



UNIVERSITY *of* WASHINGTON

School of Forest Resources

RESEARCH NEWSLETTER ISSUE TWO, VOLUME 4

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NEWS AND INFORMATION

NIFA releases first of seven RFPs to the Agriculture and Food Research Initiative (AFRI)

There isn't much to report on this, except that USDA announced on January 7 that there would be more news soon. Right now, the first wave of deadlines appear to be on March 23, 2011 (Agriculture Economics and Rural Communities), but there are earlier letter of intent deadlines in Agriculture Systems and Technology; Renewable Energy, Natural Resources, and Environment; Food Safety, Nutrition, and Health; Plant Health and Production and Plant Products; and Animal Health and Production and Animal Products. Refer to http://www.nifa.usda.gov/funding/afri/afri_program_deadline_dates.html for updates and new information as it comes out.

These are all in the AFRI Foundational Program; announcements will be forthcoming in the Challenge areas as they are developed.

NSF Dissemination and Sharing of Research Results:

All new NSF proposal submitted on or after January 18, 2011 must include a supplementary document of no more than two pages labeled “Data Management Plan”. Note that if a Data Management Plan would not be applicable to the proposed scope of work, a clear justification should be included. If it is applicable, the supplement should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results (see AAG Chapter VI.D.4<http://www.nsf.gov/pubs/policydocs/pappguide/nsf11001/aag_6.jsp#VID4>).

Simultaneously submitted collaborative proposals and proposals that include subawards are a single unified project and should include only one supplemental combined Data Management Plan, regardless of the number of non-lead collaborative proposals or subawards included. Fastlane will not permit submission of a proposal that is missing a Data Management Plan. Proposals for supplementary support to an existing award are not required to include a Data Management Plan.

A valid Data Management Plan may include only the statement that no detailed plan is needed, as long as the statement is accompanied by a clear justification. Proposers who feel that the plan cannot fit within the supplement limit of two pages may use part of the 15-page Project Description for additional data management information. Proposers are advised that the Data Management Plan may not be used to circumvent the 15-page Project Description limitation. The Data Management Plan will be reviewed as an integral part of the proposal, coming under Intellectual Merit or Broader Impacts or both, as appropriate for the scientific community of relevance.

UW Libraries Data Services

Stephanie Wright, Data Services Coordinator, University of Washington Libraries announced a Data Management Plan service being offer by the Libraries. In a message dated January 5, 2011, she said, “Last summer, the UW Libraries formed a Data Services Team to identify services we could offer to meet the data needs of students, staff and faculty at the University of Washington.

With more funding agencies requiring **data management plans** (DMPs) be included in grant proposals, one of the priorities of the Team is to provide resources to assist UW researchers in preparation of data management plans.

To that end, the Libraries is currently offering the following:

A web guide including several DMP guides, examples and templates, as well as funding agency requirements and information. The guide can be found here <http://guides.lib.washington.edu/data> by clicking on the “Data Management Plans” tab at the top. It can also be found through the UW Libraries Research Commons website (<http://commons.lib.washington.edu/>) under Services.

A webinar titled “Guidance on Preparing a Data Management Plan” being presented in the Libraries Research Commons (Allen Library South, Ground Floor) on Wednesday, January 12th from 9a-10a. You can find out more about the webinar or register to watch it on your own computer here: <https://www2.gotomeeting.com/register/703523019>.

An open email listserv for the dissemination and/or discussion of library data policies, issues, events. You can register for the list or find out more here: <https://mailman1.u.washington.edu/mailman/listinfo/uwlib-datainfo>

The Data Services Team is also currently in discussion with other groups on campus to create a more comprehensive online guide for data management and related services on campus.

As we learn more about the various data management plan requirements, we hope to expand these services in the future. The team would appreciate any feedback you may have on how it can help meet the data needs of researchers at the University of Washington. If you have any questions or suggestions, please feel free to contact me at swright@uw.edu.”

OPPORTUNITIES

USDA Outreach And Assistance For Socially Disadvantaged Farmers And Ranchers Competitive Grants Program

Deadline: February 15, 2011

The Office of Advocacy and Outreach (OAO) requests applications for the Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers Competitive Grants Program (OASDFR). This announcement seeks applications from eligible organizations able to provide outreach and technical assistance to socially disadvantaged farmers, ranchers and forest landowners (SDFRFL) within a defined geographic area in a linguistically appropriate manner. The intent of this portion of the OASDFR program is to focus specifically on connecting socially disadvantaged farmers, ranchers and forest landowners to USDA programs. Approximately \$19 million will be available through this RFP.

