News from the WEST

www.west-inc.com

Fall 2011

Season's Greetings from

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in this issue

Have you visited the WEST Website Project Page?

Have you ever wondered what types of projects WEST has completed and where we have done work? If so, have a look at our project map located on our website.

This Google Map-enabled page is an interactive tool where you can click on locations across a global map to view representative work WEST has performed. Each location has information on the name and location of the project, as well as a short description of the type of work conducted.

This page is updated often and offers our visitors an opportunity to keep up to date on WEST projects.

If you haven't seen the page, please visit it today at

www.west-inc.com/projects.html

WEST Providing Natural Resource Permitting Support for Niobrara Shale Oil Play

While the Niobrara Shale oil play in southeastern Wyoming may still be in an exploratory phase with questions remaining on how initial lease investments will pan out, industry representatives remain optimistic that their capital investments will produce long term dividends. The expectation is the development of domestic energy reserves in this region will result in a stronger independence from foreign oil imports. WEST is active in supporting oil and gas operators within the Niobrara Shale play by providing natural resource impact assessments.

WEST scientists use their technical expertise to plan and conduct surveys for threatened, endangered and sensitive species on behalf of operators to aid in obtaining federal Applications for Permits to Drill (APD). WEST biologists routinely perform surveys according to agency protocols within, and adjacent to, areas proposed for development. Results are then submitted to agencies for consideration during their National Environmental Protection Act (NEPA) review and permit issuance. WEST's knowledge and understanding of state and federal agency timing stipulations for various species helps minimize or avoid impacts to species during critical life stages.

Greater Sage-grouse

Identifying the potential issues related to wildlife or critical habitat early in the planning process provides operators with information on when and where a well can be drilled to avoid disturbance during sensitive periods. Biologists for WEST have years of experience in conducting surveys for greater sage-grouse, sharp-tailed grouse, raptors, mountain plover, bald eagles, Ute ladies'-tresses, and other sensitive species.

Recently, in concurrence with Wyoming's Governor Matt Mead's Greater Sage-Grouse Core Area Protection Executive Order 2011-05, WEST provides technical support to oil and gas operators who plan development within Core Population Areas. Our biologists and geographic information system (GIS) professionals in partnership with state and federal agencies determine whether a proposed project will comply with the maximum disturbance thresholds established by this Executive

Continued on Pg.2

WEST Office Locations

Corporate Headquarters
2003 Central Avenue
Cheyenne, Wyoming 82001
307.634.1756
Nadine Wilson

Laramie Branch Office
200 South 2nd Street
Suite B
Laramie, Wyoming
82070
Trent McDonald

NE/Mid-Atlantic Region
Waterbury Branch Office
P.O. Box 60
Waterbury, Vermont
05676
David Tidhar

Midwest-East Region
Bloomington Branch Office
408 West Sixth Street
Bloomington, Indiana
47404
Rhett Good

Pacific Northwest Region
Walla Walla Branch Office
38 East Main Street
Suite 210
Walla Walla, Washington
99362
Tamara Enz

Midwest-West Region
Bismarck Branch Office
4007 State Street
Suite 109
Bismarck, North Dakota
58503
Clayton Derby

WEST Natural Resource Support (Continued)

Order. WEST's experience using the Density/Disturbance Calculation Tool (DDCT) process demonstrates whether an operator's proposed project may or may not cause declines in sage-grouse populations within a Core Area and whether the project can move forward as planned or if alternatives will need to be developed.

Although the majority of our surveys occur prior to any surface disturbance or well development, WEST also conducts biological monitoring during construction or drilling operations to ensure these activities do not have an adverse affect on wildlife during critical time periods. As an example, biologists monitor big game migration to winter ranges and document their proximity and response to activities associated with drilling and completion of wells prior to seasonal closures.

WEST's reputation and technical expertise has resulted in a win – win situation for both agencies and operators. Our biologists conduct the field inventories needed to determine appropriate stipulations that will minimize impacts to federally protected or sensitive species and the operators realize a cost effective alternative that results in a more streamlined permitting process. In providing these services, WEST remains committed to preserving Wyoming's wildlife and wild spaces while contributing to responsible energy development.

