March 15, 2006

# Organizing Science at the Southern Research Station

# Realignment Team Recommendation


Introduction ..... 2

Problem Statement ..... 2

Desired Outcomes ..... 3

Developing a Strategy for Realignment ..... 5

Proposal for Station Organization ..... 6

Science Areas ..... 6

Structure and roles ..... 7

Research Planning ..... 8

Links to the National Forest Service Research & Development Program ..... 8

Appendix 1—How this alternative meets the desired outcomes ..... 10

Appendix 2—Key concerns from employees and how addressed ..... 12

Appendix 3—Original Science Areas ..... 14

Appendix 4—Original Organizational Concepts ..... 15

Concept A ..... 15

Concept B ..... 16

Concept C ..... 17

## Introduction

The Southern Research Station has played a central role in the restoration and recovery of forested landscapes in the U.S. South through a long-standing and broad-based research program focused on the many challenges of sustaining natural resources. It is recognized as a world leader in forest research. The capacity of the Southern Research Station to continue its productive history is now challenged by many of the forces faced by many other public research institutions in the United States including declining budgets, the changing nature of important research questions, and shifts in customers and their expectations for research products. These changes suggest that the current organizational model may not be best suited for addressing the questions at hand. Budget issues alone indicate that it cannot be sustained in its present form. The objective of this document is to recommend an organizational model that prepares the Station to address today's questions with current budgets and positions the Station for research leadership well into the future.

An organization is more than an organizational chart. At one level, it can be defined by units composed of people (Research Work Units or RWUs), linkages among these units (authorities), processes for planning and conducting business, and its physical infrastructure (locations, experimental forests, and equipment). This document addresses the definition of units, their linkages, and to a certain extent, planning and business processes. It takes the current physical infrastructure as a given, with the expectation that a new organization would evolve its infrastructure to best support research.

In addition to the technical definition of the organization described above, organizations also develop informal structures and networks. In the case of the Station, RWUs serve as hubs in networks of university cooperators and other internal and external partners. They serve as communication portals for many research customers. Any change to this long-standing formal organization will have impacts on the informal network that has been crucial for supporting the research mission and accomplishing goals. We have attempted to understand and provide continuity of these networks in designing new organizational models.

### Problem Statement

Organizational change is required in the Southern Research Station. It is not a question of whether it will change but is a question of how it will change. Incremental reductions to several RWUs have occurred every year since 2002. These reductions have been driven by a decline in the "purchasing power" of budgets—salaries and fixed costs have risen while funding has remained constant. Units have reduced costs through attrition of personnel and, as a result, the average size of an RWU has declined. Because business processes—e.g., fiscal management, research planning and evaluation, and accomplishment reporting—must be conducted within each RWU, the administrative burden has increased on a per scientist basis.[1] As a result, a decreasing percentage of resources have been dedicated to research.

Declining purchasing power and increasing administrative burdens provide the most immediate impetus for evaluating the Station's size and organization. But reorganization of any sort needs to start with the question of what structure is best suited for the current and anticipated research mission of the Southern Research Station. The Station's organization has evolved over time, but its core structure dates to a research model defined in the 1960s when single-disciplinary research centers under powerful center

[1] We also forecast (1) an increase in administrative burden per unit due to ongoing Business Operations Transformation that pushes administrative duties to the field, and (2) a further decline in the number of scientists due to flat or declining budgets. Administrative burden per scientist is therefore projected to increase within the existing structure.

directors gave way to the RWU as the primary organizational entity—with RWUs grouped together under the administration of Assistant Directors, first by State and then by loosely defined cross-cutting themes[2].

Most recently each Assistant Director was assigned supervision of one or more of the cross-cutting themes and an attempt was made to group RWUs within themes, but research planning and budget remained solidly with the RWUs. Over the years some RWUs have become smaller and more specialized, sometimes with only one or two scientists. At the same time, the cross-cutting themes, while clearly reflecting the uniqueness of the Southern landscape of the mid 1990s, fail to reflect emerging issues such as urbanization and nonnative plant invasions; and deprive us of a common language with which to engage in national priorities.

Compared with the research questions of the past, today's resource problems increasingly demand research with a broader scope and scale. Fire, global change, and other disturbances are replacing a single species or single forest type as a research focus, while the impacts of development and land parcelization on natural resource sustainability often far exceed the impacts of all forest management options. These research problems require insights from multiple disciplines and therefore a more highly integrated research program. The Forest Service Strategic Plan and the Research & Development Strategic Program Areas[3] (SPAs) also anticipate this kind of integration within and among Stations in the Forest Service. Organizational structure determines, to a large degree, the extent to which integrated research can be accomplished.

> ***Summary Problem Statement:*** *The Southern Research Station needs to develop an organizational model that is highly efficient—i.e., it is able to maximize scientific efforts given budgets, business processes, and external environments—is highly effective—i.e., it is able to define the best questions and deploy resources to answer them in a timely fashion—and has the flexibility to adapt to changing conditions in the future.*

## Desired Outcomes

To guide our design and discussion of alternative organizations we started with a set of desired outcomes. Any change to a complex organization can have multiple impacts. In addition, desired outcomes are not always complementary and therefore imply tradeoffs. For example, attempts to increase research coordination may lead to better integration but may impinge on the innovation supported by more independent RWUs. As a result it is difficult to objectively "score" any alternative against another. Our approach is to provide the following set of desired outcomes as guiding principles for our design and discussion of alternatives. This set defines the criteria not only for evaluating the desirability of any new organizational model but also for guiding the decisions involved in implementing the details of a selected organizational model.

