

11 REFERENCES

- Abramovich R, Molnau M, Craine K. 1998. *Climates of Idaho*, University of Idaho Cooperative Extension System, College of Agriculture, Moscow, Idaho.
- Ager, A. A., B. K. Johnson, J. W. Kern, and J. G. Kie. 2003. Daily and seasonal movements and habitat use by female Rocky Mountain elk and mule deer. *Journal of Mammalogy* 84:1076-1088.
- AHS 2006. Cultural Resources Surveys of Idaho Transportation Department Proposed US-95, Thorn Creek Road to Moscow, Phase 1, Project Latah County Idaho. Short Report 898. Archeological and Historical Services (AHS). Eastern Washington University. Cheney, WA. November 2006
- Abramovich, R., M. Molnau, and K. Craine 1998. *Climates of Idaho*, University of Idaho Cooperative Extension System, College of Agriculture, Moscow, Idaho.
- Anderson 1989. Creating Habitat for the Yellow-Billed Cuckoo. (*Coccyzus Americana*). USDA Forest Service Gen. Tech. Rep. PSW-110. 1989
- Bakker KK, Higgins KF. 2009. Planted grasslands and native sod prairie: Equivalent habitat for grassland birds? *Western North American Naturalist* 69(2):235-242. Published by: Monte L. Bean Life Science Museum, Brigham Young University
- Balda, R.P. 1967. Ecological relationships of the breeding birds of the Chiricahua Mountains, Arizona, Dissertation. University of Illinois, Urbana, IL.
- Barker, Raymond J., 1981 Soil Survey of Latah County Area, Idaho. U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the University of Idaho College of Agriculture and the Idaho Soil Conservation Commission. U.S. Government Printing Office, Washington, D.C.
- Best, L. B., H. Campa III, K. E. Kemp, R. J. Robel, M. R. Ryan, J. A. Savidge, H. P. Weeks Jr., and S. R. Winterstein. 1998. Avian abundance in CRP and crop fields during winter in the Midwest. *American Midland Naturalist* 139:311-324.
- Biesmeijer JC, Roberts SP, Reemer M, Ohlemueller R, Edwards M, Peeters T, Schaffers A, Potts SG, Kleukers R, Thomas CD, Settele J, Kunin WE, 2006. Parallel Declines in Pollinators and Insect-Pollinated Plants in Britain and the Netherlands, *Journal of Science* July 21, 2006 313:351-354.
- Bionomics 2012. Analysis of Noise Environment and Impacts. Discipline Report for US-95 Thorncreek to Moscow Project. Bionomics Environmental Inc. October 2012. (Revised to correct right-of-way impacts corrected April 2015).
- Black, Anne E., J. Michael Scott, Eva Strand, R. Gerald Wright, Penelope Morgan, and Cortney Watson 2003. Land Use History of North America. Biodiversity and Land-use History of the Palouse Bioregion: Pre-European to Present. November 2003.

- BLM 2005. Bureau of Land Management. The Official Federal Land Patent Records Site. <http://www.glorerecords.blm.gov/>. Bureau of Land Management, U.S. Department of the Interior, Washington, D.C.
- Bock C.E. and D.E. Fleck 1995. Avian response to nest box addition in two forest of the Colorado Front Range. *Journal of Field Ornithology* 66:352-362.
- Bollinger, E. K., P. B. Bollinger, and T. A. Gavin. 1990. Effects of hay-cropping on eastern populations of bobolink. *Wildlife Society Bulletin* 18:142-150.
- Brawn J.D. and R.P. Balda 1988. Population biology of cavity nesters in northern Arizona: do nest sites limit breeding densities? *Condor* 90:51-71.
- Bush, John H., Andrew P. Provant, and Steve W. Gill 1998. Bedrock Geologic Map of the Moscow West Quadrangle, Latah County, Idaho, and Whitman County, Washington. Idaho Geological Survey, University of Idaho, Moscow.
- Cameron, S.A., Lozier, J.D., Strange J.P., Kock, J.B., Cordes, N., Solter, L.F., Griswold, T.L. 2011. Patterns of Widespread Decline in North American Bumble Bees. *Proceeding of the National Academy of Sciences* 108:662-667. *Proc Nat'l Acad Sci U S A*. 2011 January 11; Published online 2011 January 3. doi: 10.1073/pnas.1014743108
- Cardno-Entrix 2011. Historic Resources Survey update to An Historic Buildings/Structures Survey for the Idaho Transportation Department's Proposed US 95, Thorn Creek Road to Moscow, Stage 1 Project, Latah County, Idaho. November 2011.
- CEQ 1997. Council on Environmental Quality. Considering Cumulative Effects under the National Environmental Policy Act. January 1997.
- City of Moscow 2009. Comprehensive Plan. Available at: http://www.moscow.id.us/comm_dev/planning/comp_plan.aspx. Accessed September 22, 2011. Adopted December 7, 2009.
- City of Moscow 2014. City of Moscow Water Conservation Page. Accessed January 2014. <http://www.ci.moscow.id.us/water/conservation>
- Compton B. B., R. J. Mackie, and G. L. Dusek 1988. Factors influencing distribution of whitetailed deer in riparian habitats. *Journal of Wildlife Management* 52:544-548.
- Couch 2010. Memorandum of Safety Evaluation for Western Ecosystems Technology's Assessment of Potential Big Game Impacts Associated with Highway Alternative from Thorncreek Road to Moscow. Prepared by the ITD District 2, Lewiston, ID. December 9, 2010.
- Couch 2011. Thorncreek Road to Moscow Environmental Matrix Safety Analysis Alignments Carried Forward. Prepared for ITD District 2, Lewiston ID. February 15, 2011.
- Creel SJ, Winnie Jr., B. Maxwell, K. Hamlin, and M. Creel 2005. Elk alter habitat selection as an antipredator response to wolves. *Ecology* 86:3387-3397.
- Daily GC. 1997. Countryside biogeography and the provision of ecosystem services. 104-113. In Raven P (ed.), *Nature and human society: The quest for a sustainable world*. National Research Council, National Academy Press, Washington, D.C.