Where We've Been

Donald Solick, **Kevin Murray**, and **Matt Clement** attended the Sonobat Field Techniques Workshop in Uniontown, Pennsylvania September 28-October 1. This workshop focused on collecting full-spectrum acoustic data in the Allegheny Mountains of Pennsylvania, and analyzing this data using Sonobat acoustic analysis software.

Zapata Courage and **Donald Solick** attended the 41st North American Symposium on Bat Research in Toronto, Canada October 26-29. Donald presented "Activity Rates and Call Quality by Full-Spectrum Detectors" and Zapata presented a poster, "A Comparison of Acoustic Detection Systems For Passive Monitoring of Bats." This annual meeting features professional bat researchers from throughout North America, with occasional attendees from Europe, Asia, Africa, and Central and South America.

Dale Strickland, **Lyman McDonald**, **Trent McDonald**, **Dave Young**, **Bryan Manly**, **Andrea Chatfield** and **Terry Enk** attended the 18th Annual Conference of The Wildlife Society. The conference was held in Waikoloa, Hawaii November 5-11. This annual gathering draws professionals from around the globe to attend presentations and programs on wildlife research.

Trent McDonald attended the 19th Biennial Conference on the Biology of Marine Mammals, November 27 - December 2, in Tampa, Florida. This is a gathering of marine mammal scientists from around the world, with the goal of enhancing collaboration, sharing ideas, and improving the quality of research on marine mammals.

WEST Staff shines at 18th Annual TWS Conference

Dale Strickland, Lyman McDonald, Trent McDonald, Bryan Manly, Dave Young, Terry Enk, and Andrea Chatfield attended the 18th Annual Conference of The Wildlife Society. The conference which was held in Waikoloa, Hawaii November 5-11, offers participants the opportunity to explore recent wildlife topics, visit with other industry professionals, and participate in presentations, conferences, and courses in all areas of wildlife research.

Dave Young, Trent McDonald and Bryan Manly were all presenters at the conference.

Lyman Mc Donald was the co-organizer of the symposium on data analysis methods.

Recent Publications

Miller, R.F., Knick, S.T., Pyke, D.A., **Meinke, C.W**., Hanser, S.E., Wisdom, M.J., Hild, A.L., 2011, Characteristics of sagebrush habitats and limitations to long-term conservation In Knick, S.T., Connelly, J.W., eds., Greater Sage-Grouse- Ecology and Conservation of a Landscape Species and Its Habitats, Studies in Avian Biology No. 38: Berkeley, CA, University of California Press, p. 145-184. [FullText] Catalog No: 1943

Wisdom, M.J., **Meinke, C.W**., Knick, S.T., Schroeder, M.A., 2011, Factors associated with extirpation of sage-grouse In Knick, S.T., Connelly, J.W., eds., Greater Sage-Grouse- Ecology and Conservation of a Landscape Species and Its Habitats, Studies in Avian Biology No. 38: Berkeley, CA, University of California Press, p. 451-472. [FullText] Catalog No: 2167

Sawyer, H., and **C. LeBeau**. 2011. Evaluation of mule deer crossing structures in Nugget Canyon, Wyoming, Final Report, December 2008-May 2011. Western EcoSystems Technology, Inc., Laramie, Wyoming

McDonald, T. L., W. J. Richardson, C. R. Greene, S. B. Blackwell, **C. Nations, R. Nielson**, and B. Streever (in Press) "Detecting Changes in Distribution of Calling Bowhead Whales Exposed to Fluctuating Anthropogenic Sounds". Journal of Cetacean Research and Management.

Blackwell, S. B., **T.L. McDonald**, K.H. Kim, L.A.M. Aerts, W.J. Richardson, C.R. Greene Jr., and B. Streever (in Press) "Directionality of Bowhead Whale Calls Measured with Multiple Sensors", Marine Mammal Science.

WEST Biologist Honored with State Award

WEST Research Biologist, Hall Sawyer was recently honored by the Wyoming Game and Fish Department with the Excellence in Wildlife Conservation Award.

WEST Biologist Hall Sawyer

The award is designed to recognize government and non-government agencies and individuals for exceptional efforts in conservation of Wyoming wildlife and wildlife habitats. Sawyer was recognized for his outstanding contributions to wildlife research and monitoring throughout Wyoming.