We seek an organizational model that can:

1. Maintain and enhance the strengths of Forest Service research relative to other research institutions: long term, place based, and interdisciplinary studies
2. Maintain and enhance broad networks of cooperators
3. Communicate a coherent research mission and organization to the interested public

---

[2] Original cross-cutting themes were Southern Appalachian Ecosystem Research and Sustainability; Sustainability and Productivity of the Interior Highlands Ecosystem; Sustainability and Productivity of Southern Pine Ecosystems; Ecology and Management of Forested Wetlands, Bottomland Hardwoods, and Riparian Zones; Landscape and Regional Integrated Assessment and Modeling; Inventory and Modeling.

[3] The Research & Development Strategic Program Areas are fire, invasive species, air & water, resource management & use, fish & wildlife, outdoor recreation, resource data & analysis, and strategic opportunities.

4. Support a research planning process that effectively engages the interested public
5. Enhance accountability to Congress and the public
6. Deploy resources to address the most important questions in a timely fashion
7. Work across disciplinary boundaries to define and address the complex questions central to sustainability
8. Direct the maximum level of resources to research efforts
9. Retain, draw, and develop a diverse complement of highly talented employees and cooperators
10. Interact effectively with Washington, other Stations, and other research institutions to increase the value of research efforts
11. Deliver timely and effective research products to the people who need them
12. Continue the long tradition of excellent forest science at the Southern Research Station

## Developing a Strategy for Realignment

The realignment effort began with a 2003 Management Team meeting in which the financial viability of RWUs was a major focus. Afterward, the Leadership Team developed a four prong approach to improving viability by:(1) attracting additional support for high priority research, (2) taking advantage of retirements to consolidate units, (3) working with marginal RWUs to cut expenses, and (4) ensuring that Forest Service leadership is aware of the impact of flat budgets and increasing costs and changing administrative burdens.

For several years, the strategy succeeded in pulling RWUs out of the "red" but the new realities posed by the cost of relocating business processes to the Albuquerque Service Center and budget recissions looming in Fiscal Year 2006 prompted another session on RWU viability at the Management Team meeting in October 2005. With input from that meeting on possible ways to re-organize research, the Leadership Team brainstormed several concepts for organizational structure and chartered a team to develop input from the Management and Leadership Teams into alternatives for a realignment strategy. The realignment team met twice, for two days in December to define the task at hand and again for a week in January. Included in the December meeting was a session on successes and lessons-learned from reorganizations in other research organizations with particular attention to the Pacific Northwest Station. In between the two meetings, employees reviewed two preliminary Concepts (A and B) for organization and provided additional input. The realignment team used input from employee and administrative group leaders to refine and expand the concepts into three organizational models (Concept A, Concept B, and Concept C).

The development and evaluation of the organizational models involved three steps. The first was to identify logical groupings of scientific activities (called Science Areas) within which current RWUs could be organized. These Science Areas define broad scientific communities which share common subject matter, disciplines, and/or research models. They also define the core research strengths of the Station and provide a logical structure for coordinated research planning. The second step was to develop alternative organizational models for managing research (defined in this report as Concepts) given this set of Science Areas. In the third step, the team visited field locations to describe the Science Areas and Concepts and to ensure that all employees had an opportunity for face-to-face as well as written input into the realignment process. The team emphasized that its charter was to develop models that would set a course toward fiscal solvency and better integration of research. Although some belt-tightening would likely to be necessary in the future, the final strategy from the team would NOT address the question of cuts in funding or personnel. Rather, these organizational models would provide a framework within which better decisions affecting costs could be made. Nor would there be the need for many employees to relocate, as all of the models operate under the assumption of a largely virtual reporting structure, at least initially. Any movement of employees would be gradual and accomplished to the maximum extent possible using vacancies created by attrition.

Over a two week period, comments came in from every part of the Station and most levels of the organization, including project managers, scientists, professional support people, and administrative employees, both in the field and in headquarters. One additional Concept was offered (Concept D) and employees pointed to weaknesses both in the Science Areas and in all four Concepts (A through D). The team reviewed the comments about all the proposed Concepts and developed one that they believed would incorporate their best features and avoid the pitfalls pointed out during the comment period.

