Berlin wall came down. In my opinion, there is too much administration, and not enough good biological science being done in FS Research. Although individual research scientists are doing very good work, the limitations imposed by administration limit the usefulness of the products that these people can successfully create and distribute. There is a perception among many FS employees that FS Research is not producing knowledge that is useful to improving their understanding of forested ecosystems in this country. That should be the ultimate goal of FS Research, and I fear that many programs are straying from this vision. For example, FS Research should emphasize biological research. Social science research should be left to the university system. The siphoning of resources from biological research to social science research should stop.

I am an ecologist working on writing standards for watershed management. This work is inherently integrative across disciplines. I also have more than 30 years of work experience. While I am an avid user of USDA FS websites as a source of downloadable scientific papers and technical reports, there remains an unused opportunity to integrate search engines to access

published literature across and among federal government agencies and departments. For example, why should there not be a search engine which accesses literature published by the USDA-FS and by the USDI-USGS and by the USDI-FWS on related environmental topics such as the effects of forestation on subsurface water quality and on hypothetic community health at the edge of surface water? While this is surely an achievable technical goal, overcoming the politics of this information sharing appear to be the frontier requiring further effort.

I am an external user of US Forest Service products who is not familiar with the arrangement and organization of your Service. The access to part of the service I have got via publications of some of yours scientific experts and later asked them to give me a free of charge access to your info. As I am willing to change my job and access to the Forest Research Institute in Poland I would like to have much more close touch to your services including personal contacts as well participation in the workshops and conferences. .

I am excited about the new initiative of the Rocky Mountain Research Station and their creation of an Invasive Special Program Area (SPA). The station's effort to develop stronger partnerships with the University System is a great way to leverage resources, (both dollars and expertise). In the past my use of Research products and services has been limited because there did not seem to be much in the Range and Invasive area. One last comment: My impression is there is a need to strengthen the technology transfer part of the process. The use of State & Private Forestry program of the agency is one avenue. The use of the University Extension program may be another. As FS Research & Development solidifies it's Invasive SPA, it would be important to become a part of the Weed Science Society of America, or the Western Society of Weed Science, and/or professional societies concerned with Invasive. Thank you for the opportunity to participate in this endeavor.

I am generally pleased with the products and services provided by FS Research and Development. However, I often hear from my colleagues (and I've experienced it to some degree) that FIA data analysis and reporting is not getting the attention it deserves. The state foresters depend on FIA data everyday and it can really make a great difference in how states deal with effectively legislative matters, industry recruitment, and public information. The Forest Service needs to give more focus, attention, and funding to this area of work. Thank you for asking us to participate in this survey.

I am probably 'above average' in internet competency. Despite this, unless I have a direct address, I can never seem to find USFS materials that I know are published on the internet. Even addresses and phone numbers of field laboratories can be difficult to find. Better organization or better linking to the material you already have out there would be a great start.

I am the [NAME DELETED]. [NAME DELETED] and other research staff at the Pacific Southwest R & D - Redding Silviculture Lab, who are working on the Long Term Soil Productivity Study, have provided invaluable help in addressing soil management issues for our region. Increasing appeals and litigation on soil issues for proposed projects (NEPA documents) demonstrates the need for maintaining and increasing the level of research to address soil management on national forest lands or federal lands in general.

I am very satisfied with FS R&D: very inclusive, well connected, they want to assist and be relevant to management issues.

I am very satisfied with the applied research that I use as a basis for developing forest management guidelines to insure the conservation of indigenous flora and fauna on commercially managed forests in the NE.

I appreciate the work done by R&D. I have two suggestions. First is to improve the announcement of publications and ongoing work by research--online is best. Second is to develop an easily accessed and analyzable listing of the R&D publications--all of them by station--that is available online and that would allow sorting by keyword, author, station, etc., with links on how to get the pubs.

I believe there needs to be a more formal network set up to identify the science needs of units in the field. This would be set up at the R.O./Station level. Field units could send their needs for research up to be coordinated at the region/station level. This could ensure money is spent and research is being done on the highest priorities. More interaction between the districts and researchers would help break down the barriers between R&D and NFS. Without this interaction there is no way either group will know what is important to the other.

I can find funding for economic/market research projects. But, when we contract with the USFS, it typically takes 2-3 years to get the research done and by that time the cooperative funding agencies are very unhappy and they don't want to put their funds in the hands of the USFS again. They'd rather contract with outside consultants to get the job done more quickly.

I can't really say how, I appreciate the posters, and lesson plan enhancements that I have received--esp. on forest & range fires. I share them with other teachers. I also love Smokey Bear...I wish there were more things that could be purchased or given away with Smokey.

I depend on the FIA data and analytical reports. The delivery of data can be a little clunky, but workable. I have had a harder time getting analytical reports from the PNW/PSW for the Lake Tahoe area. This is problematic since we cover two states (CA and NV). I would really like to see one publication that covers both FIA and FHM data collected by the PSW-Remote Sensing Lab and PNW-FIA along with the Intermountain Region FHM data. In 5 years I haven't seen a full report.

I don’t think the National Forest System and the R&D Branch talk to one another well enough to know what the folks on the ground need from the R&D branch. I don’t blame the R&D branch for this lack of communication. I am not aware of any direct line of communication that would be capable of providing the amount of communication needed. And if such a direct line of communication were available, the R&D branch would not have the information resources and enough personnel to deal with the deluge of problems that confront the NFS branch on a day-to-day basis. The NFS branch operates with out-dated technical expertise -- what we learned in school 20-30 years ago. As a planner, I often find that our opponents are better prepared to drop a project in its tracks than we are in analyzing and implementing it. It is only the large volume of projects we attempt to send through that prevents every one of them from being enjoined. If there is one thing the R&D branch could do, it would be to regularly connect with the Appeals and Litigation folks, study all the NFS “losses,” determine which losses were due to bad science or miss-applied analytical techniques or outdated implementation techniques, and quickly respond

to these losses with new science and new methods for the NFS to apply on the ground, either in analysis, or in implementation.

I don't think you should close the research lab in Juneau, AK.

I feel that FS R&D is coming dangerously close to losing a critical level of research scientists, in particular the forest health field of entomologist and plant pathologist. There are so many emerging issues in the field of forest health that at current staffing levels many issues are not being addressed adequately. There is an often-overlooked value of having access to FS scientists as a consulting tool and/or sounding board for various resource related issues. To better serve my needs would require additional researchers in the FH insect and disease field.

I find research products as valuable as those materials and ideas coming from National Forest managers and technicians, though they seem to stem from different organizations. More coordination and mutual support between research and practice would greatly improve the value of information, ideas and innovation.

I greatly appreciate the services provides by FSR&D.

I have a lot of respect for the individuals within Research. However, I think the bureaucracy of the Research Program limits their usefulness. There needs to be better coordination between the research units. There needs to be more emphasis on doing research that is needed and useful to the USFS and other resource agencies. Dissemination of research information needs to be revamped and brought into the modern age. Effective technology transfer is the key!

I have been both extremely pleased and extremely disappointed when contacting FS R&D offices to obtain data that is not available on the web. I have either been treated with courtesy and received the data in a timely manner, or I have been given the run around. I have only requested data that was listed somewhere on the web, in a newsletter, or a publication as available.

I have found R&D to be very responsive to my needs. They have participated and contributed to workshops and meetings, provided information, and offered advice willingly whenever contacted.

I have had good success with personnel from the Delaware Research lab on collaborative projects. They have also been willing to stick up for our management in public forums. This type of one-on-one and getting involved with field staff in other agencies should be encouraged throughout FS R&D.

I have nearly always had a positive response from technical professionals/researchers as well as data management/library personnel. Keep up the good work.

I have no concerns regarding service. Providing a very important and beneficial role. Much appreciated.

I have no suggestion right now, I do mostly administrative task such as copying, typing, faxing and mail out. I do research in the internet once or twice as needed by staff Forester in my area. I need to read more and familiarize myself more about your products and service.

I have nothing but praise for the professionalism and responsiveness of R&D employees that we work with, primarily out of [NAME DELETED]. Nonetheless, due to the busyness of our schedules, I think that we at NFS (White Mountain NF) and our counterparts at R&D would agree we don't spend enough time in conversation, and we should find a way to improve the efficiency of delivery of information between our two branches of the agency.

I have obtained information from you from time to time. I used to see a publication called Info net, which was quite helpful. Now I get an occasional email about a publication that's available. If I really needed some info, I'd like try to see what you have available by looking at the Internet.

I have read news articles on political interference in scientific research and reporting. This taints the scientific integrity of all that the USFS does and makes me doubt report conclusions if it seems to me that there is any chance that there are political implications to the work. Get the politicians out of the scientific agencies and let the scientists do their work in as unbiased a manner as possible. Then we will know we can trust their results.

I have used and depended on USFS research products and personnel. I am a fan of your hard work and contributions.

I haven't a great deal of experience using FSR&D products but what I have used is excellent. I think the Forest Service should make a better effort via the Internet to make users aware of FS research results and products. The Forest Service does outstanding work but finding results is not the easiest thing to do and often I have found myself simply stumbling across great info from the Forest Service and I would like to have access to more.

I interact daily with American, and Canadian Consumers, Tradesmen, Builders, Architects and others involved in Residential construction and maintenance. ‘Pseudo-expert’ advice, commercial marketing claims, and inadequate product understanding and uses resulting from that misinformation have obscured the practical needs of people who use and reside in wood structures. That costs consumers in wasted time, money and poor results. The USDA Forest Products Laboratory offers the only unbiased, and true expert advice on a whole range of topics that cost consumers billions each year. Yet the average American does not know you exist. They should concentrate on is making American homeowners aware that such a resource exists and that they not need to rely upon some sales clerk in a lumber yard or paint store to explain how to properly maintain their deck, or explain how long paint can last on their wood siding. I refer hundreds of people to the website each year and I know several other people who do similar work that make the same reference. With federal regulations on VOC emissions and other topics changing the nature of commercial coatings more needs to be done to help consumers maintain their homes without being victimized because they know less about wood products than any consumer product they own. Can you name anyone you know who does not live in a wood framed home? Yet there is no consumer product Americans know less about than Forest Products. Information published by the FPL over 10 years ago is still largely unknown by those with the greatest need to know it.

