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Fiscal Year 2004 Business Report



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Introduction

The Forest Inventory and Analysis (FIA) program of the U.S. Department of Agriculture (USDA) Forest Service provides the information needed to assess the status, trends, and sustainability of America's forests. This business report, which summarizes program activities in fiscal year (FY) 2004 (October 1, 2003, through September 30, 2004), gives our customers and partners a snapshot of past activities, current business practices, and future program directions. It is designed to increase our accountability and foster performance-based management of the FIA program. (Note: This business report does not include statistical information about the forests of the United States. Those who wish to obtain such information should contact the appropriate regional or national FIA office listed on the inside back cover of this report or go to <http://www.fia.fs.fed.us>).

The FIA program is the Nation's continuous forest census. We collect, analyze, and report information on the status and trends of America's forests: how much forest exists, where it exists, who owns it, and how it is changing, as well as how the trees and other forest vegetation are growing and how much has died or been removed in recent years. This information can be used in many ways, such as in evaluating wildlife habitat conditions, assessing sustainability of current ecosystem management practices, monitoring forest health, supporting planning and decision-making activities undertaken by public and private enterprises, and predicting the effects of global change. The FIA program combines this information with related data on insects, diseases, and other types of forest damage to assess the current health and potential risks to forests. These data are also used to project how forests are likely to appear in 10 to 50 years under various scenarios in order to evaluate whether current forest management practices are sustainable in the long run and to assess whether current policies will allow our grandchildren and their grandchildren to enjoy America's forests as we do today.

Changes from Previous Year's Business Reports

The financial table (app. 2) appears the same as last year's, but this year there is more consistency between FIA units in how data are reported, especially for administrative and indirect costs. This has been a particular concern of regional and national user groups. The direct cost of doing FIA business has been more clearly separated from more general research station assessments. Please see the section on "Program Resources" for more details.

In FY 2004, the FIA program lost no funds to "fire transfers," and in the Northeast Station, some restitution was made. Many other units had completed this restitution in prior years. This report also includes reporting of one-time carryover funds from FY 2003 that were applied to the FIA program at the direction of the new Deputy Chief for Research and Development—a clear commitment on her part to the full implementation and success of the FIA annualized inventory.

Appendix 3 has been modified by adding estimates of the number of employees that are funded with FIA grants and agreements to carry out the program as well as base Federal employees and totals. Contract work continues to become an important factor in program delivery flexibility.

Appendix 7 has been added to provide a 5-year summary to compare annual area of forest under annualized inventory. This report once again includes data showing the new reporting standard for percentage of implementation found in appendix 1 on a total forest-land basis, including interior Alaska and Hawaii. Reports prior to 2003 excluded these areas in the percentage of coverage calculation, and the percentage under that method is also provided for comparison purposes.

Appendix 8 has been added to provide information on the status of FIA special project areas in the islands of the Atlantic and Pacific. All the non-State islands were granted permission by Congress to operate with periodic inventories

owing to issues of scale and logistics. Returning to each island every year to collect data on a few plots was deemed too expensive to be efficient. Appendix 8 lists the total area, number of islands, number of plots, and current source of published data.

Fiscal Year 2004 Program Highlights

Program highlights for FY 2004 include outputs and products, program changes, program resources, and partner contributions.

Outputs and Products

Appendix 1 shows some comparisons across FIA regional units in the rates, costs, and performance of implementing the FIA program. Federal funding available for the FIA program in 2004 totaled \$62,724,642, an increase of \$3,054,052 from the previous year's total available funding of \$59,670,590. The funding consisted of \$56,652,000 appropriated by Congress specifically for FIA

plus \$1,298,107 in unspent FIA funds from the previous fiscal year, which should have been available for FIA in FY 2003 and \$4,774,535 in carryover funds from all research programs in FY 2003 (app. 2). In addition, partners contributed \$7,479,102 toward implementing or enhancing the FIA program in 2004.

In FY 2004, we were active in 44 States (fig. 1), covering 42,153 Phase 2 and 3,415 Phase 3 sample locations from the base grid, or 13 percent and 17 percent, respectively, of the total. At the end of FY 2004, 76 percent of all forested lands of the United States were covered by the annual FIA program, an increase from 71 percent of all forest lands in FY 2003.¹ Periodic inventories, exempt from the annualized

¹ In previous years, we reported implementation exclusive of interior Alaska because this large area (15 percent of U.S. forests) is planned to be treated as a special project. Now that we are getting closer to full implementation, we are adding interior Alaska to the rest of the program and will henceforth speak of implementation percentage in terms of "all U.S. forest lands," including interior Alaska.

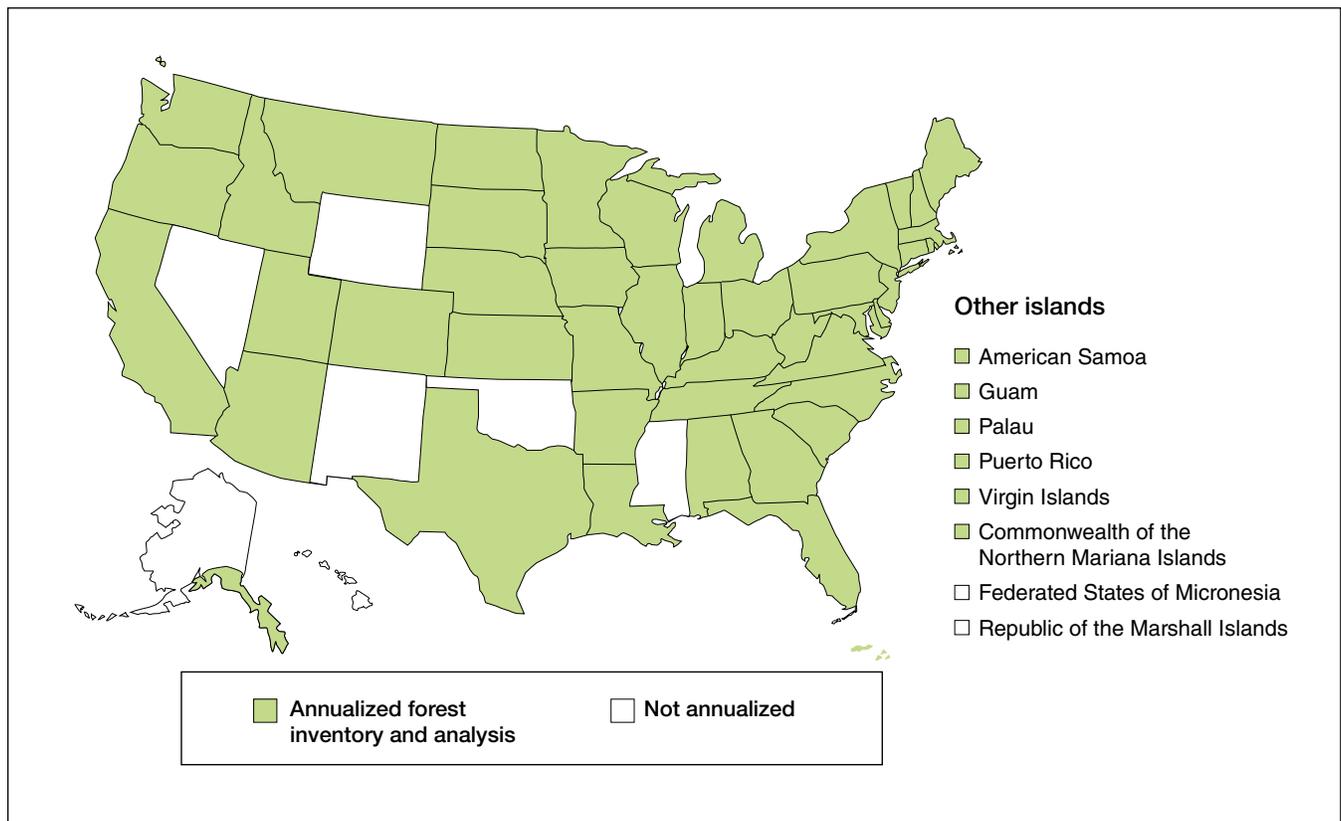


Figure 1—FIA implementation status, 2004.

system, have also been completed in the Commonwealth of Puerto Rico, U.S. Virgin Islands, American Samoa, Guam, the Republic of Palau, the Republic of the Marshall Islands, and the Commonwealth of the Northern Mariana Islands in compliance with Congressional mandate under the Renewable Resources Research Act of 1978, as amended.

The FIA program produced 114 reports and publications in FY 2004, 24 less than in FY 2003. Of these publications, 35 were core publications consisting of reports specific to a complete survey unit, complete State, national forest, or national report. This number represents a decrease of 4 core reports from the FY 2003 total of 39 core publications and reflects the continued difficulty the FIA program has recently had in analyzing and reporting inventory data for geographic units as funding to fully implement the analysis portion of the program has been delayed. We also published 25 articles in peer-reviewed journals (2 more than in FY 2003), and 28 articles in proceedings from scientific meetings and conferences (compared to 36 in FY 2003). The increase in peer-reviewed articles and decline in proceedings reflect a shift to more formal release of scientific approaches and findings. The FIA staff participated in 1,566 significant consultations with FIA customers, requiring 4,899 hours of staff time—more than 2 full-time staff positions. This signifies more consultations and total hours than in FY 2003 (1,450 consultations and 4,514 hours, respectively). The FIA technical staff met on several occasions to further refine the national core FIA program, resulting in the development and release of Version 2.0 of the national core field guide; development of the first national forest biomass map; enhancement of Internet tools for accessing and analyzing FIA data; and release of the National Information Management System (NIMS), which will provide a single national platform for processing FIA data and posting it on the Web. Our Internet resources processed nearly 26,000 completed data retrievals (up from approximately 12,000 in 2003) where FIA customers obtained user-defined tables and maps of interest, along with nearly 500 retrievals by users of the FSveg forest vegetation simulator, which uses FIA data as one source of input data for modeling forest growth and yield.

Program Changes in FY 2004

In FY 2004, the FIA program completed the 6th year of program transition to an annual inventory system as outlined in the Strategic Plan for Forest Monitoring written in response to the Agricultural Research, Extension, and Education Reform Act of 1998 (Public Law 105-185). The FIA program includes three sample levels, or “phases”: Phase 1, consisting of remote sensing for stratification to enhance precision; Phase 2, based on the original set of FIA forest measurement plots (approximately one plot per 6,000 acres); and Phase 3, consisting of a subsample of Phase 2 plots measured for a broader suite of forest ecosystem indicators (approximately one sample location per 94,800 acres). By the end of FY 2003, our goal was to implement an annual FIA program that measures at least 10 percent of all Phase 2 sample locations per year in the Western United States, 15 percent of Phase 2 sample locations per year in the Eastern United States, and 20 percent of Phase 3 sample locations per year in all States. Owing to lack of full funding, we are now more than 2 years behind the original plan. The base program will include annual compilations of the most recent year’s information, with full reporting at 5-year intervals. All States have the option to contribute the resources necessary to bring the program up to the full sample intensity of 20 percent per year, or to make other value-added contributions such as funding new measurements or additional sample locations. The permanent funding level in FY 2004 was still short of the target levels required to complete this transition by \$17 million. At present, full funding and full implementation are expected to be achieved in FY 2006.

The FIA program did not add any new sampling protocols in FY 2004. We completed the development of a vegetative diversity measurement protocol, which is ready for implementation in 2005, subject to availability of requisite funding. We initiated a pilot study of a new protocol for an indicator of tree damage.

Program Resources

At the end of FY 2003, we reported \$1,298,107 in unspent funds, which we expected to be available for use in FY 2004

plus an additional \$4,774,535 in one-time carryover funds from the Washington Office (app. 2). Congress currently appropriates funds annually for the FIA program in two different Forest Service deputy areas: (1) Research and Development and (2) State and Private Forestry (S&PF). Historically, most FIA funding was contained within the research budget of the USDA Forest Service. In FY 2004, the amount of research money provided by Congress for the FIA program was \$51,714,000, an increase of \$10,416,000 over the FY 2003 level of \$41,298,000 (app. 2). This increase includes the permanent transfer of \$6,200,000 of National Forest System (NFS) funds to Research and Development. Congress also provided \$4,938,000 in the S&PF Forest Resource Inventory and Analysis budget line (a decrease of \$11,000 below the 2003 level of \$4,949,000 as a result of rescissions) to support the FIA program in those States that provide a cost-share contribution. Thus, a total of \$62,724,642 in new, carryover, or base funding was available to the FIA program in FY 2004.

