STRATEGIC PLAN:
COLLEGE OF
NATURAL RESOURCES
NORTH CAROLINA STATE UNIVERSITY

June 30, 2013
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Process Used to Develop the Plan

General discussion of strategic planning began shortly after Dean Watzin’s arrival, at the Fall 2012 “All College Meeting.” At that meeting, the Dean shared some initial impressions and some questions to ponder as the College considered its future. In January 2013, Associate Dean for Research Joel Pawlak hosted “Scholarship Day.” After hearing a few invited speakers offer perspectives on interdisciplinary research around grand challenges, the faculty brainstormed themes and incentives that could engage and energize CNR’s research efforts.

Later in January, the Dean and CNR’s Executive Committee spent a day in a facilitated retreat that focused on a process for strategic planning in the College, and some common hopes and fears about the task at hand. After that retreat, Dean Watzin appointed a Strategic Planning Committee with broad representation in the College (Appendix A), and charged them with leading the strategic planning process in the College.

The committee began by revisiting the College’s mission, vision, and values. After several iterations and a feedback session at the College’s second retreat (see below), the committee prepared the revised mission, vision and values that appear below.

A smaller group from this committee worked with the Dean to design a Strategic Planning retreat for the full faculty and staff. An internal website was also established to support the work of the College, and all faculty and staff were given access to it. Background materials and all the working documents produced were made available on this site.

A second subset of the Strategic Planning Committee developed a student survey, to get input from both undergraduate and graduate students about their ambitions, experiences, and ideas for the future. The survey was open for several weeks in February and early March. The results of the survey were brought back to the Strategic Planning Committee, faculty and the CNR Executive Committee to help inform their work. The survey instrument and a summary of the results appear in Appendix B (available on the CNR website).

The Strategic Planning Committee also developed a second survey for thought leaders in our disciplines and professions (Appendix C, available on the CNR website), and this survey was administered by a group of four retired professionals, who are also alums of our College, by phone or in-person interviews. The majority of stakeholder surveys were conducted by phone. This data gathering effort is ongoing.

Using a set of peer and aspirant institutions recommended by the Strategic Planning Committee and the Department Heads, a data set about the academic and research programs of other similar departments and colleges around the country was also assembled (Appendix D, available on the CNR website).

On March 14, 2013, the College of Natural Resources held a Strategic Planning Retreat. In preparation, the faculty was asked to think about two questions:

- What is one big new direction you would like to explore for CNR? Why? How would this be transformational for our College?
- Is there something about the College that we could develop further, fix and strengthen, or eliminate altogether? Why? How would this help our College?

At the retreat, participants wrote their ideas on cards and these cards were circulated for written feedback. Then all the idea cards were collected and organized into theme tables for further work during the day. All comments and the work that followed was recorded and posted to the College’s strategic planning web site.
Subsequently, six themes were identified, and members of the Strategic Planning committee agreed to chair working groups focused on these themes as follows:

1. Student Services/ Career Services,
2. Evolution of our Academic Programs,
3. Interdisciplinary Research Themes,
4. Cross Campus Collaboration,
5. External Partners and Engagement

Each Working Group was charged with exploring the reoccurring ideas and comments found in the first retreat and providing suggestions on how to move forward with specific goals and objectives related to that theme. (See Appendix A for working group chairs and a list of participating faculty and staff). Each group defined its own schedule, gathered data through a variety of processes, and crafted goals and objectives through both meetings and email exchanges. Eventually, the ideas of groups 2 and 3 were combined and the significant overlap between groups 4 and 5 was reconciled. The Strategic Planning Committee met 4 times (April 1, April 11, May 8, & June 6) to discuss Working Group progress and provide feedback.

A second CNR Strategic Planning Retreat was held on May 15, 2013. At this retreat, the six Working Groups presented the work they had done and their preliminary goals and objectives. Using a gallery walk and poster presentations of these preliminary goals and objectives, participants provided written feedback and indicated the most important goals and pressing issues for the College’s future. All comments were recorded and posted online for faculty and staff to access.

Final written recommendations from working groups were presented to the Strategic Planning Committee in early June. The Strategic Planning Committee and the CNR Executive Committee then worked with the Dean to extract the three overarching themes and finalize this draft Strategic Plan.

This CNR Strategic Plan should be considered a living, evolving document. The College will continue to develop and refine our plan and add specificity during the fall 2013, with the goal of having a new CNR “Pathway to 2020” completed by the end of December 2013.
Introduction

The College of Natural Resources (CNR) has a proud history at NC State University, going back almost 85 years to when a School of Forestry was established in 1929 in recognition of the importance of North Carolina’s forests and wood products to the state’s economy. In 1947-48, separate departments focused on wood and paper products and on parks, recreation and tourism were added, the first recognizing the technology demands and economic importance of this industry, and the latter recognizing that parks and recreational amenities were almost completely absent in the rural communities of North Carolina.

Today, the College fully embraces the University’s Land Grant Mission and our research and outreach programs create jobs and economic value across North Carolina. CNR is proud to serve some of the largest economic sectors in the state of North Carolina, including the state’s largest manufacturing industry, forest and wood products, the largest service sector, tourism (including golf), and more than half a million private forest landowners. The combined economic impact of these sectors approaches $50 billion, with direct employment estimated at 558,500.

Our College takes a comprehensive approach to teaching, research, and engagement that encompasses the many ways in which people’s physical, economic and social needs are met while protecting our planet’s natural resources for future generations. Nurturing the environment and engineering sustainable products go hand-in-hand with helping communities and enterprises thrive. Our three departments, Forestry and Environmental Resources (FER), Parks, Recreation and Tourism Management (PRTM), and Forest Biomaterials (FB) are nationally ranked and many of our faculty members have earned international recognition in their disciplines. Each of our departments has strong academic and research programs that serve diverse stakeholders.

Parks, Recreation and Tourism Management programs specialize in preparing planning and management professionals for the fields of parks, recreation, tourism, golf and recreational sports. PRTM faculty teach students skills that are applicable across a wide range of environments, preparing them to be the leaders in the next generation of park, recreation, tourism and sport professionals. PRTM research is breaking new ground and providing new solutions to interdisciplinary problems. For example, PRTM’s People First Initiative in equitable and sustainable tourism is the only program of its kind in the US and now has branches in several international locations. This program focuses on alleviating rural poverty by empowering citizens with tools to expand tourism opportunities and enhance their livelihoods. PRTM’s research program on physical activity, health and well-being is showing how joint-use agreements between public schools and local parks and recreation boards can improve wellness and address environmental justice issues through access to public facilities.

The Forest Biomaterials department is uniquely positioned to create sustainable economic growth, producing renewable materials for bioenergy, engineered wood products and value-added biomaterials. The faculty play critical role in the education and hands-on training of undergraduate engineers for the pulp and paper, and wood products industries. Our world-class researchers have created interdisciplinary research programs that create fundamental science, applied engineering, and integrated life cycle and modeling analytical tools to provide integrated solutions that consider economic, environmental and social drivers. These solutions are deployed through a variety of traditional and innovative corporate and community partnerships.
The Forestry and Environmental Resources department has the largest number of faculty encompassing a range of disciplines from the basic to the applied. From historical strengths in economic forestry and silviculture, including strong industrial research cooperatives, it has diversified to add social sciences, geospatial sciences, biotechnology, loblolly pine and Christmas tree production, land-use change, wildlife management and conservation, and environmental protection. With four undergraduate majors and five graduate programs (four of which are shared with other academic units), FER exemplifies a department taking interdisciplinary approaches to education, research and extension and engagement.

NC State and CNR have a strong national and international reputation in production forestry based on the work of its industrial research and technology transfer cooperatives that have been operating for decades. The NC State Cooperative Tree Improvement Program (breeding cooperative for loblolly pine), The Forest Productivity Cooperative (silviculture and management), Camcore (international germplasm conservation and domestication) and the Southern Forest Resource Assessment Consortium (comparative economics and timber supply) are world leaders in research and applications. Cooperative members contribute dues to support the research, help to set the research agenda, and use the research findings to promote profitability and sustainability of forest ownership.

CNR faculty, staff and students also deliver innovative solutions to complex problems using traditional and new extension and engagement approaches. Some CNR faculty support NC State’s network of county agents and specialists, while others work directly with community and industrial partners. In many cases CNR faculty have created new strategies and partnership that have generated funding and the innovative applied research results to solve new problems. Examples are our partnerships with the military, in community-based tourism and with the biomass power industry.

CNR will continue to offer strong programs in areas of strength, including paper science and engineering, forest management and natural resource conservation, and park planning and tourism management. **We will not diminish or step away from what we do well.** Our vision is to build on these strengths and leverage new partnerships and collaborations that will address the increasingly complex “grand challenges of society.” These challenges demand a systems approach, with transdisciplinary perspectives and methods of analysis. They form the basis for three bold new themes the College will pursue. They also undergird the many goals and objectives we have outlined to enhance student success and satisfaction, increase our research by taking on larger interdisciplinary projects that have the potential for greater impact, and to become the “go-to” place for solutions to natural resource challenges in both the built and natural environment.
CNR Mission, Vision and Values

MISSION

Our mission is to provide solutions to the challenges of natural resources management, social and ecological sustainability, and human health and well-being by educating new leaders and professionals, generating new knowledge and technology, leveraging transdisciplinary insights, and engaging with communities in North Carolina, the nation, and the world.

VISION

Our vision is to be a world leader among universities that are creating a healthy and more sustainable future for all people. By 2020, we will become the “go-to” place for solutions to natural resource challenges in both the built and natural environment.