I just DON'T want FSR&D to go away!

I know there is always a tendency to cut research & development when budgets are tight and as a District Ranger, I support more funding to the field. That being said, I need solid science to support my 'on the ground' decisions. Our society is ever changing and their interest in public land management is increasing. They can be fickle at times; we need to be responsive to their desires, questions and even critique of our management. I read Popular Mechanics and Rolling Stones magazine to keep up with the pulse of our youth. I need the same kinds of information from FSRD related to natural resource management and changes in our society. Thank you for the opportunity to respond to your survey.

I love the work you're doing on urban and community forestry.

I mainly work with USDA FS research scientists or forest health specialists in the context of forest insects (mainly bark beetles) I have nothing but the highest praise for the individuals I have worked with. They are professional, enthusiastic, helpful, and cooperative. In my discipline, the Forest Service research enterprise is a critical and productive part of the scientific community, and the trend of downsizing should be reversed. The impact of USDA FS scientists on forest entomology is recognized internationally, and they fulfill an extremely valuable task, which cannot be replaced by universities.

I make extensive use of past research done by FS R&D. Much of it is still relevant and of excellent quality. Unfortunately, FS R&D in my areas of interest, especially forest pathology, is currently doing very little research. I would love to see greater support and funding for such research in the future. About the only worthwhile research being done by FS R&D in my arena now involves exotic pathogens and insects. We still have many research needs with native insects and diseases. The Forest Service is not currently addressing these.

I need to know more about diseases, particularly exotic and emerging diseases, population genetics of tree species and other native plants, and silvicultural practices to meet emerging objectives or emerging social demands. The need for this type of information is only going to grow in the future. My concern with Forest Service Research is that it seems to be moving away from these areas of expertise. The Forest Service researchers that work in this area are very good. Unfortunately, the number of Forest Service researchers that address issues that are important to me are dwindling. In some cases there are NO Forest Service researchers left that work in my area of need in the area where I work. For example, I don't understand why are no true research silviculturists in the Forest Service in the Lake States, the part of the country where National Forests are managed most intensively. At the same time Forest Service Research is increasing its work in areas that not only have little relevance to the National Forest System, but also don't seem to have a lot of relevance to anybody else.

I often have to go to several regional web sites to get all the information I need. Consolidate research and publications on one web site.

I really appreciated receiving hardcopies of publication for use at my leisure, without having to be tied to a computer (or print off a thousand pages).

I really have no suggestions to offer - but would like you to know how valuable R&D input has been over the years. The local research unit in [NAME DELETED] has provided outstanding support to the Allegheny National Forest since I've been here (24 years). We are fortunate to have such a gifted and committed group of scientists to work with. The most outstanding feature to the lab is their interest in technology transfer and in being involved in the application of their research to applied field settings. They are very receptive to comment and questions. In particular, they have been extremely willing to go the extra mile to help us with questions and comments from the public regarding project planning as part of the NEPA process. Also - the personal interest the researchers take in ANF employees is great - they've helped mentor many young professionals over the years and have made such a difference in career development.

I recommend FS R&D conduct wilderness visitor monitoring every 5 years in each NFS wilderness area, the same as you conduct National Visitor Use Monitoring every 5 years across the national forests. Statistically valid visitor data would be invaluable to wilderness managers as we struggle with issues related to visitor use and the associated resource impacts. Please think seriously about institutionalizing this collection of visitor use data in our wildernesses.

I regularly use FS research information and consider it useful and highly supportive of my work. I appreciate the effort the FS is making. My survey input would indicate that I am highly confident and appreciative of FS researchers and output. This is true. But this positive answer applies only to the relatively few individuals I have found that provide me with the specific and applied information I need. In general, I believe the FS research program has some very serious flaws. These are: (1) far too much money is spent on the western US; (2) the FS seems to have gotten away from applied silviculture; and (3) there is too much emphasis on publishing in referred journals and not providing applied information useful to field foresters. Just how much FS information does consulting foresters use? Probably very little! This was not the case 25 years ago. How is FS research helping US forest industry remain competitive? Just whom does FS research serve? How does FS research support the efforts of state and private to ensure the effective use of public money? I too often get the impression (perhaps inaccurately) that research priorities are set by what has the best chance of publication and/or funding, not what will help practicing foresters do their job better. In this aspect, the FS has taken the same path as many in the university community.

I see somewhat of a disconnect between the National Forest System (NFS) and the Research branches of the Forest Service. That is to say that every National Forest in the country has a Land and Resource Management Plan, required by National Forest Management Act (NFMA). Each Plan articulates a list of research needs for that Forest, and the needs are typically different for each Forest. The research needs for each Forest reflect information gaps, or perhaps barriers to implementing the plan(s) fully. If the Research branch of the Forest Service would keep these items among the mix of projects they prioritize and do, I feel the NFS operate more smoothly, and successfully. I simply do not feel the agency is putting emphasis at all on keeping research needs current in Land Management Plans, nor is the agency addressing the list(s) with its Research branch.

I think it is important for the R&D Community to continue to strive at providing research that is practical, relevant to needs and easily implemented into work. Some projects seem to be research for research sake. Those types of projects should be limited only those items that holds potential future benefits.

I think more work needs to be done in the development of methods of pest detection and identification relative to quarantine protocols and treatment mitigation. Important areas include rapid molecular ID technology, efficacy of available fumigants etc. on emerging pests (such as SOD).

I think that FS R&D quality has fallen off within the last 10 - 20 years. They do not seem focused on solving problems for the field, but are more concerned about developing their careers and reputations. Many of the employees do not 'buy into' the USFS mission and seem to design studies that are not supportive of management. The program continues to dwindle because of a lack of support from their customers. They seem to view themselves as academics, when their mission is applied research. Overall, I have become very dissatisfied with their direction.

I think the Forest Service needs to identify that it is responsible for providing its very useful products (Need to better market yourself). And that there is a direct connection between their products and better overall management of public resources. Taxpayers do not make the connection between what the Forest Service does and the benefit to the public. That connection needs to be made, if your funding for operations and research is to continue. Make the researchers more accessible to the state and local units of government. Create a better dialogue with them through discussion groups and periodic gatherings to discuss what the local needs are. It doesn't have to be formal. An hour or so over coffee to update the researchers on what is going on in the field and to give the field personnel the researchers updates. Include the tech transfer folks too so they can make the connections among all the interested parties. Have a presence in state and local meetings that are discussing resource use and let people know you are at the table to help. Contribute to the ongoing dialogue; let people know of the emerging resources issues. The Forest Service needs to be on the cutting edge of what is happening. I think you are, but not very many people know it. How to market yourself without blowing your horn that is the question.

I think the FS R&D program could be improved by emphasizing external review of research reports. One recent internally reviewed report reported more author bias than research and was eventually withdrawn by the station director. It is okay to have a viewpoint but it is not okay to present it as science.

I think the service is great, overall. I am very satisfied.

I think the USDA FS R&D folks, overall, do an amazing job with insufficient resources and staff. Those with whom I have collaborated have been generous with their considerable knowledge, and remarkable responsive, considering the workload they're juggling. Our program is especially grateful to [NAME DELETED] of the Southern Station for his work on predictive models for Southern Appalachian ecosystems.

I think the utility of Forest Service Research and Development would be improved by working more closely with the Forest Service field specialists. I also think it should be a priority for researchers to present their work at Forest Service conferences. I know one case where a researcher was denied funding to go to a national Forest Service conference, because it was thought more important that he go to a professional society meeting. I understanding that there

is more prestige at the professional meetings, but I think the goal of the Research and Development staff should be to pass on their information to Forest Service personnel.

I think this is an excellent service to receive notification of research materials I may want to access via e-mil. I am an avid reader and like to stay current with US and world issues in my natural resources area. I would appreciate a format that gives a connection to a web site but also has the summary attached in the e-mail so I can see if it is worth my while to go and look up the article that has been posted. I think the research stations in the NFS are invaluable and support them to the nth degree. Without research scientific applications are meaningless.

I think this the service has been great. In general I support ways to improve the ability of the manager to find research results over the web and get access to them. The amount that is out there is huge so it is important that we have ways to sift through it to find things relate to our topics and issues are important.

I use the Hubbard Brook Experimental Forest and interact with peer scientists in the Forest Service. I am not very aware of the rest of the organization (and can't rate most of your products and services).

I want to praise the work being done at the NE Station Delaware Ohio Office on the effects of fire on oak dominated forests in the eastern US. The research done by this unit is vital to ensuring the sustainability of the oak forests of the East. This group has done an excellent job in sharing the results of their research through publications, workshops and conferences. Hopefully funding will continue to support their efforts.

I was consistently unable to find information on your web site regarding budgets. Email responses to your Portland office did not provide the requested information. This proved very frustrating. I have provided peer reviews of PNW station reports at the request of scientists. The process seemed fairly odd. Your glossy annual reports are too expensive and seem like a waste of money. Given the decline in actual on the ground research this is disappointing. Your glossy annual report has consistently failed to mention our agency, yet we have cooperated with PNW station scientists over the past decade. This is disappointing and has previously been pointed to the station. .

I was in the eastern region until about a month ago and could utilize library services from the north central station. Now I am in the southwest region and our unit needs to pay to get library service from the rocky mountain research station. In a world where know all the available science is important I don't see why it is different from the east to the Rockies. Why not just take the funding off the top in the WO and provide the service to all? To help save some money you could try to encourage folks to download any newer articles, but the only way to efficiently get older articles, chapters from books, monographs, etc. is through the research station. This is a necessary valuable resource to getting the best science for analyzing effects of land management.

I work closely with several scientists at the PNW Research Station and in my opinion; they are the best forest scientists in the world. I have noticed recently that they are going beyond just research on federal lands issues and dealing with all of America's forest resource issues. This is important and should be continued. More emphasis needs to be giving to technology transfer to

forest industry. Maybe a partnership with the Extension Service would be a vehicle to do this. Thanks for the opportunity to complete this survey.

I work in the fire and fuels functions. It is difficult to use a lot of the information since most of it is focused on Forest Service lands and FS issues. I see very little effort in building interagency programs. Not to say that my agency is any better. I would suggest consolidating the R&D programs a lot more than what happens currently.