Starting with last year’s business report, the “direct expense” calculation includes charges such as office rent, utilities, FIA employee relocation costs, and other charges that, in the past, were generally assessed by research stations as part of the overhead rate, and were therefore not broken out separately. Because these charges are a legitimate cost of doing FIA business, and because we are now able to account for them separately, this and future editions of the annual business report will include such costs as part of “direct expenses.” The remaining amount counted as “effective indirect expenses” now includes only assessments for research station administration plus costs assessed to FIA units in support of non-FIA activities. By using this approach, of the funding available in FY 2004, approximately 82 percent was spent in direct support of FIA activities (fig. 2), 14 percent was spent on effective indirect costs charged by research stations, and 4 percent remained unspent at the end of the fiscal year.

Across FIA regions, cost and productivity figures differ because of the cyclical nature of the current inventory system and because of differences among field units in operational methods and ease of access to property. Rates

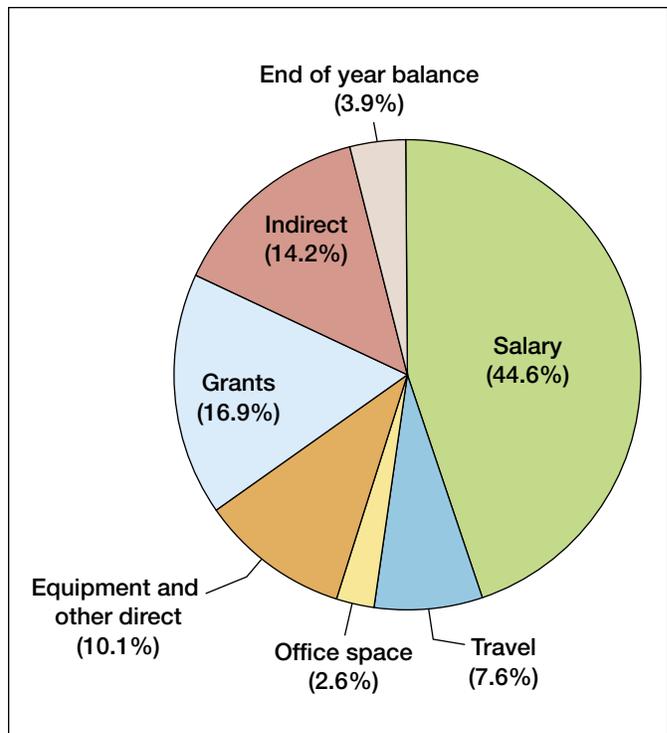


Figure 2—FIA Program expenditures by category, 2004.

of effective indirect expenses in FIA field units in 2004 ranged from about 10 to 27 percent across the country (app. 2), reflecting differences in both sources of funding as well as research station overhead assessment practices. The Washington Office had a 27 percent rate of indirect cost because its FIA budget includes the USDA overhead assessed to the entire FIA program. Figure 3 shows the total appropriated funding available for FIA from FY 1995 to FY 2004 from all sources, as well as the projected future total funding needed to deliver the base Federal program beyond FY 2004.

In FY 2004, FIA program staffing consisted of 426 Federal person-years of effort (app. 3), up from 403 Federal person-years in FY 2003. The largest change was in field crew staff (increased from 143 to 160 person-years); otherwise, the changes were relatively small and may indicate that our nonfield staffing is approaching the strength needed to implement the program over the long run. Of the Federal FIA employees, approximately 56 percent were

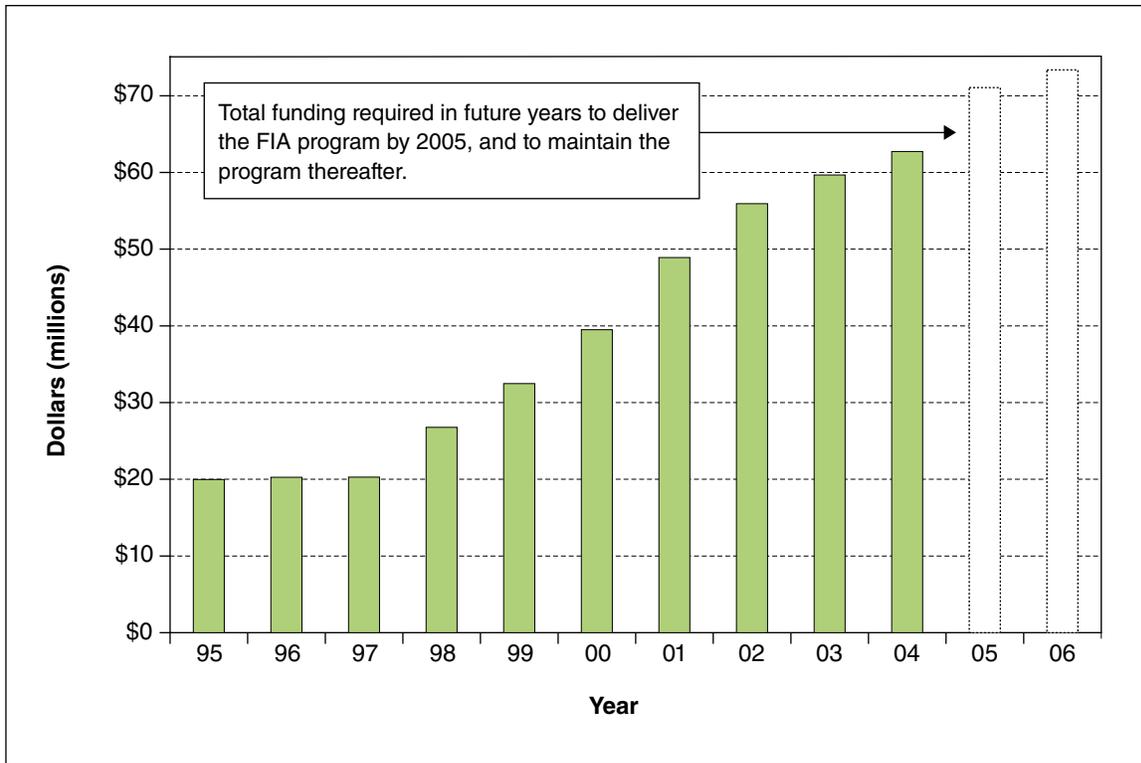


Figure 3—FIA funding level, 1995–2006 (projected).

involved in supervising and data collection, 27 percent in analysis and information management, 8 percent in program management and administration, 6 percent in techniques research, and 3 percent in Phase 1 production work (fig. 4). Each of these percentages is within 1 or 2 percent of the 2003 staffing values.

Much of the work done by FIA is accomplished by cooperators through grants and agreements. In FY 2004, it is estimated that we employed an additional 166 people through this mechanism. These bring the total number of employees working for FIA to 591 and represent 28 percent of the total FIA workforce.

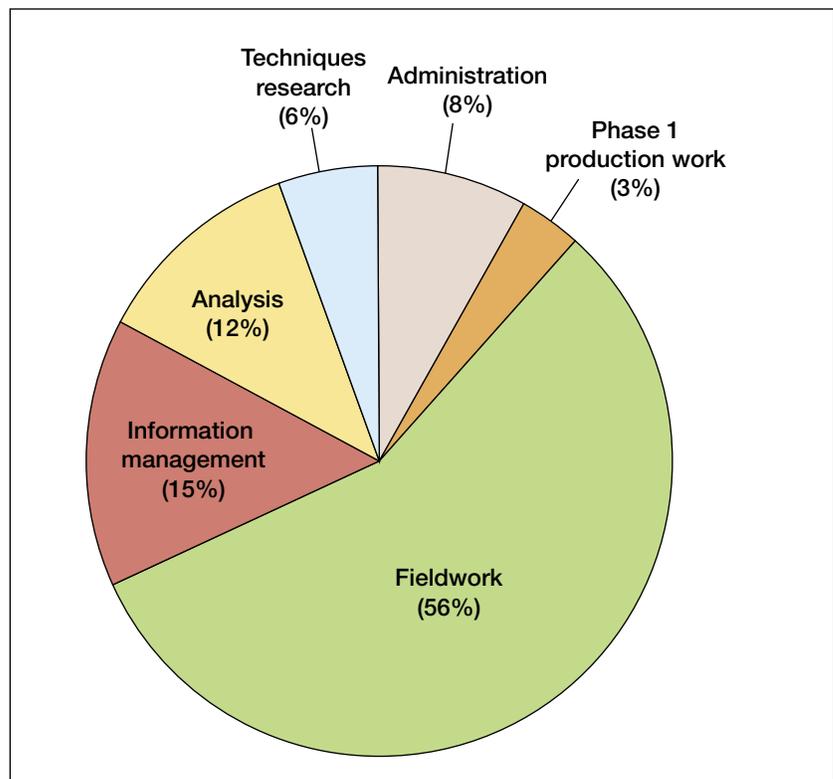


Figure 4—FIA program employees, by job group, FY 2004.

Partners' Contributions

The complete FIA program required by Congress is envisioned to be a Federal-State partnership, with both partners contributing resources to accomplish the work. We have agreed that the base Federal share of this program is an inventory program that collects data from 10 percent of sample locations in the Western United States and 15 percent of the sample locations in the Eastern United States on an annual basis, with comprehensive, analytical reports for all States produced at 5-year intervals.

Partners, at their discretion, may choose to contribute the resources needed to bring the FIA program up to the full 20-percent measurements per year described in the law. Additionally, or alternately, partners may choose to contribute resources for other purposes that add value to the FIA program from their perspective, such as intensifying the base FIA sample location grid to support analysis at finer spatial resolution, funding additional types of measurements on FIA sample locations, or providing analyses or reporting beyond that provided by FIA. The willingness of partners to contribute resources demonstrates the inherent value of the FIA program as a flexible framework upon which to address other issues of interest.

Appendix 4 lists those partners that have contributed resources to the FIA program in FY 2004, either to achieve the 20-percent program envisioned by Congress or to add value to FIA data in other ways. These resources include staff time, vehicle use, office space, equipment, travel costs, and other noncash items that support or add value to the FIA program. Contributions are valued for reporting purposes in terms of what it would cost the Federal FIA staff to provide the same service, which may not necessarily be the same as the actual cost to the partner making the contribution. Overall, partners contributed \$2,919,153 toward the full 20 percent FIA program envisioned by Congress, and another \$4,559,949 in contributions that add value to the FIA program, for a total of \$7,479,102 in partners' contributions. This amount is a decrease from \$10,163,895 contributed by partners in FY 2003. The source of the partner contributions depends on the region of the country. In the West, where forest-land ownership is primarily Federal, the major cost-sharing partners tend to be Federal land man-

agers, particularly the NFS branch of the Forest Service, which contributed approximately \$448,896 in additional funds to add value to the basic FIA program. In the East, where forest-land ownership is predominantly private, States are the major contributors. In FY 2004, States contributed over \$2.9 million to help implement the basic 20 percent FIA program, plus an additional \$3.2 million to add value to the basic FIA program.

FIA Data Availability

The FIA program is designed and intended to provide continuously updated, accurate, and reliable information on status and trends in the Nation's forested resources. Currency of information is one of the chief interests of FIA customers. Our program objectives include (1) providing annual updates for all forested lands sampled as part of the annual inventory system and (2) producing complete analytical reports for all States on a 5-year cycle.

As we move through our transition and toward full program implementation, one key performance measure is how well we are satisfying those objectives. Figure 5 shows, for each State, the age of FIA data accessible in our public database as of October 2004—the start of the 2005 fiscal year. States with 1-year-old data—the program objective—are shaded green; States with 2- to 5-year-old data are shaded yellow; and States for which data are more than 5 years old are shaded blue. This map shows that progress is being made in all regions of the country. States with data older than 5 years are a few States in the Northeast, South, and West. The number of “green” States increased from 13 in 2003 to 16 in 2004, and the number of “blue” States dropped from 15 to 10. Of the 23 “yellow” States, 12 have data that are only 2 years old. We believe that the implementation of the national FIA information management system will enable us to catch up on this backlog and shade many more States “green” by the end of 2005. Some minor slippage in loading current data has occurred as annual budgets continue to fall below target levels for full program implementation.

