

## **Appendix I: SNAMP Publications**

Appendix I lists publications associated with the Sierra Nevada Adaptive Management Project as of December 2015. Additional publications may be forthcoming. All these publications used data generated by SNAMP and/or were funded at least in part under the SNAMP budget. SNAMP was funded by USDA Forest Service Region 5, USDA Forest Service Pacific Southwest Research Station, US Fish and Wildlife Service, California Department of Water Resources, California Department of Fish and Game, California Department of Forestry and Fire Protection, and the Sierra Nevada Conservancy.

### **Peer-reviewed journal articles**

SNAMP PUB #1: Collins, B.M., S.L. Stephens, J.J. Moghaddas, and J. Battles. 2010. Challenges and approaches in planning fuel treatments across fire-excluded forested landscapes. *Journal of Forestry* 108(1): 24-31.

SNAMP PUB #2: Collins, B.M., S.L. Stephens, G.B. Roller, and J.J. Battles. 2011. Simulating fire and forest dynamics for a landscape fuel treatment project in the Sierra Nevada. *Forest Science* 57(2): 77-88.

SNAMP PUB #3: Phillips, C.E., D.J. Tempel, and R.J. Gutiérrez. 2010. Do California spotted owls select nest trees close to forest edges? *Journal of Raptor Research* 44(4): 311–314.

SNAMP PUB #4: Guo, Q., W. Li, H. Yu, and O. Alvarez. 2010. Effects of topographic variability and lidar sampling density on several DEM interpolation methods. *Photogrammetric Engineering & Remote Sensing* 76(6): 701–712.

SNAMP PUB #5: García-Feced, C., D.J. Tempel, and M. Kelly. 2011. LiDAR as a tool to characterize wildlife habitat: California spotted owl nesting habitat as an example. *Journal of Forestry* 108(8): 436-443.

SNAMP PUB #6: Li, W., Q. Guo, M.K. Jakubowski, and M. Kelly. 2012. A new method for segmenting individual trees from the lidar point cloud. *Photogrammetric Engineering & Remote Sensing* 78(1): 75-84.

SNAMP PUB #7: Blanchard, S.D., M.K. Jakubowski, and M. Kelly. 2011. Object-based image analysis of downed logs in disturbed forested landscapes using Lidar. *Remote Sensing* 3: 2420-2439.

SNAMP PUB #8: Popescu, V.D., P. de Valpine, D. Tempel, and M.Z. Peery. 2012. Estimating population impacts via dynamic occupancy analysis of Before–After Control–Impact studies. *Ecological Applications* 22(4): 1389–1404.

SNAMP PUB #9: Berigan, W.J., R.J. Gutiérrez, and D.J. Tempel. 2012. Evaluating the efficacy of protected habitat areas for the California spotted owl using long-term monitoring data. *Journal of Forestry* 110(6): 299–303.

SNAMP PUB #10: Keller, S.M. M. Gabriel, K.A. Terio, E.J. Dubovi, E. VanWormer, R. Sweitzer, R. Barret, C. Thompson, K. Purcell, and L. Munson. 2012. Canine distemper in an isolated population of fishers (*Martes pennanti*) from California. *Journal of Wildlife Diseases* 48(4): 1035–1041.

SNAMP PUB #11: Sulak, A. and L. Huntsinger. 2012. Perceptions of forest health among stakeholders in an adaptive management project in the Sierra Nevada of California. *Journal of Forestry* 110(6): 312–317.

SNAMP PUB #12: Kelly, M., S. Ferranto, S. Lei, K. Ueda, and L. Huntsinger. 2012. Expanding the table: The web as a tool for participatory adaptive management in California forests. *Journal of Environmental Management* 109: 1-11.

SNAMP PUB #13: Jakubowski, M.K., Q. Guo, B. Collins, S. Stephens, and M. Kelly. 2013. Predicting surface fuel models and fuel metrics using lidar and CIR imagery in a dense, mountainous forest. *Photogrammetric Engineering & Remote Sensing* 79(1): 37–49.

SNAMP PUB #14: Zhao, F., Q. Guo, and M. Kelly. 2012. Allometric equation choice impacts lidar-based forest biomass estimates: A case study from the Sierra National Forest, CA. *Agricultural and Forest Meteorology* 165: 64– 72.