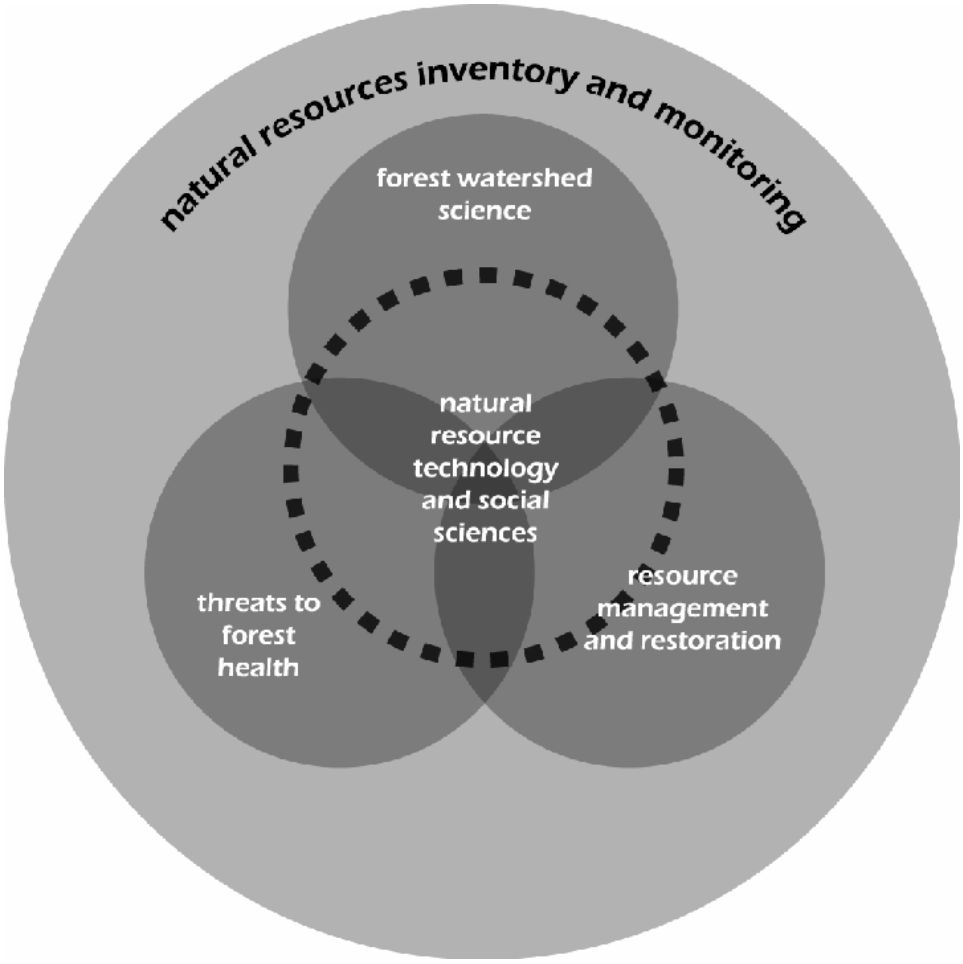
## Proposal for Station Organization

Based on a careful review of employee comments, the team constructed a "preferred alternative" for organizing the Station to address the challenges outlined in the introduction. This proposal is based largely on Concept B from the original realignment report, but more thoroughly describes how research programs would develop and operate within the new organizational model.

### Science Areas

The team discussed many employee-identified issues related to the purpose of Science Areas in Station realignment. We concluded that the Science Areas were an important component of the recommended realignment option for two reasons. First, we felt that Science Areas provide a compelling statement of who we are. The five Science Areas represent the historical, contemporary, and likely future core strengths of the Southern Research Station. We recognize that the Science Areas are multi-faceted and over-lapping. They are synthesized from the current collection of research activities of the 28 existing RWUs and are not intended to exclude or minimize the importance of any RWU. Second, we felt that Science Areas provide a framework for elevating and integrating science planning. In concept, the five Science Areas reflect a manageable number of "home rooms" where RWUs with similar research foci can be co-housed and where our research efforts already overlap. In practice, we believe the Science Areas provide an opportunity for increased integration and broader scale approaches.

The team sharpened the Science Areas titles and descriptions to clarify the types of research activities encompassed by each of the Science Areas.



**Natural Resources Inventory and Monitoring –** quantifying and monitoring the condition of natural resources in the Southern United States is critical for determining ecosystem responses to forest health threats and improvements in natural resource condition resulting from management activities. **Natural Resources Inventory and Monitoring** will provide the knowledge and tools required to quantify, monitor, and predict the condition of natural resources.

**Threats to Forest Health –** forest ecosystems in the Southern United States are facing increased threats from factors such as nonnative and native insects and disease, invasive plants and animals, wildfire, and climate change and variability. **Threats to Forest Health** will provide the knowledge and tools required to prevent, eradicate, and mitigate the impacts of forest health threats.

**Forest Watershed Science –** forested watersheds (uplands, wetlands, bottomlands, and their components) will be increasingly relied upon to provide clean and dependable water to support aquatic ecosystems and satisfy the demands of a rapidly growing human population in the Southern United States. **Forest Watershed Science** will provide the knowledge and tools required to manage the full range of forest watershed resources in a dynamic and complex landscape.

**Natural Resource Technology and Social Sciences –** natural resources and humans are inextricably linked in the Southern United States. These linkages will only strengthen as increased urbanization, globalization, and shifting values influence and alter how people interact with forests. **Natural Resource Technology and Social Sciences** will provide the knowledge and tools required to manage impacts and optimize benefits of human-forest interactions.

**Resource Management and Restoration –** as the nature of private landownership changes, society's needs from public lands shift, and species, communities, and ecosystems require restoration, new options will be required for forest and wildlife management in the Southern United States **Resource Management and Restoration** will provide the knowledge and tools required to manage and restore the multiple benefits provided by forests.

## Structure and roles

An Assistant Director will be assigned to each of the five Science Areas described above. Each Assistant Director is responsible for coordinating the research program in the assigned Science Area, for communicating with internal and external research partners and clients, and for coordinating research plans across Science Areas within the Station.

Assistant Directors will supervise Project Leaders within their Science Area. Project Leaders will be strategically located in Forestry Sciences Laboratories and have administrative and facilities responsibilities, with appropriate levels of support personnel. They will supervise scientists, either individually or in teams. The number of RWUs and Project Leaders in each Science Area will shrink through consolidation to achieve desired economies of scale in operations. The realignment team felt that the number of RWUs could shrink by up to 50 percent (from 28 to about 14). The feasibility of specific mergers will depend on a number of variables and will be evaluated by the Leadership Team as a part of implementing the new organization.