VALUES

We value -

- Human health and well-being, natural resources and sustainable biomaterials, and the environment
- Our students, staff, faculty, alumni, and friends
- Diversity of people, places, perspectives and ideas
- Academic excellence in all of its forms - the scholarships of discovery, teaching, information transfer and scientific integration
- Engagement with communities in North Carolina, the nation and the world
- Fundamental and translational science/research that is innovative, transdisciplinary, relevant and high impact

We intend - to make the world a better place for this and future generations

THE PATHWAY TO THE FUTURE

The College of Natural Resources fully embraces the core values and guiding principles as expressed in the University’s 2011-2012 Strategic Plan. Our three themes, and our goals and objectives are fully aligned with the 5 goals articulated in “The Pathway to the Future:”

1. Enhance the success of our students through educational innovation.
2. Enhance scholarship and research by investing in faculty and infrastructure.
3. Enhance interdisciplinary scholarship to address the grand challenges of society.
4. Enhance organizational excellence by creating a culture of constant improvement.
5. Enhance local and global engagement through focused strategic partnerships.

In the following sections, we present our strategic plan in two parts. The first part, entitled “Excellence in Three New Thematic Areas,” presents our new overarching themes. The second part of our plan, entitled “CNR’s Programmatic Goals and Objectives,” includes goals and objectives to enhance student success and satisfaction, to build our portfolio of interdisciplinary research and engagement and our cross campus collaborations, and to improve our college operations and have greater impact in the world. At the end of our
plan, we present a summary table that cross-references our goals and actions with the five overarching goals in NC State’s Pathway to the Future.

Our action plans are very much “in process” – this is a living, evolving document. It will change in response to our successes and challenges, and over time, will ensure that we are successful in achieving our vision and excelling in our three new areas of excellence.
Excellence in Three New Thematic Areas

THEME 1 – SUSTAINABILITY SOLUTIONS

Discussions about sustainability abound in businesses and on college campuses around the world, and yet in many ways, it is still an ambiguous concept. At its essence, sustainability refers to a way of living that ensures we leave our environment as good or better than we found it, so future generations have the same opportunities that we do today.

Sustainability is perhaps most valuable as a framework for making difficult choices in a world where resources are finite and many conflicting social, economic, and environmental goals must be balanced. There is no single “engineering solution” that will provide a sustainable future; instead a constantly evolving series of tradeoffs reflects our values and our commitment to a different kind of future. Understanding those tradeoffs requires a systems approach and new tools for quantifying and envisioning the future.

Achieving sustainability is as much a societal challenge as an environmental one. It will require a commitment to doing things differently, to thinking about development and innovation differently, with education, communication and equity as central concerns that are explicitly addressed. It will come only when we acknowledge the vast accumulation of unintended consequences that have resulted from piecemeal approaches to development and environmental management. Most importantly, sustainability will only become common currency in business, government, and society when we create ways to measure, analyze and evaluate it.

CNR is uniquely poised to lead and collaborate with colleges across the NC State campus and beyond to address the challenges associated with developing and applying these new methods. Our research is already beginning to quantify the inputs and outputs of various socio-ecological systems. For example, our modelers have developed new techniques to bring social considerations into life cycle assessment, which considers the full array of environmental impacts and costs, from supply chain to end-of-product life. Our engineering faculty members have worked with a leading sustainable paper producer, Domtar, to turn a by-product of pulp production into a value-added and sustainable chemical additive, diverting it from the waste stream. Our remote sensing and visualization specialists are developing total immersion technologies to assist small farmers with preservation and agro-tourism development goals and scenarios.

Across the campus, NC State excels in technologies and innovation that can be applied to the practical challenges of sustainability. Sustainability will not come with infinitely more detailed descriptions of how we got to the crises of today. It will come when we can use new tools and technologies to visualize and evaluate alternative scenarios for the future. Gaming technologies are one way to do this but there are many other technologies as well, including big data analytics, visualization, geospatial analysis and modeling, system integration and life cycle analysis, computational social science analytics, integrated policy, planning and economics analysis, partnership and community development.

In the realm of land management and the natural and built environment, CNR excels in approaches to sustainable management of forested ecosystems – for biomass and energy, for wood production and new bio-product development, in new approaches for sustainable and equitable tourism, and for holistic management of landscapes where biodiversity protection, carbon sequestration, water management, food, recreation and other goals can and should be considered.

Monetizing the values of these goods and services (the so-called ecological services), and using market-based methods to help achieve environmental goals are increasingly accepted approaches to conservation and
environmental management. However, the models and methods to support these approaches, and the appropriate values – both short and long term costs and benefits – have not yet been developed and accepted. CNR is well positioned to work in this area, building on our strengths in resource economics, life cycle analysis and full cost accounting, and ecological foot-printing.

Communication and a different mode of public education are also key parts of sustainability that NC State can address. Over the last several decades, scientists have lost credibility because they have failed to communicate in ways that others can understand. This must change, and with partnerships in CHASS, COS and the NC Museum of Natural Sciences and Nature Research Center, we have unique opportunities to drive that change.

As we lead the development of a research portfolio that addresses the many aspects of sustainability, we will also continue to infuse sustainability across our curricula. While we are already bringing sustainability into specific majors and minors that address energy, sustainable wood products, resilience of rural communities, and other specific applications, the concept of sustainability cast large can be abstract until it is connected to specific places.

Place-based approaches to sustainability, natural resources management, and environmental problem solving – and to education – can transcend from concept to reality. As we live in and learn the story of particular places, we understand in a deeper way how living systems work in those places, we become immersed in the culture and develop a shared sense of responsibility for the quality of the community. With that community – businesses, natural resources professionals and citizens alike – we can develop solutions that work.

To bring this back to an educational context, students must know how what they are learning is positioning them to work for and in a more sustainable world. Educational activities focused in a specific place where culture and context can be experienced and real bonds are formed, have the power to be transformative, turning concepts into real learning and real change.

By expanding and building new interdisciplinary and collaborative teaching, research and engagement programs around the theme of sustainability, CNR will develop practical approaches for quantifying, visualizing and analyzing alternative scenarios for a more sustainable future. With our partners, we will train a new generation of sustainability leaders and professionals that can bring real-world solutions to sustainability challenges and help keep businesses profitable, contributing to economic growth and development in North Carolina and the world.
THEME 2 – LAND AND WATER

Freshwater supply and management is the most pressing natural resource issue in the 21st century. Clean and affordable drinking water is a basic human right, but as much as 80% of the world’s population does not have water security, defined as the availability of sufficient quantity and quality of water to support human health and livelihoods, ecosystem services, and national security.

More specifically, about 1 billion people around the world do not have access to clean, safe drinking water; 2.5-3 billion people lack adequate sanitation; and half the patients filling hospital beds around the world suffer from water borne diseases. By 2025, about 2.8 billion people will face significant water scarcity as a result of population growth, rising economic expectations, political instability, climate changes, and other factors.

Water is the ultimate renewable resource, cycling continuously among the atmosphere, land, rivers, lakes, groundwater reservoirs, and oceans. Most of the world’s useable freshwater falls first on land, meaning water management is intimately and inextricably tied to land management. These lands are under assault from the combined pressures of development, agriculture, energy extraction and mining, and increasing habitat fragmentation. Climate change has already and will continue to exacerbate water shortages and present new water management challenges as both the amplitude and frequency of floods and drought are increasing. The only way to address the challenges of freshwater in the face of these pressures is through a landscape approach. While water scientists and engineers exist across the NC State campus, CNR is uniquely poised to approach water challenges through this lens.

In North Carolina, 70% of our water falls first on forested land, where it is absorbed and treated naturally before being conveyed to our rivers, reservoirs, lakes and estuaries. The demand for new housing sites, recreation, biodiversity protection, and the many wood products provided by these forests will only increase as the State’s population continues to grow. A changing climate may result in more frequent and intense droughts, threatening agriculture, industry and domestic water supplies. Quite simply, the future prosperity of our State will only be achieved with improved and integrated water resource management.

In North Carolina, as in most of the world, integrated water resources management means coordinated multiuse management of forests. Keeping forested land forested will provide more water, and higher quality water than developed land, and at a lower cost. However the economics of land conservation – the business case for conservation – has not yet entered the debate about water provision in most areas. CNR and NC State can lead in the development of the transactional infrastructure that will inform this debate. The recent political maneuvering surrounding Jordan Lake clearly illustrates the many entangled issues of environmental justice, supply, affordability, pollution, and public health that are crying out for this kind of information. In addition, river basins across our state feed ecologically sensitive coastal habitats and thus management of water in central North Carolina can impact water systems hundreds of miles away, along our coast.

Water is currently a $400 billion global industry, with huge opportunities for growth. The world needs new technologies for advanced water treatment, including point-of-use treatment, water reuse systems (including gray-water systems), real-time monitoring and remote sensing technologies, stormwater control and decontamination, and improvements in agricultural water use, in both irrigation and animal waste management. These challenges play to strengths across the NC State campus.

Equally, there is a need for better – and more equitable – policies for water management. Social science, economics, and human behavior research are equally important to finding water resource solutions. Current water policies in the US do not incentivize new water technologies, manage water withdrawals or water quality, or protect and restore ecological integrity. Effective water management in the future will require a
paradigm shift towards shared governance, using integrated, adaptive approaches. CNR social scientists, with partnerships across the NC State campus can address these challenges as well.

*By establishing a Land-Water Institute to bring a landscape perspective to water resource issues and forming interdisciplinary teams across the NC State campus and beyond, CNR will focus new energy on the challenges of water security. Working across political, societal, and economic boundaries, we will educate new integrated water resource managers and develop holistic solutions to the challenges of freshwater supply and management.*

### THEME 3 – URBAN ECOSYSTEMS AND THE INTERSECTION OF BUILT AND NATURAL ENVIRONMENTS

Urban areas in North Carolina, the Southeast, and the world are growing as the human population continues to explode. As the natural resources needs of this growing population become ever greater, there are enormous pressures on both local ecosystems and the remaining areas outside urban centers to meet human needs. Nowhere is this pressure more evident than in the areas where population centers and traditional natural lands intersect, sometimes called the wildland-urban interface or peri-urban environment.

