



# New Publications

July to September 2011

Integrated Science Working for You

Air, Water,  
and Aquatic  
Environments



Fire, Fuel,  
and Smoke



Forest and  
Woodland  
Ecosystems



Grasslands,  
Shrublands,  
and Desert  
Ecosystems



Human  
Dimensions



Inventory,  
Monitoring,  
and Analysis



Wildlife  
and Terrestrial  
Habitats



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# The Rocky Mountain Research Station



The Rocky Mountain Research Station is one of five regional units that make up the USDA Forest Service Research and Development organization—the most extensive natural resources research organization in the world. We maintain 14 research locations throughout a 12-state territory encompassing the Great Basin, Southwest, Rocky Mountains, and parts of the Great Plains. The Station employs over 400 permanent full-time employees, including more than 100 research scientists.

Scientists conduct research that spans an area containing 52% of the nation's National Forest System lands (54 National Forests and Grasslands). In the lower 48 states, our territory also includes 55% of the nation's BLM lands; 48% of the designated wildernesses; 37% of National Park Service lands; numerous other public and tribal lands; and 41% of the non-urban/rural private lands.

We administer and conduct research on 14 experimental forests, ranges and watersheds while maintaining long-term databases for these areas. We also oversee activities on more than 260 Research Natural Areas and lead ecosystem management and research partnership projects in Arizona, Montana, New Mexico, and Nevada.

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## New RMRS Series Publications

### Great Basin meadow complexes

Order 22

**Geomorphology, hydrology, and ecology of Great Basin meadow complexes—Implications for management and restoration.** Chambers, Jeanne C.; Miller, Jerry R., eds. 2011. Gen. Tech. Rep. RMRS-GTR-258. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 125 p.

This report contains the results of a 6-year project conducted by the U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station and U.S. Environmental Protection Agency, Office of Research and Development on stream incision and meadow ecosystem degradation in the central Great Basin. The project included a coarse-scale assessment of 56 different meadows systems coupled with more detailed, fine-scale analyses of six of those meadows. This report presents basic information on the linked geomorphic, hydrologic, and vegetation characteristics of the meadow systems. Then, the causes of degradation; the underlying geomorphic, hydrologic, and biotic processes operating within the meadows; and the factors required to evaluate the sensitivity or, conversely, resistance of streams and their associated meadow complexes to stream incision are described. Finally, management and treatment options are provided based on our current understanding of both the causes of degradation and the underlying processes.

Online: [http://www.fs.fed.us/rm/pubs/rmrs\\_gtr258.html](http://www.fs.fed.us/rm/pubs/rmrs_gtr258.html).

### Aspen stand types: Cedar Mountain case study

Order 23

**Moderate-scale mapping methods of aspen stand types: A case study for Cedar Mountain in southern Utah.** Oukrop, Chad M.; Evans, David M.; Bartos, Dale L.; Ramsey, R. Douglas; Ryel, Ronald J. 2011. Gen. Tech. Rep. RMRS-GTR-259. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 18 p.

Quaking aspen (*Populus tremuloides* Michx.) are the most widely distributed tree species across North America, but its dominance is declining in many areas of the western United States, with certain areas experiencing rapid mortality events over the past decade. The loss of aspen from western landscapes will continue to profoundly impact biological, commercial, and aesthetic resources associated with aspen. However, many options are available for its restoration. Advances in remote sensing technologies offer cost-effective means to produce spatial and quantitative information on the distribution and severity of declining aspen at many scales. This report describes the development and application of transferable remote sensing and geographic information system methodologies to accurately classify aspen condition within areas of delineated aspen woodland cover. These methodologies were applied on Cedar Mountain in southern Utah within the Colorado Plateau to map three aspen stand conditions (healthy, damaged, and seral) successfully. Using moderate-scale imagery (2008 Landsat TM data), digital elevation model derivatives, high-resolution National Agriculture Imagery Program imagery, and a decision tree modeling approach, a spatially explicit 2008 landscape assessment of Cedar Mountain aspen was produced with an overall accuracy of 81.3% (Kappa [K] or KHAT accuracy measure = 0.69, n = 445). Of the total area mapped as aspen within the 12,139-ha study area, healthy aspen was the most abundant with 49% (5960 ha), followed by damaged with 35% (4210 ha), and seral with an estimated 16% (1968 ha) coverage. Aspen classification maps, derived from remotely sensed digital imagery and ancillary datasets, can offer objective management information to land managers to utilize when planning, implementing, and evaluating aspen restoration activities.

