

## **Preparers, Agencies, or Individuals Who were Consulted or Contributed Towards Preparation of the Final EIS and the Public Involvement Process**

---

FWP's Lauri Hanauska-Brown and Kevin Frey were the primary authors of this document with oversight by Howard Burt, Rebecca Cooper, Quentin Kujala, Ken McDonald, and Ray Mule. Many additional FWP staff persons reviewed and edited drafts of this document including Shawn Stewart, Justin Gude, Jeremiah Smith, and Stephanie Adams. FWP's Adam Messer, Dan Tyers with the USFS, Mark Haroldson and Frank van Manen with the IGBST, Dan Bjornlie with Wyoming Game and Fish, and Chris Servheen with the USFWS all provided editing and technical assistance throughout document preparation.

Members of the Center for Biological Diversity, Defenders of Wildlife, Endangered Species Coalition, Greater Yellowstone Coalition, Natural Resources Defense Council, and Sierra Club met with FWP mid-way through development of this document to provide input and suggestions.

## GLOSSARY

---

ARM - Administrative Rules of Montana  
BLM - Bureau of Land Management  
BMU - Bear Management Unit  
CEM - Cumulative Effects Model  
CMA - Conservation Management Area  
COY - Cubs of the Year  
CS - Conservation Strategy  
DLP - Defense of Life or Property  
DNA - Deoxyribonucleic acid -- the molecule that encodes genetic information  
DNRC - Department of Natural Resources and Conservation  
DOT - Department of Transportation  
EIS - Environmental Impact Statement  
ESA - Endangered Species Act  
FCOY - Females with Cubs of the Year  
FWP - Montana Fish, Wildlife & Parks  
GYA - Greater Yellowstone Area  
IGBC - Interagency Grizzly Bear Committee  
IGBST - Interagency Grizzly Bear Study Team  
MCA - Montana Codes Annotated  
MEPA - Montana Environmental Policy Act  
MOA - Memorandum of Agreement  
MOU - Memorandum of Understanding  
NEPA - National Environmental Policy Act  
PCA - Primary conservation area or the designated recovery zone plus a 10 mile buffer  
PEIS - Programmatic Environmental Impact Statement  
USFS - United States Forest Service  
USFWS - United States Fish & Wildlife Service  
WMA - Wildlife Management Area  
WS - Wildlife Services  
YNP - Yellowstone National Park

## LITERATURE CITED

---

- Bentz, B.J., J. Regniere, C.J. Fettig, E.M. Hansen, J.L. Hayes, J.A. Hicke, R.G. Kelsey, J.F. Negron, and S.J. Seybold. 2010. Climate change and bark beetles in the western United States and Canada: direct and indirect effects. *Bioscience* 60:602-613.
- Blanchard, B., and R. Knight. 1990. Reactions of grizzly bears to wildfire in Yellowstone National Park, Wyoming. *The Canadian Field Naturalist* 104:592-594.
- Cayan, D.R., S.A. Kammerdiener, M.D. Dettinger, J.M. Caprio, and D.H. Peterson. 2001. Changes in the onset of spring in the western United States. *Bulletin of the American Meteorological Society* 82:399-415.
- Clevenger, T., J. Wierzchowski, B. Hruszcz, and K. Gunson. 2002. GIS-generated, expert-based models for identifying wildlife habitat linkages and planning mitigation packages. *Cons. Biol.* 16:503-514.
- Craighead, F.C., Jr., and J.J. Craighead. 1972. Grizzly bear prehibernation and denning activities as determined by radiotracking. *Wildlife Monographs* 32:1-35.
- Duffy, P.B., R.W. Arritt, J. Coquard, W. Gutowski, J. Han, J. Iorio, J. Kim, L.-R. Leung, J. Roads, and E. Zeledon. 2006. Simulations of present and future climates in the western United States with four nested regional climate models. *Journal of Climate* 19:873-895.
- Eberhardt, L.L. and R.R. Knight. 1996. How many grizzlies in Yellowstone? *Journal of Wildlife Management* 60: 416-421.
- Fagre, D.B., D.L. Peterson, and A.E. Hessler. 2003. Taking the pulse of mountains: Ecosystem responses to climatic variability. *Climatic Change* 59:263-282.
- Gunther, K.A., R. Shoemaker, K. Frey, M.A. Haroldson, S.L. Cain, and F.T. van Manen. In press. Grizzly bear foods in the Greater Yellowstone Ecosystem, 1891-2012. *Ursus*.
- Gunther, K.A., R. Shoemaker, K. Frey, M.A. Haroldson, S.L. Cain, and F.T. van Manen. In review. Annotated List of Grizzly Bear Foods in the Greater Yellowstone Ecosystem, 1925–2012. *Ursus*.
- Harris, R.B., G.C. White, C.C. Schwartz, and M.A. Haroldson. 2007. Population growth of Yellowstone grizzlies: uncertainty, correlation, and future monitoring. *Ursus* 18(2): 167-177.
- Haroldson, M.A. 2008. Assessing trend and estimating population size from counts of unduplicated females. Pages 9-15 in C.C. Schwartz, M.A. Haroldson, and K. West, editors. *Yellowstone grizzly bear investigations: annual report of the Interagency Grizzly Bear Study Team, 2007*. Geological Survey, Bozeman, Montana, USA.