Figure 6 shows, for each State, the data collection year for the most recently published statewide FIA report. States where publications exist based on data less than 5 years

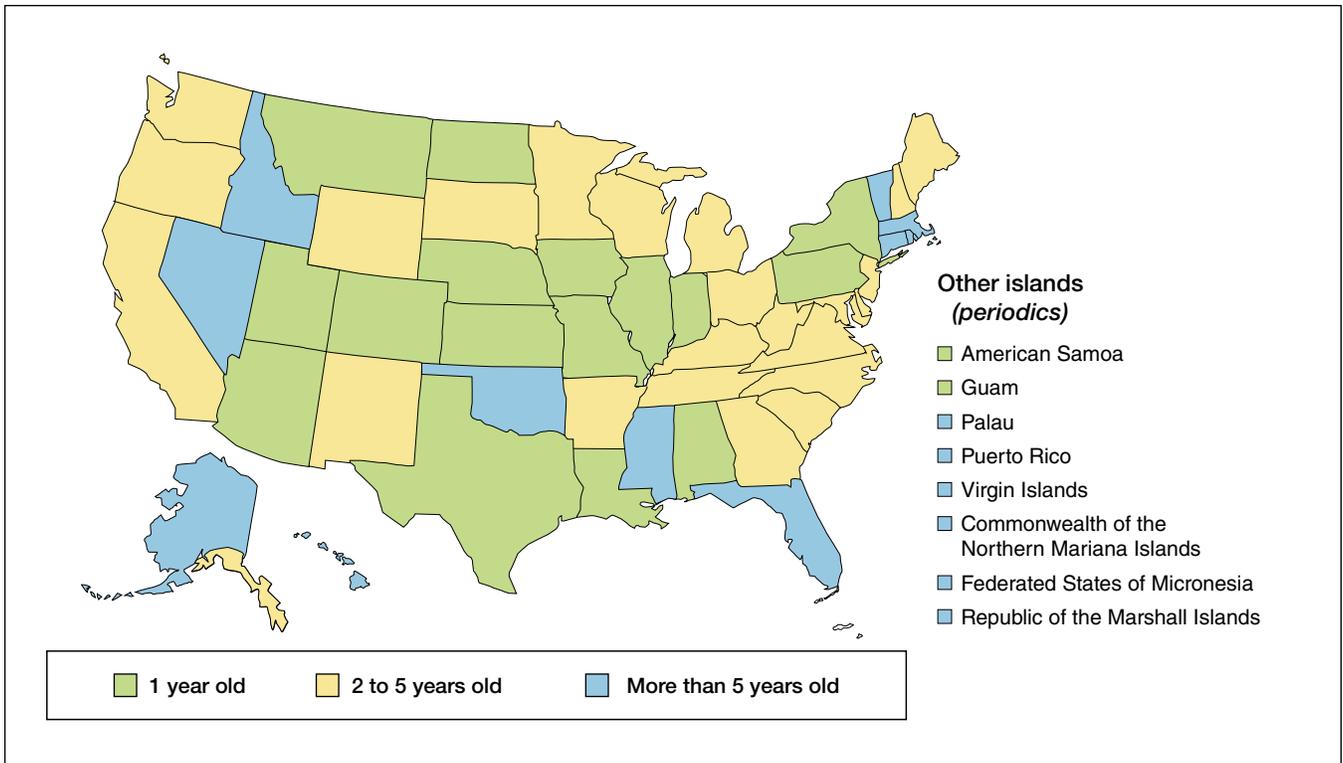


Figure 5—Availability of State FIA data, 2004.

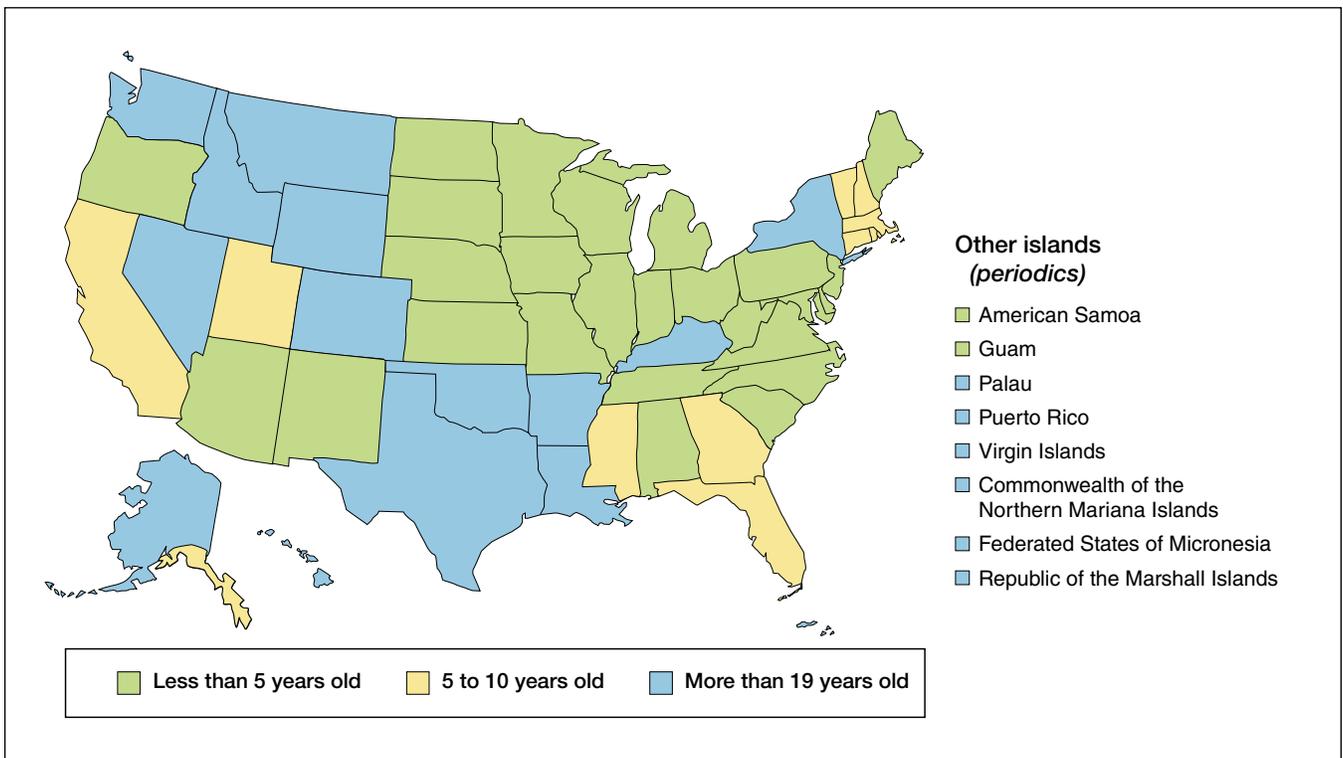


Figure 6—Publication status of State reports, 2004.

old—the program objective—are shaded green. States with publications 5 to 10 years old are shaded yellow, and States where the most recent publication reports on data more than 10 years old are shaded blue. The North Central region again leads the Nation, with all of these States having reports based on data that are less than 5 years old. Progress is more mixed in the rest of the country.

Fiscal Year 2004 Regional Highlights

The following section presents general information on the types of activities completed in each part of the country in FY 2004. Those wanting more detailed information on results, accomplishments, and impacts may contact the respective FIA unit (contact information for each FIA unit can be found on the inside back cover of this report).

West Coast

In FY 2004, the Pacific Northwest (PNW) FIA Program:

- ▶ Continued annual inventory in California, Oregon, and Washington and initiated annual inventory fieldwork in coastal Alaska.
- ▶ Measured 3,645 Phase 2 plots (10 percent of the regional total outside of interior Alaska) and 444 Phase 3 plots (17 percent of the regional total outside of interior Alaska) (app. 1).
- ▶ Produced 27 publications in FY 2004 (an increase from the 20 produced in FY 2003), including 3 core reports, 2 proceedings papers, and 11 peer-reviewed publications.
- ▶ Held two user-group meetings and two regional management team meetings, and continued to provide national leadership for the understory vegetation indicator.
- ▶ Applied a policy simulation tool (FIA BioSum in parts of Oregon, California, Arizona, and New Mexico). The tool uses FIA data to estimate biomass availability, financial returns, and fuel treatment efficacy associated with a range of silvicultural prescriptions and price assumptions.
- ▶ Conducted research on climate change and fire suppression, fuel load changes and prescribing

treatments, chaparral inventory, lichens and biomonitoring in central California, and timber resources of Oregon and southeast Alaska.

Interior West

In FY 2004, the Interior West (IW) FIA Program:

- ▶ Continued the annual inventory in Arizona, Colorado, Utah, and Montana, and initiated the complete annual FIA system in Idaho.
- ▶ Initiated the annual inventory in Nevada as part of a special project to enhance the existing annual system by stepping up inventory timelines, addressing the potential of strategic-level inventory on lands not traditionally sampled by FIA such as rangelands and riparian areas, increasing efficiency of woodland techniques, and reducing field data collection costs.
- ▶ Measured 6,868 Phase 2 plots (7.5 percent of the total for the region) and 853 Phase 3 plots (15 percent of the total for the region) (app. 1).
- ▶ Produced 11 publications, including 5 core reports (4 of them specific to individual national forests, 1 State report), 2 technical reports, 3 proceeding articles, and 1 station publication.
- ▶ Made available annual 2003 data and tables for all States in the annual system on the Web in July.
- ▶ Held one regional user-group meeting, three NFS-specific user meetings in Region 1, and one regional management team meeting; continued to provide national co-leadership for the soil indicator (west) through an agreement with another research unit within the Rocky Mountain Research Station; continued the collaborative effort with the LANDFIRE project aimed at mapping forest fuels and forest condition; and continued to provide national leadership and staff to ensure the timely loading of FIA data into NFS information management systems, to make FIA data readily available to national forest staff.

North Central

In FY 2004, the North Central (NC) FIA Program:

- ▶ Continued annual inventory fieldwork in all States (Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, and Wisconsin) and started preparing 5-year reports for Indiana, Iowa, Minnesota, and Missouri.
- ▶ Measured 17,904 Phase 2 plots (24 percent of their regional total) and 1,081 Phase 3 plots (23 percent of their regional total) (app. 1).
- ▶ Eliminated the vegetation diversity indicator from Phase 3 plots and slowed annual inventory reporting because of lack of funds.
- ▶ Produced 23 publications in FY 2004 (a decrease from 44 in FY 2003), including 1 national resource report, 6 State resource reports based on annual inventory data, 7 peer-reviewed journal articles, and 5 proceedings papers.
- ▶ Conducted research on survival modeling, downed-woody material, fuel-treatment opportunities, carbon, sustainability, decision support, and forest owners.
- ▶ Participated in one regional user-group meeting and one regional management meeting. Continued to co-lead the National Woodland Ownership Study as well as the Phase 3 soils indicator, led the downed-woody material indicator, and continued to develop and manage the Resource Planning Act database, the national FIA database, and Web applications.

Northeastern

In FY 2004, the Northeastern FIA Program:

- ▶ Continued doing annual surveys in Connecticut, Massachusetts, and Rhode Island, in addition to the six already in progress.
- ▶ Began the annual inventory in Delaware, Maryland, New Jersey, and West Virginia. As a result, the Northeast is the second of the five regions to have an annual inventory in all its States.

- ▶ Delaware agreed to provide funds to both reduce the cycle from 7 to 5 years and to help double the number of plots.
- ▶ Continued Phase 3 data collection in all 13 States within the jurisdiction of the Northeastern Research Station. The unit measured 3,478 Phase 2 plots (13 percent of the regional total) and 324 Phase 3 plots (20 percent of the regional total) (app. 1). The unit produced 19 publications including 2 State resource reports and 8 proceedings papers.
- ▶ Completed fieldwork in Maine on the fifth and final panel of plots for the annual inventory (and began remeasurement of the first panel). For the State of Maine, completed a 5-year comprehensive report, which will be published in spring 2005.
- ▶ Posted data on the Web for New Hampshire, New York, and Ohio within 6 to 8 months of the end of the fieldwork for the current panel of plots.
- ▶ The National Woodland Owner Survey produced preliminary results for 2003 and began collecting third-year data.
- ▶ Published a study of the tree resource on nonforest lands in the five-county Baltimore area. Developed mapping techniques to assess forest fragmentation by using satellite imagery. With the U.S. Geological Survey, we demonstrated that water quality decreases with decreasing forest cover.
- ▶ Held one regional management team meeting and one user-group meeting.
- ▶ Continued to coordinate the agreement to provide national support for the ozone indicator; provided national leadership, along with the North Central Research Station, for the National Forest Woodland Ownership Study and for internal technical coordination within the FIA program; and housed the national Spatial Data Services (SDS) Center to assist external FIA customers in working with FIA data in a spatial context. A national team was formed to coordinate spatial data requests between the national and regional centers.