The award states “Over the past 15 years, Sawyer has led big game research and monitoring projects throughout the state. His work has greatly enhanced the Game and Fish Department's ability to manage big game on a changing landscape. He was the first research biologist to conduct a long-term study evaluating potential impacts of natural gas development on mule deer in the Pinedale Anticline project area. In addition, the department's statewide ability to assess impacts to big game from energy development, urban development, and highway mortality has been based, in large part, on Sawyer's research on migration corridors, population dynamics, and habitat selection.”

“Sawyer has also been instrumental in leading research projects or assisting with research projects throughout Wyoming including elk research in Grand Teton National Park, migration routes of pronghorn that summer in Jackson Hole, and a study of recently transplanted bighorn sheep in the Laramie Range. He has also worked on mule deer research on the Atlantic Rim to assess movements of the Baggs mule deer herd and monitoring of mule deer migration along U.S. Highway 30 in Nugget Canyon near Kemmerer. In addition, he has recently begun an assessment of elk and mule deer habitat use in the Steamboat elk and deer herd units north of Rock Springs in response to proposed increases in oil and gas and wind energy developments. “

“Wyoming Game and Fish Department's wildlife division commended Sawyer for his commitment to Wyoming's wildlife. "His analysis on animal survival and movement is often used by the Game and Fish Department when formulating management recommendations for herd units.”

Cara Meinke Joins WEST in New Portland Location

Cara Meinke joined WEST in August 2011 and with her addition WEST added a new branch office in Portland, Oregon. Cara is a wildlife biologist with over 15 years of experience designing, implementing, and reporting the results of ecological investigations.

Prior to joining WEST, Cara worked as a Senior Project Manager and Wildlife Biologist at Stantec Consulting, Inc. where her work focused on assessing impacts from wind energy development on bat and avian species.

Read the rest of Cara's bio to the right.

Recent Staff Presentations/Workshops

This November (7-12) **Ryan Nielson** taught a 6-day course titled Modeling Resource Selection by Animals: Design and Application with co-instructors Michael Wisdom (USFS), Mary Rowland (USFS) and Solana Tabeni at CONICET in Mendoza, Argentina. This class was for Ph.D. students and research scientists and included an introduction to resource selection modeling using R. Some of the research projects discussed included guanaco, anteater, and andean condor.

As part of the final stages in development of the CV Adult Chinook Salmon Escapement Monitoring Plan, **Ryan Nielson** gave a follow-up workshop on Estimating Chinook Salmon Escapement using Carcass Mark-recapture Methods. He presented a hands-on workshop, demonstrating a program in 'R' developed for the Cormack-Jolly-Seber model. Workshop participants got a chance to use the program on an example data set and discussed interpretation of analysis results.

Upcoming Workshops/Seminars

Dr. Bryan Manly will be presenting a workshop "Computer Intensive Statistical Methods in Biology" March 12-16, 2012. The workshop is based on the third edition of the *book Randomization, Bootstrap and Monte Carlo Methods in Biology* (Chapman & Hall/CRC, 2007) written by Dr. Manly, and provides an introduction to computer-intensive approaches to statistical analysis (randomization, bootstrapping and Monte Carlo methods), with an emphasis on applications in biology and environmental science. For additional information on this or other workshops/seminars, please visit: http://www.west-inc.com/events.html

Meet our Newest Staff Members

Cara Meinke - Wildlife Biologist/Project Manager-Portland Office

Cara Meinke joined WEST in 2011 as a Wildlife Biologist and Project Manager. She received her Bachelor's degree in Wildlife and Fisheries Biology from University of Vermont in 1998 and her Master's degree in Wildlife from Humboldt State University in 2004. She began her career in 1996 working in Yellowstone National Park. She also worked on a wolf study in Ninemile Valley, MT, a coyote predation study for U.C. Davis in Hopland, CA, and did her Master's research on mountain lion habitat use relative to human activity in Redwood National Park, CA. Her focus shifted to greater sage-grouse and sagebrush-associated species in the Intermountain while working for the USGS BRD Snake River Field Station. She then went on to start Oxbow Environmental, a woman-owned environmental consulting company in Boise, ID.