We anticipate that the increased administrative burden of larger work units will justify enhanced field-level administrative support for RWUs. Each field location will continue to be overseen by a Director's Representative (either a Project Leader or Team Leader) with appropriate administrative support for maintenance and day-to-day operations of these facilities. Specific guidance regarding titles and grades of administrative positions is another implementation task.

The Management Team would be comprised of the Leadership Team and Project Leaders working together on research and budget planning and meeting more often than the current Management Team.

The reorganization shrinks the research component of the Management Team by about 40 percent, from 31 (28 Project Leaders and 3 Assistant Directors) to 19 (14 Project Leaders and 5 Assistant Directors).

## Research Planning

In many ways, the operation of RWUs will remain the same under this reorganization. However, important changes are anticipated for the way that decisions are made regarding the fundamental research portfolio of the Station. The five Science Areas will provide disciplinary "home bases" for RWUs and a framework for coordinating the research activities of the Station.

Research planning will take place at two levels within this organizational model. At the strategic level, a research plan will be developed for each Science Area. Each of these plans will identify long term and issue-driven research questions to be addressed by the Station's science program and will assign specific Problem Areas to RWUs. Problem Areas will be assigned to (1) a single RWU, (2) two or more RWUs within a Science Area, or (3) two or more RWUs in different Science Areas (see graphic, below). Assignment of Problem Areas, which has traditionally been done at the RWU level, will now be coordinated at the Station level. This will ensure that the research program addresses the highest priority problems—i.e., it forces explicit tradeoff analysis among research areas--and will prescribe interdisciplinary research through shared Problem Areas.

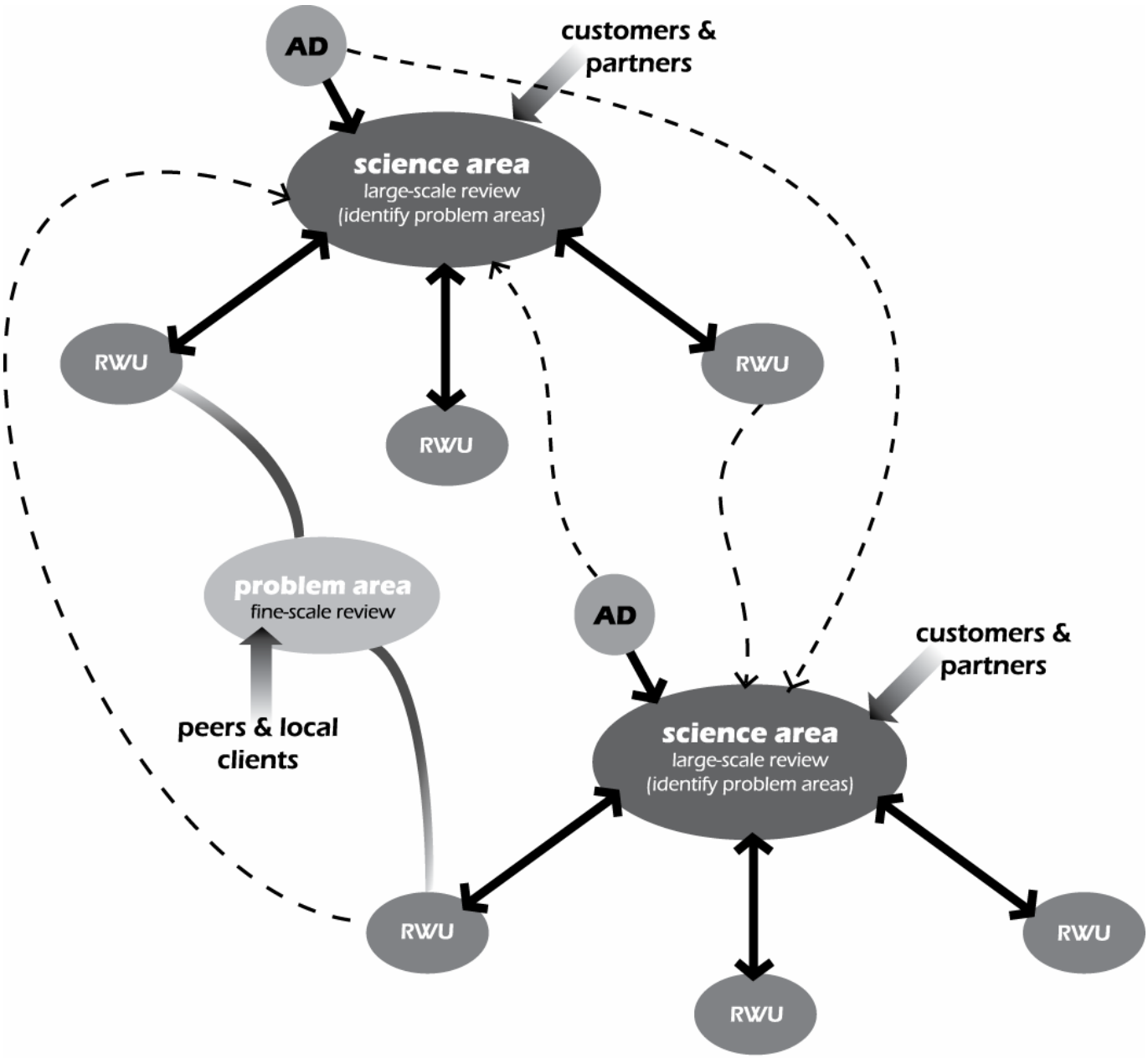
Development of each Science Area plan will involve scientists, constituents, and partners using a public science review managed at the Station level. Broadening the scope of science planning in this way should allow research customers and partners to engage more effectively in Station strategic planning. The Assistant Director will be responsible for developing the plan and for coordinating participation of RWUs. The duration of the Science Area plan will be five years and reviews will be staggered.