Southern

In FY 2004, the Southern (SRS) FIA:

- ▶ Continued annual inventory fieldwork in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, North Carolina, South Carolina, Puerto Rico, Tennessee, Texas (including central and western Texas), and Virginia through cooperative agreements with 11 State foresters.
- ▶ In collaboration with its partners, measured 10,258 Phase 2 plots (11 percent of the regional total) and 713 Phase 3 plots (13 percent of the regional total).
- ▶ Produced 28 publications (an increase from 21 in FY 2003), including 1 State statistical report, 2 unit statistical reports for a closeout periodical inventory, 5 State timber product output reports, and the Southern Pulpwood Production report.
- ▶ Processed and provided data to State foresters in Alabama, Arkansas, Georgia, Kentucky, Louisiana, Tennessee, and Texas.
- ▶ Released annual inventory data to the public for Alabama, Arkansas, Kentucky, Louisiana, Tennessee, and Texas, and released periodic data for North Carolina.
- ▶ Hosted three regional user-group meetings and two regional management team meetings. Also, entered into or continued funding a number of cooperative ventures with university scientists and other stations, including cooperating with the University of Tennessee to complete a pilot study of the Phase 3 vegetation diversity and structure indicator on St. John, U.S. Virgin Islands, and by initiating further vegetation pilot study work in Tennessee; initiating cooperative work with the State of Virginia for application of aerial photography for Phase 1 area estimates; initiating cooperative work with Virginia Polytechnic Institute on work to improve the economical and statistical efficiency of Phase 1 estimates; continuing work with the University of Georgia on a Web-based hypermap.

- ▶ Continued to support the national FIA program through representation on technical bands and leadership of the remote-sensing band; leadership to NIMS development team; and leadership to the national data recorder software development effort.

National Office

The National Office of the FIA program helps to guide and coordinate the FIA field units engaged in implementing the enhanced FIA program. In FY 2004, National Office staff:

- ▶ Facilitated an external review of the SRS FIA unit for the Chief.
- ▶ Facilitated FIA's participation in a review of Canada's national forest inventory.
- ▶ Produced six publications (four more than produced in FY 2003). Most of the reporting effort in 2004 was focused on supporting several large assessments, including final printing of the Resource Planning Act "Forest Resources of the United States, 2002," the "National Report on Sustainable Forests—2003," the update of the "U.S. Forest Resource Facts and Historical Trends" brochure, and the first draft of the U.S. submission to the Food and Agriculture Organization (FAO) global Forest Resources Assessment 2005. Also participated in several international workshops focusing on global forest resource assessment reports.
- ▶ Facilitated one FIA management team meeting and dozens of briefings for internal and external partners, customers, collaborators, and supporters.
- ▶ Collaborated with the Society of American Foresters (SAF) and assisted the fifth national user-group meeting for FIA customers, which was held in Washington, DC.
- ▶ Prepared a presentation for Government Accounting Office (GAO) Auditors on FIA and its role in Criteria and Indicators (C&I) by providing overviews of FIA, Forest Health Protection, and Forest Products Lab programs and how they

provided most of the forest sector data for the Heinz Center Report. Answers were provided for 32 questions about the FIA program, its budgets, and ability to provide quality C&I data.

- ▶ Drafted a new Memorandum of Understanding with the National Park Service (NPS) to improve access to NPS lands and encourage opportunities for collaborative work.
- ▶ Initiated process to extend the Interim Directive on FIA data privacy to extend its provisions through September 2006.
- ▶ Continued working with the Conservation Biology Institute in Corvallis, Oregon, to develop and improve the Protected Areas Database. This database offers a significant improvement in reporting Protected Areas and has drawn the interest of the World Conservation Monitoring Union.
- ▶ Participated in FAO/North American Forestry Commission (NAFC) Inventory Working Group project on a large-scale summary database for North America. Completed a preliminary database and drafted three papers: one for CAMESA, one for the NAFC Board of alternates, and one for the Joint SAF/Canadian Forest Inventory Committee Convention in Edmonton, Alberta, Canada.

Spatial Data Service Center

In FY 2004, the national SDS staff received 88 requests for FIA data or information about the FIA program. Of the 88 data requests, 68 were completed during the fiscal year, 4 projects were still in progress at the end of the fiscal year, 3 were on hold by the requestor, and 13 had been either withdrawn or abandoned by the requester. Roughly 75 percent of requests are completed in 4 weeks or less; the balance generally

require more detailed consultations between SDS staff and the requestor, and thus take longer. Data requests fall into three broad classes: (1) summaries of FIA plot data for user-supplied strata (for example, a watershed basin within a State); (2) imagery analysis (for example, accuracy assessments of user-supplied forest/nonforest maps derived from satellite imagery); and (3) geographical information system/spatial data extractions (for example, where FIA data are overlaid on a user-provided coverage to classify FIA plots). Figure 7 shows breakdown of requests in 2004 by type of organization. In 2004, SDS's largest customer group was academia (37 percent of requests). Approximately 72 percent of the requests in FY 2004 were for data from a single FIA unit; 12 percent were for data from two to four units; and 16 percent involved all five FIA units. As SDS has become more well-known, and regional staff was added, requests have increased in both number and complexity.

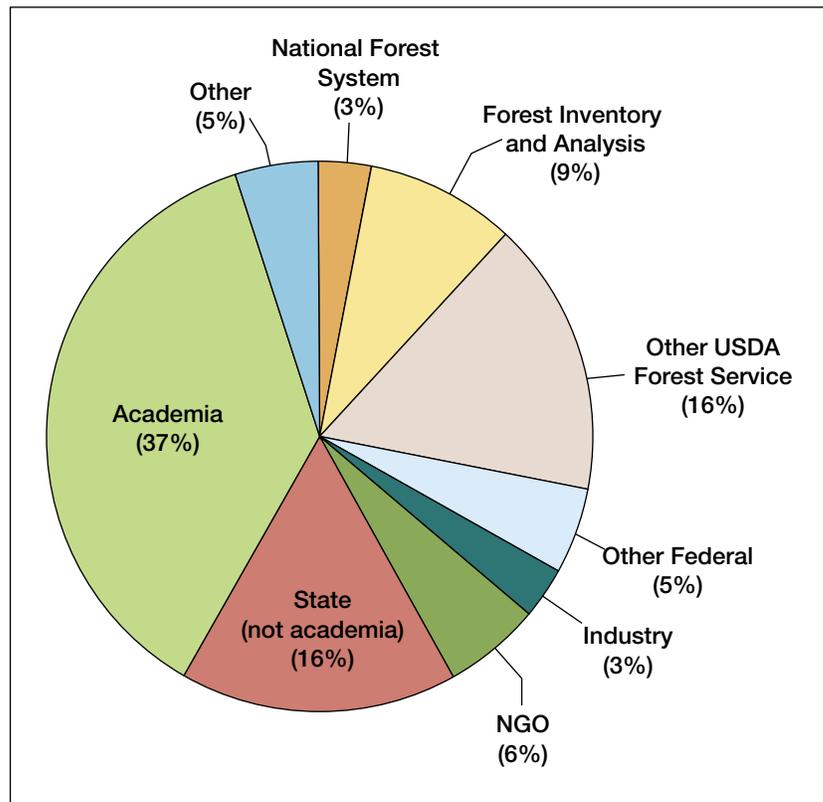


Figure 7—Requests made to the FIA Spatial Data Service Center, by organization, FY 2004.

Grants and Agreements

Each year, FIA units enter into various grants and cooperative agreements with partners to accomplish specialized work in support of the FIA mission. In some cases, partners provide expertise that is not available within the FIA program; in other cases, they share the workload. Appendix 5 lists 67 grants and agreements funded in FY 2004, composing \$10,625,840 or approximately 17 percent of the total available FIA program budget. This amount is a decrease in number (down from 93 grants in 2003) and a decrease in total funding, down from \$12,183,935 (20 percent of the FIA budget) awarded in grants in FY 2003. This number fluctuates from year to year; it demonstrates the reliance of the FIA program on collaborating with external partners to get work done efficiently. Most of these grants and agreements were with State agency (57 percent of funds) and university (34 percent of funds) partners (fig. 8). Other cooperators included other USDA Forest Service offices (7 percent of funds) and other non-Federal partners (2 percent of funds). The major purpose for grants was for collaboration in data collection and for research in techniques development. We expect to continue to make significant use of grants and agreements to augment FIA staff capacity in the analysis and reporting of annual FIA data for individual States.

Consultations by FIA Staff

Consulting with FIA customers is a growing part of our business. Just as we have increased information (both data and analyses) made available on our Web site, our FIA staff are increasingly available for customers that contact them seeking either to understand more about the FIA program and our results, or seeking to address a specific question not obviously addressed through other means. Questions pertaining to a single administrative unit (for example, to a single State or to a single national forest) often are referred to partners within that administrative unit (for example, State foresters, national forest analytical staff) who can often provide better context and who prefer to maintain their contacts with their customers. When questions span multiple administrative units, FIA staff will try to help the customer

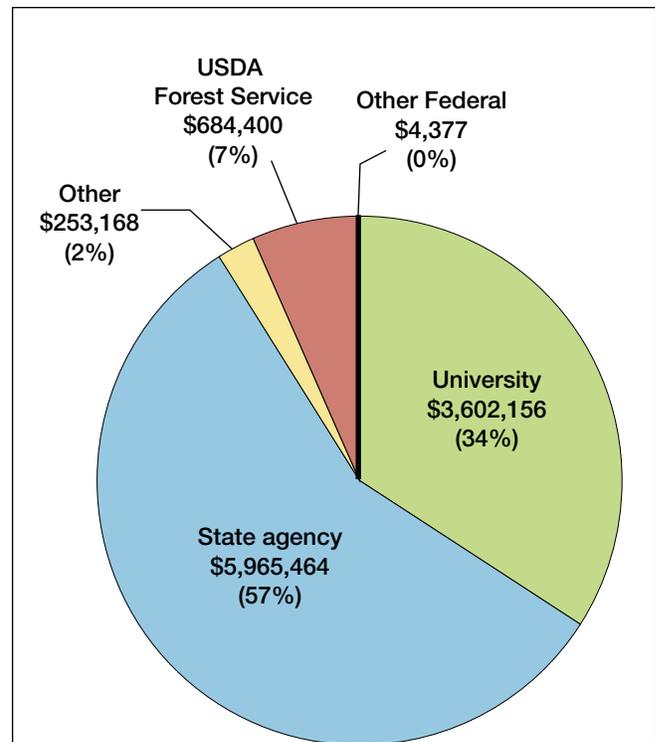


Figure 8—Grants and agreements, by recipient group, 2004.

find an answer. FIA does not compete with private sector consultants; rather, we answer questions about our methods and help customers (including private consultants) use FIA data to answer their own questions. Appendix 6 shows the number of significant consultations that FIA staff provided in FY 2004, by unit and by type of customer. A significant consultation is defined as any dialogue with a customer outside of FIA that requires more than a single hour to address, and which is not part of our normal course of business in collecting, analyzing, and reporting on FIA information. All together, FIA staff addressed 1,566 significant consultations requiring 4,899 staff hours to complete—equivalent to over 2 full-time staff-years. More than half of the time and approximately a third of the consultations were conducted with other government agencies, such as State agencies and other Federal agencies, as well as having internal discussions within the USDA Forest Service. Other major client groups included academic clients (approximately 18 percent of the consultations and 24 percent of the time), industry (21 percent of the consultations and 15 percent

of the time), and nongovernmental organizations (NGOs) (5 percent of the consultations and 4 percent of the time). The data also show some regional variations. For example, industrial customers are the major clients of the SRS FIA unit, whereas government organizations (largely State agencies) are the major clients for other FIA regional units.

FIA-National Forest Collaboration

In FY 2002, the Deputy Chief for Research and Development and the Deputy Chief for NFS signed an internal memorandum of understanding providing for permanent inclusion of all national forest lands within the FIA program. This was a significant step forward for FIA customers, guaranteeing the availability of consistent FIA information across the entire United States, including all national forest lands. Under the terms of the negotiated agreement, the

national forests provide permanent funding to help cover the cost of the FIA program on national forest lands, and in return, the FIA program agrees to implement the program in a consistent manner with inventory on other lands within the same State and to load FIA data into the national forest information base for use in forest planning and other strategic-scale assessments. FIA will also prepare standardized reports specific to individual national forests, provide advice and assistance in developing forest-level sampling protocols linked to FIA, and collaborate with national forests that want to contribute additional resources for additional sampling. The following table highlights some of the expectations outlined in the agreement and the degree to which the agreement is being satisfied.