The fragmentation of the landscape and disconnections of wetlands, forests, streams and floodplains that accompany urban development create unique natural resource problems, including significantly elevated risks of wildfire, polluted air and water, nuisance wildlife, the spread of invasive species, zoonotic diseases and other problem resulting from interactions among wildlife, domestic animals and people. With impairments of ecological integrity come losses of biodiversity and reductions in the resiliency of natural systems to disturbances, including extreme climate and weather events like drought and floods.

Urban ecosystems need large amounts of energy to function. Urban lifestyles, poorly planned transportation networks, the pattern of urban land use, and the sprawl associated with the peri-urban environment can all reduce access to parks, physical exercise, and the quality of the air, land and water people encounter in daily living. All of these things have very real impacts on human health and wellness. As people are less connected to the natural world, psychological stresses can increase, understanding of natural processes decreases and support for environmental stewardship can decline. Furthermore, the history of social and environmental injustices in the United States has further alienated some populations. As demographic shifts continue to occur across North Carolina and the nation, the need for reconnecting disenfranchised populations with natural resources and the environment will become even more important.

The challenges of wildfire are sometimes thought about only as a problem for the western states, but CNR leads research and engagement efforts around wildfire in the southeastern US. Here fire has also been suppressed, with degrading impacts on ecosystem health and productivity and significant increases in risks to the built environment. Our natural and social scientists are using modeling to examine the spatial distribution of fire risk, and ways to manage and use fire to protect people and restore the health of forest ecosystems that rely on fire as a critical ecosystem process.

The challenges of community development and sustainable housing are also being addressed in CNR projects focused on resilient housing and communities that bring together wood products engineering, visualization approaches, social network analysis and community partnerships. There are enormous opportunities to increase teaching, research and engagement in these areas.

The Triangle Area and surrounding communities provide the perfect environment for research on sustainable urban design, watershed management, and the development of whole system models to explore different
scenarios of management and environmental infrastructure to address urban problems. NC State is already working with partners at UNC-Chapel Hill and Duke University on these issues as part of NSF’s Urban Long-Term Ecological Research (LTER) network to study urban ecosystems, stormwater and the urban-environmental interface. New efforts will capitalize and internationalize these efforts through partnerships in South Africa and other areas.

By building new transdisciplinary collaborations across our departments and the NC State campus, CNR’s research and engagement in this thematic area will help address the challenges of urban communities and the wildland-urban interface providing practical solutions that improve urban ecosystem services and support resilient, just and healthy community development and environmental stewardship.

ACHIEVING EXCELLENCE IN CNR’S THREE THEMATIC AREAS

To tackle the issues addressed in the three thematic areas, CNR will need significant new investments. We envision a phased investment in these areas, following a “cluster hire model” bringing in 3 or more new faculty and a cohort of 10-12 graduate students in each thematic area at a time. These resources might come from a combination of the new resources provided by the provost to CNR when Dean Watzin was hired, returns on the Hofmann Forest investment if the impending sale of the Forest goes through, and our Capital Campaign.

The most pressing need that must be addressed to move these new areas forward is new space. We simply do not have the classroom, laboratory, collaboration, or office spaces needed to bring in the new faculty, staff and students we envision in these areas.

Our implementation plan is as follows:
Priority 1 – Sustainability Solutions

1. **Hire 3 new faculty members in the area of sustainability**, with specialties to be defined in the next 6 months.

2. **Create a named “Professor of Practice” in Sustainability.**

3. **Complete a proposal to create a new PhD program in Geospatial Analytics** as described in the following pages. This program will, in part, provide education and applications to support the development of sustainability models, methods and metrics needed to solve sustainability challenges.

4. Create the cross-campus collaborations and other academic program changes necessary to support the questions and issues discussed.

5. Incentivize and build faculty capacity for interdisciplinary research in sustainability science and policy.

6. **Fund and recruit 10-12 PhD students to conduct interdisciplinary research in sustainability science and policy.**

Priority 2 – Land and Water

1. **Create a Land-Water Institute** to bring together interdisciplinary expertise in this area from across the campus and highlight the strengths, capacities and urgencies for research, education and outreach in this area.

2. Identify the specific expertise areas and **hire 3 new CNR faculty members** with these qualifications, including a director to lead the Institute.

3. Create the cross-campus collaborations and academic program additions and changes necessary to support the questions and issues discussed.

4. Incentivize and build faculty capacity for interdisciplinary research in this area.

5. **Fund and recruit 10-12 PhD students to conduct interdisciplinary research to solve water resource management challenges.**

Priority 3 – Urban Ecosystems and the Urban-Rural Interface

1. Further define specific focal areas to be addressed, which might include fire use and management, ecological design, human health and resilient communities, and urban wildlife and conservation.

2. **Hire 3 new faculty members** who have strengths and leadership potential in these areas.

3. Create the cross-campus and inter-institutional collaborations and academic program additions and changes necessary to support the questions and issues discussed.

4. Incentivize and build faculty capacity for interdisciplinary research in this area.

5. **Fund and recruit 10-12 PhD students to conduct interdisciplinary research to solve urban ecosystem management challenges.**
CNR Programmatic Goals, Objectives, and Strategic Actions

GOAL 1. ENHANCE STUDENT SUCCESS THROUGH EDUCATIONAL INNOVATION, BOTH WITHIN CNR AND THROUGH COLLABORATIONS ACROSS THE NC STATE CAMPUS

Student success requires a combination of challenging academic training and a supportive environment for individual personal and professional growth. Successful students should leave NC State University with discipline-specific academic knowledge, well-developed problem-solving skills, and the ability to both lead and serve.

The College recognizes the need to continually improve its academic programs to meet the natural resources, environmental, and societal challenges of the state, nation and world. The College also recognizes the need to support the personal growth of students through effective advising and mentoring, engaged learning, and preparation and placement of students in rewarding, professional opportunities upon graduation. With a committed faculty and staff who are constantly improving the depth and breadth of academic content and its delivery, and a robust student support infrastructure, graduates from the College will be prepared to solve the complex, interdisciplinary societal and natural resource problems facing the state, nation and world.

There is a clear consensus across the College that both undergraduate and graduate students are best served when there as an effective balance of challenging academic programs, delivered by engaged faculty, connected to real world problems. These real world problems are reinforced with internships, service learning, study abroad, co-op and other capstone experiences. Out-of-class, real world experiences are required for all the degree programs within the College, and they are highly valued by students and employers. Although these experiences can sometimes increase the time to graduation, students and faculty agree that this is a small cost relative to the educational and professional value of these experiences. Simply said, students get better jobs and are better prepared for success, because of these experiences.

The College has a number of degree programs that, within the state of North Carolina, are only offered at NC State. The College also has a well-earned reputation for being student-focused, with committed faculty. Thus, the College tends to attract a number of NC State internal transfers, as well as first-year and transfer students from outside NC State. By welcoming these internal transfer students the College plays an important role in supporting the University overall retention and graduation targets.

OBJECTIVE 1. Enhance Undergraduate Academic Programs by Emphasizing Interdisciplinarity, Leveraging Opportunities for Cross-College Collaboration, and Using New Technologies and Engaged Learning Across the Curriculum

Specific Actions

The College is committed to providing interdisciplinary perspectives and learning opportunities to all our students regardless of academic program. We are also committed to a thorough review and updating of our curricula in light of our thematic emphases and with an emphasis on engaged learning across all four years of undergraduate study. Student learning is enhanced with opportunities to work on problems that are place-based and require the application of knowledge and skills in context.
There are enormous undergraduate opportunities in some of our traditional undergraduate degree programs and in environment/environmental science, sustainability, and fisheries, wildlife and conservation biology. Student interest is high and enrollments are growing in these majors, both at NC State and elsewhere. All of these areas are inherently interdisciplinary and connected to CNR’s existing strengths.

The College of Natural Resources has been highly successful with our distance education programs, and based on that experience, see the potential to make greater use of on-line teaching tools in traditional classes. Blended classes that combine features of both face-to-face and on-line instruction might allow instructors to deliver basic material through recorded lectures and on-line activities while retaining the immediacy and spontaneity of in-class learning for applications, problem-solving activities, and collaborative learning. These approaches can also provide scalability as enrollments change, minimizing some of the time and space issues experienced by growing programs like PRTM.

1. Create a common interdisciplinary class that would allow all CNR students to recognize the complex array of environmental, economic and societal challenges and demands on natural resources and the livelihoods they support and to learn about diverse strategies for meeting those demands.

2. Lead a campus-wide effort to enhance the Environmental Science B.S., including establishing a common first-year experience, greater curricular coherence across the campus, and upper-level options in the Colleges that build on the many strengths that exist in CALS, COS, COD, COE, and CHASS.

3. Review and enhance the structure of our Fisheries, Wildlife, and Conservation Biology undergraduate program to fully support (or eliminate) options in Fisheries. Implement the structural and curricular changes necessary.

4. Building on CNR’s near 100% participation of all students in engaged learning, create progressively more challenging opportunities from the first year to graduation.

5. Strengthen linkages with strategic international partners to increase opportunities for undergraduate study abroad and internships.

6. Provide training and support for faculty to use web-based tools more effectively. The use of appropriate technology and training for faculty can provide the seamless delivery of video, simulations, graphics, and visual aids that can be available across the college.

7. Partner with DELTA to begin moving appropriate large undergraduate courses to blended class models (part on-line and part face-to-face), beginning in PRTM.