<http://www07.grants.gov/search/search.do?&mode=VIEW&opId=62153>

Plant Feedstock Genomics for Bioenergy: A Joint Research Solicitation - USDA, DOE

Deadline: February 25, 2011

The NIFA's Competitive Programs and the Department of Energy's Office of Science, Office of Biological and Environmental Research (OBER) announce the interagency Program to support genomics-based research that will lead to the improved use of biomass and plant feed stocks for the production of fuels such as ethanol or renewable chemical feedstocks. Please note that applicants will submit applications through DOE and a preapplication is requested rather than a letter of intent.

<http://www.nifa.usda.gov/fo/plantfeedstock.cfm>

The National Institute of Environmental Health Sciences (NIEHS)

Program Name: Innovative Bioavailability Assays to Assess the Effectiveness of Contaminated Sediment Remediation (R01)

The National Institute of Environmental Health Sciences (NIEHS) invites qualified investigators from domestic institutions of higher education to submit an application for a Superfund Research Program Individual Research Project Grant (R01). This funding opportunity announcement encourages the research community to develop innovative bioavailability assays to determine the effectiveness of contaminated sediment remediation. NIEHS intends to commit in fiscal year 2011 \$1.6 million for approximately five or six awards. An applicant may request a budget for direct costs up to \$200,000 per year.

Letter of Intent due January 18, 2011

Application Due Date: February 17, 2011

<http://grants.nih.gov/grants/guide/rfa-files/RFA-ES-11-005.html>

AFRI Renewable Energy, Natural Resources, and Environment

The program area priorities include Processes and Transformation on Soil, Water, and Air; Thresholds in Agroecosystems; and Management in Agroecosystems. Agroecosystems can include crop, pasture, range, and forest lands that are actively managed to provide economic, societal, and environmental benefits for individuals, communities, and society at large. Sustainable management of agroecosystems requires improved understanding of interactions among physical, chemical, and biological processes and their response to changing conditions. It also requires scientific knowledge that integrates the complex interactions between management practices and natural processes in order to anticipate and avoid critical thresholds of irreversible damage or loss. Projects funded through this program should improve efforts to achieve sustainable production in agroecosystems. We anticipate funding projects that reflect diverse spatial and temporal scales across a geographic diversity of agroecosystems. Research can be approached from a single resource focus up through multiple coupled ecosystem levels and may be interdisciplinary or single discipline based within the context of an agroecosystem.

Letter of Intent deadline: March 3, 2011

Application deadline: June 3, 2011

http://www.nifa.usda.gov/funding/rfas/pdfs/11_afri_foundational_final_1-7-11.pdf

Royalty Research Fund

Deadline: March 7, 2011

<http://www.washington.edu/research/main.php?page=rrf>

USDA Commodity Credit Corporation Natural Resources Conservation Service OREGON

Deadline: March 31, 2011

CONSERVATION INNOVATION GRANTS Fiscal Year 2011 Announcement of Program Funding
Announcement Number: USDA-NRCS-11-OR-002 Catalog of Federal Domestic Assistance (CFDA)
Number: 10.912 EXECUTIVE SUMMARY: NRCS Oregon requests applications for Conservation Innovation Grants (CIG) to stimulate the development and adoption of innovative conservation approaches and technologies. Applications will be accepted from any eligible entity within the 50 States, the Caribbean Area (Puerto Rico and the Virgin Islands), and the Pacific Basin Area (Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands) for projects within the state of Oregon. For fiscal year 2011, up to \$486,000 may be available for the Oregon statewide CIG competition. NRCS will reserve the right to offer more or less funding at the discretion of the State Conservationist. Funds will be awarded through a competitive grants process. The Oregon CIG category available in FY 2011 is the State Resource Concern Category. Applications are requested from eligible government or non-government organizations or individuals for competitive consideration of grant awards for projects between one to three years in duration. This notice identifies the objectives for Oregon CIG projects, the eligibility criteria for projects and associated instructions needed to apply to CIG. To participate in the Oregon CIG sign-up, project proposals should request federal funds of \$75,000 or less and must be implemented within the state of Oregon. Proposals that request more than \$75,000 or are multi-state in scope should be submitted under the National CIG competition: <http://www.nrcs.usda.gov/technical/cig/index.html>.
PROPOSAL DUE DATE AND ADDRESSES: For more information contact: Todd M. Peplin, USDA-NRCS 1201 NE Lloyd Blvd. Suite 900 Portland, OR. 97232 Phone: (503) 414-3292 E-mail: dennis.kimberlin@or.usda.gov RFP:

<http://www.grants.gov/search/search.do;jsessionid=vn7WNnghY9Mp1nJL8dT8nVc2NwpMKLpDF2Yf4lzf5JL82XLpmzgl1105640332?oppld=63253&mode=VIEW>

AWARDS

Application Number: A63772
Faculty Member: David Briggs
Role: Principal Investigator
Title: **Stand Management Coop**
Agency: Weyerhaeuser Company
Period: 1/1/2011 - 12/31/2011
Amount: \$73,041
Supplement and Extension

2011Membership dues from Weyerhaeuser Company NR. CO. to Stand Mgmt CO-OP.