- Daily GC, Ehrlich PR, Sánchez-Azofeifa GA. 2001. Countryside biogeography: Use of human-dominated habitats by the avifauna of southern Costa Rica. *Ecological Applications* 11:1-13.
- Demarais, S., K. V. Miller, and H. A. Jacobson 2000. White-tailed deer. Pages 601-628 in S. Demarais and P. R. Krausman, editors. *Ecology and Management of Large Mammals in North America*, Prentice-Hall, Inc., Upper Saddle River, New Jersey.
- Diekotter T., Walther-Hellwig K., Conradi M., Suter M., Frankl R. 2006. Effects of Landscape Elements on the Distribution of the Rare Bumblebee Species *Bombus Muscorum* in an Agricultural Landscape. *Arthropod Diversity and Conservation* 1:43-54.
- Dusek G. L, R. J. Mackie, J. D. Herringes, and B. B. Compton 1989. Population ecology of white-tailed deer along the lower Yellowstone River. *Wildlife Monographs* 104.
- Environmental Analysis Bureau 1997. USC 658. The Farmland Policy Protection Act of 1981 (FPPA). DOT Environmental Procedures Manual, as amended. Washington, D.C.
- EDR (Environmental Data Resources) 2011. Phase I Database Inquiry 3134591.1s; Data Map Corridor Study. Prepared for US-95 Thorncreek Road to Moscow. August 2011.
- Environmental Laboratory 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y 87-1. US Army Engineer Waterways Experiment Station. Vicksburg, Mississippi.
- Farigone, J. E., Cooper, T. R., Flaspohler D. J., Hill, J., Lehman, C., McCoy, T., McLeod, S., Nelson, E. J., Oberhauser, K. S., and Tilman, D. 2009. Bioenergy and Wildlife: Threats and Opportunities for Grassland Conservation. *BioScience* 59: 767-777. ISSN 006-3568. American Institute of Biological Sciences. University of California Press.
- Fauci, M. F. and D. F. Bezdicek. 2002. Lumbricid earthworms in the Palouse region. *Northwest Science* 76:257-260. Farigone JT, Cooper TR, Flaspohler DJ, Hill J, Lehman C, McCoy T, McLeod S, Nelson EJ, Oberhauser KS, Tilman D. 2009. Bioenergy and wildlife: Threats and opportunities for grassland conservation. *BioScience* 59(9):767-777.
- FHWA 1987. US Department of Transportation, Federal Highway Administration. Guidance for Preparing and Processing Environmental and Section 4 (f) Documents. Federal Highway Administration (FHWA). Technical Advisory 6640.8A. October 30, 1987
- FHWA 1989. Guidelines for Implementing the Final Rule of the Farmland Protection Policy Act for Highway Projects. Federal Highway Administration (FHWA).
- FHWA 1998. FHWA Actions to Address Environmental Justice in Minority Populations and Low-income Populations. USDOT, FHWA, December 2, 1998. 6640.23
- FHWA 2009. Nondiscrimination, Title VI and Environmental Justice. Federal Highway Administration (FHWA). Accessed July 2009.
<http://www.fhwa.dot.gov/environment/ejustice/facts/>
- FHWA 2011. FHWA Resource Center, Air Quality Team. Global Climate Change Cumulative Effects Discussion.
http://www.fhwa.dot.gov/resourcecenter/teams/airquality/climatechange_cumeffects.cfm