8. Market CNR and NC State remote facilities and partnerships (Camp Slocum at Hill Forest, CMAST in Morehead City, Nature Research Center at the NC Museum of Natural Sciences) as ‘outposts’ where all Colleges can work, train, teach and collaborate.
OBJECTIVE 2. Create New Opportunities for Cross-College Collaboration around Graduate Programs That Are Transdisciplinary and Jointly Delivered.

In the same way that undergraduate academic programs can be improved through linkages to CNR’s new themes and by focusing on interdisciplinary approaches, there are enormous opportunities for building graduate programs in these areas that combine CNR strengths and partnerships across the campus.

Specific Actions

1. Develop a new Ph.D. Program in Geospatial Analytics that ties to the Faculty Excellence Cluster and is focused on land use change, people, and the environment.

2. Create a new vision for the interdisciplinary Fisheries, Wildlife and Conservation Biology graduate program that leverages the strengths of CNR, CALS, COS and CVM; and make the infrastructural changes necessary to implement it.

3. Work with the Graduate School and other college deans to develop a university-wide Ph.D. fellowship program that focuses on cross-campus collaboration, similar to the cluster hire program.

4. Bring CNR departments together to develop and deliver inter-departmental graduate seminar courses that take an interdisciplinary approach to problem solving. Joint meetings of faculty and graduate students would build cohesion, increase understanding about research methods, perceptions, and practices across the disciplines, and facilitate on-going dialogue.

5. Lead efforts and coordinate with other Colleges to strengthen linkages with strategic international partners.

OBJECTIVE 3. Develop and Implement New Models for Mentoring and Advising Across the College, and Build Co-curricular Programs to Support Honors Students, Transfer Students and Other Target Groups

The current CNR Honors Program is focused on undergraduate research and is effective and valued by some students. But many other CNR students are passionate about other forms of engaged learning, including service to the community, global engagement and other experiences. While these passions and interests can serve as the basis for undergraduate research, they may better fit into broader models of an Honors Program.

Specific Actions

1. Develop a new Honors Program that begins in the first year, in order to attract a more diverse group of students into the College. This expanded CNR Honors Program should include a specific individual to serve as the coordinator, workshops on research ethics and methods, and have activities that increase students’ global awareness.

2. Broaden the opportunities for the capstone Honors experience to include a variety of research, senior design and engagement, and international options.

The various academic programs across the College have different models for advising and mentoring, but in all cases there are opportunities for improving student advising. Strong advising is essential for all students to get the courses they need, when they need them. Strong advising also allows students to take advantage of co-
curricular and professional opportunities that improve success such as internships, co-ops and study aboard. An expanded program of professional development will help connect current students with career opportunities and recent graduates working in their field.

Focusing on creating a sense of community and opportunities for students to engage with faculty, staff, and other students outside of the classroom can clearly improve retention and graduation rates. Benefits include helping students feel connected to NC State, providing a support network of people who can provide guidance and advising, and developing a sense of loyalty to their Programs, the College and the University. CNR is committed to creating a sense of community including addressing the needs of specific populations such as veterans, first generation, and international students, and providing them with customized support programs.

3. **Practice proactive advising** across the College to help all students make the most of their undergraduate programs.

4. **Create a College level Career Services Office** that will develop and strengthen relationships with potential internship sponsors and employers and with alumni who can serve as career mentors to our students, helping them to develop professional networks and be “job-ready” at graduation. This office would also develop programs that extend beyond resume building and interview skills training seminars to include professional communications, business etiquette, and training in cultural competency so that students are prepared to enter and succeed in a diverse workforce.

5. Create a **Peer Advising Program** to supplement academic advising by our faculty advisers with a corps of trained upper-class students available to provide advice on professional development, careers, and course selections for incoming first-year and transfer students.

6. Enhance the success of graduate students by offering professional development opportunities, graduate internships, training in cultural awareness and professional ethics, and opportunities for participation in professional societies and networks.

CNR is committed to providing the best possible experience for our **transfer students**. Through unique partnerships with NC community colleges and as part of the First-Year experience at NC State, CNR matriculates a relatively large number of transfer students, each of whom faces individual challenges in developing an appropriate plan of study, and graduating in a timely manner.

7. Through proactive advising, help transfer students develop plans of study that provide as timely a path to graduation as possible.

8. Work with DASA to assist internal transfer students find early information about CNR programs and degree requirements.

9. Develop and deliver community-building activities designed to assist transfer students in connecting with college faculty, staff, and other students.
OBJECTIVE 4. Enhance And Integrate Diversity Efforts More Fully Into All Aspects of the College.

Although the College has made good strides towards diversifying our faculty, staff and student body, the College community does not yet reflect the demographic diversity of North Carolina or the nation. To prepare our students to live and work in a diverse and global society, our students must be culturally competent and understand the links between environment, social justice and our professions.

Specific Actions

1. Develop programs to support and train faculty and staff in key aspects of cultural competency.

2. Develop and seek approval for a diversity course that meets the US Diversity GEP requirements and that links diversity issues to the environment and natural resource professions.

3. Embed diversity into all other goals and objectives for enhancing student success through educational innovation, including service learning, study abroad and other efforts.

4. Develop and implement recruitment plans to attract faculty, staff and students that reflect the demographic diversity of North Carolina and the region.

5. Partner with local schools and other organizations to engage youth in activities that educate them about our professions and highlight potential career paths.
GOAL 2. INCREASE INTERDISCIPLINARY RESEARCH AROUND THEMES THAT ENGAGE CNR FACULTY BROADLY, LEVERAGE CROSS-COLLEGE COLLABORATIONS AND CONTRIBUTE TO ECOLOGICAL AND SOCIOECONOMIC SUSTAINABILITY

CNR is keenly interested in continuing to build its portfolio of interdisciplinary research that addresses the grand challenges of society, especially in our three new thematic areas. This must be pursued both across departments within CNR, and across the campus with the other Colleges on the NC State campus.

Natural resources programs are by their nature interdisciplinary, requiring a mix of natural and social science perspectives and expertise and a range of skills from fundamental genetics and biochemistry, applied plant and soil sciences, wildlife and fisheries ecology, economics, policy and planning, human behavior, forest and environmental engineering, watershed science and management, and wood product manufacturing and pulp and paper chemistry and engineering. The challenge is to bring diverse disciplines together in successful partnerships.

The key to successful research partnerships and collaboration is faculty passion. CNR envisions a reinvigorated transdisciplinary research agenda that arises from the faculty, in areas that build on existing strengths and the genuine excitement that comes from self-identification of research priorities. Our three new themes highlight areas of interest that already engage faculty broadly across the College.

A vibrant College should be comprised of a mix of disciplinary and interdisciplinary work. Disciplinary work helps create the foundation for interdisciplinary work, and the faculty is actively working to define the right “balance” among these work areas. Currently, about 30% of CNR’s sponsored grants include faculty from at least two academic Departments within CNR or across campus. To build a higher quality and higher impact portfolio that can address the grand challenges of society, this percentage must increase. A mix of capacity building and incentives are needed to support this change.

Graduate students and post-doctoral associates are an integral part of interdisciplinary work; in fact, they often serve as the “glue” helping to bring and hold faculty together in interdisciplinary endeavors. In our recent survey, CNR graduate students clearly recognized the benefits of interdisciplinary work, especially the cross fertilization between faculty and students with different backgrounds and experiences. However, it is also important to acknowledge that many aspects of interdisciplinary student research and training may extend the time to graduation, and incentives for faculty to take on the responsibilities of mentoring graduate students with interdisciplinary research projects are needed.

OBJECTIVE 1. Identify Interdisciplinary Themes That Build on Faculty Strengths, Interests, and Emerging Areas of Societal Need, and That Support the Development of Competitive Research Proposals in These Areas.

CNR’s current research portfolio addresses aspects of a number of society’s grand challenges, and both individuals and research teams within CNR have already established substantive cross-campus collaborations. Recent examples include the Chancellor’s Faculty Excellence cluster hires, and involvement in the US Department of Interior’s Climate Science Center projects. The faculty believes strongly that collaborations should be developed organically, through a bottom-up process, however CNR has strong scholarship and will take a leadership role in developing collaborations that emphasize our three new themes.
Specific Actions

1. **Form interdisciplinary working groups** comprised of interested faculty from across CNR departments and faculty from other units to collaborate on specific grand challenges.

2. **Hold a thematic, College-level seminar with high profile speakers** who will attract attendees from other colleges. Leverage connections with colleagues in other colleges to recruit speakers.

3. **Bring in visiting scholars** currently engaged in interdisciplinary research in areas that interest more than one CNR faculty member.

OBJECTIVE 2. Increase the Capacity for Interdisciplinary Research Across the College.

Even though the College has a strong history of interdisciplinary research, more needs to be done to both encourage faculty to attack these more complex and challenging research areas, and to help support the management of large complex projects. To be successful, the College and University must align structures and incentives that facilitate collaboration. More specifically, NC State needs ways for faculty and Departments to share ‘credit’ for students working between Departments and Colleges, more flexible administrative systems and business practices for accounting and research grant administration between Colleges, and greater sensitivity to the potential impacts of interdisciplinary research on promotion and tenure.

Specific Actions

1. **Establish structures in the CNR Research Office to support larger and more complex, interdisciplinary research project development**, from idea generation through grant submission.

2. **Initiate a CNR internal seed grant competition** for faculty teams to work together to develop interdisciplinary research projects. Resources available might include a funded graduate student, faculty course release time, and modest operating funds.

3. **Create a Cross-College Collaboration Fund** that (1) is jointly funded by Colleges with shared interest in collaboration, (2) awards small grants to faculty teams through a competitive process that all participating colleges endorse, and (3) results in an interdisciplinary proposal addressing a grand challenge.

4. Develop and support interdisciplinary research collaborations around geographic interests of faculty. Opportunities within North Carolina, the US and around the world currently exist.