Online: [http://www.fs.fed.us/rm/pubs/rmrs\\_gtr259.html](http://www.fs.fed.us/rm/pubs/rmrs_gtr259.html).

### Wildfires: Risk perception and treatment options

Order 24

**A qualitative and quantitative analysis of risk perception and treatment options as related to wildfires in the USDA FS Region 3 National Forests.** Martin, Ingrid M.; Martin, Wade E.; Raish, Carol B. 2011. Gen. Tech. Rep. RMRS-GTR-260. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 57 p.

As the incidence of devastating fires rises, managing the risk posed by these fires has become critical. This report provides important information to examine the ways that different groups or disaster subcultures develop the mentalities or perceived realities that affect their views and responses concerning risk and disaster preparedness. Fire risk beliefs and attitudes of individuals and groups from four geographic areas in the Southwest (U.S. Department of Agriculture, Forest Service, Region 3, Arizona and New Mexico) surrounding the Kaibab, Tonto, Santa Fe, and Lincoln National Forests are presented. Using both quantitative and qualitative methods, we collected information from three distinct groups: general public, informed lay public, and local experts. In addition, personal interviews were conducted with a group of policy experts in the science of wildfires and climate change. A primary finding indicates that all of the groups that we interviewed expressed a strong desire for land managers to manage the public lands proactively in order to reduce the risk of catastrophic wildfire. However, respondents expressed different preferences regarding the management approach that should be used. One important observation was that respondents in each of the three distinct respondent groups prioritized their preferred means of communication differently.

Online: [http://www.fs.fed.us/rm/pubs/rmrs\\_gtr260.html](http://www.fs.fed.us/rm/pubs/rmrs_gtr260.html).

### Wildland fire management: Comparative risk assessment

Order 25

**A comparative risk assessment framework for wildland fire management: The 2010 cohesive strategy science report.** Calkin, David E.; Ager, Alan A.; Thompson, Matthew P., eds. 2011. Gen. Tech. Rep. RMRS-GTR-262. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 63 p.

The FLAME Act of 2009 requires the U.S. Department of Agriculture Forest Service and the U.S. Department of Interior to submit to Congress a Cohesive Wildfire Management Strategy. In this report, we explore the general science available for a risk-based approach to fire and fuels management and suggest analyses that may be applied at multiple scales to inform decisionmaking and tradeoff analysis. We discuss scientific strengths and limitations of wildfire risk assessment frameworks, including the benefit of broad scalability as demonstrated by four recent case studies. We further highlight the role of comparative risk assessment, which extends the analysis to include the decision space available to managers and stakeholders to allow them to explore the tradeoffs between alternative courses of action. We identify scientific limitations of the analytical protocol and discuss questions of how to better address climate change, smoke modeling issues, and socioeconomic vulnerability, and how to better quantify treatment effectiveness. Key challenges are: achieving a balance between retaining analytical flexibility at regional and sub-regional planning scales while simultaneously retaining data and methodological consistency at the national scale, and identifying and aligning regional and national priorities to inform multi-objective strategy development. As implementation proceeds, the analytical protocol will no doubt be modified, but the contents of this report comprise a rigorous and transparent framework for comparative risk assessment built from the best available science.

Online: [http://www.fs.fed.us/rm/pubs/rmrs\\_gtr262.html](http://www.fs.fed.us/rm/pubs/rmrs_gtr262.html).

### Ninth World Wilderness Congress symposium

Order 26

**Science and stewardship to protect and sustain wilderness values: Ninth World Wilderness Congress symposium**; November 6-13, 2009; Merida, Yucatan, Mexico. Watson, Alan; Murrieta-Saldivar, Joaquin; McBride, Brooke, comps. 2011. Proceedings RMRS-P-64. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 225 p.