Application Number: A63775
Faculty Member: David Briggs
Role: Principal Investigator
Title: **Stand Management Coop**
Agency: Rayonier Timberlands Operating Company
Period: 1/1/2011 - 12/31/2011
Amount: \$23,353
Supplement and Extension

2011Membership dues from Rayonier Forest Resources L.P. to Stand Mgmt Coop.

Application Number: A63613
Faculty Member: Ivan Eastin
Role: Principal Investigator
Title: **Rose Braden Staff Assignment**
Agency: Evergreen Building Products Association
Period: 1/1/2011 - 12/31/2012
Amount: \$147,460
Non-Competing Renewal

Staff assignment support for Rosemarie Braden for the period, January 1, 2011 to December 31, 2012.

Application Number: A60921
Faculty Member: Robert Edmonds
Role: Principal Investigator

Title: Efficacy of biocontrol agents applied to bare-root conifer seedlings grown under minimal buffer zone rates of soil fumigation

Agency: USDA

Period: 9/16/2010 - 9/15/2012

Amount: \$31,000

New

Project goal is to test the efficacy of fungal and bacterial biocontrol agents coupled with a reduction in use of formerly used but now restricted soil fumigants to mitigate a root pathogen complex. The study will be conducted in two Douglas-fir seedling nurseries in Oregon (Canby and Aurora). Soil fumigation with Methyl Bromide and other chemical agents has been the operational means to assure that soils are free of weeds and disease and that disease free seedlings are planted. 2009 EPA Registration Eligibility Decisions on reregistration of soil fumigants is restricting their use. Project will design and test new disease control strategies that can consistently deliver cost-effective and environmentally acceptable integrated pest management alternatives for disease control.

Application Number: A62320

Faculty Member: Richard Gustafson

Faculty Member: Renata Bura

Role: Principal Investigator

Role: Co-Investigator

Title: Evaluation of crumbles feedstocks for bioconversion processes

Agency: Forest Concepts, LLC

Period: 8/15/2010 - 8/14/2012

Amount: \$80,000

New

Project goal is exploration of potential benefits of rotary sheared Crumbles™ wood particles for bioconversion pretreatment; the reduced particle size and favorable pore orientation of sheared particles should make them easier to fractionate by steam explosion pretreatment. Project will 1) perform experiments with two Forest Concepts LLC-provided feedstocks at the UW bioconversion laboratory to assess efficacy of pretreatment as a function of feedstock preparation; 2) derive bioconversion models appropriate for the Crumbles™ feedstock. These models will include modules for the wood processing unit operations as well as modifications to the biorefinery processing conditions that the Crumbles™ wood feedstock material enables. Outputs from the models will be used to calculate processing energy and material demands as well as process economics. These results will provide a definitive measure of the environmental and economic performance associated with use of Crumbles™ feedstock in comparison to traditional chips used as raw material sources.

Application Number: A62324

Faculty Member: Richard Gustafson

Faculty Member: Elaine Oneil

Role: Principal Investigator

Role: Co-Investigator

Faculty Member: Bruce Lippke

Faculty Member: Renata Bura

Role: Co-Investigator

Role: Co-Investigator

Title: **Life cycle analysis of biofuels production from woody biomass**

Agency: Consortium for Research on Renewable Industrial Materials

Period: 9/1/2010 - 3/31/2013

Amount: \$543,713

New

Project goal is to combine biomass growth/yield models and engineering process models to characterize the inputs and outputs for specific woody biomass feedstocks and biofuel processing alternatives. Feedstocks of interest include: forest residuals, short rotation woody crops, and biomass from fire risk reduction thinning, particularly on federal land. Life cycle inventory data such as total carbon emissions representative of bio processing alternatives will be developed. Impacts will be compared with alternative fuel sources and product uses in order to support adoption of appropriate policies and investments to reach energy independence goals, reduce GHG emissions, and effectively use sustainably managed wood resources. Project will use research protocols and LCI/LCA information on the traditional production and uses of woody biomass already developed by the Consortium for Research on Renewable Industrial Materials for wood products and biofuel produced from mill residuals, and will develop parallel information for collection of feedstocks and production of biofuels using biochemical and thermochemical process models for prospective processing plants.