5. Create a culture within the College and Departments that recognizes and rewards interdisciplinary research efforts at every step, e.g., position descriptions, hiring, annual evaluations, reappointment, promotion and tenure, post tenure review.

6. Adjust faculty SME’s to include interdisciplinary effort in teaching and/or research. Develop appropriate metrics to measure achievement and success for promotion and tenure decisions.

7. Work with the University to ensure that the ‘metrics’ it uses to track faculty, Departmental and College success include the shared credit for interdisciplinary work.
GOAL 3. EXPAND AND FOSTER CNR EXTERNAL PARTNERSHIPS BY LEVERAGING THE IMPACT OF RESEARCH, ACADEMIC AND ENGAGEMENT INITIATIVES.

CNR believes strongly in the Land Grant Mission. CNR has a broad spectrum of external constituencies; and our extension and engagement programs are highly valued by partners in government, the private sector and non-profits. CNR serves some of the largest economic sectors in the state of North Carolina, including the state’s largest manufacturing industry, forest and wood products, the largest service sector, tourism and golf, and more than half a million private forest landowners. While these sectors have changed over the past decade the long-term growth projections for North Carolina clearly show future demand for wood housing, recreation, freshwater, and other products that require natural resources will only increase and highlight the need for innovative solutions to complex problems of natural resource management coupled with human health and well-being.

Our many partnerships help to keep our academic programs relevant and strong, offer real-world internships, co-op opportunities and future employment to our students, and ensure that our research is relevant and shared with stakeholders who can use it. Building on our strengths, CNR has unique opportunities to create high impact programs focused on sustainability, water, the urban-forest interface, bioenergy, and climate change adaptation and resiliency initiatives.

OBJECTIVE 1. Increase Awareness and Opportunities for All CNR Faculty and Staff to Work with Local and Global Partners on Applied Problems.

All CNR faculty members are encouraged to actively pursue opportunities to use their professional insights to solve real world problems. These College-wide efforts are based on the long history of forestry as an applied science, and on the current interests of the faculty who are motivated and engaged in many real world problems.

Examples of the synergistic benefits of applied research and teaching developed by faculty without traditional extension appointments, but directed at specific industry and community problems include market-based conservation initiatives with the military and other partners, biomass production on marginal lands such as municipal waste application sites, and evaluation of various payments programs for ecosystem services. Other examples include recreation resource impact monitoring, new programs to promote physical activity and community well being, and assistance with wood machining and life cycle analysis. In return the research and teaching interests of many faculty are refined and improved as they better understand the real world problems communities, and industrial and government partners face.

Specific Actions

1. Establish CNR Professorships of Practice to bring experts from other sectors into the university to create a bridge between academia and other sectors, spark creativity and innovation, and maximize the impact of our work.

2. Encourage all faculty members to engage in appropriate extension and outreach in areas where their research or teaching activities can support partners by including this in SME’s and annual reviews.

3. Encourage CES extension faculty to identify specific skills and experience that can provide high impact solutions to problems faced by local communities.
4. Recognize and reward faculty who are actively engaged in real world problems through annual awards/recognitions and highlighting success in the appropriate CNR communications.

**OBJECTIVE 2. Create New Programs and Funding Models that Support New Extension and Engagement Initiatives.**

There is simply not enough funding within the CES and University systems to adequately address all the complex natural resource problems facing North Carolina. New problems like natural resource demands and expectations placed on the military, invasive species, obesity and wellness, urban-forest interface, water quality and quantity, and sustainable and resilient housing and wood products are all examples of relative new program areas where CNR faculty are having an impact. Because there is no reduction in the very real, and well-justified expectation from the more traditional extension partners, new funding streams and techniques to address these new demands must be identified.

**Specific Actions**

1. Encourage and reward faculty developing new sources of funding for innovative programs and partnerships. The College can help faculty develop the networks, and support faculty as they develop new partnerships.

**OBJECTIVE 3. Increase the Impact of our Engagement by Strengthening and Expanding our Partnerships within the Cooperative Extension Service System and the Recreation Resource Service.**

CNR Cooperative Extension Service faculty support manufacturing and service sections that have a tremendous economic benefit for the state of North Carolina. To serve a very diverse array of clients across the state, the CES funded faculty work with county agents and specialists to provide them with the information they need to answer the almost infinite array of specific questions coming from North Carolina landowners and citizens. The CES funded faculty also work directly with small industrial and community based clients to solve practice problems that allow them to be economically competitive.

In a unique partnership with the Division of Parks and Recreation in the North Carolina Department of Environment & Natural Resources, PRTM provides a technical assistance program for North Carolina’s park and recreation providers through the Recreation Resources Service (RRS). The RRS concentrates on four types of services: technical assistance, field administration for the Land & Water Conservation Fund and the Park & Recreation Trust Fund, applied research and continuing education.

**Specific Actions**

1. Continue to work with the county-based Cooperative Extension system to ensure that they have the most accurate information and training to answer local questions, using the national extension website as appropriate.

2. Increase efforts to work directly with specific communities, small industrial partners and other constituencies to develop innovative solutions to complex problems. Since many natural resource issues are unique to specific landscapes and communities, CNR Extension faculty will continue to develop, and expand, their delivery of community and campus-based training for specific partners.
3. Seek external partner/stakeholder input about research, academic and engagement functions central to the CNR mission, perhaps by forming a CNR Engagement Advisory Council.

GOAL 4. STRENGTHEN AND ENHANCE INFRASTRUCTURAL SUPPORT ACROSS THE COLLEGE OF NATURAL RESOURCES.

For CNR to achieve its ambitious academic, research and scholarship, and engagement goals, it must have robust and efficient infrastructure systems and facilities that can support the College’s goals and priorities. These include space for all activities, communications, business services, staff organization, and training and professional development.

Space is a critical challenge for CNR. According to NC State’s central metrics, CNR lacks the space it needs for its current programs. In addition, the space it has is spread too broadly across the NC State campuses. Most critically, the distance between the Wildlife and Conservation Biology faculty in Turner House and the corpus of other faculty along Western Boulevard is an impediment to collaboration and student involvement with all aspects of the College. Across all our academic programs, there is inadequate space for graduate students, and no space to support the needs of new hires coming into the College. Our lack of space is becoming a barrier to hiring the best faculty and attracting the best students to our programs.

Strong communications are essential to everything we do in the College. They support recruitment of students, faculty and staff, keep alumni connected with the College after graduation, support development activities, strengthen and build partnerships, and promote the good work and reputation of the College.

The College of Natural Resources staff is distributed among a Central Dean’s Office and our three Departments, and other administrative offices. The combination of the recent budget cuts and high workloads has led us to reflect on whether the delivery of business/financial, human resource, and research administration services could be improved by finding efficiencies in structure and process. Our Business Team strives to provide the highest possible level of business/financial/HR/research services to all units and for all the various funding sources that include: state appropriations, trust funds, agency accounts, sponsored programs, foundations, and state and federal appropriations. The complexity of budgeting and accounting has created problems and the need for more centralized orchestration of business services.

OBJECTIVE 1. Develop and Implement a Long-Term Comprehensive Space Plan for CNR.

Like all Colleges, a lack of space is a barrier to both growth and success. This barrier applies to both disciplinary and interdisciplinary work, as well as to offices, laboratories, and collaborative space. The University and College must find ways to increase the space allocated to collaboration and high impact research.

Specific Actions

1. Develop clear criteria for allocation and retention of office, laboratory and creative space across the College. Criteria should include consideration of the quality of the work and its support for the strategic priorities of the College. Apply those criteria as appropriate moving forward.
2. Working with the Central Administration, consider ways to bring faculty and graduate students closer together using existing space on the NC State campus.

3. Identify and pursue opportunities for renovating current space allocated to CNR to better meet needs across the College.

4. Identify the needs for new space and develop specific plans for a new building that will meet those needs.

5. Identify and obtain the resources necessary to implement the long-term comprehensive space plan for the College.

6. Create and equip new collaborative spaces and give explicit priority to interdisciplinary and/or interdepartmental working groups of faculty and graduate students.

OBJECTIVE 2. Develop a Comprehensive and Integrated Communications Plan for the College That Brings Consistent Messaging to All of Our Web, Print and Other Media.

Specific Actions

1. Work with a communications and marketing professional to help identify core messages and themes for CNR. Coordinate key messaging with University Communications and Development.

2. Launch a rebranded and refreshed CNR website within a year, and begin a regular set of printed and email communications linked to this branding.

3. Develop a strategy that includes targeted communications to key partners in all levels of government, large and small industries, nonprofit organizations, community groups, and individual citizens.

4. Improve communications to prospective students and the broader campus community in order to attract on-campus transfer students and high school students looking to enroll at NC State, with specific strategies for underserved populations, veterans, and high performing students from rural communities.

5. Improve our communications to alumni and potential donors, which will have direct benefits in fundraising and indirect benefits for student employment and professional development.

6. Develop new communication tools to highlight our accomplishments and impacts, and our solutions for partners.

OBJECTIVE 3. Clarify Roles and Responsibilities of Business Operations Staff and Provide Proactive Service to All Parts of the College.

Specific Actions

1. Create a Business Operations structure that clearly defines roles and responsibilities of business staff at the Departmental and College levels. Change the reporting structure such that all members
of the business services team have a dotted line report to the Assistant Dean for Finance and Business.

2. Create a CNR Business Services Directory that shows the specific services provided by each member of the Business Services Team.

3. Create a CNR Business Services website for CNR faculty and staff that provides specific information and links on specific business services transactions. Include training modules on this site.

4. Provide individualized training for all employees, and work to retain employees that deliver excellent service across the College

OBJECTIVE 4. Improve the Level of Customer Service in the CNR Research Office and Better Integrate Grant and Contract Management with the Business Operations of the College.