- Haroldson, M.A., and K. Frey. 2008. Estimating sustainability of annual grizzly bear mortalities. Pages 24–27 in C.C. Schwartz, M.A. Haroldson, and K. West, editors. *Yellowstone grizzly bear investigations: annual report of the Interagency Grizzly Bear Study Team, 2007*. U.S. Geological Survey, Bozeman, Montana, USA.
- Haroldson, M.A., M. Ternent, K. Gunther, and C.C. Schwartz. 2002. Grizzly bear denning chronology and movements in the Greater Yellowstone Ecosystem. *Ursus* 13:29-37.
- Higgs, Megan D., William A. Link, Gary C. White, M.A. Haroldson, and D.D. Bjornlie. 2013. Insights Into the Latent Multinomial Model Through Mark-Resight Data on Female Grizzly Bears With Cubs-of-the-Year. *Journal of Agricultural, Biological, and Environmental Statistics*. doi: 10.1007/s13253-013-0148-8.
- Interagency Grizzly Bear Committee. 1998. Task force report, Grizzly Bear/Motorized Access Management. 6 pp.
- Interagency Grizzly Bear Study Team. 2006. Reassessing methods to estimate population and sustainable mortality limit for the Yellowstone grizzly bear workshop document supplement. U.S. Geological Survey, Northern Rocky Mountain Science Center, Bozeman, Montana, USA.
- Interagency Grizzly Bear Study Team. 2012. Updating and evaluating approaches to estimate population size and sustainable mortality limits for grizzly bears in the Greater Yellowstone Ecosystem. U.S. Geological Survey, Northern Rocky Mountain Science Center, Bozeman, Montana, USA.
- Kendall, K.C., J.B. Stetz, D.A. Roon, L.P. Waits, J.B. Boulanger, and D. Paetkau. 2008. Grizzly Bear Density in Glacier National Park, Montana. *Journal of Wildlife Management* . 72(8):1693-1705.
- LeFranc, M.N., Jr., M.B. Moss, K.A. Patnode, and W.C. Sugg III, editors. 1987. Grizzly bear compendium. The National Wildlife Federation, Washington, D.C., USA.
- Leung, L.R., Y. Qian, X. Bian, W.M. Washington, J. Han, and J.O. Roads. 2004. Mid-century ensemble regional climate change scenarios for the western United States. *Climatic Change* 62:75-113.
- Mace, R., J.S. Waller, T. Manley, L.J. Lyon, and H. Zuuring. 1996. Relationships among grizzly bears, roads, and habitat in the Swan Mountains, Montana. *Journal of Applied Ecology* 33: 1305-1404.
- McWethy, D. B., S.T. Gray, P.E. Higuera, J.S. Litell, G.T. Pederson, A.J. Ray, and C. Whitlock. 2010. Climate and terrestrial ecosystem change in the U.S. Rocky Mountains and Upper Columbia Basin: Historical and future perspectives for natural resource management. U.S. Department of the Interior, National Park Service Natural Resource Report NPS/GRYN/NRR–2010/260, Fort Collins, Colorado, USA.

- Mincher, B.J. 2000. Issues affecting grizzly bear management in the Greater Yellowstone Ecosystem. 17 pp.
- Montana Fish, Wildlife and Parks. 2011. Montana State Trails Plan. 186 pp. [fwp.mt.gov/recreation/management/stateTrailsPlan.html](http://fwp.mt.gov/recreation/management/stateTrailsPlan.html).
- Montana Fish, Wildlife and Parks. 2002. Grizzly bear management plan for southwestern Montana 2002-2012. Helena, Montana, USA.
- Montana Fish, Wildlife and Parks. 2012. Fish and Wildlife Recommendations for Subdivision Development in Montana: A Working Document. Montana Fish, Wildlife & Parks, Helena, Montana. 174 pp.
- Nitschke, C.R., and J.L. Innes. 2008. Climatic change and fire potential in south-central British Columbia, Canada. *Global Change Biology* 14:841-855.
- Pederson, G.T., S.T. Gray, T. Ault, W. Marsh, D.B. Fagre, A.G. Bunn, C.A. Woodhouse, and L.J. Graumlich. 2011. Climatic controls on the snowmelt hydrology of the northern Rocky Mountains. *Journal of Climate* 24:1666-1687.
- Proctor, M.F. 2003. Landscape use, dispersal, geneflow, and population fragmentation of grizzly bears (*Ursus arctos*) in southeast British Columbia, southwest Alberta, and the northwestern USA. Ph.D. Dissertation. University of Calgary.
- Proctor, M.F., et al. 2012. Population Fragmentation and Inter-Ecosystem Movements of Grizzly Bears in Western Canada and the Northern United States. *Wildlife Monographs*. 180:1-46. doi: 10.1002/wmon.6.
- Reynolds, P.E., H.V. Reynolds, and E.H. Follmann. 1986. Responses of grizzly bears to seismic surveys in northern Alaska. Pages 169-175 *in* Bears: their biology and management. Proceedings of the 6th International Conference on Bear Research and Management, Grand Canyon, AZ, USA.
- Rodriguez, C., J. Naves, A. Fernandez-Gil, J.R. Obeso, and M. Delibes. 2007. Long-term trends in food habits of relict brown bear population in northern Spain: the influence of climate and local factors. *Environmental Conservation* 34:36-44.
- Schwartz, C.C., M.A. Haroldson, K. Gunther, and D. Moody. 2002. Distribution of grizzly bears in the Greater Yellowstone Ecosystem, 1990-2000. *Ursus* 13:203-212.
- Schwartz, C.C., S.D. Miller, and M.A. Haroldson. 2003. Grizzly/brown bear. Pages 556-586 *in* G. Feldhamer, B. Thompson, and J. Chapman, editors. *Wild mammals of North America: biology, management, and conservation*. Johns Hopkins University Press, Baltimore, Maryland, USA.