PROPOSALS

Application Number: A63749

Faculty Member: Jonathan Bakker

Role: Principal Investigator

Title: **Grazing and Afforestation Effects on Understory Community Composition and Diversity in Uruguayan Grasslands**

Agency: Weyerhaeuser Company

Period: 5/1/2009 - 4/30/2012

Amount: \$20,000

Non-Competing Supplement

The landscape of Uruguay is dominated by the South American Campos ecoregion, 85% of which is considered natural grassland and composed primarily of perennial grass and herb species, although shrubs and trees can be sparsely present. The Campos is important for the country's livestock production; currently, it supports 10 million head of cattle and 13 million head of sheep. Although its climate is suitable for forest development, the Campos has not been forested. Grazing is the primary factor maintaining the Campos as grassland, essentially creating an herbaceous pseudoclimax phase. Afforestation efforts began a few decades ago. To date, little research has been conducted on the

effects of afforestation or the combined effects of grazing and afforestation on vegetation community dynamics. The objectives of this research are to:

1. Quantify changes in vegetation structure and function associated with afforestation,
 2. Examine community composition and response to management over multiple scales and grazing histories: across regions and between similar sites within regions,
 3. Determine if grasslands are able to re-establish following tree harvest, and
 4. Compare the vegetation responses of Uruguayan and Pacific Northwest grasslands to afforestation and tree harvest.
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Application Number: A63772

Faculty Member: David Briggs

Role: Principal Investigator

Title: **Stand Management Coop**

Agency: Weyerhaeuser Company

Period: 1/1/2011 - 12/31/2011

Amount: \$73,041

Supplement and Extension

2011Membership dues from Weyerhaeuser Company NR. CO. to Stand Mgmt CO-OP.

Application Number: A63775

Faculty Member: David Briggs

Role: Principal Investigator

Title: **Stand Management Coop**

Agency: Rayonier Timberlands Operating Company

Period: 1/1/2011 - 12/31/2011

Amount: \$23,353

Supplement and Extension

2011Membership dues from Rayonier Forest Resources L.P. to Stand Mgmt Coop.

Application Number: A63785

Faculty Member: David Briggs

Role: Principal Investigator

Title: **Stand Management Coop**

Agency: Port Blakely Tree Farms LP

Period: 1/1/2011 - 12/31/2011

Amount: \$16,523

Supplement and Extension

2011 Stand Management Coop Membership Dues for Port Blakely Tree Farms.

Application Number: A63889
Faculty Member: David Briggs
Role: Principal Investigator
Title: **Stand Management Coop**
Agency: Cascade Timber Consulting, Inc.
Period: 1/1/2011 - 12/31/2011
Amount: \$16,541
Supplement and Extension

2011 Stand Management Coop Membership Dues for Cascade Timber Consulting Inc.

Application Number: A63890
Faculty Member: David Briggs
Role: Principal Investigator
Title: **Stand Management Coop**
Agency: Hampton Resources, Inc.
Period: 1/1/2011 - 12/31/2011
Amount: \$9,050
Supplement and Extension

2011 Stand Management Coop Membership Dues for Hampton Resources Inc.

Application Number: A63895
Faculty Member: David Briggs
Role: Principal Investigator
Title: **Stand Management Coop**
Agency: Green Diamond Resource Company
Period: 1/1/2011 - 12/31/2011
Amount: \$21,590
Supplement and Extension

2011 Stand Management Coop Membership Dues for Green Diamond Resource Co.

Application Number: A63996
Faculty Member: David Briggs

differentiate them from similar products. Developing marketing and managerial skills is critical for tribal forest and sawmill managers looking to identify, enter and compete in international markets. Exporting can provide tribal forest managers with a new strategy to promote economic development and could create substantial employment opportunities within the participating tribal communities.

This project would help to develop the marketing and managerial capacity within the Native American communities targeted in this proposal to enter and compete in international markets by: 1) assessing the technical and marketing capabilities of tribal forest operations (both log and lumber producers), 2) identifying potential niche markets where tribal forest products would be competitive, 3) providing workshops on export topics such as international marketing, export logistics and export financing, 4) working with tribal cooperators to develop strategic business plans for export markets, 5) linking tribal managers with potential customers in international markets through trade missions and 6) providing outreach and communication service with tribes and students at Salish-Kootenai College, and 7) supporting graduate level training for tribal students in the areas of international marketing and logistical management to develop and expand the marketing capacity of tribes and tribal associations.