I work with the collection of both invasive species information and rare plant or rare community information. There must be a rapid way to verbally answer sequential questions about the ecological context of field sites and have the answers parsed into data storage areas based on the question. Tying this to location information icing a simple Garmin GPS would provide a very powerful information system to begin to address resource problems. I have experimented with using digital voice recorders to collect such information, and they can be a powerful tool provided the data could be automatically associated with the location information. The other key is to have a prompting system that asks you appropriate questions that will lead to increased knowledge about the site. Having a way to retrieve this information at will of any given site would prove to be a very powerful tool. With such a tool, the field situation could be rapidly described and just as rapidly comprehended by the next system user. A workable system that was able to collect meaningful blocks of data on sites and to have that data retrievable and capable of being parsed into other information systems would be valuable indeed.

I would like to say that I am grateful for the group of professionals that I have had the opportunity to deal with over the years. This year [NAME DELETED] has been especially helpful, as have her statistician colleagues. Thank you.

I would like to see a dedicated internal research and development fund, available to fund competitive internal proposals promoting commercialization and technology transfer for product and methodology development in the private sector. Basically a funding system to support collaborative (with a private sector partner) product development and commercialization of suitable research technology.

I would like to see more attention paid to issues related to logging in the northeast and to the concerns of small landowners (under 100 acres). There is very little current research on issues related to harvesting that would benefit the average logger in our region.

I would like to see the Forest Service do more with people on the ground in conjunction with their studies, not just as subjects.

I would like to thank you for the very useful service that you do provide. It would be very useful to develop a database of persons working in each field across the globe. This would greatly assist with networking with other people carrying out similar research as one self. For example, my field of expertise is nursery propagation, pests and diseases, and forest re-establishment (re-generation). Every time research information is generated on each of these topics, it would be very nice for every person registered on your database under these fields, to be sent notification thereof.

I would recommend that the FSR&D develop a comprehensive finders guide for all publications, past and present. This should include location of published materials and ideally would have links to sites where electronic copies of materials are available. In the absence of such links, the FSR & D should establish an equivalent of an interlibrary loan office where hard copies of materials could be borrowed. Basically, the FSR & D provides great information. The issue is finding it and especially finding past materials.

I would suggest that your survey failed to address the most critical area -- the research capacity of Forest Service Research in critical areas needed by your clients. The number of research scientists and technicians employed by FS Research has declined dramatically in the past few decades. As a result, FS Research produces very little knowledge in key areas (disturbance ecology, wildlife ecology, aquatic ecology). So, I would suggest, you are looking for the problem in the wrong area. You have focused on 'science delivery'. However, if your organization doesn't have a critical group of scientists for your clients to interact with, it doesn't matter how effective you are at delivering the little science that you still produce. I suggest you develop a survey asking about the capacity your organization to deliver knowledge in the areas where National Forest System is struggling.

I'd suggest further restructuring to maximize synergy in regional locations. There are still some remote outposts in several of the stations. Relocating these closer to other units or universities could be fruitful in information development and transfer.

I'm a relatively younger teacher and researcher at University of Concepcion from Chile and my principal problem is to obtain hard copy of articles published on the web. I am not yet able to obtain a hard copy of your book. I've sent you a letter about this, but there was no answer. Sorry for trouble about my problem, but you asked me.

I'd like to see tangible evidence that Research is regularly and strategically working with national forest personnel at the field level to understand and address the issues we are dealing with: especially effects of land management on forest resources and monitoring & assessment methods and tools.

I'm annoyed by your 'products and services' approach, as if you were a business. I am not a customer, I'm a citizen. USDA is part of the government that we all share. Your survey is not very useful. How do you expect to get meaningful information from average responses? In my own experience, the data I received from USDA was very useful to me. However, getting the data was like pulling teeth, even thought it's 'publicly available.' I had to go several notches above the person who was supposed to give me the data before he moved on it. I had to have real endurance. Rating my overall satisfaction in such a context is folly. I would warn anyone who wanted access to the same data set that there is no way they can count on getting the data by a particular date, even if they start asking for it six months in advance. I don't think you should be spending money on consultants, instead, use the money to hire competent people. I bet you need more people too.

I'm more of a collaborator than a user, as I do a lot of research with and for the FS. I think a one-stop location with links to all the different groups, models, publications, data sets, and recent presentations would be helpful. Ideally both topic and group could sort this. I should add that the

employee search mechanism on the FS home page is extremely easy to use and helpful. If you can do anything as good for research products, that would be amazing.

Improvements in accessibility of material and organization of material would be welcome, as well as updates on availability of new information.

In general FSRD is providing the most updated information as quickly as possible. It will be beneficial if the end users can go to one web site and be able to search all the information produced by FSRD scientists and forest practitioners.

In my area of interest (engineering information related to structural uses of wood-based products), the Forest Service has a long history of leadership and competence. Unfortunately, as more of the funding for Forest Service programs has focused on the 'hot topic of the day,' some traditional areas of worldwide leadership have eroded. While this is unfortunate, it may simply reflect the reality of funding in today's world. In response to this evolution, the leadership of the Forest Service R&D organization should revisit its mission statement. The 'new' organization should tell the world what areas of expertise are considered 'mission critical' and (just as importantly) which are not. Subsequently, the organization should be managed in line with the new mission. Over time, it will become obvious to users. One final note: The American Lumber Standards process -- established by the Department of Commerce -- specifies the USDA Forest Products Laboratory as its technical expert organization related to the establishment and maintenance of technical standards for lumber in the U.S. If the Forest Service does not choose to maintain a critical mass of expertise in this area over time, it needs to inform ALS and the Department of Commerce that it is abandoning this longstanding and critical role. While I believe that abandoning this leadership area would be a mistake, the decision needs to be consciously made by FS leaders.

In my experience, Forest Service Research and Development, all Forest Service branches and personnel have been among the best as related to natural resources. I could ask for nothing more since they already do so much. I only differ with some research, which is common among scientists.

In my opinion, the Forest Service is the research and development authority for natural resources management!

In some instances, they could better address issues in terms of smaller landowners in addition to landscape-scale landowners (i.e., insect & disease control measures that are impractical over thousands of acres might be effective and affordable on 5 acres).

In the urban forestry area, FS R&D could better serve me if it had a more secure funding base & more scientists. The small number of scientists does an excellent job. We simply need more of them to address the issues faced by urban communities.

Increase & improve R&D involvement in legislative issues & draft legislation when possible.

Increase budgets and professional/technical staffing at USDA Forest Service research stations so that the quality and amount of research, publications and dissemination of information can be sustained at the level of recent decades, at least.

Increase funding to the lab in Madison for additional equipment, scientists, and upgrading.

Increase the amount of scientist time available for silviculture research and joint publications with NFS personnel describing the 'state of the National Forest' (using FIA and FHM data).

Info derived from USDA is generally used for personal professional development rather than work related professional development; currently feel that Forest Service R&D provides me with an acceptable range of info services consistent with my needs.

Initiate and Conduct Learning Lunches - present information on projects and research to local National Forests on a quarterly basis.

Interaction with Forest Service scientists is invaluable in carrying out my research as a forest ecologist and conservation biologist. Their work is crippled, however, by inadequate funding from Washington. I urge the USDA to significantly increase R&D funding (e.g. 300%), and to protect this funding against the demands of fire fighting and budget cutting. I have less favorable things to say about the forest-level managers in our local National Forest. They seem more concerned with pleasing special interest groups, and less interested in the long-term integrity of forest ecosystems.

Introduce yourselves to the real world (i.e. where the rest of us work).

Is there a catalog of information available? What web site should I look into? Most all my contacts have been person to person via phone or stop in at the [NAME DELETED] office. I feel all information I have acquired from the FS has been very helpful, but in general I have been unaware of things available to me. Most of the info. And suggestions I come across have NOT been via computer. I'm on a learning curve there - near the bottom.

It is difficult to find information easily using keywords.

It is great that much of the work is available online.

It is important to me to be able to meet with and talk with scientists (Accessibility). The people I work with (state natural resources agencies, communities, and non-profit organizations very well receive having researchers present at conferences and workshops. Our USFS researchers are really seen as THE experts on urban forestry and natural resources topics -- it is key that they are available to these constituencies (both listening to their needs, and providing research findings and results).

It is inconceivable that the number of research staff, which works in the fields of Forest Genetics and Forest Pathology, has diminished to the current level. Research management seems content to allow further erosion of these skills in the face of serious threats from non-native diseases and threats to genetic diversity from the ever-increasing threat of wildfire. In our role, applying the limited but valuable research, which is still conducted, we will continue to be indebted to the excellent and motivate staff, which remains.

It is only now and then, that I visit your site in order to satisfy my curiosity. I am an agronomist dealing with farm production. So my interest is only now and then. I suggest you do not enter my replies in your surveys.

It seems as though they are always struggling for funding - they appear to be one of the most efficient groups I have ever worked with...All the money goes into the project, no frills, no extras. I have had my needs met every time I have asked for assistance. These people are always willing to go the extra mile in customer service.

It seems every FS meeting I go to talks about the need for better social and cultural understandings but there is virtually no staff or research being done except economics.

It seems that the number of research scientists, mainly in forest pathology, is decreasing continuously. It is becoming difficult to find collaborators in the US Forest Service with experience in forest pathology. There are a few left but for how long? .

It would be of great interest if the FSRD and the California Indian Basket weavers Association could have at least three workshops. One in Northern California, one in Central California and one in Southern California. This would be a very educational and informative workshop for both the forest service and the native communities. In So Cal there is so much development that it is very difficult for traditional gatherers to gather their materials. Many of the areas are being sprayed or restricted. Research regarding pesticides, herbicides would be very useful in a workshop. Please contact the CIBA office in Woodland California or their website CIBA.org. Meeting with local native communities would also be a plus for all. Our forests are becoming smaller and smaller and more restricted. Native people need access and safe access to gather.

It would help if there were a common site in the web where foreign users could subscribe to all USDA-FS research stations at once, without being obliged to subscribe to each station separately. Hard copies of articles take months to arrive in Greece by regular mail. An option should be provided for fast delivery, at the subscriber's expense.

It's amazing how much R&D accomplishes with so few people. The biggest problem is critical mass of scientists.