- Forman RTT. 2000. Estimate of the area affected ecologically by the road system in the United States. *Conservation Biology* 14(1):31-35.
- Forman, R. T. T., D. Sperling, J. A. Bissonette, A. P. Clevenger, C. D. Cutshall, V. H. Dale, L. Fahrig, R. France, C. R. Goldman, K. Heanue, J. A. Jones, F. J. Swanson, T. Turrentine, and T. C. Winter. 2003. *Road Ecology. Science and Solutions*. Island Press, Washington, D.C., USA.
- Franklin Jerry F., and C. T. Dyrness, 1988 *Natural Vegetation of Oregon and Washington*. Oregon State University Press, Corvallis, OR.
- Franzmann A. W., 2000. Moose. Pages 578-600 in S. Demarais and P. R. Krausman, editors. *Ecology and Management of Large Mammals in North America*, Prentice-Hall, Inc., Upper Saddle River, New Jersey.
- Frawley, B. J., and L. B. Best. 1991. Effects of mowing on breeding bird abundance and species composition in alfalfa fields. *Wildlife Society Bulletin* 19:135-142.
- Geodata 2008. Idaho Department of Fish and Game Idaho Transportation Department - District 2 Fish and Wildlife Linkage Area Project Final Technical Report May 12, 2008 ITD D2, Fish and Wildlife Linkage Area Project. Prepared by Geodata Services. Missoula, Montana.
- Ghalambor C.K. and R.C. Dobbs. Pygmy Nuthatch (*Sitta pygamaea*): a technical conversation assessment, USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/passessments/pygmynuthatch.pdf>. Accessed April 2015.
- Gillies K. 2004. Idaho Bat Conservation Plan. DRAFT. R. Dixon and C. Harris, (eds). Nongame and Endangered Wildlife Program Technical Report. Idaho Conservation Data Center. Idaho Department of Fish and Game Boise, Idaho 83707
- Gilmore 2006. Thorncreek Road to Moscow-Wetland Functions Evaluation. Resource Planning Unlimited, Inc. Lewiston ID. Prepared for ITD-District 2, Lewiston, ID. November 2006
- Gilmore 2005. Thorncreek Road to Moscow Determination of Jurisdictional Waters of the United States. Resource Planning Unlimited, Inc. Moscow, ID. Prepared for ITD-District 2, Lewiston, ID. December 2005
- Gilmore 2012. Thorncreek Road to Moscow Wetland Delineation Technical Report. Resource Planning Unlimited, Inc. Moscow, ID. Prepared for ITD-District 2, Lewiston, ID. April 2012
- Goulson D, Lye GC, Darvill B, 2008. Decline and Conservation of Bumble Bees. *Annual Review of Entomology*, 53:191-208.
- Grixti JC, Wong LT, Cameron SA, Favret C. 2009. Decline of bumble bees (*Bombus*) in the North American Midwest. *Biological Conservation*. 2009; 142:75–84.
- Grovenburg TW, Klaver RW, Jenks JA. 2012. Spatial ecology of white-tailed deer fawns in the Northern Great Plains: Implications of loss of Conservation Reserve Program grasslands.

- The Journal of Wildlife Management 76(3):632-644.
www.ecologyandsociety.org/vol14/iss1/art9
- Haagen 2006. Farmland Protection Policy Act. Prepared for the ITD District 2, Lewiston ID. December 2006
- Hall, F. G., and P. J. Sellers (1995), First International Satellite Land Surface Climatology Project (ISLSCP) Field Experiment (FIFE) in 1995, *J. Geophys. Res.*, 100(D12), 25383–25395, doi:[10.1029/95JD03300](https://doi.org/10.1029/95JD03300).
- Hashmi G. S. 1995. Four Mile Creek Watershed Characterization. Washington State University M.S. Thesis
- Hatten, T.D. and Looney, J.P. 2013. Bumble Bee Fauna of Palouse Prairie: Survey of Native Bee Pollinators in a Fragmented Ecosystem, *Journal of Insect Science*. April 2013.
- HDR Engineering 2005a. US-95 Thorncreek Road to Moscow; Community Profile & Induced Development. Prepared for ITD-District 2, Lewiston ID. December 2005
- HDR Engineering 2005b. US-95 Thorncreek Road to Moscow; Environmental Justice. Prepared for ITD-District 2, Lewiston ID. December 2005
- HDR Engineering 2006. US-95 to Thorncreek Road to Moscow; Community Impact Assessment. Prepared for the ITD District 2 Lewiston, ID. October 2006
- HDR Engineering 2011a. US-95 to Thorncreek Road to Moscow; Community Profile Update. Prepared for ITD District 2, Lewiston, ID. December 2011
- HDR Engineering 2011b. US-95 Thorncreek Road to Moscow; Environmental Justice Update. Prepared for ITD District 2, Lewiston, ID. December 2011
- HDR Engineering 2011c. US-95 Thorncreek Road to Moscow; Induced Development Update. Prepared for ITD District 2, Lewiston, ID. December 2011
- HDR Engineering 2011d. US-95 Thorncreek Road to Moscow; Community Impact Assessment Update. Prepared for ITD District 2, Lewiston, ID. December 2011
- Hill, J. L. 2011. Conservation of the Palouse Prairie Ecosystem- Phase 3. Site Assessment of Potential Remnants of Palouse Grassland in Latah County, Idaho. 2010 Progress Report and Final Report (2008-2010). USFWS, Boise, Idaho and Idaho Natural Heritage Program, Idaho Department of Fish and Game, Boise, Idaho.
- Hendrix SD, Kwaiser KS, Heard SB. 2010. Bee communities (Hymenoptera: Apoidea) of small Iowa hill prairies are as diverse and rich as those of large prairie preserves. *Biodiversity and Conservation* 19:1699-1709.
- Herkert JR. 2007. Evidence for a recent Henslow's sparrow population increase in Illinois. *The Journal of Wildlife Management* 71(4):1229-1233.
- Hines HM, Hendrix SD. 2005. Bumble bee (Hymenoptera: Apidae) diversity and abundance in tallgrass prairie patches: Effects of local and landscape floral resources. *Environmental Entomology* 34:1477-1484.