The Ninth World Wilderness Congress (WILD9) met in Meridá, Yucatán, Mexico in 2009. The symposium on science and stewardship to protect and sustain wilderness values was the largest of multiple symposia held in conjunction with the Congress. The papers contained in this proceedings were generated at this symposium or submitted by the author or authors for consideration for inclusion in this proceedings, and have been organized into six major topics: (1) empowering young people, (2) promoting involvement of local communities, (3) enhancing transboundary conservation goals, (4) exploring wilderness meanings, (5) monitoring and predicting change, and (6) new directions in wilderness stewardship. Included are papers that address wildland issues in Afghanistan, Antarctica, Canada, Czech Republic, El Salvador, the Gambia, Germany, Honduras, India, Lesotho, Mexico, Namibia, the Netherlands, New Zealand, Nigeria, Philippines, Puerto Rico, Russia, South Africa, Taiwan, Trinidad and Tobago, Uganda, and the United States.

Online: [http://www.fs.fed.us/rm/pubs/rmrs\\_p064.html](http://www.fs.fed.us/rm/pubs/rmrs_p064.html).

### White pine blister rust: Pruning to manage

Order 27

**Pruning to manage white pine blister rust in the southern Rocky Mountains**. Crump, Amanda; Jacobi, William R.; Burns, Kelly S.; Howell, Brian E. 2011. Res. Note RMRS-RN-44. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 10 p.

White pine blister rust is an exotic, invasive disease that severely damages and kills white pines in the southern Rocky Mountains. We evaluated the efficacy of preventive pruning (removing lower branches) and/or sanitation pruning (removing cankered branches) to reduce disease impacts in limber (*Pinus flexilis* James) and Rocky Mountain bristlecone (*P. aristata* Englm.) pine in two recreation areas in the southern Rocky Mountains. We compared the benefits of the different pruning techniques based on the distribution and severity of cankers, tree height class (small = <20 ft, medium = 20 to 30 ft, and tall = >30 ft), and treatment feasibility and time. Preventive pruning removed less than half of all cankers at both sites. The most effective treatment, sanitation pruning, removed 98 to 100 percent of visible cankers. Cankers were located throughout tree crowns, and medium and tall trees had high incidences of cankers in the upper crown. Threatening cankers (cankers located on branches within 1 ft of or on the main stem) were common throughout the crowns of trees less than 30 ft tall. In 5 to 10 minutes per tree, crews reliably removed cankers up to 25 ft with ground based tools. Small and medium-sized trees will benefit most from pruning because nearly all threatening cankers can be removed with reasonable effort.

Online: [http://www.fs.fed.us/rm/pubs/rmrs\\_rn044.html](http://www.fs.fed.us/rm/pubs/rmrs_rn044.html).

## Journals and Other Publications

Obtain the following publications through university libraries, the publisher, or other outlets. Forest Service employees may request these items from the National Forest Service Library at [FSLibrary-DocsFC@fs.fed.us](mailto:FSLibrary-DocsFC@fs.fed.us) or telephone: (970) 498-1205. We have also provided links to electronic copies when available.

### Air, water, and aquatic environments

#### Application of the Water Erosion Prediction Project (WEPP)

##### Model to simulate streamflow in a PNW forest watershed.

Srivastava, A.; Dobre, M.; Bruner, E.; Elliot, W.J.; Miller, I.S.; Wu, J.Q. 2011. ISELE Paper Number 11040. Paper presented at the international symposium on erosion and landscape evolution; September 18-21, 2011; Anchorage, AK. 8 p.

#### Applying online WEPP to assess forest watershed hydrology.

Dun, S.; Wu, J.Q.; Elliot, W.J.; Frankenberger, J.R.; Flanagan, D.C.; McCool, D.K. 2011. ISELE Paper Number 11085. Paper presented at the international symposium on erosion and landscape evolution; September 18-21, 2011; Anchorage, AK. 8 p.

#### Applying WEPP technologies to western alkaline surface coal mines.

Wu, J.Q.; Dun, S.; Rhee, H.; Liu, X.; Elliot, W.J.; Golnar, T.; Frankenberger, J.R.; Flanagan, D.C.; Conrad, P.W.; McNearny, R.L. 2011. ISELE Paper Number 11086. Paper presented at the international symposium on erosion and landscape evolution; September 18-21, 2011; Anchorage, AK. 8 p.