SNAMP PUB #15: Kocher, S., A. Lombardo, and R.A. Sweitzer. 2013. Using social media to involve the public in wildlife research – the SNAMP fisher sock collection drive. *Journal of Extension* 51(1): Article 1IAW3.

SNAMP PUB #16: Zhao, F., R.A. Sweitzer, Q. Guo, and M. Kelly. 2012. Characterizing habitats associated with fisher den structures in southern Sierra Nevada forests using discrete return lidar. *Forest Ecology and Management* 280: 112–119.

SNAMP PUB #17: Gabriel, M.W., L.W. Woods, R. Poppenga, R.A. Sweitzer, C. Thompson, S.M. Matthews, J.M. Higley, S.M. Keller, K. Purcell, R.H. Barrett, G.M. Wengert, B.N. Sacks, and D.L. Clifford. 2012. Anticoagulant rodenticides on our public and community lands: Spatial distribution of exposure and poisoning of a rare forest carnivore. *PLoS ONE* 7(7): e40163.

SNAMP PUB #18: Jakubowski, M.K., Q. Guo, and M. Kelly. 2013. Tradeoffs between lidar pulse density and forest measurement accuracy. *Remote Sensing of Environment* 130: 245–253.

SNAMP PUB #20: Eitzel, M., J. Battles, R. York, J. Knape, and P. de Valpine. 2013. Estimating tree growth from complex forest monitoring data. *Ecological Applications* 23(6): 1288–1296.

SNAMP PUB #21: Tempel, D.J. and R.J. Gutiérrez. 2013. Relation between occupancy and abundance for a territorial species, the California spotted owl. *Conservation Biology* 27(5): 1087–1095.

SNAMP PUB #22: Matthews, S.M., J.M. Higley, J.T. Finn, K.M. Rennie, C.M. Thompson, K.L. Purcell, R.A. Sweitzer, S.L. Haire, P.R. Sievert, and T.K. Fuller. 2013. An evaluation of a weaning index for wild fishers (*Pekania [Martes] pennanti*) in California. *Journal of Mammalogy* 94(5): 1161–1168.

SNAMP PUB #23: Thompson, C., R. Sweitzer, M. Gabriel, K. Purcell, R. Barrett, and R. Poppenga. 2014. Impacts of rodenticide and insecticide toxicants from marijuana cultivation sites on fisher survival rates in the Sierra National Forest, California. *Conservation Letters* 7(2): 91–102.

SNAMP PUB #24: Jakubowski, M.K., W. Li, Q. Guo, and M. Kelly. 2013. Delineating individual trees from lidar data: A comparison of vector- and raster-based segmentation approaches. *Remote Sensing* 5: 4163-4186.

SNAMP PUB #25: Popescu, V.D., P. de Valpine, and R.A. Sweitzer. 2014. Testing the consistency of wildlife data types before combining them: the case of camera traps and telemetry. *Ecology and Evolution* 4(7): 933-943.

SNAMP PUB #26: Tempel, D.J., R.J. Gutiérrez, S.A. Whitmore, M.J. Reetz, R.E. Stoelting, W.J. Berigan, M.E. Seamans, and M.Z. Peery. 2014. Effects of forest management on California spotted owls: implications for reducing wildfire risk in fire-prone forests. *Ecological Applications* 24(8): 2089-2106.

SNAMP PUB #27: Wengert, G.M., M.W. Gabriel, S.M. Matthews, J.M. Higley, R.A. Sweitzer, C.M. Thompson, K.L. Purcell, R.H. Barrett, L.W. Woods, R.E. Green, S.M. Keller, P.M. Gaffney, M. Jones, and B.N. Sacks. 2014. Using DNA to describe and quantify interspecific killing of fishers in California. *Journal of Wildlife Management* 78(4): 603–611.

SNAMP PUB #28: Martin, S.E., M.H. Conklin, and R.C. Bales. 2014. Seasonal accumulation and depletion of local sediment stores of four headwater catchments. *Water* 6: 2144-2163.

SNAMP PUB #29: Tao, S., Q. Guo, L. Li, B. Xue, M. Kelly, W. Li, G. Xu, and Y. Su. 2014. Airborne lidar-derived volume metrics for aboveground biomass estimation: A comparative assessment for conifer stands. *Agricultural and Forest Meteorology* 198-199: 24-32.