- Hruby 2004. Washington State Wetland Rating System for Eastern Washington-Revised. Washington State Department of Ecology Publication #04-06-15. August 2004.
- ICDC 2005. Palouse Prairie Remnants Data. Idaho Conservation Data Center (ICDC). <http://fishandgame.idaho.gov/tech/CDC>. Website Accessed November 17, 2005.
- Idaho State Police (ISP) 2005. Community and Drug Information. www.isp.state.id.us/citizen/drug_community.html
- IDEQ 2005a. Cow Creek Subbasin Assessment and Nutrient Total Maximum Daily Load. Prepared by Cow Creek Watershed Advisory Group and Idaho Department of Environmental Quality (IDEQ). Lewiston Regional Office, Lewiston Regional Office. Prepared December 2005.
- IDEQ 2005b. Principles and Policies for the 2002 Integrated (303(d)/305(b)) Report. State of Idaho Department of Environmental Quality 1410 N. Hilton Boise, ID 83706. Prepared September, 2005.
- IDEQ, 2007. South Fork Palouse River Watershed Assessment and TMDLs. Idaho Department of Environmental Quality (IDEQ). Lewiston Regional Office. Prepared February 2007.
- IDFG 2006. General Wildlife Assessment Thorncreek Road to Moscow. Idaho Department of Fish and Game (IDFG). Prepared for the ITD District 2 Lewiston, ID. December 2006
- IDFG 2005. Idaho Comprehensive Wildlife Conservation Strategy. Idaho Conservation Data Center., Idaho Department of Fish and Game, Boise, ID <http://fishandgame.idaho.gov/cms/tech/CDC/cwcs.cfm>.
- IDHF 2011. Idaho Department of Housing and Finance. <http://www.ihfa.org/> Information accessed in 2011 on rental assistance.
- IDL 2010. Latah County Employment Forecast Data. Website accessed 2010. <http://lmi.idaho.gov/RegionalLaborMarkets/NorthCentral/LatahCounty.aspx>
- ITD 2002. Access Management: Standards and Procedures for Highway Right-of-Way Encroachments. Idaho Transportation Department (ITD). Division of Highways. March, 2002.
- ITD 2005. Biological Assessment. Thorncreek Road to Moscow Highway Construction Project. Idaho Transportation Department, District 2. Project Number: DHP-NH-4110 (156) Key Number: 9294. December 2005.
- ITD 2006. Thorncreek to Moscow; Alignment Screening #1. Prepared by ITD District 2, Lewiston, ID.
- ITD 2007a. Biological Assessment, Thorncreek Road to Moscow Highway Construction Project. Prepared by the Idaho Transportation Department. District 2, Lewiston, ID. December 2007
- ITD 2007b. Air Quality Screening Policy. Prepared by the Idaho Transportation Department (November/December 2007).
- ITD 2010. Strategic Highway Safety Plan. Prepared by the Idaho Transportation Department (July 2010).