I've always turned to the USFS R&D papers and data for answers to many of my questions and problems. I would like to see some of the older research publications available to download via internet. Our clients are mainly timber investors and harvesting companies so I would like to see more research and/or programs relating to timber harvesting techniques, timber growth, relating other natural resources to timber harvesting.

I've been retired from USDA Forest Service for 5+ years. When active I worked for the Rocky Mountain. Research Station for 20 years and for the Washington Office's Forest Management Service Center for 9 years. The answers I gave to your survey are based on several post-retirement contacts where I asked for information, plus an amalgamation of years of pre-retirement professional level contacts of all types. I'm not an unbiased respondent, and you need to know this when evaluating, and including (or not) the answers I've provided. Good luck in your evaluation.

I've been unable to retrieve some of the documents from the web. Apparently broken links or other problems. But, all in all, R&D has been extremely helpful in the quality and format of information.

I've found that FS employees have always been helpful with providing information on their research to forestry professionals. I'd like to see more of the research done in the NE posted on the web as HTML, PDF, or Word Documents to review.

Just a comment to express my appreciation. We in Canada share many of the same social, economic, technical and ecological issues related to our forests and grasslands. However, we do have some different laws and infrastructure; thus some of the USDA R&D information does not 'fit' our situation perfectly. For example, we have no 'Northwest Forest Plan' and its myriad detailed requirements -- but we do have many similar issues such as listed SPP, diminishing old growth, job loss, timber-dependant communities, etc. Largely, the information the US-FS R&D generates is very helpful to us. When I reach out and contact one of your research (and other) staff, nearly always I get the generous response of professionals wanting to do a good job and the willingness to extend their knowledge and experience to neighbors in Canada. Thank you very much.

Keep supporting National Forest System management activities by providing clear management implications of research, now and into the future. Thanks.

Keep the program funded so that it is adequately staffed and research can be completed quickly, and the resulting information distributed to the field in an efficient and useful matter.

Keep up the good work (7 comments)

Less money to station directors/regional offices, more to researchers in the field units.

Let users know about FS R&D, communicate more.

Like all the rest of us agencies, communication about both research and products of research are not shared enough. It would be helpful to know about research projects before they begin, so that we do not duplicate efforts. This is true, of course, of technical transfer items as well. None of us have time or money to waste on overlapping efforts. Partnerships is a great buzzword, but if our bureaucracies stand in the way of our working together in these ways, we will continue to overlap!

Look at Forest Plan and Project level monitoring as opportunities to institute long term, longitudinal studies. These studies would benefit forests by providing key information as indices of continuity and change relating to sustainability - in ecological, economic and social realms. Monitoring questions could be adopted as hypotheses to be tested, and those could be aggregated into a coherent, integrated research strategy.

Maintain critical mass of researchers working in forest insect and disease effects, and insect & disease interactions with other disturbance agents (fire, NIS) especially in the West.

Maintain the expertise in forest vegetation research, including genetics and silviculture.

Maintain the mailing of notices of availability of publications; also migrate the older publications that are out of print to the web. Increase the amount of rangeland related work being done.

Make all publications 'downloadable' for the web.

Make more information/data available via the Internet.

Make regional stand growth and yield models which are stripped of all the 'nice to know' information with which they are presently encumbered and into which field data may be much more easily and swiftly entered. Make it possible for silvicultural scientists and other socialists to make on site 'house calls' pertaining to forest management problems.

Make sure the R&D stations are adequately funded and that includes urban.

Make the publications available free of charge for people from developing or under developed countries.

Many of the survey questions are difficult to answer, because I use a variety of R&D services and products, and the answers aren't the same for each. I particularly value the participation of R&D staff in Alaska on science and technical committees. The biggest problem is that almost all of Paw's efforts in Alaska are focused on coastal forests and are driven by the National Forest System. However, many of the biggest issues and opportunities are in the boreal forest, and USFS has conducted little work there ever since the Institute of Northern Forestry was closed. This is a major gap in forestry research in Alaska.

Meet with non-USFS forest management & research users to identify research needs. Prioritize the research needs based on public (including industry) demand for that research.

More applied research and less pure research. Increased end user involvement. Accountability for delivery on time and on cost.

More availability to work with industrial reps on industry wide problems.

More collaboration opportunities through official protocols with research partners.

More focus on integration / ecosystem function and response to natural variability and human generated impacts.

More integration with national mapping and data systems.

More past reports available on the website.

More research into the values of ecosystem services.

More research on agro forestry practices. Forestry is becoming more 'linear' with corridors and buffer strips being more important as fragmentation of the forest increases. More research is

needed in this area of interaction between agriculture and forestry, and the incorporation of trees on cropland.

More research on growth and yield, and improvement of NED.

More research on invasive species and more involvement on invasive species impacts to rural and urban land managers.

Most of my experience (either negative or positive) is often dependent upon the person that I am dealing with. Some of the staff is amazing and some should just be allowed to retire now or relocated. Personalities in this arena are often determining factors as to whether someone in my position is willing to work with the staff.

Most of my experience with USFS products is limited to the SILVAH computer program. The science behind the program is first class, and presented well in the literature; however, updates to the computer program are slow (a Windows version is just becoming available - still no users manual available). It would be helpful to speed things up with the programming.

Most of my work is with the Shrub lab in Provo and Lucky Peak in Boise and I find them very professional and responsive. However, I encounter very poor research and unreliable results generated out the PNW and regional offices. There is a huge disconnecting between the science generated by your best people and decisions made by regional staff officers and district line officers. Ask your average line officer and he is generally unfamiliar with the research tools available within his own organization.

Most people that call, write, or email the Forest Service Office of Communication want their information On-line. With the 'computer' age.... I find more and more persons want to view publications but do not want hard copies. We have most of our information On-line, but we need to put all our information On-line for our customers. I find this Website very easy to use and I like the fact that I can copy the 'links' and zap them back over the Internet. This is much easier than it used to be, before we had access to the Internet.

Most R&D products address academic questions, not relevant NFS issues. Of the very, very few that are relevant, they are excellent. For instance, monetary expressions of non-market benefit valuation have never influenced a decision I have seen in 2 decades. However, there is a vast reservoir of untapped market-related values that would influence many decisions, if available. Judgment and experience of seasoned researchers could add great value to these data, and guide their usage in decision-making. However, little of this work may be publishable in academic/research journals. R&D needs an organizational division that is not publication-oriented but highly relevant to NFS operations.

My comments apply to the subset of scientists working on forest health issues, although they may be relevant to other forestry disciplines as well. Some scientists, perhaps most, are not seriously connecting application with basic science. Researchers should not be exclusively focused on basic research, but rather they should be translating basic research, once known, into techniques and approaches for mitigating problems--operational applications. If not Forest Service researchers coming up with workable solutions, then who would? In addition, I believe that the Forest Service should start working in the metric system, as do scientists in the rest of

the world, and start using more mainstream measurements and less inbred techniques. They should be publishing in refereed journals as well as technical publications. In addition, the Forest Service should be recruiting nationally for its scientists. The job market is such, and Forest Service research positions are attractive enough, that the best and the brightest may be hired. This will result in less 'inbreeding' and more innovation. Although I realize that this is not an R & D issue, the FIA plots are too general and not reliable for some pressing forest health problems, e.g., white pine blister rust that requires special training for identification. Is it possible to releaser the FIA plots less frequently, and reallocate FIA funds to operational or R & D needs? Having said this, I need to state that I have encountered some truly bright, effective researchers at research stations in the Forest Service who are extremely committed to their jobs. These people need support, resources, and need to be listened to by the policy makers. Thank you.

My experience has been positive.

My experience with FS R&D is limited to contact with a few really excellent scientists and my satisfaction is limited to experience with them. Therefore, it would be a mistake to make sweeping generalizations about the quality of FS R&D in general, based upon my responses. Unfortunately, your questions often asked for general answers that might be misleading if applied outside the scope of my relatively narrow contacts.

My experience with FSR&D from the past has been nothing but excellent. Whenever I have had a problem or question, I have always been able to call and obtain excellent assistance. It may take a while to get to the right person, but the help has always been there. The publications that I have accessed are high quality research that has helped me make good forest management decisions. As a retiree, I don't access them as much as I did several years ago, but I still try to keep current in forest and fire management. Thanks and keep up the excellent work.

My major concern is that continuous budget cutbacks appear to be reducing the effectiveness of Forest Service R&D. Scientifically sound information costs money and requires a stable investment in people and infrastructure. This seems to be at risk today.

My primary need is for information that is easily accessible and the opportunity to also access the author for follow-up.

My primary use for USFS R&D has been the FIA program. This has rarely met expectations (so much that I have developed very low expectations). A few notable exceptions exist, when I have stumbled across immensely helpful employees. However, I am frustrated with the pace of updating, the amount of flaws in the data, and recently, the inadequate analysis and interpretation of that data. What frustrates me most is that being at a University, I am in a position to collaborate on such analyses if I were able to access the data, but am prevented by the USFS bureaucracy. In other areas, I have been quite pleased with R&D products, primarily articles, downloaded from the Internet.

My primary use of FS R&D services is the work of the Aldo Leopold Research Institute. Due to their unique interagency focus, this Institute consistently provides useful and up to date wilderness social and natural sciences work that is applicable and integrates multiple facets of wilderness management for field managers. The staff is responsive and incredibly effective with

a small and unpredictable budget. I would like to see increased support for the work of the Institute, including expanding the interagency support and coordination. USFS is a leader in this arena and should capitalize on that opportunity.

My problems arise from two issues: the change in focus of USFS programs too much more deal with forest industry utilization rather than issues of NTFP and social meanings of forest, and the change of my own work which now focuses on nature conservation, primarily in new countries of Asia-Pacific, the middle east, the former USSR region. Thus Pacific NW and Rocky Mountains Stations which were once my major interests now rarely produce anything of interest to me - my contacts are almost entirely with Burlington VT and Riverside CA - both of which remain more relevance to me, e.g., Forest Trends and CIFOR.

My research needs are primarily from a policy perspective...it's a tough job, but anticipating the policy needs a year or two out would be tremendous, so as to have some peer reviewed science, as a foundation for policy development, would be a great asset.