The second, tactical, level of planning will occur in the field. Unit-level Technical Assistance Visits will be convened with local constituents and research partners to review the studies and research methods proposed to address each Problem Area. Narrowing the focus of Technical Assistance Visits should allow for a more detailed and thorough peer review of the research program. Cross-unit coordination will be required to review and plan for work under shared Problem Areas.

## Links to the National Forest Service Research & Development Program

Forest Service Research & Development is currently organized in two ways to support and coordinate Station-level research. One way is through the Deputy Chief's research staff organization, organized by broad disciplinary groupings. The other is a set of national Strategic Program Areas (SPAs) led by teams of Station and Washington Office personnel. All RWUs are currently and will continue to be connected to a primary staff area. Each RWU contributes to at least one SPA and a majority of RWUs are involved in research relevant to more than one SPA.

The proposed organizational model anticipates the need to more clearly coordinate research in support of SPAs and other national and regional efforts. But because RWUs and scientists are generally assigned to more than one SPA and regional priority, direct assignment of units to these efforts is impractical. Rather, the proposed organizational model treats Problem Areas as the fundamental building blocks of the Station's research program, and will design packages of Problem Areas to address broad research initiatives. These packages will allow explicit development of multidisciplinary research programs to address broad objectives. Resources can be redeployed to emerging issues by developing new Problem Areas and amending the respective Science Area plans.




Science Area Planning is the direct responsibility of Research Work Units (RWUs) and Assistant Directors (ADs) and becomes input for Problem Areas in RWUs.

Input from Stakeholders (customers, partners, peers, local clients)

Input to a Science Area can come from ADs or RWUs working in other Science Areas

Problem Areas can be the responsibility of one or more RWUs

## Appendix 1—How this alternative meets the desired outcomes

The team initially developed a set of criteria to guide its design and discussion of alternative organizations (see below.) While the list of "desired outcomes" was useful as we discussed alternative structures, we realized that many of these outcomes will be dependent on the *processes* put in place and the *people* who fill key leadership roles in the new organization. Having said that, the recommended alternative should provide the structure to allow much of what is good about the Southern Station to continue and flourish while it effectively improves our ability to serve our mission.

With the Research Work Unit entity staying in tact, the informal networks developed over the years should not be disrupted. It remains the home for the highly-talented people we employ and hope to attract in the future as the Station positions itself to continue to provide relevant high-quality research and research products.

Structuring our research around the Science Areas rather than cross-cutting themes provides a more coherent and comprehensive way to talk about our research program, and provides an organizing mechanism that should help us better see opportunities to work across discipline within the Station. The Science Area infrastructure should result in research that addresses the complex questions central to sustainability and allow us to deploy resources to address important issues in a timely fashion. They will provide the framework for a review process that should clearly address the relevance of our work. And, coming together around integrated problem areas should provide the place for rigorous review of the research that will ensure quality and performance. The problem area also seems more appropriate than the RWU for linking to the Strategic Program Areas (SPAs) and to others outside the Station.

In short, our efforts have been guided by a need to improve operational efficiency and research planning and several desired outcomes for a new organization. The outcomes of the reorganization will clearly depend on individuals and implementation steps. In the following table, we describe what we see as the general effects of the new organization relative to these desired outcomes.

| | |
|---|---|
| Maintain and enhance the strengths of Forest Service research relative to other research institutions: long term, place based, and interdisciplinary studies | The reorganization retains the current network of locations focused on long term, site based research. It also retains the structure of RWUs either as stand alone entities or as teams within larger RWUs and retains their respective networks. |
| Maintain and enhance broad networks of cooperators | Two-tiered planning process anticipates working with cooperators at strategic and tactical levels of planning |
| Communicate a coherent research mission and organization to the interested public | The five Science Areas establishes the Station's current and intended research strengths. |
| Support a research planning process that effectively engages the interested public | Strategic planning in the five Science Areas allows the public better access to the key decisions regarding what research will be undertaken by the Station. |
| Enhance accountability to Congress and the public | Coordinates the allocation of effort and reporting of results around five core Science Areas. |
| Deploy resources to address the most important questions in a timely fashion | Station-level research planning forces an analysis of trade offs in research efforts. |
| Work across disciplinary boundaries to define and address the complex questions central to sustainability | Shared problem areas will be used to assign interdisciplinary research teams to issues that warrant them. |
| Direct the maximum level of resources to research efforts | Management personnel will be reduced by up to 40 percent, freeing up scientists to do more science and consolidating administrative duties. Actual cost savings will depend on the extent of mergers and the design of the administrative organization. |
| Retain, draw, and develop a diverse complement of highly talented employees and cooperators | This can be partially addressed by developing a readily accessible and compelling long-term research program through planning for the Science Areas. |
| Interact effectively with Washington, other Stations, and other research institutions to increase the value of research efforts | Multiple level research planning will support interaction with the Forest Service Research organization and other institutions at appropriate scales. Approaches to SPAs and other broad scale initiatives can be coordinated through design of problem areas. |
| Deliver timely and effective research products to the people who need them | The proposed planning process would allow for a more effective communication with research partners and customers. |
| Continue the long tradition of excellent forest science at the Southern Research Station | Excellence in science requires first defining the most important questions. We anticipate that coordinated research planning will help us get the questions right. |

