

JEFF S. JENNESS

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CAREER OBJECTIVE

To be a GIS Professional and Spatial Scientist, specializing in the study of spatial phenomena. I especially enjoy research on wildlife and wildland ecosystems, and research that makes use of the shape of the land.

EDUCATION

M.S. IN FORESTRY

College of Ecosystem Sciences, Northern Arizona University

Master's Thesis: *Effects of fire on Mexican spotted owls in Arizona and New Mexico.*

1996 -2000

Flagstaff, Arizona

M.A. IN EDUCATIONAL PSYCHOLOGY, COUNSELING

Center for Excellence in Education, Northern Arizona University

1989 - 1993

Flagstaff, Arizona

B.S. IN FORESTRY

School of Forestry, Northern Arizona University

1986 - 1989

Flagstaff, Arizona

PUBLICATIONS – BOOKS, MONOGRAPHS AND LONG TECHNICAL REPORTS

- Kapetsky, J.M., Aguilar-Manjarrez, J. & Jenness, J. 2013. *A global assessment of potential for offshore mariculture development from a spatial perspective.* FAO Fisheries and Aquaculture Technical Paper No. 549. Rome, FAO. 181 pp.
- Jenness, J.S., J. Dooley, J. Aguilar-Manjarrez, and C. Riva. 2007. *African water resource database: GIS-based tools for inland aquatic resource management. 1. concepts and application case studies.* CIFA Technical Paper. No. 33, Part 1. Food and Agriculture Organization of the United Nations. Rome, Italy. 165 pp.
- Jenness, J.S., J. Dooley, J. Aguilar-Manjarrez, and C. Riva. 2007. *African water resource database: GIS-based tools for inland aquatic resource management. 2. technical manual and workbook.* CIFA Technical Paper. No. 33, Part 2. Food and Agriculture Organization of the United Nations. Rome, Italy. 305 pp.
- Hall, M.K., C.S. Walker, J.A. Weeks, L.P. Kendall, and J.S. Jenness. 2006. *Exploring Ocean Environments: GIS Investigations for the Earth Sciences, ArcGIS® Edition* (with CD-ROM), 2nd Edition. Brooks Cole. 176p.
- Hall, M.K., C.S. Walker, J.A. Weeks, L.P. Kendall, and J.S. Jenness. 2006. *Exploring Tropical Cyclones: GIS Investigations for the Earth Sciences, ArcGIS® Edition*, 2nd Edition. Brooks Cole. 176p.
- Hall, M.K., C.S. Walker, J.A. Weeks, L.P. Kendall, and J.S. Jenness. 2006. *Exploring Water Resources: GIS Investigations for the Earth Sciences, ArcGIS® Edition*, 2nd Edition. Brooks Cole. 176p.
- Hall, M.K., C.S. Walker, J.A. Weeks, L.P. Kendall, and J.S. Jenness. 2006. *Exploring the Dynamic Earth: GIS Investigations for the Earth Sciences, ArcGIS® Edition*, 2nd Edition. Brooks Cole. 160p.

PUBLICATIONS – BOOK CHAPTERS

- Beyer, H.L., J.S. Jenness, and S. Cushman. 2010. *Components of spatial information management in wildlife ecology: software for statistical and modeling analysis.* Chapter 14 in *Spatial Complexity, Informatics, and Wildlife Conservation*, Editors Sam Cushman and Falk Huettmann. Springer.
- Meaden, G.J., J. Jenness and S. Walker. 2013. *Preparing data for GIS use.* Chapter 5 in *Advances in Geographic Information Systems and Remote Sensing for Fisheries and Aquaculture*, Editors Geoffery J. Meaden and José Aguilar-Manjarrez. FAO Fisheries and Aquaculture Technical Paper No. 552. Rome, FAO. 425 pp.

Meaden, G.J., J. Jenness and S. Walker. 2013. *GIS Functionality*. Chapter 7 in *Advances in Geographic Information Systems and Remote Sensing for Fisheries and Aquaculture*, Editors Geoffrey J. Meaden and José Aguilar-Manjarrez. FAO Fisheries and Aquaculture Technical Paper No. 552. Rome, FAO. 425 pp.