In FY 2004, FIA continued development and operation of applications to load FIA data from national forests into

Criterion	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 8	Region 9	Region 10
Percentage of national forest land covered by annual FIA	72	76	54	25	100	100	88	100	100
Percentage of national forest FIA data loaded into FSveg*	67	50	67	72	100	71	38	81	0
Are regional staff invited to participate in FIA management?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are regional staff informed of plans for fieldwork within region?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are regional staff satisfied with opportunities for enhancing FIA to better meet regional needs?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are regional staff satisfied with tech support and consultation from FIA?	Yes	Region split not efficient	Yes	Yes	No, we need more support	Too early to tell	Yes	Yes	Too early to tell

*FSveg is the Field Sampled Vegetation module of the Natural Resource Information System. It is the primary vehicle for making inventory data available to NFS staff.

FSVeg (Field Sampled Vegetation module of the Natural Resource Information System), the corporate standard database for national forest staff. Databases for all NFS regions were loaded in FY 2004 with complete loading of Region 5, and more data are planned for loading in FY 2005.

Based on feedback from the nine NFS regions, FIA in general is meeting the needs of NFS partners. Some additional work is required in the western regions in the areas of coordinating fieldwork and in defining and collecting a consistent set of regional variables on NFS lands to meet NFS needs. More effort needs to be made in getting FIA

data from NFS lands into the hands of NFS staff and in developing data presentations, analyses, and reports tailored to the specific needs of NFS managers. FIA will work on these issues in FY 2005.

Comparing FY 2004 FIA Accomplishments with Plans from FY 2003

In the FY 2003 business report for FIA, we included a section stating our plans for FY 2004. Below we show how our actions in FY 2004 matched our plans from FY 2003.

In the FY 2003 business report, we said that in FY 2004 we would—	In FY 2004, we—
Continue transition to an annual inventory system by continuing annual inventories on all forested lands in all current States and initiating an annual inventory system in Delaware, Idaho, Maryland, New Jersey, and West Virginia.	Continued annual inventories on all forested lands in all current States and added Delaware, Idaho, Maryland, New Jersey, and West Virginia. Began planning for Nevada and the Federated States of Micronesia.
Continue developing and documenting nationally consistent compilation, analysis, and database management procedures, including release of Version 1.2 of the NIMS, which will include Phase 3 plot data and regionally collected data.	Completed extensive peer review of documentation of the national standard sampling and estimation methods. Completed release of version 1.2 of NIMS.
Implement a final protocol for vegetative diversity as a final test where funding permits.	Continued pilot testing. Protocol expected in FY 2005.
Release a national forest cover type map based on FIA data.	In cooperation with the Forest Health Monitoring Program, the NFS, and the Remote Sensing Applications Center, a draft forest cover map has been developed along with a draft forest/nonforest map. Accuracy assessments and peer reviews are being conducted.
Continue collaborative stewardship of the FIA program by holding user group meetings in all regions of the country and at the national level, holding regional management team meetings in all regions of the country, and holding one scientific symposium on FIA.	Held user group meetings and management team meetings in all regions of the country (the national user group did not meet until after the end of the fiscal year). Held one national FIA science symposium.
Continue to make our data more accessible and usable by adding analytical tools and program documentation to online FIA databases and Web pages. Release approximate coordinates for recent periodic plots and for annual plots where a sufficient number of plots have been taken to ensure owner confidentiality.	Completed “fuzz and swap” of all plots nationally. Tested and presented the utility of approximate coordinates for mill studies and for developing spatial modeling of biomass. The results demonstrated the utility of the publicly available coordinates to deliver valid analysis.
Continue to conduct applied research into ways of using technology to increase program efficiency, to develop new products to meet customers’ needs, and to collaborate with partners to reduce program costs and increase the scope of products offered. Develop a prototype set of core map products based on FIA data.	Continued to study tree taper to reduce the number of regional height estimates to enhance consistency over time and maximize analytical flexibility for users. Developed the Fuel Treatment Evaluator for identifying and prioritizing hazardous fuel reduction opportunities
Complete the initial loading of FIA core data for western national forest in Regions 2, 3, 4, 5, and 6 to make FIA data widely available to NFS customers.	Continued loading of NFS data for all NFS regions except Region 10, ranging from 38 percent complete in Region 8 to 100 percent in Region 5. Accessibility still needs work as regions get up to speed on access protocols.

Fiscal Year 2005 FIA Program Direction

The FIA program initially intended to implement the Strategic Plan for Forest Inventory and Monitoring by achieving a base Federal program of 10 percent per year in the Western United States and 15 percent per year in the Eastern United States by FY 2003. We have made significant changes to our program by forming a partnership with State foresters to lead and implement the FIA program in a more responsive manner, and we are implementing annual inventory systems in every region of the country. Unfortunately, although funding for the FIA program has increased over the past several years, it has not increased sufficiently to allow full program implementation as scheduled in 2003. We continue to be optimistic that we will achieve the target level of funding by 2005 or 2006 and will, at that time, achieve full program implementation (see fig. 3).

In FY 2005, to continue progress toward full program implementation, we intend to accomplish the following:

- ▶ Continue transition to an annual inventory system by continuing annual inventories on all forested lands in all current States and initiating an annual inventory system in Nevada and periodic inventory of the Federated States of Micronesia (fig. 9). This change will mean that an annual inventory is implemented in every region of the country and will include coverage of almost 77 percent of the Nation (including interior Alaska) under a cooperative program involving full Federal-State partnerships in program management and delivery.
- ▶ Continue engaging partners, users, and clients to develop and document a new strategic plan to guide the program for FY 2006 through FY 2010, setting priorities as well as staffing and funding goals.

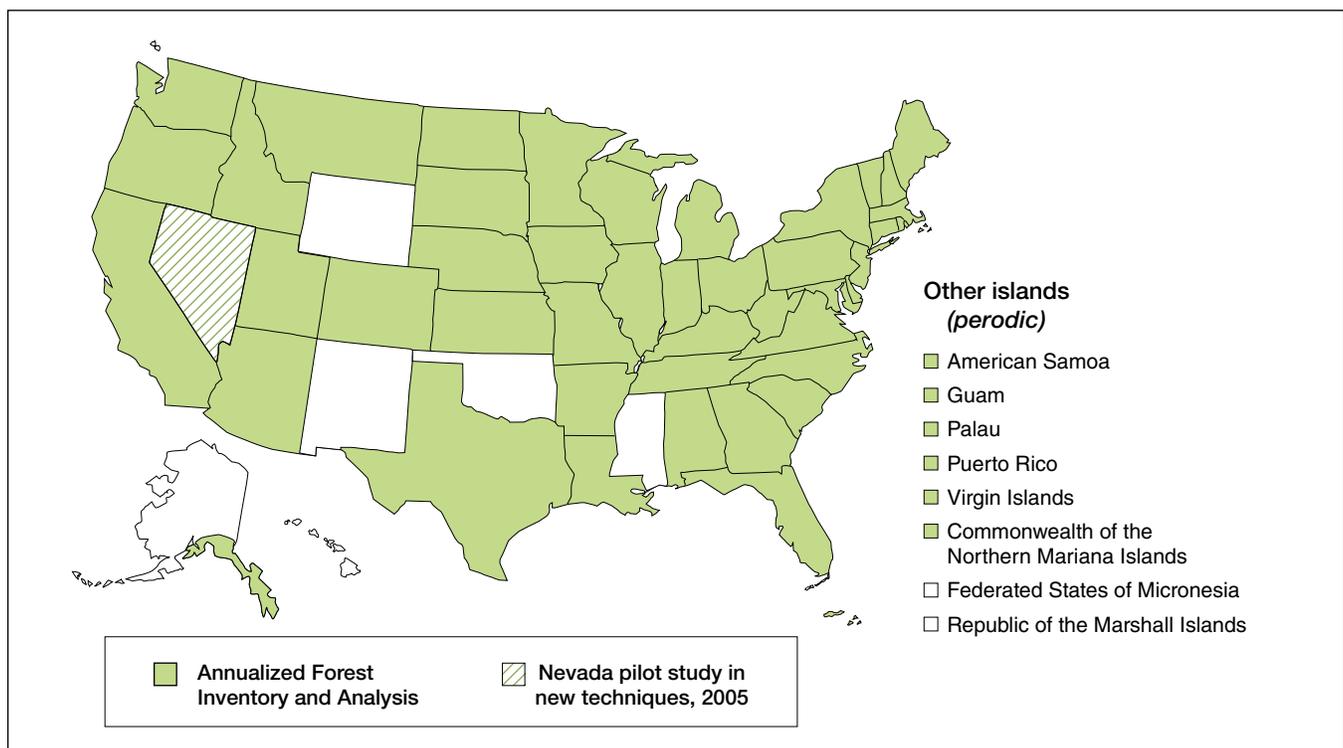


Figure 9—Planned FIA implementation status, FY 2005.

- ▶ Publish the first comprehensive State reports that integrate information on forest health.
- ▶ Release a national forest/nonforest mask, cover type map, and biomass map based on FIA data.
- ▶ Continue collaborative stewardship of the FIA program by holding user-group meetings in all regions of the country and at the national level, holding regional management team meetings in all regions of the country, and holding one scientific symposium on FIA.
- ▶ Continue to make our data more accessible and usable by adding analytical tools and program documentation to online FIA databases and Web pages. Release approximate coordinates for recent periodic plots and for annual plots where a sufficient number of plots have been taken to ensure owner confidentiality. Develop a prototype set of core map products based on FIA data.
- ▶ Continue to conduct applied research into ways of using technology to increase program efficiency, to develop new products to meet customers' needs, and to collaborate with partners to reduce program costs and increase the scope of products offered. Develop a prototype set of core map products based on FIA data.
- ▶ Publish the sampling and estimations methods documentation for Phase 2 and a quality assurance assessment of Phase 2 measurements. Finalize current Phase 3 estimation methods.
- ▶ Complete beta testing of national Portable Data Recorder data collection program (e-plot) and complete analysis of field data measurement quality objectives.
- ▶ Complete review and revision of core variables and regional attributes for the new FIA strategic plan.
- ▶ Complete development of version 2.0 of the NIMS.

Long-Term Strategic Direction

The Government Performance and Results Act (GPRA) of 1993 directs Federal entities to develop long-term goals and performance measures to monitor progress toward those goals. Although intended to apply at the agency level, the GPRA framework provides an excellent tool for guiding progress at the project level as well. The following tabulation shows our key goals, performance measures, benchmarks, and targets for the FIA program for 2002-2004. In future business reports, we will repeat this table to show how we are progressing toward our goals.

Goal	Performance measure	2002 level	2003 level	2004 level	Target level
Inputs					
Maintain sufficient funding to support the base Federal FIA program	Percentage of necessary Federal funding received	79	84	82	100
Outputs					
Include 100 percent of U.S. forest lands in the FIA sample population	Percentage of U.S. forest lands included in the target FIA sample population	100	100	100	100
Keep fieldwork current	Percentage of base Phase 2 sample locations visited/year: East West	15.5 6.1	16.2 6.2	16.3 8.0	15 10
Make data accessible to national forest customers	Percentage of national forest land for which FIA data are loaded into NRIS	2	18	65	100
Outcomes					
Keep analysis current	Average age (years) of State analytical reports	7	7	7	5
Keep online database current	Average age (years) of most recent update of FIA data available online	7	6	4	1
Customer satisfaction	Percentage of customers rating service as "satisfactory" or better	89	85	85	100
Partner participation	Partner financial contributions expressed as percentage of total Federal FIA budget	16	18	10	25

Conclusions

We continue to operate in a new era of partnership and collaboration in which Federal and State agencies and other colleagues work together to plan, manage, implement, and continuously improve the FIA program. We are gathering and disseminating information on a wider array of ecological attributes, while continuing to serve our traditional customers who require timely information on forest resources. We are increasing the timeliness of our surveys and of our reporting to provide a continuously updated, publicly accessible information base that includes meaningful reports and analyses as well as elemental data for others to use. We are exploring and using modern technology to expand the scope of our products and to deliver them more efficiently. And we are openly reporting on our progress, our accomplishments, our successes, and our challenges.

In summary, we are committed to working collaboratively with our partners to deliver the best program possible with the resources that we have at our discretion. We hope this report gives you a window into the business practices of the FIA program, and we encourage you to help us improve the program with your feedback.