My response to your questionnaire is based on current awareness service needs to my researchers; hence the answers are probably not typical. I access the web pages, and read the quarterly lists of publications to identify wildlife-oriented items to then pass onto my researchers (faculty). I do not actually do any research or public contact myself. But keep those lists coming!

My responses are biased. I am a retired FS Scientist who worked in the system for 30 years. One of my major complaints was the lack of good administrators and the poor opportunities and training for young professionals. Many PhDs are good scientists, but poor administrators because they do not have good 'people skills'. Consequently, the work place is not a pleasant place and productivity is stymied. The career opportunities (GS grade increases) are not clearly defined. Peer review panels that I sat on did not consistently follow the written criteria when considering a candidate for a GS grade increase. The majority of the panel members exceeded the criteria. Consequently many scientists were not recommended for promotion, which – again – leads to poor work environment and productivity. And, in several cases, good scientists resigned. The result is that the public is not being efficiently served.

My specialty is forest soil management. I work in the Pacific Northwest Region and therefore most of my interaction with FS research is through the PNW Station. Currently there are no soil scientists (that I am aware of) in the PNW Station so if I need research assistance; I am forced to go to another FS Research station (primarily RMRS), an outside source, retired researchers, former employees, and academia for help. In the mid-late 1970's and 1980's, there were a number of research soil scientists in the PNW Station but they have disappeared over the years. Soils are becoming an important issue in project litigation and appeals and soils affects or are impacted by other resources and management activities. The PNW Station organization does not reflect the need for soils information in my opinion. However, look at the number of research wildlife biologists, fish biologists, hydrologists, and 'ecologists' in comparison. That is not to say these things are not important but some balance would be nice.

Need a way to find the latest information in my field - what was done, who did it, who can be contacted for more info? Also need a forum for finding and developing others involved and further information on topics that USDA may only have a piece of.

Need more products targeting primary and secondary schools. More conduits for emerging research to the minds of the primary and secondary educators. More ways to deliver the information without intimidating or making more work for the reader. It's time Forest Service R&D got involved in environmental regulatory research. We have to rely on the work done by aerologists and it often misses the point for natural and wild land resources. We also need a more robust knowledge base on the contributions of private land to national forest objectives and probably more rules or tax incentives to maintain objectives at all levels; community, region, state, coercion and national.

Need to clearly explain current limits to science and research to support decisions in a world with incomplete data and unknown absolute consequences. Judges (in our appeal and lawsuit world) and many FS managers and staff believe 'science' = more data. Even if we had the data, in almost all cases we wouldn't know how to interpret it to a cause-effect relationship to our actions. R&D needs to help the FS (and the public) understand the limits to science in making SOCIAL decisions on forest management. There is too much talk of 'science-based' decisions implying that science is driving the decision. At best they are social/political decisions with some science informing us of the consequences. I add the qualified 'some' because we will never have a complete picture because the environment is too variable and stochastic.

Need to develop a process that works with field folks to ensure the topics or subjects being research will produce usable outcomes that will help the field accomplish their tasks?

Need to maintain personnel in various areas of expertise so that when retirements take place holes are not left unfilled.... In other words their needs to be overlap and a smooth transition between incoming and outgoing personnel so that expertise is transitioned and maintained.

NFS and R&D need to work on how NFS can better meet the requirements of R&D with regard to timing of the development of an administrative study and funding of that study. R&D needs to provide more support of management questions including assisting NFS with identifying testable questions, study design, and review.

No/none. (28 comments)

No. I am generally very happy with the level of service FSR&D provides. I use the material primarily for teaching to third level planning and environmental management students. The benefit to me is the ability to access high quality research material and methodologies from outside Europe, clearly written, well presented and freely available. There is talk within the European Union of making all publications from publicly funded research available to the public something that we fall far behind America on.

No. I've always enjoyed and benefited from experiences with FS R&D.

No. Thanks for the opportunity of completing your survey.

Of course more grant money for projects, but they are now doing good job for us.

Offer a very good website for downloads. Offer a Q&A section for difficult forest issues.

Offer booth at professional meetings that describe products and create opportunity to visit with staff about needs.

Offer to help the Canadian Forest Service develop expertise in urban forestry.

Older 'classic' research publications available in digital format.

On the website it would be helpful to have a listing of the projects that are occurring at this time and a comment or input section to those projects.

One of the weaknesses of NFS side is Inventory, Monitoring and Evaluation. It seems this is a perfect partnership, NFS implements project, then research conducts the monitoring.

Open up the hiring process so that anybody can apply to any USFS R&D job (federal employees already have a major advantage over outsiders simply because they know people and what's going on in the agency). Return to basics and get away from the esoteric, high-specialized areas of study that few people understand and fewer can actually use. Put A LOT less emphasis on publishing and A LOT more emphasis on getting the information into people's hands in a manner that is useful to them (which usually means software these days). Stop hiring people who are more interested in playing politics than being there to serve the land and the people.

Our great thanks to the excellent work of the staff at the Delaware Ohio lab. They are tremendous help to us.

Our library currently receives a range of print publications from different research stations. Thank you very much for this continued service, as it is a very valuable resource. This print service in conjunction with a number of online publications available from your websites helps us to provide useful forest science information to our scientific researchers.

Overall, I have been very satisfied with my dealings with research.

Overall, I'm very satisfied. They do good and useful work. I hope they can keep it up far into the future.

Particularly in the Northeastern quarter of the country, social concerns are not adequately represented. Much more work needs to be done on understanding and using the metropolitan forest. The FS has a lot of experience with scenery assessment, but there is little research or evaluation. This is an issue about which the public is passionate.

Partner with Cooperative Extension and the State Foresters to deliver Forest Service Research to the people on the ground. They are set up to deliver this kind of information, have the network developed to send it out and work with a lot of landowners who can use the knowledge gained by your researchers.

Perhaps through more active outreach and accessibility to other agencies and organizations, offering FSR&D services to them. I am thinking of those organizations that work to accomplish the same goals as the USFS, those goals stated in our Mission Statement. For instance, the Peace Corps, The Society of American Foresters, the Society for Range Management, etc. There

would need to be some sort of screen to keep from being overwhelmed by demand, and perhaps also to prevent government subsidy to overly partisan groups, but it should be feasible, perhaps cheaply over the Internet. I work with some of those groups from time to time, as do many USFS employees. Indeed, the FS has MOU's with some organizations, e.g., the Peace Corps, that the USFS will support them in their mission, to some unspecified degree--some R&D products and services could help, and when I was a Peace Corps Volunteer, I had little or no access to this help. We also have a recent request from the Chief of the USFS to all employees, asking that employees participate in their professional societies, probably to bring field experience to those societies, and also probably to expose those employees to other facets of their professional disciplines--easier access to FSR&D products and services could improve all of this.

Periodic informal meetings with groups of academic faculty related to the projects research area. "What's new on the block" might the topic and just sharing what everyone is doing would helpful with both academics and agency scientist talking. The project 5 yr. plan and progress might be discussed so that RJVA opportunities might come up in the open session. I recognize that these discussions often go on one on one, but the group is often closed. I have participated on reviews of projects and evaluation, but the purpose of these meetings is very different as is the time commitment for all those participating. Travel funding for academics may also be a problem and may become a problem for agency scientists too. E-mail discussion groups might be the answer.

Place greater emphasis on working with the states on forest assessment and monitoring. Place greater emphasis on riparian inventories.

Please expand your investments in economic issues associated with the increasing demands for natural resource amenities provided by public lands. The Forest Service has made great strides, but still has too great an emphasis on describing the economic benefits of commodities (logging, mining, industrial recreation, etc.). After ICBEMP, the agency has not taken the lead in describing the roles amenities play in different regions and communities, and in investigating the implications of different resource-management approaches.

Please just don't cut back the research services. They serve a vital purpose. At NPS, there is no equivalent to the FS PSW Wild land Recreation and Urban Cultures research unit. I regularly read the Recreation Research Update. The study results provide our NPS staff with background information and use patterns that help us with our decision making process for NPS trail management.

Please keep up the good work. Perhaps going back and updating some early basic research might be interesting.

Please make material more readily online.

Please scan GTRs now available only in hard copy.

Practical management research on typical private forests which have 'suboptimal' treatments in the past (i.e. abused by high grading, competing vegetation, insect/disease problems), looking at most cost effective rehabilitation treatments. More research on wood energy economics, harvesting systems of small diameter, low-grade material and cost effective conversion to Btu's, ethanol, methanol products.

Program needs more funding. It is shrinking through attrition and diversion of funds to fire (this makes contracting with units tenuous). Keep core positions of silviculture and ecology.

Proper forest inventory for non-coastal Alaska annotated bibliographies such as species, specific issues, equipment/methodology. Contract for annotated bibliographies and syntheses beyond USDA and major university programs. Continue and strengthen informational role of transfer of information using State and Private--current Alaska effort is excellent and working. Continue and strengthen focus on basic biological and physical research including more integration with NRCS soils efforts and USF&W and reduction in basic (not applied) social science research.

Provide a category for topics in forest restoration and management research and recommendations for urbanizing areas. These are some of the most difficult places in which to restore forest functions for water quality, biological diversity, and forest products.

Provide greater outreach to Indian tribes when setting research priorities. Increase the frequency of cooperative studies with Indian tribes.

Provide more foray for easier input to research the Forest Service undertakes at the Research Station level. Put more research projects out on competitive grant process to qualified forestry research organizations. Improve timeliness, quality, availability, coverage (all forestland), uniformity (nationwide) of FIA data. Once FIA base information is solid (see above), add analysis/information to answer the most important resource status questions in the Montreal C&I (Sustainable Forestry Roundtable) at the state and regional levels. Provide more interactive process (with knowledgeable contributors outside the agency at the state and region level) in developing RPA assessments. Send out information (e-mail) about individual research projects to interested users as it is developed rather than putting it out in one periodic database. Send out information (e-mail) about upcoming presentations to users who have expressed interest in the subject matter.

Provide more funding to Forest Service Social Science Research.

Providing cost/effective ways we might be more successful in securing the funding to purchase and implement the tools and methods prescribed from R&D would be very helpful. Ranger District budgets are so sparse these days, we would rarely have the $ available, sometimes even at the Forest level of funding, to have R&D products affordable to use and actually derive the benefits from there.