- ITD 2011a. Idaho Statewide Transportation Improvement Program FY:2011-2014. Idaho Transportation Department (ITD)
<http://itd.idaho.gov/planning/stip/stip2011/FY%202011-2014%20STIP.pdf>. Website accessed June, 2011.
- ITD 2012a. US-95 Thorncreek Road to Moscow AASHTO Highway Safety Manual Analysis for Alignments Carried Forward. Idaho Transportation Department District 2. Curtis J. Arnzen, P.E. April 2, 2012
- ITD 2012b. US-95 Thorncreek Road to Moscow Hydraulic Study for Affected Floodplains on Alternatives Carried Forward. Prepared by ITD District 2, Lewiston ID. Curtis J. Arnzen, P.E. April 2012.
- ITD 2012c. Standard Specifications for Highway Construction- 2012 Idaho Transportation Department (ITD). Boise, Idaho. November, 2012 edition.
- ITD 2013. US-95 Thorncreek Road to Moscow AASHTO Highway Safety Manual Analysis for Alignments Carried Forward. Idaho Transportation Department District 2. Curtis J. Arnzen, P.E. September 2013.
- ITD 2014a. US-95 Thorncreek Road to Moscow; Mobility and Road User Cost Study on Alternatives Carried Forward. Idaho Transportation Department District 2. Curtis J. Arnzen, P.E. March 2014.
- ITD 2014b. Addendum 1 for US-95 Thorncreek Road to Moscow, Mobility and Road User Cost Study on Alternatives Carried Forward. Idaho Transportation Department District 2. Curtis J. Arnzen, P.E. 2014
- ITD 2014c. Hydraulic Study for Affected Floodplains on Alternatives Carried Forward. Idaho Transportation Department District 2. Curtis J. Arnzen, P.E. December 2014.
- ITD 2015a. Addendum to the Analysis of Noise Environment and Impacts. Discipline Report prepared by Idaho Transportation Department District 2. January 2015. (Revised to correct right-of-way impacts corrected April 2015).
- ITD 2015b. Addendum 1 to Us-95 Thorncreek Road to Moscow AASHTO Highway Safety Manual Analysis on Alternatives Carried Forward. Idaho Transportation Department District 2. Curtis J. Arnzen, P.E. January 2015.
- ITD 2015c. Project No.: DHP-NH-4110(156), Key No.: 9294 US-95, Thorn Creek to Moscow, Stage 1 – Addendum A. Prepared by Idaho Transportation Department Headquarters, Dan Everhart, April 22, 2015.
- James, S. 2000. Earthworms (Annelida: Oligochaeta) of the Columbia River Basin Assessment Area. Gen. Tech. Rep. PNW-GTR-491. Portland, OR: USDA Forest Service, Pacific Northwest Research Station. 13 p. Online at <http://www.fs.fed.us/pnw/pubs/gtr491.pdf>
- Johnson, Douglas H. 2000. Grassland bird use of Conservation Reserve Program fields in the Great Plains. Pages 19-33 in L. P. Heard, A. W. Allen, L. B. Best, S. J. Brady, W. Burger, A. J. Esser, E. Hackett, D. H. Johnson, R. L. Pederson, R. E. Reynolds, C. Rewa, M. R. Ryan, R. T. Molleur, and P. Buck. A comprehensive review of farm bill

- contributions to wildlife conservation, 1985-2000. W. L. Hohman and D. J. Halloum, Fincham, eds. U.S. Dept. Agric., Nat. Resour. Cons. Serv., Wildl. Hab. Manage. Inst., Tech. Rep., USDA/NRCS/WHMI-2000. Jamestown, ND: Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/birds/glbuseindex.htm> (Version 30JUL2001).
- Johnson, B. K., J. W. Kern, M. J. Wisdom, S. L. Findholt, and J. G. Kie. 2000. Resource selection and spatial separation of mule deer and elk during spring. *Journal of Wildlife Management* 64:685-697.
- Johnson-Maynard JL, Umiker KJ, Guy SO, 2007. Earthworm populations and soil physical properties during the transition to no-till management. *Soil and Tillage Res.* 94: 338-345.
- Kauffman, M. J., N. Varley, D. W. Smith, D. R. Stahler, D. R. MacNulty, and M. S. Boyce 2007. Landscape heterogeneity shapes predation in a newly restored predator-prey system. *Ecology Letters* 10:690-700.
- Kimoto C, DeBano SJ, Thorp RW, Rao S, Stephen WP. 2012. Investigating temporal patterns of a native bee community in a remnant North American bunchgrass prairie using blue vane traps. *Journal of Insect Science* 12:108. www.insectscience.org/12.108
- Lass & Prather 2007. A Scientific Evaluation for Noxious and Invasive Weeds of the Highway 95 Construction Project between Uniontown Cutoff and Moscow. Aquila Vision Inc., Missoula MT. Prepared for the Idaho Transportation Department (ITD) District 2, Lewiston ID.
- Latah County 2006. Latah County Land Use Ordinance. Available at: http://www.latah.id.us/planningbuilding/land_use_ordinance_02-25-08.pdf. Accessed September 22, 2011.
- Latah County 2010. Comprehensive Plan. Available at: http://www.latah.id.us/planningbuilding/PB_ComprehensivePlan.pdf. Accessed September 22, 2011.
- Lesica P. 1993. Loss of Fitness Resulting From Pollinator Exclusion in *Silene spaldingii* (Caryophyllaceae). *Madrono*. 40:193-201
- Lesica P, Heidel B, 1996. Montana Natural Heritage Program. Pollination Biology of *Silene spaldingii*.
- Lichthardt 2005. Biological Evaluation of Plant Species and Communities of Conservation Concern in the U.S. Highway 95-Thorncreek Road to Moscow-Project Area. Idaho Department of Fish and Game, Idaho Conservation Data Center, Boise ID. Prepared for the Idaho Transportation Department (ITD). District 2, Lewiston ID.
- Lichthardt 2008. Memo: Effects Analysis of the US Highway 95-Thorncreek Road to Moscow Project for Plant Species and Communities of Conservation Concern. Idaho Department of Fish and Game. December 1, 2008.