Specific Actions

1. **Create continuity in grant and contract management by linking the responsibilities of the Research Administrator and the Assistant Dean for Finance and Business**, so that budget issues and business processes can be addressed in a more efficient manner.

2. Conduct college business services orientation for all new faculty shortly after their start date to introduce them to key people and business services, and provide on-going training to all faculty members on topics that impact their jobs.

3. Create a general CNR research administration information website that contains information for general procedural steps in proposals and project changes, PI eligibility, Conflict of Interest, Effort Reports (TEARS) and Frequently Asked Questions (FAQ).

4. Determine and develop training opportunities that would provide CNR staff with the knowledge and skill set to provide effective support of faculty research efforts.

5. Identify and enact business practices that will enable CNR staff to be pro-active and avoid potential audit issues before expenditures are posted to projects.

OBJECTIVE 5. Provide Budget Transparency and Accountability by Developing and Sharing Budget Allocation Criteria and Information with College Faculty and Staff.

Specific Actions

1. **Develop metrics for the allocation of all resources within the College**, including funding, personnel, and space.

2. **Apply** College-wide metrics for resource distribution, beginning in July 1, 2014.
GOAL 5. REORGANIZE CNR DEVELOPMENT TO BETTER SUPPORT CNR’S STRATEGIC PLAN.

Unlike other Colleges at NC State, the work of CNR’s Development Office has been divided between fundraising for the College and overseeing and managing one of the College’s major assets, the Hofmann Forest. With the sale of the Hofmann Forest anticipated during the coming fiscal year, CNR can re-focus on the primary goals of major gift fundraising, alumni and donor relations, and developing and supporting a Natural Resources Foundation Board that can serve as a critical sounding board and external advocate for the College.

OBJECTIVE 1. Create a New “CNR Advancement” Team That Will Include Major Gift Fundraising, Alumni Relations, and CNR Communications and Marketing.

Specific Actions

1. Develop and implement a process to brand CNR, including a new logo and marketing materials.
2. Create materials and a plan to market CNR and the goals and needs of the College’s strategic plan.
3. Prepare for the NC State Capital Campaign, including developing and implementing a plan to achieve the pyramid of giving necessary to support CNR’s strategic goals.
4. Evaluate current alumni relations activities and determine the appropriate resources necessary to appropriately steward our alumni and encourage a culture of giving.
5. Determine the appropriate structure for CNR’s Advancement Team and staff it by June 30, 2014.

OBJECTIVE 2. Create a New Vision for the Natural Resources Foundation and Restructure Its Board of Directors to Better Support the College.

Specific Actions

1. Manage the transition of the Hofmann Forest to its new owner, and support the staff during this change.
2. Create and implement a new management model for oversight of the remaining forests managed by the Natural Resources Foundation and the College.
3. Create a new vision and engagement plan for the Natural Resources Foundation Board.
4. Develop guidelines for Board composition, responsibilities, and size and recruit new Board members.
5. Establish and support key relationships with key constituencies and leaders in our disciplines.
RESOURCES NEEDED TO IMPLEMENT OUR PROGRAMMATIC GOALS AND OBJECTIVES

Although some of CNR’s strategic goals and objectives can be achieved simply by changing the way we work, many will require the investment of new – or redirected – fiscal and human resources. At this point in our strategic planning process, CNR has not yet fully costed out or prioritized our action plan, nor have we completed our analysis of what we might give up to free up resources for new initiatives. However, as a College, we are committed to doing the hard work required to examine our current efficiency and effectiveness and based on that work to redistribute our current resources to meet part of the need associated with our new strategic priorities.

New investments will come from:

- Provost’s/Central investments in the College of Natural Resources (including Watzin start-up)
- Income from the investment of the proceeds of the sale of the Hofmann Forest (assuming this sale is finalized)
- Resources raised by the CNR Advancement Team and the NC State Capital Campaign

MEASURES FOR SUCCESS

As we refine our plan, these measures will be developed.
### THE CNR STRATEGIC PLAN ALIGNMENT WITH PATHWAY TO THE FUTURE

**NC STATE Goal 1:** Enhance the success of our students through educational innovation.  
**NC STATE Goal 2:** Enhance scholarship and research by investing in faculty and infrastructure.  
**NC STATE Goal 3:** Enhance interdisciplinary scholarship to address the grand challenges of society.  
**NC STATE Goal 4:** Enhance organizational excellence by creating a culture of constant improvement.  
**NC STATE Goal 5:** Enhance local and global engagement through focused strategic partnerships.

<table>
<thead>
<tr>
<th>CNR Themes</th>
<th>Achieving Excellence in Three Thematic Areas</th>
<th>NC STATE GOALS</th>
<th>START YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Priority 1:</strong> SUSTAINABILITY</td>
<td>1. <strong>Hire 3 new faculty members in the area of sustainability</strong>, with specialties to be defined in the next 6 months.</td>
<td>X X</td>
<td>FY 15</td>
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<td></td>
<td>2. <strong>Create a named “Professor of Practice” in Sustainability.</strong></td>
<td>X</td>
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<td></td>
<td>3. <strong>Complete a proposal to create a new PhD program in Geospatial Analytics</strong> as described in the following pages. This program will, in part, provide education and applications to support the development of sustainability models, methods and metrics needed to build solve sustainability challenges.</td>
<td>X X</td>
<td>FY 16</td>
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<td></td>
<td>4. Create the cross-campus collaborations and other academic program changes necessary to support the questions and issues discussed.</td>
<td>X</td>
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<td></td>
<td>5. Incentivize and build faculty capacity for interdisciplinary research in sustainability science and policy.</td>
<td>X</td>
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<td></td>
<td>6. <strong>Fund and recruit 10-12 PhD students to conduct interdisciplinary research in sustainability science and policy.</strong></td>
<td>X X</td>
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<th>CNR Themes</th>
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</thead>
<tbody>
<tr>
<td><strong>Priority 2:</strong> LAND AND WATER</td>
<td>1. <strong>Create a Land-Water Institute</strong> to bring together interdisciplinary expertise in this area from across the campus and highlight the strengths, capacities and urgencies for research, education and outreach in this area.</td>
<td>X</td>
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<td></td>
<td>2. Identify the specific expertise areas and hire 3 new CNR faculty members with these qualifications, <strong>including a director to lead the Institute.</strong></td>
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</tr>
<tr>
<td></td>
<td>3. Create the cross-campus collaborations and academic program additions and changes necessary to support the questions and issues discussed.</td>
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<td></td>
<td>4. Incentivize and build faculty capacity for interdisciplinary research in this area.</td>
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<tr>
<td></td>
<td>5. <strong>Fund and recruit 10-12 PhD students to conduct interdisciplinary research to solve water resource management challenges.</strong></td>
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</tbody>
</table>
### CNR Themes

**Achieving Excellence in Three Thematic Areas**

<table>
<thead>
<tr>
<th>Priority 3: URBAN ECOSYSTEMS AND THE URBAN-RURAL INTERFACE</th>
<th>Achieving Excellence in Three Thematic Areas</th>
<th>NC STATE GOALS</th>
<th>START YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Further define specific focal areas to be addressed, which might include fire use and management, ecological design and resilient communities, and urban wildlife and biodiversity.</td>
<td>X</td>
<td>FY 16</td>
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<td>2. <strong>Hire 3 new faculty members</strong> who have strengths and leadership potential in these areas.</td>
<td>X X</td>
<td>FY 16</td>
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<td></td>
<td>3. Create the cross-campus and inter-institutional collaborations and academic program additions and changes necessary to support the questions and issues discussed.</td>
<td>X</td>
<td>FY 16</td>
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<td></td>
<td>4. Incentivize and build faculty capacity for interdisciplinary research in this area.</td>
<td>X</td>
<td>FY 16</td>
</tr>
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<td></td>
<td>5. <strong>Fund and recruit 10-12 PhD students to conduct interdisciplinary research to solve urban ecosystem management challenges.</strong></td>
<td>X X</td>
<td>FY 16</td>
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<tr>
<td>CNR GOAL AREAS</td>
<td>OBJECTIVES</td>
<td>NC STATE GOALS</td>
<td>START YEAR</td>
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<td><strong>Objective 1: ENHANCE UNDERGRADUATE ACADEMIC PROGRAMS BY EMPHASIZING INTERDISCIPLINARITY, LEVERAGING OPPORTUNITIES FOR CROSS-COLLEGE COLLABORATION, AND USING NEW TECHNOLOGIES AND ENGAGED LEARNING ACROSS THE CURRICULUM.</strong></td>
<td>X</td>
<td>FY 14</td>
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<tr>
<td></td>
<td>1. Create a <strong>common interdisciplinary class</strong> that would allow all CNR students to recognize the complex array of environmental, economic and societal challenges and demands on natural resources and the livelihoods they support and to learn about diverse strategies for meeting those demands.</td>
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<td></td>
<td>2. <strong>Lead a campus-wide effort to enhance the Environmental Science B.S.</strong>, including establishing a common first-year experience, greater curricular coherence across the campus, and upper-level options across the Colleges that build on the many strengths that exist in CALS, COS, COD, COE, and CHASS.</td>
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<td>3. Review and <strong>enhance the structure of our Fisheries, Wildlife, and Conservation Biology undergraduate program</strong> to fully support (or eliminate) options in Fisheries. Implement the structural and curricular changes necessary.</td>
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<td>4. Building on CNR’s near 100% participation of all students in engaged learning, create progressively more challenging opportunities from the first year to graduation.</td>
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<td>5. Strengthen linkages with strategic international partners to increase opportunities for undergraduate study abroad and internships.</td>
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<td></td>
<td>6. Provide training and support for faculty to use web-based tools more effectively. The use of appropriate technology and training for faculty can provide the seamless delivery of video, simulations, graphics, and visual aids that can be available across the college.</td>
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<td>7. Partner with DELTA to begin moving appropriate large undergraduate courses to blended class models (part on-line and part face-to-face), beginning in PRTM.</td>
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<td>8. Market CNR and NC State remote facilities and partnerships (Camp Slocum at Hill Forest, CMAST in Morehead City, Nature Research Center at the Natural Science Museum) as ‘outposts’ where all Colleges can work, train, teach and collaborate.</td>
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<td><strong>Objective 2: CREATE NEW OPPORTUNITIES FOR CROSS-COLLEGE COLLABORATION AROUND GRADUATE PROGRAMS THAT ARE TRANSDISCIPLINARY AND JOINTLY DELIVERED.</strong></td>
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<td></td>
<td>1. Develop a <strong>new Ph.D. Program in Geospatial Analytics</strong> that ties to the Faculty Excellence Cluster and is focused on land use change, people, and the Environment.</td>
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<td>2. Create a new vision for the <strong>interdisciplinary Fisheries, Wildlife and Conservation Biology graduate program</strong> that leverages the strengths of CNR, CALS and CVM, and implement the infrastructural changes necessary to implement it.</td>
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<td>3. Work with the Graduate School and other college deans to develop a university-wide Ph.D fellowship program that focuses on cross-campus collaboration, similar to the cluster hire program.</td>
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</table>
4. Bring CNR departments together to develop and deliver inter-departmental graduate seminar courses that take an interdisciplinary approach to problem-solving. Joint meetings of faculty and graduate students would build cohesion, increase understanding about research methods, perceptions, and practices across the disciplines, and facilitate on-going dialogue.