#### Approaches to evaluating climate change impacts on species:

**A guide to initiating the adaptation planning process.** Rowland, Erika L.; Davison, Jennifer E.; Graumlich, Lisa J. 2011. *Environmental Management*. 47: 322-337. Online: <http://www.treesearch.fs.fed.us/pubs/39150>.

#### Chapter 4: Bioenergy-related water quality issues.

Diaz-Chavez, R.; Neto, A.E.; Berndes, G.; Neary, D.G.; Fall, M. 2011. In: *The bioenergy and water nexus*. United National Environment Program; the Oko-Institut eV. Institute for Applied Ecology, and the International Energy Agency Bioenergy Task 43: 41-61.

#### Climate Project Screening Tool.

U.S. Department of Agriculture, Forest Service. 2011. Short Subjects from SAP 4.4 National Forests, No. 4. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 4 p. Online: <http://www.treesearch.fs.fed.us/pubs/38316>.

#### Combined effects of heat waves and droughts on avian communities across the conterminous United States.

Albright, Thomas P.; Pidgeon, Anna M.; Rittenhouse, Chadwick D.; Clayton, Murray K.; Wardlow, Brian D.; Flather, Curtis H.; Culbert, Patrick D.; Radeloff, Volker C. 2010. *Ecosphere*. 1(5): Article 12. Online: <http://www.treesearch.fs.fed.us/pubs/38158>.

#### Continued warming could transform Greater Yellowstone fire regimes by mid-21st century.

Westerling, Anthony L.; Turner, Monica G.; Smithwick, Erica A. H.; Romme, William H.; Ryan, Michael G. 2011. *PNAS*. doi: 10.1073/pnas.1110199108. Online: <http://www.treesearch.fs.fed.us/pubs/38823>.

#### Depositional characteristics and sediment availability resulting from the post-Schultz Fire floods of 2010.

Koestner, K.A.;

Carol, M.D.; Neary, D.G.; Koestner, P.E.; Youberg, A. 2011. Paper presented at the 24th Annual Symposium of the Arizona Hydrological Society; Watersheds near and far: Response to changes in climate and landscape; September 18-20, 2010; Flagstaff, AZ. 5 p.

#### Development of a GIS interface for WEPP Model application to Great Lakes forested watersheds.

Frankenberger, J.R.; Dun, S.; Flanagan, D.C.; Wu, J.Q.; Elliot, W.J. 2011. ISELE Paper Number 11139. Paper presented at the international symposium on erosion and landscape evolution; September 18-21, 2011; Anchorage, AK. 8 p.

#### Ecosystem carbon stocks of Micronesian mangrove forests.

Kauffman, J. Boone; Heider, Chris; Cole, Thomas G.; Dwire, Kathleen A.; Donato, Daniel C. 2011. *Wetlands*. 31: 343-352. Online: <http://www.treesearch.fs.fed.us/pubs/37658>.

#### Effects of DTM resolution on slope steepness and soil loss prediction on hillslope profiles.

Moreira, Eder Paulo; Elliot, William J.; Hudak, Andrew T. 2011. Paper presented at the XXXIII Brazilian Congress of Soil Science symposium, Soils: Climate change and sustainability; July 31-Aug. 5, 2011; Uberlândia, Minas Gerais, Brazil. 4 p.

#### Effects of forest cover and environmental variables on snow accumulation and melt.

Dobre, Mariana; Elliot, William J.; Wu, Joan Q.; Link, Timothy E.; Miller, Ina S. 2011. Paper presented at the fourth interagency conference on research in the watersheds; Sept. 26-30, 2011; Fairbanks, AK. 5 p.

#### Effects of wildfire on stream temperatures in the Bitterroot River basin, Montana.

Mahlum, S.K.; Eaby, L.A.; Young, M.K.; Clancy, C.G.; Jakober, M. 2011. *International Journal of Wildland Fire*. 20: 240-247. Online: <http://www.treesearch.fs.fed.us/pubs/37519>.