- Lichthardt 2014. Memo Documenting Resurvey for Spaldings Catchfly along US-95 Thorncreek to Moscow Project Area. Idaho Department of Fish and Game. May 13, 2014.
- Lichthardt, J. and R.K. Mosely 1997. Status and conservation of the Palouse grassland in Idaho. Idaho Department of Fish and Game (IDFG). 28 pp and appendices.
- Looney C, Caldwell BT, Eigenbrode SD. 2009. When the prairie varies: The importance of site characteristics for strategizing insect conservation. *Insect Conservation and Diversity* 2:243-250.
- Looney C, Eigenbrode SD. 2011. Landscape-level effects on Cynipid component communities of "orphaned" native shrubs. *Journal of Insect Conservation* 15:695-706.
- Looney C, Eigenbrode SD. 2012. Characteristics and distribution of Palouse prairie remnants: Implications for conservation planning. *Natural Areas Journal* 32:75-85.
- Lozier JD, Cameron SA 2009. Comparative genetic analyses of historical and contemporary collection highlight contrasting demographic histories for the bumble bee *Bombus pensylvanicus* and *B. impatiens* in Illinois. *Molecular Ecology*: 18: 1875-1886
- Lyon, L. J. 1979. Habitat effectiveness for elk as influenced by roads and cover. *Journal of Forestry* 79:658-660.
- McCorquodale, S. M., K. J. Raedeke, and R. D. Taber 1986. Elk habitat use patterns in the shrub-steppe of Washington. *Journal of Wildlife Management* 50:664-669.
- Melquist 2005a. Biological Evaluation on the Potential Impacts of Corridor Alternatives from Thorncreek Road to Moscow on Large Ungulates. CREX Consulting, Saint Maries ID. Prepared for the ITD District 2, Lewiston ID. December 2005
- Melquist 2005b. Biological Evaluation on the Potential Impacts of Corridor Alternatives from Thorncreek Road to Moscow on Long-Eared Myotis and Pygmy Nuthatches. CREX Consulting, Saint Maries ID. Prepared for the ITD District 2, Lewiston ID. December 2005
- Michener CD. 2007. *The Bees of the World*, Second Edition. The John Hopkins University Press; 2007
- Natureserve 2011. NatureServe Web Service. Arlington, VA. U.S.A. Palouse Milkvetch and Palouse Thistle. Available <http://services.natureserve.org>. (Accessed: September 2011)
- National Oceanic and Atmospheric Administration (NOAA) 2012. Federal Register 50 CFR Part 226, Endangered and Threatened Species; Designation of Critical Habitat for 12 Evolutionarily Significant Units of West Coast Salmon and Steelhead in Washington, Oregon, and Idaho.
- Norris R.A. 1958. Comparative biosystematics and life history of the nuthatches *Sitta pygmaea* and *Sitta pusilla*. *University of California Publications in Zoology* 56:119-300.
- North Wind Inc. 2005. U.S.-95 Thorncreek Road to Moscow Project Hazardous Materials Scan. Prepared for the ITD District 2, Lewiston ID. September 2005.

- Noss, R.F., E.T. LaRoe, and J.M. Scott 1995. Endangered ecosystems of the United States: A preliminary assessment of loss and degradation. Biological Report 28. USD, National Biological Service, Washington D.C. 58pp.
- Othberg, Kurt L. 1982 Surficial Geologic Map of the Pullman Quadrangle, Idaho. Idaho Department of Lands, Bureau of Mines and Geology, Moscow.
- Palouse Water Conservation Network 2005. www.pwcn.org/PWCN_brochure.pdf. Accessed 04/22/05
- Parker IM, Mertens SK, Schemske DW. 1993. Distribution of seven native and two exotic plants in a tallgrass prairie in southeastern Wisconsin: The importance of human disturbance. *American Midland Naturalist* 130:42-55.
- Perry, C., and R. Overly. 1977. Impact of roads on big game distribution in portions of the Blue Mountains of Washington. Washington Game Department, Bulletin No. 11, Olympia, Washington
- Peterson A, Bartish IV, Peterson J, 2008. Effects of population size on genetic diversity, fitness, and pollinator community composition in fragmented populations of *Anthericum lilioides* L. *Plant Ecology* 198:101-110.
- Qualls 2005. Final Report for Weather Analysis of Proposed Realignment of the U.S. Highway 95, Thorncreek Road to Moscow Project. Prepared for the ITD District 2. 2005.
- Qualls 2014. Weather Analysis and Climate Study for US Highway 95, Thorncreek Road to Moscow, Four Proposed Alternatives, No-Build, W-4, C-3 And E-2. Prepared for the ITD District 2 June 2014.
- Qualls RJ, Zhao W, 2005. Final Report for Weather Analysis of Proposed Realignment of US Highway 95, Thorncreek Road to Moscow, Prepared for the Idaho Transportation Department.
- Ralston 2014. Hydrogeologic Analysis of Alternative Alignments of Highway 95 from Thorn Creek to Moscow. Ralston Hydrologic Services Inc. Ground Water Consulting and Education. Prepared for the Idaho Transportation Department.
- Reynolds, Ronald E., Terry L. Shaffer, John R. Sauer, and Bruce G. Peterjohn. 1994. Conservation Reserve Program: benefit for grassland birds in the Northern Plains. *Transactions of the North American Wildlife and Natural Resources Conference* 59:328-336. Jamestown, ND: Northern Prairie Wildlife Research Center Online. <http://www.npwrc.usgs.gov/resource/birds/benefit/index.htm> (Version 01JUL03).
- Ricketts, Taylor H., 2001. The Matrix Matters: Effective Isolation in Fragmented Landscapes. *The American Naturalist*, Volume 158, No. 1 (July) pp. 87-99. Published by The University of Chicago Press for the American Society of Naturalists. <http://www.jstor.org/stable/3078900>
- Rodenhouse, N. L., and L. B. Best. 1983. Breeding ecology of vesper sparrows in corn and soybean fields. *American Midland Naturalist* 110:265-275.