5. Lead efforts and coordinate with other Colleges to strengthen linkages with strategic international partners.

**Objective 3: DEVELOP AND IMPLEMENT NEW MODELS FOR MENTORING AND ADVISING ACROSS THE COLLEGE, AND BUILD CO-CURRICULAR PROGRAMS TO SUPPORT HONORS STUDENTS, TRANSFER STUDENTS AND OTHER TARGET GROUPS.**

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<tr>
<td>1. <strong>Develop a new Honors Program</strong> that begins in the first year, in order to attract a more diverse group of students into the College. This expanded CNR Honors Program should include a specific individual to serve as the coordinator, workshops on research ethics and methods, and have activities that increase students’ global awareness.</td>
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<td>2. <strong>Broaden the opportunities for the capstone Honors experience</strong> to include a variety of research, senior design and engagement, and international options.</td>
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<td>3. <strong>Practice proactive advising</strong> across the College to help all students make the most of their undergraduate programs.</td>
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<td>4. <strong>Create a College level Career Services Office</strong> that will develop and strengthen relationships with potential internship sponsors and employers and with alumni who can serve as career mentors to our students, helping them to develop professional networks and be “job-ready” at graduation. This office would also develop programs that extend beyond resume building and interview skills training seminars to include professional communications, business etiquette, and training in cultural competency so that students are prepared to enter and succeed in a diverse workforce.</td>
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<td>5. Create a <strong>Peer Advising Program</strong> to supplement academic advising by our faculty advisers with a corps of trained upperclasspersons available to provide advice on professional development, career, and course selections for incoming first year and transfer students.</td>
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<td>6. Enhance the success of graduate students by offering professional development opportunities, graduate internships, training in cultural awareness and professional ethics, and opportunities for participation in professional societies and networks.</td>
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<td>7. Through active advising, help transfer students develop plans of study that provide as timely a path to graduation as possible.</td>
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<td>8. Work with DASA to assist internal transfer students find early information about CNR programs and degree requirement</td>
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<td>9. Develop and deliver community-building activities designed to assist transfer students in connecting with college faculty, staff, and other students.</td>
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### Objective 4: ENHANCE AND INTEGRATE DIVERSITY EFFORTS MORE FULLY INTO ALL ASPECTS OF THE COLLEGE.

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<td>1. Develop programs to <strong>support and train faculty and staff in key aspects of cultural competency.</strong></td>
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<td>2. Develop and seek approval for a diversity course that meets the US Diversity GEP requirements and that links diversity issues to the environment and natural resource professions.</td>
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<td>3. Embed diversity into all other goals and objectives for enhancing student success through educational innovation, including service learning, study abroad and other efforts.</td>
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<td>4. Develop and implement recruitment plans to attract faculty, staff and students that reflect the demographic diversity of North Carolina and the region.</td>
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<td>5. Partner with local schools and other organizations to engage youth in activities that educate them about our professions and highlight potential career paths.</td>
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### CNR GOAL AREAS

#### GOAL AREA 2: INCREASE INTERDISCIPLINARY RESEARCH AROUND THEMES THAT ENGAGE CNR FACULTY BROADLY, LEVERAGE CROSS-COLLEGE COLLABORATIONS AND CONTRIBUTE TO ECOLOGICAL AND SOCIOECONOMIC SUSTAINABILITY

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<tr>
<th></th>
<th>OBJECTIVES</th>
<th>NC STATE GOALS</th>
<th>START YEAR</th>
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<tr>
<td></td>
<td><strong>Objective 1:</strong> IDENTIFY INTERDISCIPLINARY THEMES THAT BUILD ON FACULTY STRENGTHS, INTERESTS, AND EMERGING AREAS OF SOCIETAL NEED, AND SUPPORT THE DEVELOPMENT OF COMPETITIVE RESEARCH PROPOSALS IN THESE AREAS.</td>
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<td></td>
<td>1. Form interdisciplinary working groups comprised of interested faculty from across CNR departments and faculty from other units to collaborate on specific grand challenges.</td>
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<td>2. Hold a thematic, College-level seminar with high profile speakers who will attract attendees from other colleges.</td>
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<td>3. Bring in visiting scholars currently engaged in interdisciplinary research in areas that interest more than one CNR faculty member.</td>
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<th></th>
<th><strong>Objective 2:</strong> INCREASE THE CAPACITY FOR INTERDISCIPLINARY RESEARCH ACROSS THE COLLEGE.</th>
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<td></td>
<td>1. Establish structures in the CNR Research Office to support larger and more complex, interdisciplinary research project development, from idea generation through grant submission.</td>
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<td>2. Initiate a CNR internal seed grant competition for faculty teams to work together to develop interdisciplinary research projects. Resources available might include a funded graduate student, faculty course release time, and modest operating funds.</td>
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<td>3. Create a Cross-College Collaboration Fund that (1) is jointly funded by Colleges with shared interest in collaboration, (2) awards small grants to faculty teams through a competitive process that all participating colleges endorse, and (3) results in an interdisciplinary proposal addressing a grand challenge.</td>
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<td>4. Develop and support interdisciplinary research collaborations around geographic interests of faculty. Opportunities within North Carolina, the US and around the world currently exist.</td>
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5. Create a culture within the College and Departments that recognizes and rewards interdisciplinary research efforts at every step, e.g., position descriptions, hiring, annual evaluations, reappointment, promotion and tenure, post tenure review.

6. Adjust faculty SME’s to include interdisciplinary effort in teaching and/or research. Develop appropriate metrics to measure achievement and success for promotion and tenure decisions.

7. Work with the University to ensure that the ‘metrics’ it uses to track faculty, Departmental and College success include the shared credit for interdisciplinary work.