Application Number: A63613

Faculty Member: Ivan Eastin

Role: Principal Investigator

Title: **Rose Braden Staff Assignment**

Agency: Evergreen Building Products Association

Period: 1/1/2011 - 12/31/2012

Amount: \$147,460

Non-Competing Renewal

Staff assignment support for Rosemarie Braden for the period, January 1, 2011 to December 31, 2012.

Application Number: A59307

Faculty Member: Soo-Hyung Kim

Role: Co-Investigator

Title: **Interactive regulation of flowering by temperature and photoperiod: linking the mechanism with models**

Agency: National Science Foundation

Period: 7/1/2011 - 6/30/2014

Amount: \$649,508

New

Anthropogenic climate change has dramatically altered the seasonal responses and development of organisms especially in the last 50 years. It is imperative that we understand precisely which organisms will be able to adjust their behavior and development to a new climate, and how these adjustments will

occur. In this proposal, we will focus on elucidating the molecular mechanism of seasonal flowering. Further, based on our findings, we aim to establish new computational models that could be used to predict flowering time in a changing climate.

Application Number: A63575

Faculty Member: L. Monika Moskal

Role: Principal Investigator

Title: **Identifying Socioeconomic Drivers of Wetland Heterogeneity**

Agency: National Aeronautics and Space Administration

Period: 12/1/2012 - 12/31/2014

Amount:

Pre-Application

Wetlands are valuable ecosystems that benefit society. They allow for gradual recharge of groundwater, provide critical habitat for plants, fish and wildlife, control erosion, mitigate water pollution, provide food and recreational bases for people and contribute to healthy water cycles and lake levels [1]. However, throughout history wetlands have been converted to other land. Remote sensing is commonly used to detect and monitor wetlands. Traditionally, research focused on remote sensing of wetlands has used a pixel-based approach. This approach uses the spectral signatures of an object to classify each pixel within an image. It relies heavily on color and therefore requires imagery with additional bands of color beyond the visible spectrum. Hierarchical Object-based Image Analysis (HOBIA) combines the analyst's personal knowledge with the power of computer processing. HOBIA has shown to improve accuracy in classification of hyperspatial imagery, especially with images that do not have a high spectral resolution, such as aerial photographs. The context of land conversion is a fundamental factor driving spatiotemporal change of wetlands, thus, we will utilize the Washington Parcel Databases and economic modeling to assess the land conversion patterns around the wetlands.

Application Number: A63927

Faculty Member: Miranda Wecker

Role: Principal Investigator

Title: **Washington Outer Coast NET MAP Data Compilation and Mapping**

Agency: Clallam County

Period: 7/1/2010 - 6/30/2011

Amount: \$5,000

New

The Washington Coast Sustainable Salmon Partnership (WCSSP) requires technical assistance for GIS data compilation and mapping utilizing the NET MAP system as part of the development of its Salmon Recovery strategy for Washington's outer coast.

Olympic Natural Resources Center (ONRC) will provide WCSSP with professional services necessary to compile and map habitat variables critical to salmon restoration in the outer coast watersheds.

Application Number: A63795

Faculty Member: Aaron Wirsing

Role: Principal Investigator

Title: **Will a warming climate intensify competition for prey between mesocarnivores in the southern boreal forests of Washington State?**

Agency: National Science Foundation

Period: 10/1/2011 - 9/30/2015

Amount: \$846,558

New

Ecological specialists are expected to decline worldwide in the face of climate change. Yet, responses of particular specialists to future climate variation are hard to predict because they depend on concomitant reactions of other interacting species. Thus, studies examining the effects of current climatic heterogeneity on interspecific interactions involving specialists should yield vital insights into the community reorganization that is likely to accompany a changing climate. We propose to explore the competitive relationship between the Canada lynx (*Lynx canadensis*) – a specialized predator of snowshoe hares (*Lepus americanus*) – and two dietary generalists – the bobcat (*Lynx rufus*) and coyote (*Canis latrans*) – across a winter climate gradient in the boreal forests of Washington State, USA. Over four years, we will assess carnivore-specific space use and hare predation in relation to varying winter snow conditions (depth, compactness) to determine if the relatively high footload of bobcats and coyotes forces them to avoid hunting in deep and soft snow to a greater extent than lynx. If heavy winter snow does spatially segregate lynx from bobcats and coyotes, then climate warming and declining winter snowpack could increase interspecific competition experienced by lynx and threaten the persistence of at risk lynx populations in areas like north-central Washington.