PSW excels in urban forestry research. It has been indispensable at the [NAME DELETED], where I am the past president and current chair of its Green Print Committee. I also facilitate a statewide coalition of urban forest leaders. Without PSW's leadership in research, the momentum in implementing urban forest best practices in California would falter. This should be a high priority! The emphasis on fire mitigation is understandable; but improved urban forestry has far greater benefits for society overall. The Forest Service should invest more in PSW's research arm; this will result in greater urban forest canopy across California.

Publications in the open literature versus Station Reports should be valued and encouraged. This will enhance the visibility of USDAFS R&D work in the scientific community.

Put R&D's emphasis on applied research.

R&D is extremely important in this fast changing, complex, working environment. Service has been very helpful. More outreach and education to the field would help in disseminating the work that is being done. Realistically, we all must deal with strained resources though.

R&D places great importance on the need for their employees to write and publish papers. These papers drive promotions and job retention. However, the most valuable services that I have received from R&D employees is their one-on-one help in providing me with suggestions, going to the field, helping me design projects, monitoring programs, etc. As a line officer, this type of help has been of tremendous benefit in helping my fellow line officers and me and employees improve the management of our Forest. Unfortunately, this help takes a lot of time for the R&D employees and is not the kind of work that seems to be appreciated by R&D management. This work has been even more meaningful for us than any of the research papers that I have seen come from R&D. The work that Rocky Mountain. Research Station's Watershed and Riparian Ecosystems branch does is invaluable.

Reduce or eliminate the privacy issues restricting the distribution of FIA forest inventory data. Get rid of the fuzzy data approach to getting around the privacy issues. It would be better to not provide any data at all rather than provide information that has been 'fuzzed'. If you can provide 'fuzzy' data and not violate the privacy laws than I have to believe it isn't worth doing because it is not giving me an accurate assessment of the forest resource. Because if fuzzy data does reflect the actual situation than someone's privacy has not been protected.

Research in the area of forest diseases is often unrelated to management needs and solutions, or the tools developed are impractical. Most of the research products I use are developed by Natural Resources Canada. Their research personnel work closely with their counterparts in management to develop and implement projects that have practical application and address immediate needs. In addition, they seem to be innovative in their use of web resources to release and market their research. Information is easy to find and retrieve. Hard copy products are also readily available. If you are serious about improving your product development and delivery, study the system used by the Canadians.

Research is not lessoning to the field, they are not meeting our research needs. They have been telling us what THEY want to work on and we are expected to come up with partners and projects.

Research must become more relevant, timely, and responsive to manager's needs. FS R&D is being left behind as others such as the CO, NM, and AZ 'institutes' step in to fill the gap.

Research needs to integrate more with Forests. I think having offices separate from your primary customers (the Forests) makes it hard. The Research scientists aren’t well connected to the applied scientists (such as the forest hydrologists, forest biologists, forest soil scientists, etc) on the Forests. This has resulted in the inefficient use of resources to address forest management issues. Research needs to be closer to the field; working out of the same offices would help.

Research on a greater range of conditions and implementation of greater range of forest management strategies to achieve various objectives. Results will then be applicable to a broader audience - federal, state, and private land managers.

Research Topic Selection. A top priority should be polling NFS personnel to determine WHAT THEY NEED. The large majority of Research papers seem to written by, of, and for other researchers and have little relevance to land managers and staff specialists at the Forest and District levels. Very little of it addresses our management problems and the research needed to solve them. Product delivery is far less a problem than developing the RIGHT PRODUCTS.

Review long range planning efforts for scientific validity. Comment on trade-off's not readily recognized by the planning teams.

RFPs and the review process need to be standardized and conducted at the Washington office rather than by individual projects. The Forest Service should adapt procedures similar to the USDA CSREES.

See last comment. The service and search engine work very well once you format search parameters through experience. Thank you for the opportunity to comment.

Serve more than USFS interests.

Since I work for private industry, my management objectives differ from those of the Forest Service. Some of the low scores I gave reflect these differences. These low scores indicate that some of the information you develop has little application in industrial forestry. It is the job of your R&D people to support your management objectives and activities. This is as it should be and my scores should not be interpreted as a basic disagreement with your priorities or the overall quality of the information you provide, just that I can't use all of it. I don't know what I would do without you.

Some information could be made able in presentations on CD-Rom versus print material.

Some of my experiences with R&D are very good. There are particular areas that are very weak. Too much time and effort is going into testing pheromones given the low success rate. There is limited forest pathology support at PSW. IPIF is frequently arrogant and no responsive to needs of island foresters. There are long-standing erosion problems on Guam and there's not effort or interest in helping, although the Institute Director is willing to take pot shots at the local university researchers who are looking for solutions. If I go to the Rocky Mt. Research Station website I find lots of useful information and I wonder why that type of information isn't available for California. We've struggled for years in California trying to manage certain mega fauna species and the available data hardly seems useful to managers. We fund research to do certain work for us and I have found them to be not very careful with the use of our funds. For example spending our money and not having accomplishments to show for it. At least one entomologist refused to share Ortomicus Erosus samples with us, which compromised a project we were doing. So, there are some relationships that are very poor.

Standardize naming of Forestry Research Reports (Report Type '_' Research Station Report and Report Number (i.e. GTR_NE001 for General Technical Report Northeastern Research Station

Report Number 001). Also, offer listings of all reports published by type and Research Station not just those available for download from the internet.

Standardize searching to conform to AltaVista and academic databases, which use nested Booleans, exact phrases, and wildcards.

Support the creation of a permanent workstation for the Northern Research Station at the Silas Little Experimental forest in the pine barrens region of New Jersey. Re-establishment of Research Work Station Unit NE-4555 for wildfire and fire management related research and related topics.

Tech transfer activities and a greater emphasis on bridging the gap between research and field application would be much appreciated. Researchers should be rewarded for publishing in trade journals, speaking at meetings attended by forest managers, conducting field tours, and generally using all the communication avenues available to reach practicing foresters. More use could be made of the Experimental Forests, both for field research and as demonstration sites. More research could be targeted at policy-relevant subjects. Another emphasis could be on long-term research that universities cannot conduct within the scope of a graduate student program. Silvicultural studies conducted years ago could be revisited to determine whether results and recommendations are different in today's changed environment.

Thanks for all you do!

Thanks for doing the research even though I don't always have time to utilized it.

Thanks for the good work.

Thanks for your service.

Thanks to FSRD's services on publications. If old publications can be online to be downloaded, it will benefit more on research.

The amount and breadth of research is enormous; it is often difficult to find the specific information I'm interested in. Publications are fairly well organized but inevitably lag a couple of years behind current research. I think the only way to capture research (past and present) effectively is to decentralize the responsibility. Require each researcher to maintain an up to date web page on their research, with links to related products. Provide them with a tool to easily build a standard page and link to products, also a thesaurus so they can code their information with common keywords. Enable access to this information directly by keyword search or by drilling down through research programs at the various stations. Provide an automatic notification agent that can run keyword searches periodically and e-mail new results (like usajobs.gov). If possible, do some interviews to better understand responses to this survey? It was difficult to provide one number answers to many of the questions. I greatly appreciate the work you do and would be happy to volunteer ([Name Deleted] at oregonstate.edu).

The biggest thing that FS R&D could do is to listen to what the Forests need and then make it a priority to meet those needs. I work with one research scientist who exemplifies what I want from research...her name is [NAME DELETED]. Look at what she provides and you will have a

good example of someone working hand in hand to meet the needs of Forest managers. Publications that explore the state of science on emerging topics are very useful. I would like research to be rewarded for entering into cooperative projects that are demonstrating new management/mitigation techniques...projects that take ideas that have been demonstrated somewhere else, but need some adjustment to make them usable in a new environment.

The budgetary cuts to the specific program I work with [coatings] over the last decade have severely hindered the amount and type of research and ability to get the word out to the industry on best practices. I realize the FPL is doing the best it can within the constraints given by congress, but the politicians need to wake up and smell the coffee, as our FSR&D program is in jeopardy of being left behind by other countries...

The contact I've had with R&D staff directly involves mainly emails or phone calls. The response time to emails is extremely slow, and occasionally never. The information available on the public internet or USFS intranet is scattered and difficult to access. Better response to individual emails, especially prominent or well-known researchers, would be appreciated. R&D could work on its PR skills and response time to research questions in particular, or at least provide a courtesy response email explaining they are busy and what a better way to contact him/her would be. A comprehensive, central website with links to the various stations, publications, and upcoming news, as well as a monthly or quarterly newsletter, would really help disseminate information and help individuals locate products as needed.

The current problem with FS Research is not related to the quality of its products but with the quantity. Over the years the number of research scientists has dropped dramatically and there are now far fewer researchers generating useful and needed information.

The FIA Program is the strongest and most valuable part of R&D program. Continue to support the geospatial application development that provides current FIA products and information in map formats useful to field managers. Basic research being performed by other Stations is misdirected and not relevant to field users and resource management issues. Many research efforts also are duplicative between various research Stations. There needs to be better coordination between Stations to avoid duplication of research.

The Forest Service R & D work has been helpful in both my teaching and research. I hope to see more products.

The Forest Service should better utilize the survey for research as there are many more samples taken. Research results coming from 'canned' research forests that in no way represent what is happening in the real world are relevant for today's problems. Each project should share equally in the administrative costs of the station. FIA pays more of its share than it should when more citizens than all other FS research use its results.

The Forest Service should hire more entomologists and plant pathologists, and make their services available to land owners and land managers through State and Private Forestry. The services SPF experts are invaluable and often can be found nowhere else.

The information on rangeland ecology and management is of most value to me.

The land managers do not need another Model that doesn't interface with the few models they actually use. I believe too much is being spent on models that use out of date stand exam and FIA data and that are not user friendly. Some of the models are likely pretty good, but they are only as good as the data that is being fed into them, and if that's out of date the model's are of no use to today's land managers. If half the money being spent on models were used to gather the data for the models, such as stand exams, then I would be more inclined to view the silvicultural models as useful. One of the Chief's four threats is invasive species. In the West, I know of two researcher Entomologists with USFS that are working on invasive weed species for overall management. One is retiring and his program will likely disappear, the other works on invasive weeds as side projects, when will R&D step up and put some serious man power into researching management techniques for invasive, or at least make that presence known? If invasive are so important, why are programs being cut that are mostly funded on money from outside the USFS? I love the Library system for finding literature. Send in a request sheet and either they email a .PDF file or a hard copy shows up in the mail in a few days. It works great.