- Schwartz, C.C., M.A. Haroldson, and S. Cherry. 2006. Reproductive performance of grizzly bears in the Greater Yellowstone Ecosystem, 1983-2002. Pages 18-24 in C.C. Schwartz, M.A. Haroldson, G.C. White, R.B. Harris, S. Cherry, K.A. Keating, D. Moody, and C. Servheen, eds. Temporal, spatial, and environmental influences on the demographics of grizzly bears in the Greater Yellowstone Ecosystem. Wildlife Monographs 161.
- Schwartz, C.C., M.A. Haroldson, S. Cherry, and K.A. Keating. 2008. Evaluation of rules to distinguish unique female grizzly bears with cubs in Yellowstone. Journal of Wildlife Management 72(2):543-554.
- Schwartz C.C., P.H. Gude, L. Landenburger, M.A. Haroldson, S. Podruzny. 2012. Impacts of rural development on Yellowstone wildlife: linking grizzly bear (*Ursus arctos*) demographics with demographics with projected residential growth. Wildlife Biology 18(3):246-263.
- Servheen, C., J. Waller, and P. Sandstrom. 2003. Identification and management of linkage zones for grizzly bears between the large blocks of public land in the Northern Rocky Mountains. U.S. Fish and Wildlife Service, University of Montana, Missoula. 87 pp.
- Servheen, C. and M. Cross. 2010. Climate change impacts on grizzly bears and wolverines in Northern U.S. and Transboundary Rockies: Strategies for Conservation. Report on workshop held Sept. 13-15, 2010 in Fernie, British Columbia. 23 pp.
- Stewart, I.T., D.R. Cayan, and M.D. Dettinger. 2004. Changes in snowmelt runoff timing in western North America under a 'business as usual' climate change scenario. Climatic Change 62:217-232.
- U.S. Fish and Wildlife Service. 2002. Biological Opinion on greater Yellowstone ecosystem snowmobile use consultation. Helena, MT, USA.
- U.S. Fish and Wildlife Service. 2003. Draft bear recovery plan. Missoula, Montana. 181 pp.
- U.S. Fish and Wildlife Service. 2007. Grizzly Bear Recovery Plan Supplement: Revised demographic criteria for the Yellowstone Ecosystem. 72 FR 11377. Available at <http://www.fws.gov/endangered/recovery/index.html>.
- Van Daele, L.J., V.G. Barnes, and R.B. Smith. 1990. Denning characteristics of brown bears on Kodiak Island, Alaska. Pages 257-267 in Bears: their biology and management. Proceedings of the 8th International Conference on Bear Research and Management, Victoria, British Columbia, Canada.
- Walther, G.R. 2003. Plants in a warmer world. Perspectives in Plant Ecology, Evolution and Systematics 6:169-185.
- Walther, G.R., S. Berger, and M.T. Sykes. 2005. An ecological 'footprint' of climate change. Proceedings of the Royal Society B 272:1427-1432.

Walther, G.R., E. Post, P. Convey, A. Menzel, C. Parmesan, T.J.C. Beebee, J.M. Fromentin, O. Hoegh-Guldberg, and F. Bairlein. 2002. Ecological responses to recent climate change. *Nature* 416:389-395.

## APPENDICES

---

APPENDIX A: Memorandum of Understanding between Montana Fish, Wildlife and Parks and US Department of Agriculture Animal and Plant Health Inspection Service Wildlife Services regarding cooperative wildlife damage control program for grizzly bears, gray wolves, black bears, and mountain lions in the state of Montana

APPENDIX B: Bee Bear Policy Guidelines for Black Bears

APPENDIX C: Memorandum of Agreement for cooperative law enforcement between the US Fish and Wildlife Service and Montana Fish, Wildlife and Parks

See FWP webpage for appendices:

<http://fwp.mt.gov/fishAndWildlife/management/grizzlyBear/grizEis.html>