#### Empirical modeling of spatial and temporal variation in warm season nocturnal air temperatures in two north Idaho mountain ranges, USA.

Holden, Zachery A.; Crimmins, Michael A.; Cushman, Samuel A.; Littell, Jeremy S. 2010. *Agricultural and Forest Meteorology*. 151: 261-269. Online: <http://www.treesearch.fs.fed.us/pubs/39232>.

#### Enhanced sediment delivery in a changing climate in semi-arid mountain basins: Implications for water resource management and aquatic habitat in the northern Rocky Mountains.

Goode, Jaime, R.; Luce, Charles H.; Buffington, John M. 2011. *Geomorphology*. doi: 10.1016/j.geomorph.2011.06.021.

#### *Erigeron mancus* (Asteraceae) density as a baseline to detect future climate change in La Sal Mountain habitats.

Fowler, James F.; Smith, Barb. 2010. *Journal of the Botanical Research Institute of Texas*. 4(2): 747-753. Online: <http://www.treesearch.fs.fed.us/pubs/38462>.

- Erosion processes and prediction in NW U.S. forests.** Elliot, W.J.; Robichaud, P.R.; Foltz, R.B. 2011. ISELE Paper Number 11002. Paper presented at the international symposium on erosion and landscape evolution; September 18-21, 2011; Anchorage, AK. 8 p.
- Flow regime, temperature, and biotic interactions drive differential declines of trout species under climate change.** Wenger, Seth J.; Isaak, Daniel J.; Luce, Charlie; Neville, Helen M.; Fausch, Kurt D.; Dunham, Jason B.; Dauwalter, Daniel C.; Young, Michael K.; Elsner, Marketa M.; Rieman, Bruce E.; Hamlet, Alan F.; Williams, Jack E. 2011. Proceedings of the National Academy of Science (PNAS). 108(34): 14175-14180. Online: <http://www.treesearch.fs.fed.us/pubs/38692>.
- Generation-scale movement patterns of cutthroat trout (*Oncorhynchus clarkii pleuriticus*) in a stream network.** Young, M.K. 2011. Canadian Journal of Fisheries and Aquatic Sciences. 68: 941-951. Online: <http://www.treesearch.fs.fed.us/pubs/39245>
- Geospatial application of the Water Erosion Prediction Project (WEPP) Model.** Flanagan, D.C.; Frankenberger, J.R.; Cochrane, T.A.; Renschler, C.S.; Elliot, W.J. 2011. ISELE Paper Number 11084. Paper presented at the international symposium on erosion and landscape evolution; September 18-21, 2011; Anchorage, AK. 8 p.
- Impacts of wildfire on runoff and sediment loads at Little Granite Creek, western Wyoming.** Ryan, Sandra E.; Dwire, Kathleen A.; Dixon, Mark K. 2011. Geomorphology. 129: 113-130. Online: <http://www.treesearch.fs.fed.us/pubs/37604>.
- Influence of bedrock geology on water chemistry of slope wetlands and headwater streams in the southern Rocky Mountains.** Nelson, Monique LaPerriere; Rhoades, Charles C.; Dwire, Kathleen A. 2011. Wetlands. 31: 251-261. Online: <http://www.treesearch.fs.fed.us/pubs/38100>.
- Influences of watershed geomorphology on extent and composition of riparian vegetation.** Engelhardt, Blake M.; Weisberg, Peter J.; Chambers, Jeanne C. 2011. Journal of Vegetation Science. doi: 10.1111/j.1654-1103.2011.01328.x. Online: <http://www.treesearch.fs.fed.us/pubs/39012>.
- The influence of wildfire extent and severity on streamwater chemistry, sediment and temperature following the Hayman Fire, Colorado.** Rhoades, Charles C.; Entwistle, Deborah; Butler, Dana. 2011. International Journal of Wildfire Science. 20: 430-442. Online: <http://www.treesearch.fs.fed.us/pubs/38159>.