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<tr>
<th>CNR GOAL AREAS</th>
<th>OBJECTIVES</th>
<th>NC STATE GOALS</th>
<th>START YEAR</th>
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<tr>
<td>GOAL AREA 3: EXPAND AND FOSTER CNR EXTERNAL PARTNERSHIPS BY LEVERAGING THE IMPACT OF RESEARCH, ACADEMIC AND ENGAGEMENT INITIATIVES</td>
<td>Objective 1: INCREASE AWARENESS AND OPPORTUNITIES FOR ALL CNR FACULTY AND STAFF TO WORK WITH LOCAL AND GLOBAL PARTNERS ON APPLIED PROBLEMS.</td>
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<td>1. Establish a CNR Professorships of Practice to bring experts from other sectors into the university to create a bridge between academia and other sectors, spark creativity and innovation, and maximize the impact of our work.</td>
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<td>2. Encourage all faculty members to engage in appropriate extension and outreach in areas where their research or teaching activities can support partners by including this as appropriate in SME’s and annual reviews.</td>
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<td>3. Encourage CES extension faculty to identify specific skills and experience that can provide high impact solutions to problems faced by local communities.</td>
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<td>4. Recognize and reward faculty who are actively engaged in real world problems through annual awards/recognition and highlighting success in the appropriate CNR communications.</td>
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<td></td>
<td>Objective 2: CREATE NEW PROGRAMS AND FUNDING MODELS THAT SUPPORT NEW EXTENSION AND ENGAGEMENT INITIATIVES.</td>
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<td></td>
<td>1. Encourage and reward faculty developing new sources of funding for innovative programs and partnerships. The College can help faculty develop the networks, and support faculty as they develop new partnerships.</td>
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<td>Objective 3: INCREASE THE IMPACT OF OUR ENGAGEMENT BY STRENGTHENING AND EXPANDING OUR PARTNERSHIPS WITHIN THE COOPERATIVE EXTENSION SERVICE SYSTEM AND THE RECREATION RESOURCE SERVICE.</td>
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<td>1. Continue to work with the county-based Cooperative Extension system to ensure that they have the most accurate information and training to answer local questions, using the national eXtension website as appropriate.</td>
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<td>2. Increase efforts to work directly with specific communities and small industrial partners to develop innovative solutions to complex problems. Since many natural resource issues are unique to a landscape and assets within a specific community, CNR Extension faculty will continue to develop, and expand, their delivery of community and campus based training for specific partners.</td>
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<td>3. Seek external partner/stakeholder input about research, academic and engagement functions central to the CNR mission. This might be pursued by developing a CNR Engagement Advisory Council.</td>
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<td>CNR GOAL AREAS</td>
<td>OBJECTIVES</td>
<td>NC STATE GOALS</td>
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<td>GOAL AREA 4: STRENGTHEN AND ENHANCE INFRASTRUCTURAL SUPPORT ACROSS THE COLLEGE OF NATURAL RESOURCES</td>
<td>Objective 1: DEVELOP AND IMPLEMENT A LONG-TERM COMPREHENSIVE SPACE PLAN FOR CNR.</td>
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<td>1. Develop clear criteria for allocation and retention of office, laboratory and creative space across the College. Criteria should include consideration of the quality of the work and its support for the strategic priorities of the College. <strong>Apply those criteria</strong> as appropriate moving forward.</td>
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<td>2. Working with the Central Administration, consider ways to bring faculty and graduate students closer together using existing space on the NC State campus.</td>
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<td>3. <strong>Identify and pursue opportunities for renovating current space</strong> allocated to CNR to better meet needs across the College.</td>
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<td>4. Identify the needs for new space and <strong>develop specific plans for a new building</strong> that might meet those needs.</td>
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<td>5. Identify and obtain the resources necessary to implement the long-term comprehensive space plan for the College.</td>
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<td>6. Create and equip new collaborative spaces and give explicit priority to interdisciplinary and/or interdepartmental working groups of faculty and graduate students.</td>
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<td>Objective 2: DEVELOP A COMPREHENSIVE AND INTEGRATED COMMUNICATIONS PLAN FOR THE COLLEGE THAT BRINGS CONSISTENT MESSAGING TO ALL OF OUR WEB, PRINT AND OTHER MEDIA.</td>
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<td>1. Work with a communications and marketing professional to help <strong>identify core messages and themes for CNR</strong>. Coordinate key messaging with University Communications and Development.</td>
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<td>2. <strong>Launch a rebranded and refreshed CNR website within a year</strong>, and begin a regular set of printed and email communications linked to this branding.</td>
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<td>3. Develop a strategy that includes <strong>targeted communications</strong> to key partners in all levels of government, large and small industries, nonprofit organizations, community groups, and individual citizens.</td>
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<td>4. Improve communications to prospective students and the broader campus community in order to attract on-campus transfer students and high school students looking to enroll at NC State, with specific strategies for underserved populations, veterans, and high performing students from rural communities.</td>
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<td>5. Improve our communications to alumni and potential donors, which will have direct benefits in fund-raising and indirect benefits for student employment and professional development.</td>
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<td>6. <strong>Develop new communication tools to highlight our accomplishments and impacts, and our solutions for partners.</strong></td>
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**Objective 3: CLARIFY ROLES AND RESPONSIBILITIES OF BUSINESS OPERATIONS STAFF AND PROVIDE PROACTIVE SERVICE TO ALL PARTS OF THE COLLEGE.**

1. Create a Business Operations structure that clearly defines roles and responsibilities of business staff at the Departmental and College levels. Change the reporting structure such that all members of the business services team have a dotted line report to the Assistant Dean for Finance and Business.

2. Create a CNR Business Services Directory that shows the specific services provided by each member of the Business Services Team.

3. Create a CNR Business Services website for CNR faculty and staff that provides specific information and links on specific business services transactions. Include training modules on this site.

4. Provide individualized training for all employees, and work to retain employees that deliver excellent service across the College.

**Objective 4: IMPROVE THE LEVEL OF CUSTOMER SERVICE IN THE CNR RESEARCH OFFICE, AND BETTER INTEGRATE GRANT AND CONTRACT MANAGEMENT WITH THE BUSINESS OPERATIONS OF THE COLLEGE.**

1. Create continuity in grant and contract management by linking the responsibilities of the Research Administrator and the Assistant Dean for Finance and Business, so that budget issues and business processes can be addressed in a more efficient manner.

2. Conduct college business services orientation for all new faculty shortly after their start date to introduce them to key people and business services, and provide on-going training to all faculty members on topics that impact their jobs.

3. Create a general CNR research administration information website that contains information for general procedural steps in proposals and project changes, PI eligibility, Conflict of Interest, Effort Reports (TEARS) and Frequently Asked Questions (FAQ).

4. Determine and develop training opportunities that would provide CNR staff with the knowledge and skill set to provide effective support of faculty research efforts.

5. Identify and enact business practices that will enable CNR staff to be pro-active and avoid potential audit issues before expenditures are posted to projects.

**Objective 5: PROVIDE BUDGET TRANSPARENCY AND ACCOUNTABILITY BY DEVELOPING AND SHARING BUDGET ALLOCATION CRITERIA AND INFORMATION WITH COLLEGE FACULTY AND STAFF.**

1. Develop metrics for the allocation of all resources within the College, including funding, personnel, and space.

## CNR GOAL AREAS

### GOAL AREA 5: REORGANIZE CNR DEVELOPMENT TO BETTER SUPPORT CNR’S STRATEGIC PLAN

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<th>OBJECTIVES</th>
<th>NC STATE GOALS</th>
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<tr>
<td><strong>Objective 1:</strong> CREATE A NEW “CNR ADVANCEMENT” TEAM THAT WILL INCLUDE MAJOR GIFT FUNDRAISING, ALUMNI RELATIONS, AND CNR COMMUNICATIONS AND MARKETING.</td>
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<td>1. Develop and implement a process to <strong>brand CNR</strong>, including a new logo and marketing materials.</td>
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<td>2. Create materials and a plan to market CNR and the goals and needs of the College’s strategic plan.</td>
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<td>3. Prepare for the NC State Capital Campaign, including developing and implementing a plan to achieve the pyramid of giving necessary to support CNR’s strategic goals.</td>
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<td>4. Evaluate current alumni relations activities and determine the appropriate resources necessary to appropriately steward our alumni and encourage a culture of giving.</td>
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<td>5. Determine the appropriate structure for CNR’s Advancement Team and staff it by June 30, 2014.</td>
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<td><strong>Objective 2:</strong> CREATE A NEW VISION FOR THE NATURAL RESOURCES FOUNDATION AND RESTRUCTURE ITS BOARD OF DIRECTORS TO BETTER SUPPORT THE COLLEGE.</td>
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<td>1. Manage the transition of the Hofmann Forest to its new owner, and support the staff during this change.</td>
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<td>2. Create and implement a new management model for oversight of the remaining forests managed by the Natural Resources Foundation and the College.</td>
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<td>3. <strong>Create a new vision and engagement plan</strong> for the Natural Resources Foundation Board.</td>
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<tr>
<td>4. Create and implement a new management model for oversight of remaining forests managed by the Natural Resources Foundation.</td>
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<td>5. Develop guidelines for Board composition, responsibilities, and size and recruit new Board members.</td>
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<td>6. Establish and support key relationships with key constituencies and leaders in our disciplines.</td>
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APPENDIX A. STRATEGIC PLANNING COMMITTEE AND WORKING GROUPS

Strategic Planning Committee
Mary Watzin, Dean and Chair
Robert Abt, Professor, FER
Dorothy Anderson, Head, PRTM
Gus Cottros, NR Foundation Board Member
Ryan Emanuel, Assistant Professor, FER
Myron Floyd, Professor, PRTM
Joshua Gira, IT specialist
Barry Goldfarb, Head, FER
Stephen Kelley, Head FB
Tiffany McLean, CNR Recruitment Coordinator
Mark Megalos, CNR Extension
Don Patty, Assistant Dean Finance and Business
Erin Sills, Professor, FER
Mary Watzin, Dean

Student Services/Career Services
Tiffany McLean, Chair
Kim Bush
Susan Colby
Tricia Davis
Pat Hill
Stephanie Jeffries
Sarah Pickel
Christopher Serenari
Sarah Slover
Christi Standley
Guillermo Velarde
Patti Woodbury

Evolution of our Academic Program
Steve Kelley, Co-Chair
Adrianna Kirkman, Co-Chair
Gary Blank
Gene Brothers
Med Byrd
Sudipta Dasmohapatra
George Hess
Elizabeth Nichols
Candace Goode-Vick

Cross Campus Collaboration
Ryan Emanuel, Co-Chair
Barry Goldfarb, Co-Chair
Dimitris Argyropoulos
Lucian Lucia
Duarte Morais
Sunkyu Park

Interdisciplinary Research Themes
Bob Abt, Co-Chair
Dorothy Anderson, Co-Chair
Jon Casper
Ryan Emanuel
Myron Floyd
Nils Peterson
Erin Seekamp
Erin Sills
Jordan Smith
Dave Tilotta
Rich Venditti

External Partners and Engagement
Mark Megalos, Chair
Tim Albaugh
Pete Armstrong
Don Belk
Gary Blank
Bill Dvorak
Brookie Lambert
Steve McKeand
Phil Mitchell
Susan Moore
Daniel Saloni
Kelly Sexton

Business Operations and Efficiency
Don Patty, Chair
Eileen Broderick
Laura Castro-Spach
John Heitmann
Trenel Holloway
Terrie Litzenberger
Roger Moore
Joel Pawlak
Daniel Saloni
Ellen Sanders
Teresa Sauls
Amanda Tueting
Jennifer Viets
Sharon Wright
APPENDIX B. STUDENT SURVEY QUESTIONS AND SUMMARY OF STUDENT SURVEY RESULTS

APPENDIX C. THOUGHT LEADER SURVEY QUESTIONS AND LIST OF THOUGHT LEADERS APPROACHED FOR INTERVIEWS

APPENDIX D. LIST OF PEER AND ASPIRANT UNIVERSITIES FOR CNR, AND DATA FOR EACH INSTITUTION

These documents are all available on the CNR website. Please contact the Dean’s office if you would like copies.