Glossary of Terms Used in Appendixes

Base Federal FIA program. A level of FIA program delivery that includes sampling 10 percent of base grid Phase 2 plots per year in the Western United States, 15 percent of base grid plots per year in the Eastern United States, and 20 percent of Phase 3 plots nationwide, with data compiled and made available annually and complete State analyses done every 5 years.

Base grid plots sampled. The base grid consists of one sample location per approximately 6,000 acres (Phase 2) and one location per approximately 94,800 acres (Phase 3). Some partners chose to intensify beyond the base grid.

Core reports. A class of publications that summarizes forest status and trends for a complete administrative unit such as a whole State or a national forest. Examples include survey unit reports, State statistical or analytical reports, or national forest reports.

Direct expenses. All expenses directly attributable to the FIA unit incurred as a part of doing FIA business. Excludes indirect business costs (such as rent, telephones, and administrative overhead outside the FIA unit staff), which are included below in “effective indirect expenses.” Includes work done for other units as a normal part of FIA business and the following items:

Salary. Includes direct salary and costs, plus benefits charged to the FIA unit, broken into the following categories:

Administration. Program manager, project leader, and clerical staff.

Phase 1 production. Aerial photointerpreters, satellite image analysts engaged in Phase 1 stratification.

Field support. Field crew supervisors who spend less than 50 percent of their time measuring plots; others involved in supporting and coordinating field crews.

Field crews. All staff spending at least 50 percent of their time measuring regular plots.

QA (quality assurance) crews. All staff spending at least 50 percent of their time doing QA fieldwork.

Information management. Programmers, data compilers, computer system support staff.

Analysts. Staff who analyze data and write publications.

Techniques research. Mainly research staff who conduct FIA-related research on methods and techniques.

Travel. Broken into the following categories:

Office travel. Travel costs for all staff except field crews and QA crews.

Field/QA travel. Travel costs for field crews and QA crews.

Equipment. Costs for durable goods used for FIA. Includes the following:

Imagery. Aerial photos, satellite imagery data files.

Vehicles. All vehicle costs, including such items as operating costs, depreciation, and leases.

Field equipment. Measurement tools and equipment, such as data recorders carried by field crews.

Computer/telecommunications. Computer hardware, software, communications costs.

Other. Any cost that does not fit into one of the above equipment categories.

Publications. Costs for laying out, editing, printing, and distributing publications.

Grants and agreements. Cost of cooperative grants and agreements that directly support the FIA mission.

Office space and utilities. Charges for rent, lease, or other real estate costs for FIA staff, plus utilities.

Other direct expenses. Any cost that does not fit into one of the above categories, including training costs, unemployment, office supplies, postage, awards, moving expenses, and other expenses related to delivering the FIA program.

FRIA (Forest Resource Inventory and Assessment).

An account created by Congress within the S&PF portion of the USDA Forest Service budget, to provide funds to support FIA.

Effective indirect expenses. Indirect expenses include items such as research station management and administrative salaries, operating expenses, research station budget shortfalls, and other items for which the FIA unit is assessed by their research station. Each station has its own means for determining these assessments. Rather than reporting the different rates, we simply calculate the “Effective Indirect Expenses” item by subtraction:

Effective indirect expenses = (total available funds) – (total direct FIA expenses + end of year balance)

Effective indirect rate. Effective indirect expenses divided by total available funds. This is not necessarily the same as the standard station overhead rate; instead this rate reflects the total indirect cost as a fraction of the total funds available to FIA.

Management meetings held. Number of national or regional management team meetings held by each FIA unit. A management team for each FIA region consists of partners who are sharing in the funding and implementation of the FIA program. This group typically consists of representatives from the FIA unit, NFS regional offices, S&PF offices, and State forestry agencies.

NGO (nongovernmental organization). A class of customers with whom FIA staff are asked to consult. Includes environmental organizations, professional societies, and other generally not-for-profit organizations.

NIPF (nonindustrial private forest land owners).

Private individuals or organizations who own forest land for purposes other than industrial operations.

Percentage of total plots sampled. Total number of base grid plots sampled divided by the total number of plots in the base grid.

Percentage of full funding. Total available funds divided by the funding needed to fully implement the base Federal program for a given year’s target funding.

Percentage of region covered by annual FIA. Sum of forested acres in States currently implementing annual FIA, divided by the total number of forested acres in each FIA region; a measure of the degree to which the FIA region has moved from periodic to annual inventory.

Phase 1. Stratification of the land base into forested and nonforested classes by using remotely sensed imagery (aerial photographs or satellite imagery). Done to increase the efficiency of fieldwork and estimation.

Phase 2. A set of sample locations, approximately 1 for every 6,000 acres of land, measured for basic mensurational forest attributes.

Phase 3. A subset of Phase 2 sample locations, approximately 1 for every 96,000 acres of land, measured for a more extended set of ecosystem attributes, including tree crown condition, lichen community diversity, soil data, and down woody debris.

Publications. Number of publications per unit, by type of publication, as reported in official agency attainment reports. Publications are among the major outputs of the FIA program. Types of publications include the following:

Core reports. A report pertaining to reporting inventory results for a complete geographic entity. Includes:

National forest reports. A complete analysis for a single national forest.

State resource reports. A complete statistical or analytical summary of the forested resources within a single state.

State timber product output (TPO) reports. A complete analysis of TPO data for a single State.

Regional reports. A report for a group of States or other contiguous unit larger than a single State, such as a regional assessment.

National report. A report for the entire Nation, such as the Resource Planning Act (RPA) report.

Peer-reviewed journal articles. An article appearing in a refereed or peer-reviewed journal.

Proceedings papers. An article appearing in the proceedings from a meeting or symposium.

Other station publications. A manuscript published by the Forest Service, e.g., a General Technical Report.

Other. Publications that do not fit into any of the above categories, such as abstracts, books, or other Government publications.

FY (end-of-the-year) balance. Funds reported in the previous FY business report as unspent at the end of that fiscal year, and presumably available for use in the current fiscal year.

Significant consultations. Cases in which an FIA staff person spent at least 1 hour in discussion, analysis, or research to address a specific question or need raised by an external FIA program customer, and which is not part of our normal course of business in collecting, analyzing, and reporting FIA information.

Total available funds. Total funds available for delivering the FIA program, including funds appropriated by Congress for the FIA program; other funds made available by USDA Forest Service partners; and previous year carryover funds. This is a measure of Federal funding for the base Federal program.

User-group meetings held. Number of user group meetings sponsored or attended by each FIA unit. A user group meeting is an open meeting in which a complete regional cross section of FIA partners and customers are invited to attend. User-group meetings differ from the usual smaller meetings with one or two partners that all FIA units call as a normal course of business.

Appendix 1. Performance Measures for the FY 2004 FIA Program

	Pacific Northwest	Interior West	Southern	North Central	North East	National Office	Total
Total available funds in FY 2004	\$14,618,000	\$13,002,367	\$15,240,099	\$7,763,484	\$8,759,258	\$3,341,434	\$62,724,642
Total appropriated funds, FY 2004	\$13,033,000	\$10,890,000	\$14,522,000	\$6,701,000	\$7,994,000	\$3,512,000	\$56,652,000
Estimated percentage of FY 2004 full funding	82%	79%	85%	73%	86%	99%	82%
Contributions from partners:							
Supporting the 20% FIA program	\$85,000	\$0	\$1,118,574	\$1,113,681	\$601,898	\$0	\$2,919,153
Value-added contributions	\$145,546	\$684,786	\$39,399	\$2,943,781	\$134,645	\$611,792	\$4,559,949
Base grid plots sampled:							
Phase 2, forested	2,009	2,017	5,684	3,451	2,168		15,329
Phase 2, nonforested	1,636	4,851	4,574	14,453	1,310		26,824
Total phase 2 plots	3,645	6,868	10,258	17,904	3,478		42,153
Phase 3, forested	234	248	352	151	198		1,183
Phase 3, nonforested	210	605	361	930	126		2,232
Total Phase 3 Plots	444	853	713	1,081	324		3,415
Total base plots	4,089	7,721	10,971	18,985	3,802		45,568
Number of quality assurance plots							
Phase 2 (forest + nonforest)	183	637	923	633	239		2,615
Phase 3 (forest + nonforest)	24	95	79	46	15		259
Total quality assurance plots	207	732	1,002	679	254		2,874
Percentage of total plots sampled ^a :							
Phase 2 (10% West, 15% East)	9	8	12	24	14		13
Phase 3 (20% overall)	18	15	13	23	20		17
Percentage of region covered by annual FIA ^b							
	48%	73%	88%	100%	100%		76%
Number of publications:							
National forest reports	0	4	0	0	0	0	4
State resource reports	2	1	3	6	2	0	14
State timber product output reports	1	0	5	0	0	0	6
Regional reports	0	0	1	2	0	0	3
National reports	0	0	0	1	2	5	8
Subtotal - core reports	3	5	9	9	4	5	35
Peer reviewed journal articles	11	0	1	7	6	0	25
Proceedings articles	2	3	10	5	8	0	28

Appendix 1. Performance Measures for the FY 2004 FIA Program (continued)

	Pacific Northwest	Interior West	Southern	North Central	North East	National Office	Total
Other station publications	5	1	1	0	1	0	8
Other publications	6	2	7	2	0	1	18
Total, all reports	27	11	28	23	19	6	114
Number of publications per Federal full-time equivalent	0.29	0.11	0.30	0.36	0.27	3.59	0.27
Consulting activities:							
Number of significant consultations	248	36	831	204	230	17	1,566
Total hours of significant consultations	659	133	2,757	816	379	155	4,899
Meetings:							
User-group meetings held	2	2	3	1	1	1	10
Management meetings held	2	1	2	1	1	3	10

^aPlot counts do not include interior Alaska, Hawaii, Puerto Rico, and Pacific Island territories, which are treated as special projects.

^bArea covered includes interior Alaska and Hawaii (departure from past year's reports, which excluded these special areas).

Appendix 2. Financial Statement for the FY 2004 FIA Program

	Pacific Northwest	Interior West	Southern	North Central	North East	National Office	Total
				<i>Dollars</i>			
Available funds:							
Reported 2003 EOY balance	365,000	799,849	53,000	76,450	(11,526)	15,334	1,298,107
Post FY 2003 adjustments ^a	1,267,000	1,274,518	881,099	451,034	900,884		4,774,535
2004 appropriated funds—							
Research	12,051,000	9,829,000	14,051,000	6,317,000	7,909,000	1,557,000	51,714,000
State and Private-FRIA	982,000	1,061,000	471,000	384,000	85,000	1,955,000	4,938,000
National responsibilities	(47,000)	38,000	(216,000)	535,000	(124,100)	(185,900)	0
Total available funds	14,618,000	13,002,367	15,240,099	7,763,484	8,759,258	3,341,434	62,724,642
Direct expenses:							
Salary—							
Administration	761,407	478,999	507,935	189,448	336,398	209,584	2,483,771
Phase 1 production	0	155,254	334,074	244,143	61,015	0	794,486
Field coordination	689,250	677,789	479,452	290,125	649,324	0	2,785,940
Data collection	2,142,030	2,117,601	749,335	1,464,516	1,565,531	0	8,039,013
Quality assurance	255,506	693,053	825,779	221,066	414,237	0	2,409,641
Information management	1,238,301	1,074,501	1,591,838	724,294	602,436	0	5,231,370
Analysis	955,561	396,472	1,547,391	619,040	448,192	0	3,966,656
Techniques research	805,270	458,509	250,512	273,962	498,499	0	2,286,752
Travel—							
Office travel	209,656	192,270	264,330	139,272	121,096	20,006	946,630
Field/quality assurance crew travel	1,108,722	1,419,103	626,696	311,288	327,432	0	3,793,241
Equipment—							
Imagery	81,890	59,069	0	1,066	3,065	0	145,090
Vehicles	242,570	314,677	212,906	176,331	253,587	0	1,200,071
Field equipment	73,664	283,645	169,408	73,537	78,740	0	678,994
Information technology/communications	313,680	444,112	81,015	537,340	155,412	0	1,531,559
Other	0	120,408	9,509	36,674	3,723	0	170,314
Publications	38,168	18,649	13,018	14,638	3,137	0	87,610
Grants and agreements	1,362,399	1,509,044	4,294,827	652,267	621,415	2,185,888	10,625,840
Office space and utilities ^b	459,042	368,676	317,113	240,133	247,111	0	1,632,075
Other direct expenses ^c	832,640	371,763	1,028,559	120,991	172,112	22,335	2,548,400
Total direct expenses	11,569,756	11,153,594	13,303,697	6,330,131	6,562,462	2,437,813	51,357,453
Fire transfer	0	0	0	0	0	0	0
Effective indirect expenses (includes funds lost to fire transfer) ^b							
Total effective indirect	1,947,001	1,240,955	1,782,432	1,413,047	1,648,946	886,804	8,919,185
Total effective indirect rate (percent)	13%	10%	12%	18%	19%	27%	14%
2004 EOY balance	1,101,243	607,818	153,970	20,306	547,850	16,817	2,448,004

^aSome bookkeeping is not completed until after the new FY begins, which may affect beginning balances. These items, such as carryover adjustments, return of fire transfer, and others, are accounted for here.

