



U.S. Forest Service's Central Siberia Sustainable Forestry Project

By Steve Eubanks

The International Forestry Branch of the U.S. Forest Service is involved with forestry and natural resource-related projects in several countries around the world. One such project has been ongoing in the Central Siberia region of Russia since 1994. The project, located in the Krasnoyarsk Krai (similar to a state in the U.S.) focuses on sustainable forestry with work in several technical areas: GIS; silviculture, including harvest prescriptions, nursery management, reforestation and site preparation; fire management, with a focus on prescribed fire; sustainable resource planning; and forest code/policy development. The Forest Service's International Forestry Branch has a staff in Washington, D.C. that coordinates international work and relations with forestry professionals and government contacts in involved countries. The actual project work in other countries is typically carried out by Forest Service employees who do this work for a few weeks a year in addition to their normal duties. In Central Siberia, the project has been led by a Forest Service team consisting of Fire Management Specialist Richard Lasko, Research Forester John Brissette, and Forest Supervisor Steve Eubanks. The team has worked closely with several Russian partners including the Sukachev Institute of Forest of the Russian Academy of Sciences; several branches of The Federal Forest Service of Russia including the traditional Forest Management Branch—at both the Krai (regional) and Leskhos ("national forest") level, Lesproekt (Inventory and Planning Branch), Avialesookhrana (the Aerial Forest Protection Branch) and the relatively new Forest Protection Branch; and the Lespromkhos (timber industry).

Russia is a country of great interest for international forestry cooperation due to the extent and importance of its forest area. Russia contains 20% of the world's total forest area and 40% of the world's coniferous forest area. As a point of reference, just in the Krasnoyarsk Krai alone, there is more forested area than in the total national forest system in the United States.



Photo By: Rich Lasko
Steve Eubanks and colleague evaluating a planted seedling after a prescribed burn near Yukseevo.

Much of Russia's accessible forest has been exploited rather heavily, but there is substantial area that is still uncut. In the harvested areas, resource impacts are usually quite high. While the quality of wood products from Central Siberia is generally good, the region is hampered by the reality of its location far from most markets. Central Siberia is located as far from Europe and the Pacific as the distance from New York to Los Angeles in the U.S. so transportation of wood products is both difficult and costly. Poor

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economics translate into poor on-the-ground management practices, particularly in regard to protection of water and soil.



Photo By John Brissette
Lunch in late October, Central Siberia

Other challenges to sustainable forestry in Central Siberia include the Siberian moth which annually defoliates tens of thousands of acres of conifer trees and wildfire which, often following Siberian moth defoliation, burns several hundred thousand acres each year.

Initial efforts of the U.S. Forest Service team were focused on helping Russian colleagues improve inventory, mapping, and data handling, particularly involving GIS technology. Work quickly expanded to the arena of fire management with a focus on building expertise in prescribed burning to assist with hazard reduction, site preparation for reforestation following harvest operations and dealing with large areas defoliated by the Siberian moth. Also included was work associated with silviculture—harvest prescriptions, reforestation and timber stand improvement—and harvest technology. After several years of cooperation, the project evolved to include the development of sustainable forest management plans.

During the project, the U.S. team has traveled to Russia almost annually and many Russian colleagues have visited the U.S. to learn about forestry practices here. Significant accomplishments of the project include the institutionalization of prescribed fire knowledge and practice, including the completion of several fire management text books, videos and instructional CDs. GIS technology has also advanced to be competitive with similar work in the U.S. and Russian colleagues recently completed a book that describes work done in all aspects of forestry during the project so far.

This project will continue into the future and additional projects have now been started to address issues like illegal logging, large-scale forest planning, road construction practices and climate change/carbon sequestration. It is the hope of U.S. and Russian partners that mutual learning from this project will benefit forestry in both countries and in other countries as the outcomes of this project are shared more widely.

Meet the Author

Steve Eubanks is a 36 year veteran of the U.S. Forest Service (USFS). During his tenure he has served as District Ranger and Forest Supervisor in five National Forests. His experience includes extensive work in developing concepts of forest ecosystem management and sustainability, leading an International Forestry Team working in Central Siberia, Russia, to develop sustainable forestry concepts and practices, and the establishment of the Sagehen Experimental Forest — the first new Experimental Forest in over 40 years. In addition to his professional duties with the USFS he has also served as chairman of NCSR's National Visiting Committee for over 12 years.