## Appendix 2—Key concerns from employees and how addressed

1. Centralization will not be good, especially if it takes the budget authority away from the field

   *The recommended approach keeps the science leadership and budget authority with Project Leaders in the field.*

2. Are the Science Areas necessary, and if so have the "right" ones been identified?

   *The Team felt that Science Areas would be important vehicles for providing a compelling statement of "who we are," and for elevating and integrating science planning. Five or so areas--not too few and not too many—was felt to be a manageable number to fulfill that purpose. The recommended alternative kept the same number of Science Areas but changed some of the titles to better reflect the types of work that would fall within each Area.*

3. How will integration really be accomplished?

   *The recommended alternative presents more details on the mechanisms the team felt would create the goal of greater integration. See* **"***Proposal for Station Organization—Research Planning.***"**

4. Beware of any organization that will stifle creativity and entrepreneurship.

   *The recommended alternative maintains the Problem Area as the core description of the work within a Research Work Unit that is lead by a line officer (just like now). The framework for research planning and evaluation at the Science Area level will provide structure to enhance integration and an environment where scientists will depend on each other for their respective roles in the work. The team sees nothing in this that would prohibit creativity and entrepreneurship. In fact, this approach could foster more creativity and entrepreneurship because of the integration that will be fostered.*

5. More analysis and scoping should be done on this.

   *More analysis and scoping can always be done. The realignment team began their work by scoping structures of research organizations both inside and outside the Forest Service, and throughout the planning process they received information from employees on how the Agricultural Research Service and other science agencies structure themselves to address research planning, conduct, and administration. The team was fortunate to have the services of an industry-trained organizational development specialist and the analytical support of employees reporting to the Administration and Planning & Applications Assistant Directors. Because the team's recommendations involve very little change in authorities and position descriptions at the Management Team level, midcourse corrections should be relatively simple if needed.*

6. The Management Team needs to work through this face-to-face.

   *The team recommends that the April Management Team meeting be used to further develop the implementation of the decision made by the Station Director.*

7. I'm concerned about the effects on Administration.

   *The team did enough of an assessment of the effects on the administration organization at headquarters and in the field to see that there will likely be no cost savings, but also not a rise in costs to support the recommended alternative. Further work will be necessary, likely by a team of folks more familiar with administrative activities, to describe the work needed to support the recommended alternative and design the administration organization that best supports the research units.*

8. Whoa! Why so fast?

   *The timeline was created by the Leadership Team in response to the urgency felt by Project Leaders to do something that would provide relief from the current less-than-viable situation for many RWUs. The team recommended to the Leadership Team that we ease up off the timeline to allow employees to review the recommended alternative before a decision is made.*

9. Why do we need five Assistant Directors when we will have half the number of Project Leaders?

   *Each Assistant Director will be responsible for guiding and integrating the research program within its Science Area. This is a different expectation than exists for Assistant Directors in the present organization. Assistant Directors will be much more intensely involved in science planning and coordination and in representation of the science to the Washington Office. One Assistant Director for each Science Area seems appropriate as we start into this. The Director always reserves the right to adjust the size of the Leadership Team in response to the changing needs of the Station.*

10. Where's the cost savings?

    *The team did not identify any cost savings. However, the recommended alternative creates a Station that should be more flexible and more strategic to enable it to make wiser decisions—about research direction and the resources needed to move in that direction.*

11. Be careful about how we think of the link to R&D Strategic Program Areas (SPAs).

    *The recommended alternative presents five Science Areas that will enable the Station to provide a compelling statement of "who we are," and for elevating and integrating science planning. The team did not think those goals would be met by organizing by SPA. It does recommend however, that the work within each Science Area clearly link to SPA program priorities. It is likely that the best place to link from will be at the Problem Area, rather than the RWU as is the case now.*

## Appendix 3—Original Science Areas

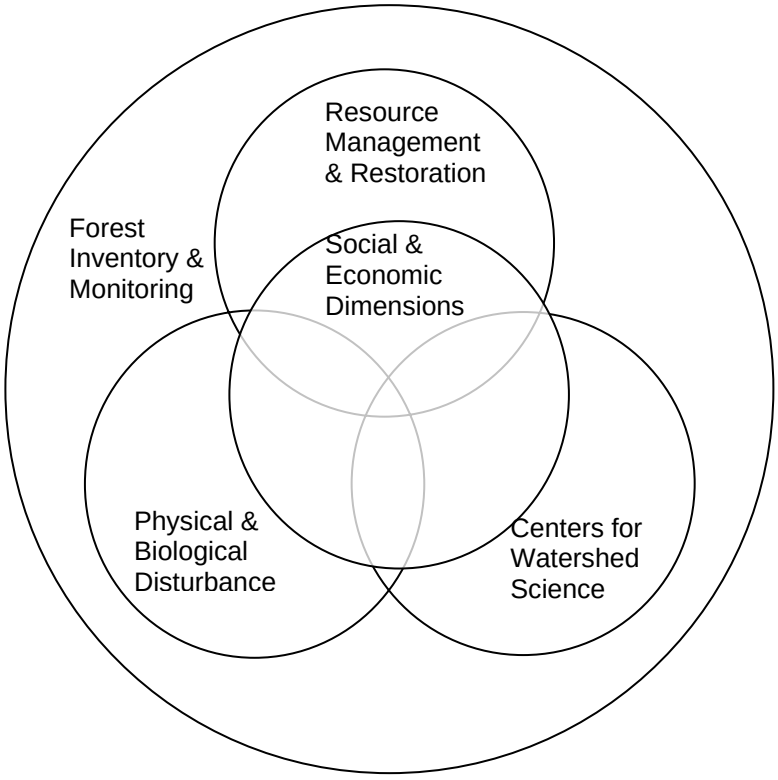
**Physical and Biological Disturbances**—From fire to nonnative plants to climate change, disturbances are increasingly changing the landscapes of the South, requiring approaches that must be implemented on smaller and smaller parcels of land and on an urbanizing landscape.