SNAMP PUB #30: Tempel, D.J., M.Z. Peery, and R.J. Gutiérrez. 2014. Using integrated population models to improve conservation monitoring: California spotted owls as a case study. *Ecological Modelling* 289: 86–95.

SNAMP PUB #31: Peery, M.Z. and R.J. Gutiérrez. 2013. Life-history tradeoffs in spotted owls (*Strix occidentalis*): Implications for assessment of territory quality. *The Auk* 130(1): 132-140.

SNAMP PUB #32: Sulak, A., L. Huntsinger, and S.D. Kocher. 2015. UC plays a crucial facilitating role in the Sierra Nevada Adaptive Management Project. *California Agriculture* 69(1): 43-49.

SNAMP PUB #33: Sweitzer, R.A., V.D. Popescu, R.H. Barrett, K.L. Purcell, and C.M. Thompson. In Press. Population size, density, and demography of fishers (*Pekania pennanti*) in the Sierra National Forest, California. *Journal of Mammalogy*.

SNAMP PUB #34: Collins, B.M., A.J. Das, J.J. Battles, D.L. Fry, K.D. Krasnow, and S.L. Stephens. 2014. Beyond reducing fire hazard: fuel treatment impacts on overstory tree survival. *Ecological Applications* 24(8): 1879–1886.

SNAMP PUB #35: Stoelting, R.E., R.J. Gutiérrez, W.L. Kendall, and M.Z. Peery. 2015. Life history trade-offs and reproductive cycles in spotted owls. *The Auk* 132(1): 46-64.

SNAMP PUB #36: Lei, S. and M. Kelly. 2015. Evaluating collaborative adaptive management in Sierra Nevada forests by exploring public meeting dialogues using self-organizing maps. *Society & Natural Resources* 28(8): 873–890.

SNAMP PUB #37: Li, L., Q. Guo, S. Tao, M. Kelly, and G. Xu. 2015. Lidar with multi-temporal MODIS provide a means to upscale predictions of forest biomass. *ISPRS Journal of Photogrammetry and Remote Sensing* 102: 198-208.

SNAMP PUB #38: Lei, S., A. Iles, and M. Kelly. 2015. Characterizing the networks of digital information that support collaborative adaptive forest management in Sierra Nevada forests. *Environmental Management* 56: 94-109.

SNAMP PUB #39: Tempel, D.J., R.J. Gutiérrez, J.J. Battles, D.L. Fry, Y. Su, Q. Guo, M.J. Reetz, S.A. Whitmore, G.M. Jones, B.M. Collins, S.L. Stephens, M. Kelly, W.J. Berigan, and M.Z. Peery. In Press. Evaluating short- and long-term impacts of fuels treatments and simulated wildfire on an old-forest species. *Ecosphere*.

SNAMP PUB #40: Gabriel, M.W., L.W. Woods, G.M. Wengert, N. Stephenson, J.M. Higley, C. Thompson, S.M. Matthews, R.A. Sweitzer, K. Purcell, R.H. Barrett, S.M. Keller, P. Gaffney, M. Jones, R. Poppenga, J.E. Foley, R.N. Brown, D.L. Clifford, and B.N. Sacks. 2015. Patterns of natural and human-caused mortality factors of a rare forest carnivore, the fisher (*Pekania pennanti*) in California. *PLoS ONE* 10(11): e0140640.

SNAMP PUB #41: Su, Y., Q. Guo, D.L. Fry, B.M. Collins, M. Kelly, J.P. Flanagan, and J.J. Battles. In press. A vegetation mapping strategy for conifer forests by combining airborne lidar data and aerial imagery. *Canadian Journal of Remote Sensing*.

SNAMP PUB #42: Sweitzer, R.A., C.M. Thompson, K.L. Purcell, R.E Green, and R.H. Barrett. In Press. Survival of fishers in the Southern Sierra Nevada region of California. *Journal of Mammalogy*.

SNAMP PUB #43: Sweitzer, R.A., V.D. Popescu, R.H. Barrett, C.M. Thompson, K.L. Purcell, G.M. Wengert, M.W. Gabriel, and L.W. Woods. 2015. Mortality risks and limits to population growth of fishers in California. *Journal of Wildlife Management*. DOI: 10.1002/jwmg.1020.