- Roloff, G. J. 1998. Habitat potential model for Rocky Mountain elk. In Proceedings 1997 Deer/Elk Workshop, Rio Rico, Arizona, ed. J. C. DeVos, Jr., 158-175. Phoenix: Arizona Game and Fish Department.
- Rowland MM, Wisdom MJ, Johnson BK, and Penninger MA. 2005. Effects of Roads on Elk: Implications for Management in Forested Ecosystems. Pages 42-52 in Wisdom, M. J., technical editor, *The Starkey Project: a synthesis of long-term studies of elk and mule deer*. Reprinted from the 2004 Transactions of the North American Wildlife and Natural Resources Conference, Alliance Communications Group, Lawrence, Kansas, USA.
- Rowland, M. M., M. J. Wisdom, B. K. Johnson, and J. G. Kie. 2000. Elk distribution and modeling in relation to roads. *Journal of Wildlife Management* 64:672-684.
- Ruediger, William C. 2007. Final Review of Wildlife Mitigation for the Thorncreek Road to Moscow Highway Development Project (US 95). Wildlife Consulting Resource. Prepared for the ITD District 2, Lewiston ID.
- Ruediger and DiGiorgio 2007. Safe passage: A user's guide to developing effective highway crossings for carnivores and other wildlife. USDA Forest Service, Federal Highway Administration, Wilburforce and Southern Rockies Ecosystem Project. 19 pages.
- Sawyer 2010. Assessment of Potential Big Game Impacts and Mitigation Associated with Highway Alternatives from Thorncreek Road to Moscow. Western Ecosystems Technology, Inc. Cheyenne, WY. Prepared for the ITD District 2, Lewiston, ID. December 2010
- Sawyer, H., R. M. Nielson, F. Lindzey, L. Keith, J. Powell, and A. Abraham 2007. Habitat Selection of Rocky Mountain Elk in a Non-Forested Environment. *Journal of Wildlife Management* 71:868-874.
- Sharley, Ann 2005. An Historic Buildings/Structures Survey for the Idaho Transportation Department's Proposed US 95, Thorn Creek Road to Moscow, Stage 1 Project, Latah County, Idaho. Short Report 832, Archaeological and Historical Services, Eastern Washington University, Cheney. August 2005
- Sharley and Gough 2005. A Cultural Resources Probability Study for the Idaho Transportation Department's Proposed US 95, Thorn Creek Road to Moscow, Stage 1 Project, Latah County, Idaho. Archaeological and Historical Services, Eastern Washington University, Cheney, August 2005.
- Skovlin, J. M., P. Zager, and B. K. Johnson 2002. Elk habitat selection and evaluation. Pages 531-555 in D. E. Toweill and J. W. Thomas, editors. *North American Elk: ecology and management*. Smithsonian Institution Press, Washington, D.C., USA.
- Smetak K, Johnson-Maynard JL, Lloyd JE. 2007. Earthworm population density and diversity in different-aged urban systems. *Applied Soil Ecology* 37: 161-168.
- Stanley TR. 2010. Land use and small mammal predation effects on shortgrass prairie birds. *The Journal of Wildlife Management* 74(8):1825-1833.