The leadership at the Forest Service should prevent private companies, and individuals, from conducting actives (e.g. well drilling, mining, road construction, dam building, & logging) that are not compatible with the carefully planned, long-term research being conducted in our nation's experimental forests. At the very least the mineral rights should be purchased for all 55 experimental forests, and legislation should be enacted to prevent the full NEPA assessment of potential impacts from by by-passed by the issuance of a categorical exclusion. The lack of effective leadership (at the national, regional, & local level) with respect to a recent incidence in the Mon. National Forest was very discouraging and has: 1) seriously threatened a unique long-term data set on stream-water quality; 2) jeopardized research funding for myself and many other researchers; 3) opened the door to the exploitation of a wilderness area; and 4) set a dangerous precedence that could long-term research at experimental forests in general. This needs to change.

The loss of FS Research Entomologists and Pathologists over the past 10 years has reduced the ability of this unit to serve Forest Health Protection, the National Forest System, other Federal land managers, and state and private landowners. If this trend continues, FS Research may become irrelevant to our mission.

The more web-based materials that can be provided the better (e.g., PDF, etc.). One of my biggest problems is finding what or who I am looking for (in a timely fashion). This is the plight of any very large agency, but better search tools might decrease the time needed to find information or personnel. Overall, I am generally quite satisfied with USDA-FS.

The most useful products are reviews of the scientific literature relating to my specialty, especially if the authors are aware of USDA For. Service & regulatory agency policies and laws regarding the resources (Nat. Environmental Policy Act (NEPA), Nat. For. Management Act, Clean Water Act, Endangered Species Act). These are few and far between. The second most useful product is the scientific studies that you produce. Keep up the good work.

The needs of industrial and non-industrial customers are very much being ignored in order to direct effort toward NFS problems. Most forestland in the US is in private hands, and those owners have very different issues and challenges than do the National Forests. FS Research used to produce information that could be applied by landowners to better manage their forested

lands. We have very little use for research on social issues associated with National Forest System management. You've left a very large group of customers high and dry!

The numbers of scientists working in the areas of forest entomology and plant pathology has decreased dramatically over the last 25 years, and I don't see plans on that changing. In fact, I'm not sure that soon to be retired scientists in these fields will be replaced. Because of the major effects to resources that can be caused by both insects and pathogens, I believe increasing the numbers of scientists in these fields is necessary if Forest Service Research and Development wants to remain a leader in these disciplines.

The problem is not the quality of the staff, or their work. The problem, at least as I see it, is the savage cuts in research and the general sense that research is not a priority. I know and respect many colleagues who work in research with the USFS and they are demoralized. This will take more than a snazzy website to fix.

The question the FS and Congress need to answer: 'Given the size of the FS Research budget, is the FS R&D competitive with other research organizations in the world?' I believe the answer to that is a resounding NO.

The role of research is research, nothing more, nothing less. The role of the manager using the science of management which pre-dates the ecological sciences--is to select where the appropriate ecological science is needed. This can only be achieved if responsible but opposing viewpoints in the ecological science are carefully described in a manuscript.

The scientific info of the FS is absolutely reliable and modern, very useful. One highlight from USDA FS is that one can use the info without providing the source of info, as the FS publications state (of course we do include the source of the info in papers); however that tells of the philosophy of the organization to extend the scientific findings of the FS researchers in the USA and worldwide. Congratulations and thanks for your help (and hard copies that the USDA FS gave me in the past).

The search mechanism could be improved to provide more understandable results.

The staff is excellent in every way. The greatest limitation seems to be funding for things like programmers to write applications to synthesize existing research results into a usable application.

The tools/services I use most pertain to syntheses of existing tools/equipment/methods and literature searches (not necessarily lit topic syntheses).The syntheses are quite valuable for comparing existing methodologies or tools, and aid in determining what would best serve the particular need. Being able to access current literature free of charge to the forest is invaluable (from the research/development stations and from Journals). I receive the TOCs to multiple journals (through RMRS) and regularly check research and development websites for what they are currently working on. Through what is provided by research and development I am able to stay abreast of current literature on topics I deal with on a regular basis. Relative to the research stations (I am unaware of how this pertains to the development centers), I feel like much of the work they do on forest is on those immediately surrounding them. I would like to see more work and collaboration with those forests not so close to station locations. I am not assuming the

responsibility of initiating this to fall solely on the research centers, but think it would be valuable to work towards.

The various Station publications I have read over the years have served me very well during my career. I have no major complaints about how the USFS shares its findings. I mostly have praise and thanks for those who have dedicated themselves to making the on-line approach to research findings as easy to access as it has become in the last decade or so. I go back to the days when I used to send request cards all over the country in hopes of obtaining a copy of a publication, report, or presentation that one of the scientists had recently completed. The newer approach to accessing research findings and reports is quite a winner in my book. The newer generation of researchers, faculty, and practitioners should be very thankful that the Forest Service has done such a good R&D job over the years and continues to seek ways to 'fix' the system even though it isn't broken. Many thanks.

The work done by the Research and Development Centers is excellent, equal to the scientists in the research units.

The workshop on invasives held in St. Paul in February 2006 was excellent. Perhaps an annual or every other year type of workshop could be held to roll out new research results and engage fellow practitioners/researchers in upcoming efforts would be great. Keep up the great work!

There is a need for more researchers and more funding going to habitat and vegetation programs. Currently, key habitats such as aspen and riparian communities are being lost and the program in the Rocky Mountain area is getting less and less money. And more of your great researchers are retiring and there are very few people to replace them. I am satisfied with the current product but it is clear that these programs are being phased out and I believe that FSR&D is making a mistake that will cost us dearly in the future.

There is an obvious erosion of scientific and professional forestry/biology response capacity that extends from academia to state and federal agencies. Attrition associated with retiring scientists (both research and field practitioners) is leading to a loss of expertise and decreased capability to address current situations; the implications for addressing future problems are even grimmer. Anything that the FS R&D program can do to champion reinvigoration of training and employment of forest scientists/practitioners (ecologists, entomologists, pathologists, etc) would be highly beneficial to the forest resource management and protection community.

There is too much disconnect between users and R&D. Although the information is scientifically rigorous, often it is presented in a manner that is not applicable, user-friendly or understandable. Research findings must be synthesized- data and studies might exist but they need to be 'packaged' and synthesized for ready application by users working under current political/social realities. The barrier must be breached either through required participation with users of research by user advisory groups during performance evaluations or establishing 'use/applicability of research findings' as a performance measure for most R&D personnel.

There seems to be a limited amount of staff to take on new projects and to revisit old and ongoing projects. Perhaps if the Forest Products Lab advertised more, industry would use the facility more increasing funding sources.

These notes were originally mailed to [NAME DELETED], re. A Fire and Fire Surrogate Study Workshop held in North Carolina. They are valid in this context as well: 1. Use English units. I know, this is blasphemy. So maybe I should say, include English units along with the metric units required for the journals. But seriously, mega grams per hectare of fuels, or basal area in m^2 per hectare means nothing to these guys. It means nothing to me, either, though I can at least switch between feet and meters, and inches and centimeters. 2. Keep the message simple. I was scribbling away, trying to write all the effects of each treatment on every species...only to hear the researcher say at that point, 'but none of these changes is significant.' Maybe presenters could minimize the discussion on the non-significant results. It's tough to do that when the research is dealing with three treatments, three replications and several years of data, but we, the managers, need to know what's most important, rather than every detail of the study. 3. Tell us the bottom line -- don't bury the take-home messages. Speaking of several years of data, we know by now that we need to be patient and wait for the ecological changes to occur over time. However, it sometimes seems that just as much emphasis is placed on what happened immediately post-burn, as is on the 2nd or 3rd year data. If that's the case, then maybe presenters can summarize the 1st year information, and spend more time on the longer-term results. One presenter, in the middle of the talk, noted that we need more than 1 burn before we see results...but that message was buried in the middle of his results discussion. 4. Following up on #3, it would be great if we could we get a hand-out of the conclusions or summary before we leave the meeting. In some cases, I've requested the power point, though that request was not always well received. And I know that these results are often preliminary. But as someone in our group mentioned, what we write down is more likely to be in error than the results are likely to be revised. The handout could list all the caveats, such as 'this data has not been peer-reviewed' or what have you. Having a summary sheet in our hands while the information is fresh in our heads would help us to add any notes. The proceedings are great, but when we get them months later, we might not remember what's there. (I still haven't gotten any follow-up info to the Coweta fire ecology workshop held last May...). 5. Feedback to you guys. Thank you for taking the time to interact with us and ask for ways to improve. 6. Advertising! I heard about this meeting two times: once directly from Richard Reitz and once via the mailing list of those who attended the Fire and Oaks conference in Ohio. I forwarded information two times: once immediately after I learned of the conference, and second, after I got the initial agenda. This second time, I contacted Rick and confirmed that there were still slots open. But when I talked with him at the meeting, he told me that the final enrollment was only about 80 (not the expected 100+), and that was including the researchers. If I had known that, I would have sent a third notice out to the national forests and other contacts I have. I never saw a notice come through the 'ologist channels, or through any of the various newsletters (internal or external) that we get. We need the fire managers, administrators, 'ologists and even interpretive staff at these meetings. And putting on the meeting was a lot of effort on your part, for the relatively few people who heard your message. We could all benefit from increased attendance. 7. How about un-manned posters set up at meetings? In the near future, USFS R8 Botanists/Ecologists are meeting in conjunction with the Association of SE Botanists, and later the all the Staff Officers and all the Foes are meeting together. That might be another way to get the message out. Provide a summary of some of the study results, along with the website for more information.

These were items I wanted to click on the last question (it had a max of 3 responses, but I feel these were still important): make users aware of new publications and use standard web sites for all research web sites. Also, be more helpful in attaining referred pubs -- the online services I've used include lots of searching and frequently only getting abstracts or citations.

They are a pleasure to work with.

They do a good job... A uniform format for web sites and one-stop-shop web site would be the biggest help.

They need larger budgets, especially in urban and community forestry, because the need is great.