SNAMP PUB #44: Sweitzer, R.A., B.F. Furnas, R.H. Barrett, K.L. Purcell, and C.M. Thompson. 2016. Landscape fuel reduction, forest fire, and biophysical linkages to single-season and dynamic occupancy of fishers (*Pekania pennanti*) in Sierra Nevada mixed-conifer forests in California. *Forest Ecology and Management* 361: 208-225.

SNAMP PUB #45: Jones, G.M., R.J. Gutiérrez, D.J. Tempel, B. Zuckerberg, and M.Z. Peery. In Press. Using dynamic occupancy models to identify refugia and inform climate change adaptation strategies. *Journal of Applied Ecology*.

SNAMP PUB #46: Sweitzer, R.A. and B.J. Furnas. In Press. Camera trap detections, co-occurrence, and occupancy linkages between fishers (*Pekania pennanti*), rodent prey, competing mesocarnivores, and larger predators that kill them in Sierran mixed-conifer forest habitats. Data in Brief.

### **Book chapter**

SNAMP PUB #19: Thompson, C.M., R.A. Green, J. Sauder, K.L. Purcell, R.A. Sweitzer, and J.M. Arnesmo. 2012. The use of radiotelemetry in research on *Martes* species: Techniques and technologies. Pages 284-319 in Aubry, K.B., W.J. Zielinski, M.G. Raphael, G. Proulx, and S.W. Buskirk, editors, *Biology and conservation of martens, sables, and fishers: A new synthesis*. Ithaca, NY: Cornell University Press.

### **Doctoral dissertations**

Rodrigues, K.A. 2008. Evaluating a Collaborative Adaptive Management model through the lens of participatory democracy. PhD Dissertation, University of California, Berkeley.

Jakubowski, M.K. 2012. Using airborne LiDAR in wildfire ecology of the California Sierra-Nevada forests. PhD Dissertation, University of California, Berkeley.

Krasnow, K.P. 2012. Managing novel forest ecosystems: Understanding the past and present to build a resilient future. PhD Dissertation, University of California, Berkeley.

Li, W. 2013. Geographic Modeling with One-Class Data. PhD Dissertation, University of California, Merced.

Lei, S. 2014. Mapping webs of information, conversation, and social connections: Evaluating the mechanics of Collaborative Adaptive Management in the Sierra Nevada forests. PhD Dissertation, University of California, Berkeley.

Tempel, D.J. 2014. California spotted owl population dynamics in the central Sierra Nevada: An assessment using multiple types of data. PhD Dissertation, University of Minnesota.

Alvarez, O. 2015. Understanding climate change and the impact on biodiversity. PhD Dissertation, University of California, Merced.

Martin, S. – in preparation.

Saksa, P. 2015. Forest management, wildfire, and climate impacts on the hydrology of Sierra Nevada mixed-conifer watersheds. PhD Dissertation, University of California, Merced.

Su, Y. – in preparation.

### **Masters thesis**

Flanagan, J.P. 2015. Efficient open source lidar for desktop users. MS Thesis, University of California, Merced.

### **Reports**

Gutiérrez, R.J. et al. 2008. Acute effects of canopy reduction on California spotted owls: Challenges for adaptive management. Final Report Revision: Contract #53-91S8-5-ECO54.

Conklin, M., R. Bales, R. Ray, S. Martin, P. Saksa, and P. Womble. 2012. Sierra Nevada Adaptive Management Project Water Team Field Activities, Methods, and Results. California Department of Water Resources Task Order #UC 10-6.

University of California Cooperative Extension. 2014. Facilitation Skills for a Collaborative Adaptive Management Process: A workbook to train natural resource managers and stakeholders in facilitation of collaborative projects.

Conklin, M., R. Bales, P. Saksa, S. Martin, R. Ray, B. Tobin, and P. Womble. 2015. Sierra Nevada Adaptive Management Project Water-Team Update. Data report addendum to California Department of Water Resources.

### **Non-peer reviewed articles**

Ingram, K. 2010. Reducing wildland fire impacts: Research to learn what treatment strategies work best. *Forestland Steward*, Spring 2010: 6-7.

Battles, J.J. 2012. Fuel Treatments Can Address Wildfire Severity. *California forests* 16(1): 14-15.