Her experience also includes Section 7/10 Endangered Species Act and National Environmental Policy Act compliance document preparation including Biological Assessments, Habitat Conservation Plans, and Environmental Assessment/Impact Statements. Notably, Cara was the lead author on the first collision risk model developed for the federally endangered Indiana bat for a groundbreaking Habitat Conservation Plan, for which she was also lead author. She is the primary author and co-author of numerous peer-reviewed scientific journal articles and book chapters, including two chapters she co-authored in the special series on greater sage-grouse published in Studies in Avian Biology. When she is not sitting in front of her computer or out in the field, she enjoys biking, digging in her garden, singing, and metalsmithing.

Continued on Page 5

Meet Our Newest Staff Members (Continued)

Alex Kirby - IT Specialist-Cheyenne Office
Alex Kirby joined WEST in September 2011 as an IT Specialist in the Cheyenne Office. Alex graduated from the University of Phoenix with a Bachelor's degree in Networking and Telecommunication. His specialties include networking design/building/maintenance, computer hardware and software repair, system administration and Linux administration.

With WEST, Alex's responsibilities will include management of the entire IT system as well as being the "go-to" contact for all WEST staff regarding in-house technology.

Melissa Wolfe - Biologist-Cheyenne Office
Melissa Wolfe joined WEST as a biologist in Fall 2011. During previous work for WEST, she conducted avian point counts; lek, aerial, and brood surveys for sage-grouse and greater prairie chickens; owl/raptor surveys; avian/bat fatality monitoring; and report compiling/ editing. I She currently writes reports and oversees the Zotero reference collection for WEST.

Prior to joining WEST, Melissa conducted and supervised field work for numerous avian research projects for state and federal governments and non-profit organizations in several states including North Dakota, Texas, Arkansas, Alaska, Utah, and Wisconsin, as well as the Lesser Antilles of the Caribbean and in Costa Rica. This work involved point/transect counts, mist-netting and banding, and vegetation sampling for projects exploring habitat use for birds in grasslands, sagebrush, tropical forests, and wetlands. Melissa has handled thousands of birds and enjoys learning about their life history characteristics.Melissa also has hands-on experience conducting prairie and wetland restoration projects in Wisconsin for a utility company and two non-profit organizations. Melissa received a Bachelor's degree in biology from Luther College. She earned her Master's degree in zoology from Southern Illinois University, discerning the variables associated with songbird nest predation in fragmented forest habitat.

Meghan Lout - Biologist/Project Manager-Vermont Office
Meghan joined WEST as a project manager in October 2011 in the Waterbury, VT office. She received her Bachelor's degree in wildlife and fisheries conservation from the University of Massachusetts, Amherst and a certificate in tropical reforestation from The School for Field Studies, Australia. She received her Master's degree in biological sciences from Purdue University in West Lafayette, Indiana. Her master's research investigated bird song differentiation and implications of climate change on avian communities demonstrating patterns of high beta diversity in Costa Rica.

Meghan was a fieldwork vagabond prior to pursuing her master's degree. During that time, she participated in numerous ecological monitoring projects that included waterfowl, shorebird, passerines, raptor, crane, condors and bats in the flattest to the most topographically complex locations in the US and Central America. Meghan has extensive capture and radio telemetry experience with threatened and endangered birds and bat species of concern. She has also done vegetation mapping for noxious species management in Massachusetts and Australia, although her favorite types of work include breeding bird surveys, capturing and tracking bats, analyzing avian and bat acoustics and technical writing.

Meghan has developed several hobbies throughout her wildlife career. She enjoys reading GRE vocabulary word lists and baking bread, she is also a competitive marathon runner. She is known for her passion of avian and bat ecology and is also a strong candidate for the top ten most energetic people in the world.

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*For additional information on any story contained within this edition of News from the WEST, please send an e-mail to marketing@west-inc.com. In our continuing effort to be an environmentally conscious firm, we **only** distribute an electronic version of our newsletter.*

Did you know?

WEST staff members are always excited to share their vast knowledge though workshops, seminars, webinars, and other speaking engagements.

Our highly experienced staff have a wide range of expertise to share. We offer workshops and professional trainings in 1-day to 5-day formats. Many of our staff members present workshops both nationally and internationally on many topics including Resource Selection by Animals, Computer Intensive Statistics, Environmental and Ecological Sampling.

If you are interested in any of these workshops contact us at marketing@west-inc.com. If you would like to see examples of our past workshops, seminars, and webinars, you can view them at: http://www.west-inc.com/events.html

You can view all available job listings at WEST on our website: http://westinc.catsone.com/careers/