^bNote that this row was new in 2003; formerly, these expenses were lumped into “other direct and indirect expenses.”

^cNote: Because office space and other direct expenses are no longer included in this line, these figures are not directly comparable to previous years’ data.

Appendix 3a. Federal Staffing (*Full-Time Equivalents*) for the FY 2004 FIA Program

	Pacific Northwest	Interior West	Southern	North Central	North East	National Office	Total
Administration	10.9	8.4	8.0	2.6	4.3	1.7	35.9
Phase 1 production work	0.0	2.3	7.0	3.9	1.0	0.0	14.2
Field coordination	11.4	11.9	5.9	3.6	9.0	0.0	41.7
Field crew	33.2	47.4	16.8	32.2	30.4	0.0	159.9
Quality assurance crew	3.5	11.2	13.3	3.4	6.5	0.0	38.0
Information management	12.8	14.8	19.4	8.8	7.4	0.0	63.1
Analysis	11.1	5.2	20.3	7.4	5.4	0.0	49.4
Techniques research	9.0	3.0	3.0	2.8	5.8	0.0	23.6
Total	91.9	104.0	93.6	64.7	69.8	1.7	425.6

Appendix 3b. Estimate of Cooperator Staffing Funded by FIA Grants and Agreements (*Full-Time Equivalents*) for the FY 2004 FIA Program

	Pacific Northwest	Interior West	Southern	North Central	North East	National Office	Total
Administration	0.0	0.0	0.0	-	0.0	0.0	0.0
Phase 1 production work	0.0	0.0	0.2	0.2	0.0	0.0	0.4
Field coordination	0.4	1.0	8.5	0.6	1.5	0.0	12.0
Field crew	7.0	12.5	100.5	9.0	9.0	0.0	138.0
Quality assurance crew	0.7	0.0	0.0	-	1.0	0.0	1.7
Information management	0.0	0.0	0.0	0.5	0.0	5.0	5.5
Analysis	0.0	0.0	0.8	0.7	0.4	5.0	6.9
Techniques research	0.0	0.0	0.0	-	0.4	1.0	1.4
Total	8.1	13.5	110.0	11.0	12.2	11.0	165.8

Appendix 3c. Estimate of Total Federally Funded Staffing (*Full-Time Equivalents*) for the FY 2004 FIA Program

	Pacific Northwest	Interior West	Southern	North Central	North East	National Office	Total
Administration	10.9	8.4	8.0	2.6	4.3	1.7	35.9
Phase 1 production work	0.0	2.3	7.2	4.1	1.0	0.0	14.6
Field coordination	11.8	12.9	14.4	4.2	10.5	0.0	53.7
Field crew	40.2	59.9	117.3	41.2	39.4	0.0	297.9
Quality assurance crew	4.2	11.2	13.3	3.4	7.5	0.0	39.7
Information management	12.8	14.8	19.4	9.3	7.4	5.0	68.6
Analysis	11.1	5.2	21.1	8.1	5.8	5.0	56.2
Techniques research	9.0	3.0	3.0	2.8	6.2	1.0	24.9
Total	100.0	117.5	203.6	75.7	82.0	12.7	591.4

Appendix 4. Partner Contributions Towards Implementing FIA in FY 2004

Unit	Partner	Contributions toward the base program	Contributions that add value
Interior West (IW)	Arizona State Department of Lands		\$3,000
	Colorado State Forest Service		\$317,188
	Navajo Nation Tribal Forestry		\$3,000
	University of Montana, Bureau of Business and Economics Research		\$55,598
	USDA Forest Service Region 1		\$302,000
	USDI Bureau of Land Management		\$2,000
	Utah State Division of Forestry, Fire, and State Lands		\$2,000
IW total		\$0	\$684,786
National Office (NO)	University of Georgia Research Foundation, Inc.		\$18,880
	University of Missouri		\$32,904
	University of Nevada in Las Vegas		\$482,025
	University of Wisconsin		\$77,983
NO total		\$0	\$611,792
North Central (NC)	Hoosier National Forest		\$7,350
	Illinois Division of Forest Resources	\$32,165	
	Indiana Department of Natural Resources	\$48,507	
	Iowa Department of Natural Resources	\$26,363	
	Kansas State Forest Service	\$55,187	
	Mark Twain National Forest		\$52,000
	Michigan Division of Forest Management	\$484,232	\$1,270,000
	Minnesota Department of Natural Resources	\$159,493	\$458,252
	Missouri Department of Conservation	\$139,525	
	Nebraska Department of Forestry, Fish, and Wildlife	\$29,112	
	North Dakota Forest Service	\$9,123	
	Resources Planning Act		\$30,000
	Shawnee National Forest		\$31,500
	South Dakota Department of Forestry and Nat. Res. Mgmt.	\$33,191	
	Superior National Forest		\$42,000
Wisconsin Department of Natural Resources	\$96,783	\$1,052,679	
NC total	\$1,113,681	\$2,943,781	
Northeastern (NE)	Maine Forest Service	\$263,861	\$131,145
	New York State Department of Environmental Conservation	\$296,637	
	Ohio Department of Natural Resources	\$15,525	
	Pennsylvania Department of Conservation and Natural Resources	\$25,875	
	Rhode Island Department of Environmental Management		\$3,500
NE total	\$601,898	\$134,645	

Appendix 4. Partner Contributions Towards Implementing FIA in FY 2004 (continued)

Unit	Partner	Contributions toward the base program	Contributions that add value
Pacific Northwest (PNW)	Alaska Department of Natural Resources	\$15,000	
	California Department of Forestry	\$15,000	
	USDA Forest Service National Monitoring and Evaluation (FHM)		\$30,000
	USDA Forest Service Region 5		\$10,000
	USDA Forest Service Region 6		\$7,000
	USDA Forest Service Region 6		\$13,546
	State and Private Forestry		\$15,000
	Oregon Department of Forestry	\$35,000	
	USDA Forest Service PNW Research Station		\$50,000
	USDA Forest Service PNW Research Station		\$20,000
	Washington State Department of Natural Resources	\$20,000	
PNW total		\$85,000	\$145,546
Southern (SRS)	Alabama Forestry Commission	\$171,627	
	Arkansas Forestry Commission	\$79,206	
	Florida Department of Agriculture and Consumer Services	\$42,256	
	Georgia Forestry Commission	\$199,874	
	Kentucky Division of Forestry	\$81,250	
	Louisiana Department of Agriculture and Forestry	\$20,224	
	South Carolina Forestry Commission	\$127,323	
	Tennessee Department of Agriculture	\$99,747	
	Texas Forest Service	\$182,252	
	University of Tennessee		\$14,413
	Virginia Department of Forestry	\$114,815	
	Virginia Polytechnic Institute and State University		\$24,986
SRS total		\$1,118,574	\$39,399
Grand total, all FIA units		\$2,919,153	\$4,559,949

Appendix 5. Grants and Agreements Entered Into by FIA Units, FY 2004

Unit	Amount	Recipient	Purpose
Interior West (IW)	\$136,080	Aerial Photography Field Office	Nevada estimation/sampling pilot
	\$638,652	Colorado State Forest Service	Implementation of annual FIA
	\$95,835	Duck Creek Associates	Collection of ozone plot data
	\$147,775	USDA Forest Service NFS NRIS	Loader development for FIA data to FS Veg
	\$8,000	Nature Conservancy (via WO-FIA)	National Vegetation Classification Survey
	\$352,900	USDA Forest Service Remote Sensing Application Center	Acquisition and processing of large-scale GPS controlled aerial photography for Nevada to enhance the existing annual inventory system
	\$79,802	University of Montana, Bureau of Business and Economic Research	Timber products output data collection and analysis
	\$50,000	Utah State University	Modeling faunal indicator species distributions in Utah by using FIA-generated maps
	IW total	\$1,509,044	
National Office (NO)	\$60,000	Forest History Society	Recording the 75-year history of the forest survey
	\$39,000	NatureServe	Develop National Vegetation Classification System protocols
	\$60,000	USDA Forest Service Remote Sensing Application Center	Remote sensing technology development and application
	\$40,000	University of Georgia Research Foundation, Inc.	Development of Web-based interactive hypermap with forest inventory information for the southeastern United States
	\$51,487	University of Missouri	National forest health monitoring program data analysis
	\$70,091	University of Nevada at Las Vegas	Crown indicator advisor
	\$1,723,918	University of Nevada at Las Vegas	Information management support
	\$141,392	University of Wisconsin	Lichen communities for FIA
NO total	\$2,185,888		
North Central (NC)	\$8,570	Indiana Department of Natural Resources	Implementation of annual FIA
	\$1,611	Iowa Department of Natural Resources	Implementation of annual FIA
	\$77,861	Kansas State University	Implementation of annual FIA
	\$50,333	Lumber Jack RC&D	Implementation of annual FIA
	\$336,218	Minnesota Department of Natural Resources	Implementation of annual FIA
	\$39,700	USDA Forest Service NC Research Station	Soils analyses
	\$4,000	North Dakota Forest Service	Implementation of annual FIA
	\$75,128	South Dakota Department of Forestry and Natural Resource Management	Implementation of annual FIA
	\$23,388	University of Michigan	Implementation of annual FIA
	\$29,768	University of Minnesota	Development of estimation engine
	\$5,690	University of Nebraska	Implementation of annual FIA
NC total	\$652,267		

Appendix 5. Grants and Agreements Entered Into by FIA Units, FY 2004 (continued)

Unit	Amount	Recipient	Purpose
Northeastern	\$388,349	Maine Forest Service	Phase 2 and 3 data collection and expertise
	\$98,453	Maine Forest Service	Taper study
	\$26,021	Pennsylvania State University	Assist with Phase 3 plots
	\$5,093	Massachusetts Department of Environmental Management	Phase 3 data collection and expertise
	\$5,796	New Hampshire Department of Resources and Economic Development	Phase 3 data collection and expertise
	\$9,965	University of Maine	Mapping changes in forest cover in Maine by using LANDSAT imagery
	\$9,094	University of Massachusetts	Timber product output study data collection
	\$68,908	University of Massachusetts	National ozone indicator advisor
	\$9,736	Vermont Department of Forests, Parks and Recreation	Phase 3 data collection and expertise
NE total	\$621,415		
Pacific Northwest (PNW)	\$10,000	Oregon Department of Forestry	Collaborate on the integration of ongoing work in collecting, compiling, and reporting annual forest inventories
	\$82,170	Oregon State University	Developing climate and air quality gradient models of lichen communities in California
	\$59,102	University of California, Berkeley	Development of a geo-referenced database for the circa 1919 vegetation type map/Weislander inventory plots
	\$3,377	USDI National Park Service, Mt. Rainier	Ozone injury monitoring at Mount Rainier National Park
	\$1,000	USDI Fish and Wildlife Service	Printing of "Willows of Interior Alaska"
	\$299,537	University of Montana	Forest market census for California for year 2005–2006
	\$25,000	Oregon State University	Identification and documentation of vascular plants on inventory plots in the Pacific Northwest
	\$60,000	Oregon Department of Forestry	Evaluating the potential of remote sensing technologies
	\$108,519	Oregon State University	Using imputation to estimate change and current status of forest attributes from panelled inventory data
	\$27,582	University of California, Berkeley	Identification and documentation of vascular plants on inventory plots in the Pacific Northwest
	\$150,000	University of Washington	Land cover change assessment for western Washington for the past 20 years
	\$266,112	University of Guam	Supplement data collection for the Pacific Islands forest inventory
	\$30,000	University of Wisconsin - Madison	Lichen communities for FIA
\$15,000	USDA Forest Service PNW Research Station - Director's Office	Funding of book publication (Pacific Islands)	