- Linking climate, gross primary productivity, and site index across forests of the western United States.** Weiskittel, Aaron R.; Crookston, Nicholas L.; Radtke, Philip J. 2011. Canadian Journal of Forest Research. 41: 1710-1721.
- Managing uncertainty in climate-driven ecological models to inform adaptation to climate change.** Littell, Jeremy S.; McKenzie, Donald; Kerns, Becky K.; Cushman, Samuel; Shaw, Charles G. 2011. Ecosphere. 2(9): Article 102. Online: <http://www.treesearch.fs.fed.us/pubs/39230>.
- Native fish conservation areas: A vision for large-scale conservation of native fish communities.** Williams, Jack E.; Williams, Richard N.; Thurow, Russell F.; Elwell, Leah; Philipp, David P.; Harris, Fred A.; Kershner, Jeffrey L.; Martinez, Patrick J.; Miller, Dirk; Reeves, Gordon H.; Frissell, Christopher A.; Sedell, James R. 2011. Fisheries. 36(6): 267-277. Online: <http://www.treesearch.fs.fed.us/pubs/38415>.
- A new synonymy in *Erebomyia* (Diptera: Dolichopodidae).** Runyon, Justin B. 2010. Pan-Pacific Entomologist. 86(4): 139-140. Online: <http://www.treesearch.fs.fed.us/pubs/38652>.
- A perspective on thirty years of the Webb, Pearman and Leuning density corrections.** Lee, Xuhui; Massman, William J. 2011. Boundary-Layer Meteorology. 139:37-59. Online: <http://www.treesearch.fs.fed.us/pubs/37477>.
- Phase I: Climate change and connectivity: Assessing landscape and species vulnerability.** Cushman, Samuel A.; Landguth, Erin L.; Flather, Curtis H. 2010. Final Report to Great Plains Landscape Conservation Cooperative. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 103 p. Online: <http://www.treesearch.fs.fed.us/pubs/39233>.
- Probabilistic soil erosion modeling using the Erosion Risk Management Tool (ERMIT) after wildfires.** Robichaud, P.R.; Elliot, W.J.; Wagenbrenner, J.W. 2011. ISELE Paper Number 11039. Paper presented at the international symposium on erosion and landscape evolution; September 18-21, 2011; Anchorage, AK. 8 p.
- Rainfall and geomorphic aspects of post-fire soil erosion—Schultz Fire 2010.** Youberg, A.; Koestner, K.A.; Neary, D.G.; Koestner, P.E. 2011. Paper presented at the 24th Annual Symposium of the Arizona Hydrological Society; Watersheds near and far: Response to changes in climate and landscape; September 18-20, 2010; Flagstaff, AZ. 5 p.
- Rill and gully formation following the 2010 Schultz Fire.** Neary, D.G.; Koestner, K.A.; Youberg, A.; Koestner, P.E. 2011. Paper presented at the 24th Annual Symposium of the Arizona Hydrological Society; Watersheds near and far: Response to changes in climate and landscape; September 18-20, 2010; Flagstaff, AZ. 6 p.
- Rock gabion, rip-rap, and culvert treatments: Successes and failures in post-fire erosion mitigation, Schultz Fire 2010.** Neary, D.G.; Koestner, K.A. 2011. Paper presented at the 24th Annual Symposium of the Arizona Hydrological Society; Watersheds near and far: Response to changes in climate and landscape; September 18-20, 2010; Flagstaff, AZ. 5 p.
- Role of climate and invasive species in structuring trout distributions in the interior Columbia River Basin, USA.** Wenger, Seth J.; Isaak, Daniel J.; Dunham, Jason B.; Fausch, Kurt D.; Luce, Charlie; Neville, Helen M.; Rieman, Bruce E.; Young, Michael K.; Nagel, David E.; Horan, Dona L.; Chandler, Gwynne L. 2011. Canadian Journal of Fisheries and Aquatic Science. 68: 988-1008. Online: <http://www.treesearch.fs.fed.us/pubs/38691>.