**Resource Management and Restoration**—As the nature of private landownership changes, society's needs from public lands shift, and species, communities, and ecosystems require restoration, new options will be required for forest and wildlife management. New research will build on long-term, and often place-based studies focused on forest management and ecosystem restoration across the South.

**Social and Economic Dimensions**—As urbanization and globalization proceed and management becomes focused on a smaller and smaller land base, the Station has begun to build capacity both in the social sciences and in the disciplines that will be needed to help landowners keep "forests in forests" and sustain ecosystem services and help natural resource professionals and communities plan and design productive tree-based conservation options in rural and urban settings.

**Centers for Watershed Science**—Much of our "place-based" research started with watershed studies yielding long-term data and understanding of forest-soil-water interactions, but more recently has expanded to include multiresource and multidiscipinary studies on issues ranging from forest fragmentation to conversion of agricultural land into forests. Knowledge derived from place-based watershed research provides the underpinnings to expand the range of studies into adjacent landscapes and address more broad-scale water resource issues in the South.

**Forest Inventory and Monitoring**—The implementation of annualized inventories and incorporation of forest health monitoring data into inventory reports have allowed the Station to provide more and more relevant information faster, strengthening links to other disciplines and partners.



# Appendix 4—Original Organizational Concepts

## Concept A

Concept A would organize the Station research around the five Science Areas. Programmatic research planning, implementation and review would occur at the Science Area level; Program Managers, replacing Assistant Directors, would be the Station's lowest level of line officer with corresponding budget allocation and execution authority. Within each Science Area, RWUs would be strategically consolidated into Research Centers led by Research Center Directors, who would be drawn from the current cadre of Project Leaders. Each Research Center would be comprised of Research Teams, individual scientists, or a combination of both.

The basic premise of Concept A is that a strategic reorganization of the Station research program into major Science Areas will improve overall the Station research programs by (1) strategically consolidating RWUs into larger research teams, resulting in an adequate critical mass of scientific disciplines, (2) increasing administrative efficiency by reducing the number of units from 28 RWUs to approximately 14 Research Centers, minimizing the research resources dedicated to administrative duties, (3) creating a more coordinated and integrated research structure able to respond to emerging issues and priorities, and (4) maximizing organizational coherence.

### Structure and Roles

In Concept A, five Program Managers—replacing the current three Research Assistant Directors, and two Program Managers—would report to the Station Director and serve on the Leadership Team. Each Program Manager would be assigned to a Science Area. The Program Managers would supervise two to seven Center Directors who would lead research activities of a cadre of Research Teams and/or scientists. The Program Managers would be located at Station Headquarters or strategically located in Forestry Sciences Laboratories and have administrative and facilities responsibilities, with appropriate levels of support personnel. Program Managers would be in nine-factor (administrative) positions. The Center Directors would be the science leaders in the Station and would likely occupy four-factor (paneled) positions. Budget allocation among and within Science Areas and broadly defined problems would be led by the Program Managers with participation by other Program Managers, Center Directors, and Research Team Leaders, as appropriate.

The Management Team would be comprised of the Leadership Team and Center Directors working together in research planning and allocations and meeting more often than the current Management Team. A Science Advisory Team, consisting of the Leadership Team, Center Directors, and Research Team Leaders, would meet less often than the current Management Team, with focus more on science rather than administrative issues.

Concept A would create new position descriptions to replace existing ones and would shift responsibilities upward. Program Managers would convene teams of Center Directors within their Science Areas to coordinate research planning and strategy. The team of Science Area Program Managers would be the point of contact for SPAs and would determine how to deploy Station resources to address specific interdisciplinary problem areas. Attainment reporting would be done programmatically (Science Area) and therefore would be shifted up to the Program Manager level with Center Director supervising the collection of scientist input but not processing. Center Directors would have a broader area of science and possibly more employees to supervise and would need some level of administrative support. Grants and Agreement initiation, tracking, and accrual would be at the Center Director level. Small-scale procurement would remain at the field where appropriate.

### Administrative Support Structure

Each Program Manager would be supported by a management analyst, support specialist, administrative assistant, and secretary, with the possibility of sharing administrative support personnel among Program Managers. Each Center Director would be supported by a support specialist. Designated Directors Representatives may need an additional administrative assistant.

Concept A would likely result in no net gain in administrative positions: only the re-allocation of administrative support from field units to the Program Managers.

### Implementation Requirements—Administrative Impacts

Implementation of Concept A would require development and approval of a new organization chart (including new RWU numbers); revisions of the Forest Service Manual, Handbook, and supplements; new delegations of authorities; development of new position descriptions due to increasing complexity involved, and some staffing and classification for reassignments. The deliberate creation of career ladder opportunities and related training for the new support positions would be important, as would realignment of programs for civil rights, wellness, safety, and fleet.