Appendix 5. Grants and Agreements Entered Into by FIA Units, FY 2004 (continued)

Unit	Amount	Recipient	Purpose
	\$100,000	USDA Forest Service PNW Research Station - Pacific Wildland Fire Sciences Lab	Support of joint venture agreement with University of Washington for LIDAR data acquisition, research, and analysis
	\$125,000	USDA Forest Service Southern Research Station	University of Las Vegas co-op (National portable data recorder development)
PNW total	\$1,362,399		
Southern (SRS)	\$514,882	Alabama Forestry Commission	Implementation of annual FIA
	\$487,619	Arkansas Forestry Commission	Implementation of annual FIA
	\$126,770	Florida Department of Agriculture and Consumer Services	Implementation of annual FIA
	\$599,623	Georgia Forestry Commission	Implementation of annual FIA
	\$325,000	Kentucky Division of Forestry	Implementation of annual FIA
	\$60,672	Louisiana Department of Agriculture and Forestry	Implementation of annual FIA
	\$258,239	North Carolina Division of Forest Resources	Implementation of annual FIA
	\$381,970	South Carolina Forestry Commission	Implementation of annual FIA
	\$299,242	Tennessee Department of Agriculture	Implementation of annual FIA
	\$731,755	Texas Forest Service	Implementation of annual FIA
	\$344,445	Virginia Department of Forestry	Implementation of annual FIA
	\$1,000	University of Tennessee - Knoxville	Spring block
	\$49,806	Virginia Polytechnic Institute and State University	Improving the economical and statistical efficiency of FIA Phase 1 estimates
	\$40,700	University of Tennessee - Knoxville	University of Tennessee cooperative partnership, Jim Perdue
	\$73,104	University of Tennessee - Knoxville	Programming support
SRS total	\$4,294,827		
Grand total, all FIA units	\$10,625,840		

Appendix 6. Number and Hours of Significant Consultations by FIA Staff, by Customer Group, FY 2004

Customer group	Pacific Northwest		Interior West		Southern		North Central		Northeast		National Office		Total	
	No.	Hours	No.	Hours	No.	Hours	No.	Hours	No.	Hours	No.	Hours	No.	Hours
Academic	57	113	4	15	131	854	22	88	68	84	1	2	283	1,156
Government	119	387	26	111	204	1,107	114	456	88	165	7	125	558	2,351
Industry	20	14	1	2	278	560	26	104	9	52	0	0	334	732
NGO ^a	5	10	1	1	35	35	36	144	0	0	2	10	79	200
NIPF ^b	2	1	0	0	139	138	4	16	0	0	0	0	145	155
Media	0	0	0	0	23	21	2	8	4	6	6	12	35	47
Other	45	134	4	4	21	42	0	0	61	73	1	6	132	259
Total	248	659	36	133	831	2,757	204	816	230	379	17	155	1,566	4,899

^aNGO = nongovernmental organization.

^bNIPF = nonindustrial private forest landowner.

Appendix 7. Land and Forest Area and FIA Annualized Implementation Status by State and Region, FY 2001–2005^a

State	Land area	Forest area	Entry year	Annual FIA implemented (forest area)				
				2001	2002	2003	2004	2005 (plan)
----- Acres -----				----- Forest acres -----				
Northeast:								
Connecticut	3,101,000	1,859,000	2003			1,859,000	1,859,000	1,859,000
Delaware	1,251,000	383,000	2004				383,000	383,000
Maine	19,753,000	17,699,000	1999	17,699,000	17,699,000	17,699,000	17,699,000	17,699,000
Maryland	6,295,000	2,566,000	2004				2,566,000	2,566,000
Massachusetts	5,016,000	3,126,000	2003			3,126,000	3,126,000	3,126,000
New Hampshire	5,740,000	4,818,000	2002		4,818,000	4,818,000	4,818,000	4,818,000
New Jersey	4,748,000	2,132,000	2004				2,132,000	2,132,000
New York	30,223,000	18,432,000	2002		18,432,000	18,432,000	18,432,000	18,432,000
Ohio	26,210,000	7,855,000	2001	7,855,000	7,855,000	7,855,000	7,855,000	7,855,000
Pennsylvania	28,685,000	16,905,000	2000	16,905,000	16,905,000	16,905,000	16,905,000	16,905,000
Rhode Island	668,000	385,000	2003			385,000	385,000	385,000
Vermont	5,920,000	4,618,000	2003			4,618,000	4,618,000	4,618,000
West Virginia	15,415,000	12,108,000	2004				12,108,000	12,108,000
North Central:								
Illinois	35,580,000	4,331,000	2001	4,331,000	4,331,000	4,331,000	4,331,000	4,331,000
Indiana	22,957,000	4,501,000	1998	4,501,000	4,501,000	4,501,000	4,501,000	4,501,000
Iowa	35,760,000	2,050,000	1998	2,050,000	2,050,000	2,050,000	2,050,000	2,050,000
Kansas	52,367,000	1,545,000	2001	1,545,000	1,545,000	1,545,000	1,545,000	1,545,000
Michigan	36,359,000	19,281,000	2000	19,281,000	19,281,000	19,281,000	19,281,000	19,281,000
Minnesota	50,955,000	16,680,000	1998	16,680,000	16,680,000	16,680,000	16,680,000	16,680,000
Missouri	44,095,000	13,992,000	1998	13,992,000	13,992,000	13,992,000	13,992,000	13,992,000
Nebraska	49,201,000	947,000	2001	947,000	947,000	947,000	947,000	947,000
North Dakota	44,156,000	672,000	2001	672,000	672,000	672,000	672,000	672,000
South Dakota	48,574,000	1,619,000	2001	1,619,000	1,619,000	1,619,000	1,619,000	1,619,000
Wisconsin	34,761,000	15,963,000	2000	15,963,000	15,963,000	15,963,000	15,963,000	15,963,000
Southern:								
Alabama	32,481,000	22,987,000	2001	22,987,000	22,987,000	22,987,000	22,987,000	22,987,000
Arkansas	33,328,000	18,771,000	2000	18,771,000	18,771,000	18,771,000	18,771,000	18,771,000
Florida	34,520,000	16,285,000	2001	16,285,000	16,285,000	16,285,000	16,285,000	16,285,000
Georgia	37,068,000	24,405,000	1998	24,405,000	24,405,000	24,405,000	24,405,000	24,405,000
Kentucky	25,428,000	12,684,000	1999	12,684,000	12,684,000	12,684,000	12,684,000	12,684,000
Louisiana	27,883,000	13,812,000	2000	13,812,000	13,812,000	13,812,000	13,812,000	13,812,000
Mississippi	30,025,000	18,580,000						
North Carolina	31,180,000	19,302,000	2003			19,302,000	19,302,000	19,302,000
Oklahoma	43,955,000	7,665,000						
South Carolina	19,272,000	12,495,000	1998	12,495,000	12,495,000	12,495,000	12,495,000	12,495,000
Tennessee	26,381,000	14,396,000	1999	14,396,000	14,396,000	14,396,000	14,396,000	14,396,000

Appendix 7. Land and Forest Area and FIA Annualized Implementation Status by State and Region, FY 2001–2005^a (continued)

State	Land area	Forest area	Entry year	Annual FIA implemented (forest area)				
				2001	2002	2003	2004	2005 (plan)
----- Acres -----				----- Forest acres -----				
Texas	167,626,000	17,149,000	2000	17,149,000	17,149,000	17,149,000	17,149,000	17,149,000
Virginia	25,343,000	16,074,000	1998	16,074,000	16,074,000	16,074,000	16,074,000	16,074,000
Rocky Mountain:								
Arizona	72,732,000	19,427,000	2001	19,427,000	19,427,000	19,427,000	19,427,000	19,427,000
Colorado	66,387,000	21,637,000	2002		21,637,000	21,637,000	21,637,000	21,637,000
Idaho	52,960,000	21,646,000	2004				21,646,000	21,646,000
Montana	93,157,000	23,293,000	2003			23,293,000	23,293,000	23,293,000
Nevada	70,276,000	10,204,000						10,204,000
New Mexico	77,674,000	16,682,000						
Utah	52,587,000	15,676,000	2000	15,676,000	15,676,000	15,676,000	15,676,000	15,676,000
Wyoming	62,147,000	10,995,000						
Pacific Northwest:								
Alaska, Coast	39,041,000	13,718,000	2003			13,718,000	13,718,000	13,718,000
Alaska, Int.	326,000,000	113,151,000						
California	99,824,000	40,233,000	2001	40,233,000	40,233,000	40,233,000	40,233,000	40,233,000
Hawaii	4,111,000	1,748,000						
Oregon	61,442,000	29,651,000	2000	29,651,000	29,651,000	29,651,000	29,651,000	29,651,000
Washington	42,612,000	21,790,000	2002		21,790,000	21,790,000	21,790,000	21,790,000
Total, all States	2,263,230,000	748,923,000		398,085,000	464,762,000	531,063,000	569,898,000	580,102,000
New performance measure, including interior AK and HI>				53%	62%	71%	76%	77%
Old performance measure, excluding interior AK and HI>				63%	73%	84%	90%	91%

AK = Alaska.

HI = Hawaii.

^aBased on area from Forest Resources of the United States, 2002 and entry year into annualized inventory.

Appendix 8. Status of FIA Special Project Areas Excluded From Annualized Inventory

Region and area	Land area in inventory	Forest area	Percent forest	Number of major islands	Year of current inventory	Year of published report	Total Phase 2 plots ^a	Total Phase 3 plots	Available online data
Pacific (PNW):									
American Samoa	48,434	43,631	90	4	2001	2004	21		No
Guam	135,660	63,833	47	1	2002	2004	46		No
Palau	111,544	96,688	87	10	2003	1988	55		No
Commonwealth of the Northern Mariana Islands	73,536	53,665	73	3	2004	1989	50		No
Federated States of Micronesia	149,660	135,668	91	10	2005–2006	1986–87	75		No
Marshall Islands	44,800	44,460	99	5	2007				No
Hawaii	4,141,469	1,990,000	48	8	Unscheduled	1988			
Atlantic (SRS):									
Commonwealth of Puerto Rico	2,200,000	710,000	32	3	2003	1997	367	55	No
U.S. Virgin Islands	86,000	35,000	41	3	2004		70	45	No
Total	6,991,103	3,172,945	45	47			684	100	

^aPartial suite of Phase 3 data collected on all plots in Pacific region.

Publications

American Samoa

Donnegan, J.A.; Mann, S.S.; Butler, S.L.; Hiserote, B.A. 2004. American Samoa's forest resources, 2001. Resour. Bull. PNW-RB-244. Portland, OR: U.S. Department of Agriculture Forest Service, Pacific Northwest Research Station.

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Republic of Palau

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Marshall Islands

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Hawaii

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Puerto Rico

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U.S. Virgin Islands

Report for current inventory in preparation. Figures reported here are from FAO FRA 2005 Country Report and are not based on current inventory data.

Contacts

For information about the status and trends of America's forests, please contact the appropriate office below:

Northeast

Program Manager, FIA
USDA Forest Service
Northeastern Research Station
11 Campus Boulevard, Suite 200
Newtown Square, PA 19073
(610) 557-4075

North Central

Program Manager, FIA
USDA Forest Service
North Central Research Station
1992 Folwell Avenue
St. Paul, MN 55108
(651) 649-5139

South

(includes Commonwealth of Puerto Rico and the U.S. Virgin Islands)
Program Manager, FIA
USDA Forest Service
Southern Research Station
4700 Old Kingston Pike
Knoxville, TN 37919
(865) 862-2073

Interior West

Program Manager, FIA
USDA Forest Service
Rocky Mountain Research Station
507 25th Street
Ogden, UT 84401
(801) 625-5388

Pacific Northwest

(includes Alaska, Hawaii, Guam, American Samoa, Commonwealth of the Northern Mariana Islands, Federated States of Micronesia, Palau, and Marshall Islands)
Program Manager, FIA
USDA Forest Service
Pacific Northwest Research Station
620 SW Main St., Suite 400
Portland, OR 97205
(503) 808-2066

National Office

Forest Inventory National Program Leader
USDA Forest Service
1601 North Kent Street, Suite 400
Arlington, VA 22209
(703) 605-4177

All our regional Internet home pages, as well as a wealth of statistical and other information, are available through the national FIA homepage located at <http://www.fia.fs.fed.us>.

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U.S. Department of Agriculture
Pacific Northwest Research Station
333 SW First Avenue
P.O. Box 3890
Portland, OR 97208-3890

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