- Role of the U.S. Forest Service: Helping forests, grasslands, and wildlife adapt to shifts in climate.** Tomosy, Monica S.; Thompson, Frank R.; Boyce, Douglas. 2011. *The Wildlife Professional*. Fall: 42-46. Online: <http://www.treesearch.fs.fed.us/pubs/39149>.
- Seasonal change of WEPP erodibility parameters on a fallow plot.** McCool, D.K.; Dun, S.; Wu, J.Q.; Elliot, W.J. 2011. ISELE Paper Number 11066. Paper presented at the international symposium on erosion and landscape evolution; September 18-21, 2011; Anchorage, AK. 8 p.
- Soil and water characteristics in restored canebrake and forest riparian zones.** Andrews, Danielle M.; Barton, Christopher D.; Kolka, Randall K.; Rhoades, Charles C.; Dattilo, Adam J. 2011. *Journal of the American Water Resources Association*. 47(4): 772-784.
- Soil erosion model predictions using parent material/soil texture-based parameters compared to using site-specific parameters.** Foltz, R.B.; Elliot, W.J.; Wagenbrenner, N.S. 2011. *Transactions of the ASABE*. 54(4): 10 p. Online: <http://www.treesearch.fs.fed.us/pubs/39189>.
- Stream temperature monitoring and modeling: Recent advances and new tools for managers.** Isaak, Daniel J. 2011. *Stream Notes*. July 2011. 7 p. Online: <http://www.treesearch.fs.fed.us/pubs/38693>.
- Temperature and soil organic matter decomposition rates—synthesis of current knowledge and a way forward.** Conant, Richard T.; Ryan, Michael G.; Ågren, Göran I.; and others. 2011. *Global Change Biology*. 17: 3392-3404. Online: <http://www.treesearch.fs.fed.us/pubs/39246>.
- Threats to riparian ecosystems in western North America: An analysis of existing literature.** Poff, Boris; Koestner, Karen A.; Neary, Dan; Henderson, Victoria. 2011. *Journal of the American Water Resources Association (JAWRA)*. 1-14. doi: 10.1111/j.1752-1688.2011.00571.x. Online: <http://www.treesearch.fs.fed.us/pubs/38738>.
- Transpirational water loss in invaded and restored semiarid riparian forests.** Moore, Georgianne W.; Owens, M. Keith. 2011. *Restoration Ecology*. doi: 10.1111/j.1526-100X.2011.00774.x. Online: <http://www.treesearch.fs.fed.us/pubs/39151>.
- Vulnerability of landscape carbon fluxes to future climate and fire in the Greater Yellowstone Ecosystem.** Smithwick, Erica A. H.; Westerling, Anthony L.; Turner, Monica G.; Romme, William H.; Ryan, Michael G. 2011. In: Andersen, C., ed. *Questioning Greater Yellowstone's Future: Climate, Land Use, and Invasive Species*; Proceedings of the 10th Biennial Scientific Conference on the Greater Yellowstone Ecosystem; October 11-13; Yellowstone National Park. Yellowstone National Park, WY: Yellowstone Center for Resources. 9 p. Online: <http://www.treesearch.fs.fed.us/pubs/38822>.
- Water quality assessment of bioenergy production.** Diaz-Chavez, Rocio; Berndes, Goran; Neary, Dan; Neto, Andre Elia; Fall, Mamadou. 2011. *Biofuels, Bioproducts, & Biorefining*. 5: 445-463. Online: <http://www.treesearch.fs.fed.us/pubs/38739>.
- WEPP Model applications for evaluations of best management practices.** Flanagan, D.C.; Elliot, W.J.; Frankenberger, J.R.; Huang, C. 2010. Paper presented at the 16th Congress of the International Soil Conservation Organization; November 8-12, 2010; Santiago, Chile. 5 p.
- Wetland features and landscape context predict the risk of wetland habitat loss.** Gutzwiller, Kevin J.; Flather, Curtis H. 2011. *Ecological Applications*. 21(3): 968-982. Online: <http://www.treesearch.fs.fed.us/pubs/38155>.
- Fire, fuel, and smoke**
- Abiotic and biotic influences on *Bromus tectorum* invasion and *Artemisia tridentata* recovery after fire.** Condon, Lea; Weisberg, Peter J.; Chambers, Jeanne C. 2011. *International Journal of Wildland Fire*. 20: 597-604. Online: <http://www.treesearch.fs.fed.us/pubs/38353>.
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