This survey was difficult to answer as written because my responses vary distinctly by station. My answers primarily reflect my opinions regarding the PSW station. I have some dealings with the PNW station and believe the ratings would be at least several levels higher. However, I have dealings with the Rocky Mountain Research Station and my ratings would have been the opposite. For fire questions, I will often start with PSW Riverside and get a curt or no response or not a useful one. I will then go to the Missoula Fire Lab and get a courteous, prompt and useful one. Secondly, while I am located in California...it is rare that I am aware of much that is going on with PSW. On the other hand, it is easy to know what is going on with the Rocky Mountain Research station for several reasons. First, they work on products that are useful and they make sure that they let people know they are there and are approachable with questions on them. It seems that PSW works in a vacuum and is not receptive of manager's input. They tend to focus on communication with higher levels of management (i.e. Regional Officer) and assume that it filters down to Ranger Districts...it does not. IT also seems that they spend little time with managers and hence their research seems to be of little relevance to priorities. Next time, this survey needs to be changed to reflect different answers by station.

To reiterate, I would like to see Research Station researchers interact with field professionals (for example, ranger district level in FS) in order to better learn about questions that resource managers would like addressed. While I appreciate and use the information provided by research, it seems as though this step is missing.

Too much current emphasis on technology, Landfire and models. Methods and scientific principles do not have to be new to be useful. New protocols are often untested and have bugs. This survey is rather lame in that it forces you to pick an answer to a question that really doesn't have an answer, such as rating hundreds of contacts with FS Laboratory personnel as a single number! They've ranged the spectrum, naturally--how is that going to provide useful information?

Truly focus on what issues are facing the National Forest System. I've seen research done, even locally, but have no clue how to use it to help accomplish work tasks. I've also seen different groups within the same station working on similar research with little or no interaction. Better communication within the Research community and with external publics would help.

Try to propose to Forest Managers ideas for useful training/technical transfer sessions to entice more training to occur closer to home and attempt to make it tailored to the local situations/needs. Outreach to Forest Managers to get new ideas for needed research; ask for locations to fit these requests. Try to utilize lesser known and under-utilized experimental forests for research projects.

Trying to find and access information on the web is laborious and very trying. I have my best luck searching USDA FS publications and research through Google. The USDA system is very clunky and cumbersome. Also, we used to be able to use web of science for finding authors who cited or were cited by a publication. That option expedited the process for finding relevant publications and information. Combined, these two shortcomings really make it frustrating for me as a hydrologist to find current and relevant information on the Internet. Finally, when I find publications on the web, many are not accessible as of yet. This is especially true of GTR's.

Unfortunately I don't know much about R&D.

US Forest Products Laboratory in Madison Wisconsin should be given additional resources to be able to attract and hire talented scientists and engineers who will replace world-class scientists who are retired. The USFPL plays an important role regarding the success of US wood products industry, and safe use of wood products.

Utility and timeliness of research information would be greater if delivery was not through organizations but through topical subjects and issues. A one stop shop or way to better search research results and publications by subject would be useful. Notification of emerging reports through networks or sign up mail service might be a way to keep current with research results.

We have worked with FS R&D for over 10 years and learned how to access the people and the materials. I think we need to work with the organization to find a way to make the time available to get your scientists into the field at workshops on restoration, fire, utilization and marketing, etc. These are all timely social issues...and society needs information. FS R&D is an excellent part of the agency and an important resource for all of society. Keep up the good work, fight for the budget, and share the knowledge.

We still don't understand fire spread and especially the importance of chaparral fuel age in fire spread. Fire modeling programs are good but fall short in being able to be implemented immediately on the fire ground. Real time fire mapping at regular intervals seems technically possible but a distant dream. Should IAPs for incidents be wirelessly uploaded to PDA’s? Should software managing major wild land fires and other emergencies be beta tested on real incidents? And released in April or May?

We work very closely with the RMRS. The knowledge base is indispensable. We would be lost without their help in many cases. We began Forb production at our facility; we've had [NAME DELETED] visit with us on sowing, elevation bands, etc.

When I approached the Forest Service about California's proposal of using 2 x 6 studding in all homes to accommodate fiber insulation at a depth that would meet their 'R' rating needs, they were not aware of the amount of additional timber this would consume yearly. They also were not aware of how this would affect the frost lands if adopted nation wide. I work in an area of energy conservation that looks at how using or not using my product effects the environment and the depletion of resources. My research shows that at today’s current rate of building, we would use an additional 198 miles of timber to build all of the homes in the USA of 2x6, allowing for 20% to be used building with steel. What would the number be down the road in 2012 or 2060? I think the Title 24 program has a lot of positives and some negatives, and I don't think

California State officials have thought out the long-term ramifications of some of their proposals. The USDS needs to take a close look at the long-term effects of some of these proposals.

When you ask for input from cooperators to help direct research follow through on it. Cooperators typically want more practical knowledge and tools to help do their jobs. Researchers typically ignore this need and pursue their own research desires regardless of user needs! You'd get more support by providing useful and timely tools to cooperators. I realize there is a need for pure research and that it advances science but there needs to be a mix of practical and theoretical outputs!

While the southern research station has been extremely proactive in getting their publications on the web and getting info into the hands of potential users, other regions simply haven't kept up. While I have no problem getting publications from the northeast station once I know what I want, finding out about new publications takes a lot of time and effort I simply don't have. I love SRS's new quarterly magazine and wish this were available for other regions. If there was one area I'd like to see the FS do more research and publication, it would be in the area of invasive plant management and ecosystem restoration following site disturbance, particularly as it applies to watershed protection and water quality. My own research program in these areas has difficulty getting off the ground due to lack of funding and personnel resources (I am a research program consisting of one person and a couple of part-time summer interns) and would greatly appreciate any assistance available in understanding these relationships.

With the change in forestland ownership from forest industry to TIMOs and REITs, and the uncertainty about the new owners becoming involved in R&D research, we need the Forest Service R&D to once again be the leader in forest research.

Work more closely with National Forest and Forest Health Protection groups to prioritize research needs, then provide some researchers to work in those areas.

Would just like to be specific about products/services/people I've worked with I use FVS (Forest Vegetation Simulator) a lot and ask questions of the FVS helpdesk in Fort Collins (I believe) frequently. The FVS helpdesk is always prompt and thorough in its responses. Very helpful. [NAME DELETED] has been exceptionally helpful. [NAME DELETED] has also been helpful. FVS is well documented but sometimes overwhelmingly so, such that it is sometimes not so easy to find answers from the documentation, simply because of its volume. I also use the Most Similar Neighbor Analysis program developed by [NAME DELETED]. The program is well documented and both individuals have been very helpful. I also use Forest Inventory Analysis Integrated Database and have worked at the FIA PNW office to work with actual point locations through a user agreement. Individuals at the PNW FIA office have been extremely helpful in facilitating this process and in explaining the data. Special kudos to [NAME DELETED]. Biggest difficulties in using this data have simply been logistical, due to the fact that we can only use the confidential FIA point locations at the FS office, and it seems that there are often problems with the computers there (which the employees there also have to deal with) ever since FS computer help (internal IT services) went offsite. Bottom line: all of the individuals with the USFS have been extremely helpful in making their data useable and deserve many thanks.

Would like to see more capacity in aquatic invasive species area, as that is a global issue that my agency has not fully embraced in FS R&D Deputy Area.

Would like to see more emphasis on urban and community forestry - with our population more and more urban centered, they are not as keenly aware of the importance of forest health issues nor are they inclined to support it. I would suggest that the FS needs to be more visible in the urban areas and provide more focus to urban forestry issues in order to maintain its relevance to the public at large and the decision makers in DC.

Would like to see tree inventory information obtained from the Mapmaker website be consistent with what was printed in past research publications.

Would like to see way more R & D on technical recreation-related issues, as they are our future, e.g.: dispersed use data collection methodologies on a reduced budget. Thanks.

Yes I do. I have used SILVAH, NED/SIPS, NED-1 over the years, and hope to use NED-2. It seems very odd to me that only one person in the USA can answer seemingly rather simple questions about NED-1. I understand he designed many parts of these. Even so, I feel like I am taking him from his research when I call or email. For this reason, even though the product is fantastic, I tell everyone not to use it because if there's a problem you are on your own. It would sure be nice to have someone else to call. Thanks for asking!

You could start with supporting the wilderness scientist position at the Aldo Leopold Institute that the Rocky Mountain director eliminated. That was a very poor decision. The work being accomplished in that position is extremely important in furthering wilderness management and may have long lasting impacts on the future. I had a very positive experience working with this scientist. Secondly, the FIA program needs to work with wilderness managers to improve existing knowledge on the vegetation components of wilderness. There is much baseline information needed for wilderness that needs collected and it needs to be done in a manner that is congruent with manual direction, and done in a partnership with the wilderness program in a positive working relationship. The information gathered needs to be fully, and readily available for managers to access and use. I have had less than a positive experience with the FIA program and trying to accomplish the needed inventories in an open working relationship and in a manner that meets wilderness policy direction.

You folks are great. I use the reports and services all the time. I transfer that information to the other agencies that I work with. Those folks are always appreciative of the information. Please continue to provide the reports in a published format - it is still easier going through a printed report than on the computer. I appreciate that you list the scientists and other staff members and their disciplines on the websites. This helps me determine whom I should talk with.

You know, I simply don't have time for this right now. I'm too busy meeting deadlines and the like.

Your organization is excellent. The breakdown is not on quality, it is on quantity. The R&D organization is understaffed and under funded considering the magnitude of pressing questions facing forest ecosystems. This is why I didn't give you a 10 on the question of ideal research organization. Having said that, our experience has been very positive and the staff that we

regularly interact with is extremely competent and professional. The partnership with your organization is a key factor in our success.

Your research is primarily market (politically) driven, and therefore often suspect in its evaluation and conclusions concerning the health of the forests. As long as the forest industry is providing the bulk of your funds, and the revolving door is open for your administrators and researchers between the forest service and timber industries, your science will always be tainted by your propensity to consume rather than preserve. Fix that.

[NAME DELETED] and his group in Madison do an outstanding job. It would be great to see additional resources committed to this group so that they could continue with their unbiased research.

[NAME DELETED] at PSW is an extremely talented researcher and presenter. Promote her.