- Steffan-Dewenter I, Münzenberg U, Bürger C, Thies C, Tschardtke T. 2002. Scale-dependent effects of landscape context on three pollinator guilds. *Ecology* 83:1421-1432.
- Steffan-Dewenter I, Tschardtke T. 1999. Effects of habitat isolation on pollinator communities and seed set. *Oecologia*. 121: 432-440.
- Storer B.E. 1977. Aspects of the breeding ecology of the pygmy nuthatch (*Sitta pygmaea*) and the foraging ecology of wintering mixed-species flocks in western Montana. Thesis. University of Montana, Missoula, MT.
- Transportation Research Board (TRB) 1995. Expanding Metropolitan Highways: Implications for Air Quality and Energy Use – Special Report 245. Washington D.C.
- US Bureau of Economic Analysis 2009. Latah County Employment Data.
<http://www.bea.gov/regional/bearfacts/action.cfm>
- USACE 2008. The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West. United States Army Corps of Engineers. Environmental Laboratory.
- USDA 1991. Prime Farmlands, Important Farmlands: Correlated Soil Mapping.
<http://soildatamart.nrcs.usda.gov/>.
- USDA 2007. U.S. Department of Agriculture, Natural Resources Conservation Service. National Soil Survey Handbook, title 430-VI. Available online at:
<http://soils.usda.gov/technical/handbook/> accessed [2007].
- USDA FSA 1979. Aerial photos from USDA Farm Service Agency, Moscow, Idaho containing wetland identification within agricultural lands. (US Department of Agriculture Farm Services Agency)
- USDHHS 2010. US Department of Health and Human Services. Poverty Guidelines for the Remainder of 2010 (August 2010). <http://aspe.hhs.gov/poverty/10poverty.shtml>
- USFWS 2007. US Fish and Wildlife Service. Recovery Plan for *Silene spaldingii* (Spalding's Catchfly). Portland, Oregon. U.S. Fish and Wildlife Service. p.xiii + 187.
- USFWS 2009. News Release on: Revised Critical Habitat Designated for Canada Lynx. U.S. Fish and Wildlife Service. Mountain-Prairie Region, Lakewood, Colorado. Released February 24, 2009. http://www.fws.gov/mountain-prairie/species/mammals/lynx/criticalhabitat_files/PressRelease02242009.pdf
- USFWS 2008-2010. Report and Final Report (2008-2010). U.S. Fish and Wildlife Service, Boise, Idaho, and Idaho Natural Heritage Program, Idaho Department of Fish and Game, Boise, Idaho. 36. pp., plus appendices. 2011.
- USFWS 2010. US Fish and Wildlife Service Endangered Species Webpage. Wolverine <http://www.fws.gov/mountain-prairie/species/mammals/wolverine/>. Website updated 12/10/2010. Website accessed February 2012.
- USFWS 2011. New Release: Giant Palouse Earthworm Not Warranted for ESA Protections. Pacific Region. July 25, 2011.
<http://www.fws.gov/pacific/news/news.cfm?id=2144374846>

- USFWS 2015. Updated USFWS Threatened and Endangered Species List for the Thorncreek Road to Moscow Project. Latah County Idaho. April 2015.
- Vamosi JC, Knight TM, Steets JA, Mazer SJ, Burd M, Ashman T. 2006. Pollination decays in biodiversity hotspots. *Proceedings of the National Academy of Sciences*. 103: 956-961.
- Vercautern, K. C., and S. E. Hygnstrom 1998. Effects of agricultural activities and hunting on home ranges of female white-tailed deer. *Journal of Wildlife Management*. 62:280-285.
- VerCauteren, K. C., and S. E. Hygnstrom. 1998. Effects of agricultural activities and hunting on home ranges of female white-tailed deer. *Journal of Wildlife Management* 62:280–285.
- Visual Genesis 2005. US-95 Thorncreek Road to Moscow Project. Final Visual Resources Report. Visual Genesis, Inc. Boise, Idaho 83703. Prepared for ITD District 2, Lewiston, ID. December 2005
- Wackenhut, M., and M. McGraw. 1996. Idaho's Bats: description, habitats, and conservation. *Idaho Wildlife* 16.
- Weddell, B.J. 2001. Preliminary evaluation of potential mitigation sites at Paradise Ridge, Latah County, Idaho. Draba Consulting, Pullman, WA.
- Wisdom, M. J. 1998. Assessing life-stage importance and resource selection for conservation of selected vertebrates. Ph.D. dissertation, University of Idaho, Moscow.

Personal Communication

- Arnzen, C. pers. Comm. 2012. Telephone conversation with Project Development/Safety Engineer at ITD District 2. January 2012.
- Carscallan, Dan pers. comm. 2011. Telephone conversation September.
- Crenshaw, J. pers. comm. 2005. Electronic mail correspondence on 11 January 2005. Jay Crenshaw is the Regional Wildlife Manager, Idaho Department of Fish and Game, Clearwater Region.
- Denbleyker, D. pers. comm. March 29, 2005. Idaho State Police Region 2 - Lewiston, Detective.
- Henneky, Ray. 2015 pers. comm. January 14, 2015. Shawn Smith, ITD District Planner met with Ray Hennekey, IDFG Biologist, to discuss wildlife sections of the EIS.
- Prather, Tim pers. comm September 13, 2005. Associate Professor of weed ecology. Department of Plant, Soil, and Entomological Sciences, University of Idaho.
- Rand, C. pers. comm. Telephone conversation on 14 October 2004 and electronic mail correspondence on 13 January 2005. Clint Rand has been a Idaho Department of Fish and Game Conservation Officer in the Moscow, Idaho area for the past 25 years.
- Tacke, Katheryn. September 9, 2011. Idaho Department of Labor. Email communication: Largest Employers in Latah County.

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