## Concept B

Concept B would also organize the Station research around the five Science Areas. Programmatic research planning, implementation, and review would occur at the Science Area level; however, Project Leaders would remain line officers and actively participate in research planning and allocation through more frequent participation in a smaller and more interactive Management Team.

The basic premise of Concept B is that a strategic reorganization of the Station research program into major Science Areas will improve the overall research program by (1) strategically consolidating RWUs into larger research teams, resulting in an adequate critical mass of scientific disciplines, (2) increasing research efficiency by reducing the number of units from 28 to approximately 14 RWUs, (3) creating a more coordinated, integrated, and flexible research structure able to respond to emerging issues and priorities, and (4) retaining a “loose enough” structure to allow individual creativity/entrepreneurship.

### Structure and Roles

In Concept B, five Research Assistant Directors—replacing the current three Research Assistant Directors, and two Program Managers—would report to the Station Director. Each Assistant Director would be assigned a Science Area. The Assistant Directors would supervise two to seven Project Leaders who would lead research activities of a large research cadre that would be aligned with the Science Areas. The Project Leaders would be strategically located in Forestry Sciences Laboratories and have administrative and facilities responsibilities, with appropriate levels of support personnel. They would supervise scientists, either individually or in teams. Although Project Leaders would remain the science leaders in the Station, they could be in either the four-factor or nine-factor series (paneled scientists or not, as appropriate). Decisions regarding resource allocation among Science Areas and broadly defined problems would be led by the Assistant Directors with participation by Project Leaders and Research Team Leaders, as appropriate; budget allocation and execution within RWUs would be led by the Project Leader with participation by Research Team Leaders and scientists.

The Management Team would be comprised of the Leadership Team and Project Leaders working together in research planning and allocations and meeting more often than the current Management Team. A Science Advisory Team, consisting of the Management Team and Research Team Leaders, would meet less often than the current Management Team and would focus on science rather than administrative issues.

Concept B would utilize familiar positions but with shifts in responsibilities. Assistant Directors would convene teams of Project Leaders within their Science Areas to coordinate research planning and strategy. The team of Science Area Assistant Directors would be the point of contact for the SPAs and would determine how to deploy Station resources to address specific interdisciplinary problem areas. Attainment reporting would be done programmatically (Science Area) and therefore would be shifted up to the Assistant Director level with Project Leaders supervising the collection of scientist input but not processing. Project Leaders would have broader programs and more employees to manage and would need a higher level of administrative support. Budget execution and tracking and small-scale procurement would continue to be conducted at the RWU level, as would Grants and Agreements initiation, tracking, and accrual.

### Administrative Support Structure

Each Assistant Director would be supported by an assistant, similar to the current support at Station Headquarters. Each Project Leader would be supported by a management analyst and an administrative assistant. Designated Directors Representatives may need an additional administrative assistant.

Concept B would likely result in no net gain in administrative positions: only the re-allocation of administrative support to fewer and larger RWUs.

### Implementation Requirements—Administrative Impacts

Implementation of Concept B would require development and approval of a new organization chart (including new RWU numbers), development of some new position descriptions, and some staffing and classification for reassignments. The deliberate creation of career ladder opportunities and related training for the new support positions would be important, and as would realignment of programs for civil rights, wellness, safety, and fleet.

## Concept C

Under Concept C realignment would occur as a continuation of current efforts. In 2004 the Leadership Team adopted a four-part strategy to improve the viability and financial solvency of the RWUs. One part of that strategy included the restructuring of some RWUs to reduce fixed costs. Some RWUs went through formal exercises that resulted in the elimination of positions. One established a conservative position management strategy that has reduced costs through attrition. Others have been involved in discussions of mergers and shared services. The Leadership Team also identified opportunities for RWU merger. In December 2005, the Assistant Director-Pines and Project Leaders from 4105, 4106, and 4111 tentatively agreed to move forward with a three-way merger (pending the outcome of this study).

Under Concept C these kinds of efforts would continue and gain momentum, resulting in a significantly smaller number of RWUs within two to five years. Mergers and RWU restructuring would primarily be driven by the Leadership Team, although field proposals for mergers would be considered on a case-by-case basis. These mergers would not be driven by or be integrated into Science Areas as in Concepts A and B. This means that the final organization and its science program would be less strategic and less transparently developed than under Concept A and Concept B. However, a smaller Management Team could allow for more effective cross-unit cooperation and orchestration to address regional questions.

### Structure and Roles

The process would not change the current Assistant Director structure (three Research Assistant Directors and two Program Managers). It would not change the role of the Project Leader, although there would be a smaller number within a short time, and that number would continue to decline until the organization stabilized within five years. Science planning would continue at the Project Leader level. Budget execution and tracking would continue to be conducted at the RWU level, as would Grants and Agreements initiation, tracking, and accrual.

### Administrative Support Structure

The field administrative structure would be somewhat smaller than the current one (being reduced with reduced numbers of Project Leader positions) although cost savings would be offset by the need for higher-level administrative positions to handle the more complex workload of larger RWUs. Because of the slower pace of change, the process would be adaptive, so that lessons learned in one realignment process could be applied to the next.

### Implementation Requirements—Administrative Impacts

Realignment through Concept C would be relatively simple and requires no approvals beyond the Station Director. There would be immediate results, although the process would be more gradual, with final implementation and potential efficiencies delayed for a longer period.