NCSR Collaboration with Michigan Initiatives

By Jon Yoder

The NCSR secondary education program with its community-based approach has become an integral part of several educational initiatives in Michigan. After working with Joan Chadde and her efforts at the Western UP Center for Science, Math, and Environmental Education in previous years and the presentation at the Michigan Alliance of Outdoor and Environmental Education state conference last fall, interest was generated for further contact and involvement by NCSR. As a result, a number of interconnected programs have now looked to NCSR for consulting and involvement with their efforts. These are:

Great Lakes Stewardship Initiative : This state-wide initiative is funded by the Great Lakes Fisheries Trust, a consortium of groups receiving a total of \$20 million as a result of an environmental settlement with a large utility company. The goal of the Great Lakes Stewardship Initiative (GLSI) is to increase awareness and understanding of the Great Lakes ecosystem in order to encourage Michigan's future adults to become active stewards of the Great Lakes and to advocate for the long-term sustainability of the Great Lakes fisheries. NCSR has been asked to provide advice for professional development and implementation of community-based programming for the Initiative and at regional hubs being established around the state.

Lake Superior Stewardship Initiative: The Lake Superior Initiative (LSSI) is one of the funded regional hubs for the GLSI and is located at the Western UP Center for Science, Math, and Environmental Education. The major goal is to prepare K-12 students to become knowledgeable citizens, concerned about the Great Lakes, and actively engaged in stewardship activities that will contribute to the recovery, restoration, and future protection of the Great Lakes and their watersheds. NCSR will be working with teachers and schools for several days in June at the Western UP Center for Science, Math,

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NCSR NEWS

Meet Jon Yoder



Jon Yoder has been the Secondary Education Coordinator for NCSR for the last 13 years. He has taught biology, life science, and field biology for 23 years and, most recently, was appointed Secondary Science Coordinator for the Salem-Keizer School district, the second largest district in Oregon. Over the years Jon has received numerous teaching excellence awards including the 2002 Oregon Biology Teacher of the Year. Jon's work for NCSR led to the development of the community-based curriculum model used to connect science teaching to local needs while supporting required academic standards. This model has gained widespread recognition and is being implemented in school districts across the nation. Jon's secondary education guides for implementing the community-based curriculum development process serve as the foundation of many of these implementation efforts. Recently he has been named as one of three "national experts" in place-based education (what we have been calling community-based) by the Great Lakes Stewardship Initiative. The Initiative is attempting to make adults active stewards of the Great Lakes and to advocate for long-term sustainability of their fisheries. To do that, they are using the K-12 system to establish place-based curriculum activities that will impact students, their parents and eventually the kids as they become adults. Jon is one of the major consultants in training teachers in the technique using NCSR materials he developed. NCSR is proud to have Jon Yoder as part of our team and be an integral part of the community-based curriculum movement he has advocated. For more information on Jon Yoder's work, feel free to contact the NCSR staff at ncsradm@chemeketa.edu or review his curriculum materials on our website at www.ncsr.org.



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and Environmental Education to provide ideas and advice for the development and implementation of community-based programming.

Great Lakes Watershed Investigations Institute: This Institute is designed to teach educators about the physical, chemical, and biological components of the Great Lakes ecosystem, using Lake Superior as the classroom. This 5-day course is designed to enhance the ability of educators to teach about Great Lakes topics including watershed delineation, stream and lake assessments, amphibian monitoring, communicating results, stewardship, and environmental careers. Mathematics, life, earth and physical sciences, technology, and social studies content expectations will be woven into the course content. The Institute will be held in June at the Western UP Center for Science, Math, and Environmental Education. NCSR will be spending time working with teachers at the institute to provide a framework for implementing a community-based approach to their program development.

For more information about how NCSR can provide assistance in developing a community-based curriculum initiative in your region, contact Jon Yoder, Secondary Education Coordinator at: yoder_jon@salkeiz.k12.or.us.

NCSR has developed eight new curriculum modules for use by college natural resource faculty. A new Fire Ecology and Management series provides instructors with lecture support for issues related to wildfire. The series includes an overview of the ecological role of fire as well as our current understanding of historical fire regimes. Controversial wildfire management issues such as salvage logging, thinning and prescribed fire are also examined. The modules are appropriate for both technical and life science courses. In addition to the Fire Ecology Series, a new module addressing the debate around genetic modification of organisms has been developed. Finally, Poles Apart, the first in a new Pictorial Series of modules geared for audiences with a wide range of ages and natural resource backgrounds has been developed. The purpose of this series is to stimulate interest in the natural environment and factors that affect the environment. Poles Apart covers the differences in the Polar Regions. All modules contain notes for instructors, supporting PowerPoint slides, and additional information designed to facilitate adaptation of the materials to a variety of courses. Descriptions and copies of the new modules will be available in August on our website www.ncsr.org

- The Ecological Role of Wildfire
- Anatomy of a Wildfire – The B&B Complex Fire
- Historical Fire Regimes and their Application to Forest Management
- An Evaluation of Media Coverage of Wildfire Issues
- Post-Fire (Salvage) Logging – the Controversy
- Pre-Fire Intervention: Thinning and Prescribed Burning
- Genetically-modified Organisms
- Poles Apart

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