PUBLICATIONS – GENERAL, PEER-REVIEWED

- Jenness, J., S.W.K. van den Burg, J. Aguilar-Manjarrez, M. Torrie. 2018. *Spatial datasets to define operational boundaries within four marine basins delineated by distance from shore, depth, EEZ and protected status, accompanied by maps and statistical summary tables*. Data in Brief. 21:2638-2642
- van den Burg, S. W. K., J. Aguilar-Manjarrez, J. Jenness, and M. Torrie. 2019. *Assessment of the geographical potential for co-use of marine space, based on operational boundaries for Blue Growth sectors*. Marine Policy. 100:43-57
- Kim, Y.-S., S. Latifah, M. Afifi, M. Mulligan, S. Burk, L. Fisher, E. Siwicka, K. Remoundou, M. Christie, S. M. Lopez, and J. Jenness. 2018. *Managing forests for global and local ecosystem services: a case study of carbon, water and livelihoods from eastern Indonesia*. Ecosystem Services. 31:153-168.
- Rebollo, S., S. Martínez-Hestekamp, G. García-Salgado, L. Pérez-Camacho, J. M. Fernández-Pereira, and J. Jenness. 2017. *Spatial relationships and mechanisms of coexistence between dominant and subordinate top predators*. Journal of Avian Biology. 48:1226–1237.
- Ganey, J. L., White, G. C., Jenness, J. S. and Vojta, S. C. 2015. *Mark–recapture estimation of snag standing rates in Northern Arizona mixed-conifer and ponderosa pine forests*. The Journal of Wildlife Management. 79(8):1369-1377
- Ganey, J.L., Bird, B.J., Baggett, L.S. and Jenness, J. 2015. *Density of large snags and logs in northern Arizona mixed-conifer and ponderosa pine forests*. Forest Science. 61(2):353-362
- Drake, J.C., J.S. Jenness, J. Calvert and K.L. Griffis-Kyle. 2015. *Testing a model for the prediction of isolated waters in the Sonoran Desert*. Journal of Arid Environments. 118:1-8
- Ganey, J.L., J.P. Ward Jr., J.S. Jenness, W.M. Block, S. Hedwall, R.S. Jonnes, D.L. Apprill, T.A. Rawlinson, S.C. Kyle and S.L. Spangle. 2014. *Use of protected activity centers by Mexican spotted owls in the Sacramento Mountains, New Mexico*. Journal of Raptor Research. 48(3):210-218
- Ganey, J. L., and J. S. Jenness. 2013. *An apparent case of long-distance breeding dispersal by a Mexican spotted owl in New Mexico*. Res. Note RMRS-RN-53WWW. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 5 p.
- Rudnick, D.A., S. J. Ryan, P. Beier, S.A. Cushman, F. Dieffenbach, C.W. Epps, L.R. Gerber, J. Hartter, J.S. Jenness, J. Kintsch, A.M. Merenlender, R.M. Perkl, D.V. Preziosi, and S.C. Trombulak. 2012. *The role of landscape connectivity in planning and implementing conservation and restoration priorities*. Issues in Ecology. 16:1-20
- Tagil, S. and J.S. Jenness. 2008. *GIS-based automated landform classification and topographic, landcover and geologic attributes of landforms around the Yazoren Polje, Turkey*. Journal of Applied Sciences. 8(6):910-921
- Jenness, J.S. and J.J. Wynne. 2005. *Cohen's Kappa and classification table metrics 2.0: an ArcView 3.x extension for accuracy assessment of spatially explicit models*. U.S. Geological Survey Open-File Report OF 2005-1363. U.S. Geological Survey, Southwest Biological Science Center, Flagstaff, AZ, USA.
- Dickson, B., J.S. Jenness and P. Beier. 2005. *Influence of vegetation topography, and roads on cougar movement in southern California*. Journal of Wildlife Management. 69(1):264-276
- Jenness, J.S. 2004. *Calculating landscape surface area from digital elevation models*. Wildlife Society Bulletin. 32(3):829-839
- Jenness, J.S., P. Beier and J.L. Ganey. 2004. *Associations between forest fire and Mexican spotted owls in Arizona and New Mexico*. Forest Science. 50(6):765-772

- de Graaf, G., F.J.B. Marttin, J. Aguilar-Manjarrez, and J.S. Jenness. 2003. *Manual on the use of Geographical Information Systems in fisheries management and planning*. FAO Fisheries Technical Paper. No. 449. Rome, FAO. 173p.
- Ganey, J.L., W.M. Block, J.S. Jenness, and R.A. Wilson. 1999. *Home range and habitat use of Mexican spotted owls in ponderosa pine - Gambel oak forest*. *Forest Science*. 45(1):127-135.
- Ganey, J.L., W.M. Block, J.K. Dwyer, B.E. Strohmeyer, and J.S. Jenness. 1998. *Dispersal movements and survival rates of juvenile Mexican Spotted Owls*. *Wilson Society Bulletin* 110(2): 206-217.
- Ganey, J.L., W.M. Block, J.S. Jenness, and R.A. Wilson. 1997. *Comparative habitat use of sympatric Mexican spotted and great horned owls*. *Journal of Wildlife Research* 2(2):115-123

PUBLICATIONS – GENERAL, NON-PEER REVIEWED

- Schenk, E. R., J. S. Jenness, and L. E. Stevens. 2018. *Springs distribution, flow, and associated species in the Verde River basin, Arizona*. Springs Stewardship Institute Technical Report to One for the Verde, Museum of Northern Arizona. 47 pp.
- Salvador R, S.M. Hesterkamp, G.G. Salgado, L.P. Camacho, J.M.F. Pereira y J. Jenness. 2014. *Las rapaces forestales diurnas en la naturaleza zivales o socios?* *Biología Y Conservación*. Anuario AECCA 2014, 17-27.
- Kapetsky, J.M., J. Aguilar-Manjarrez, and J. Jenness. 2014. *The what, where and how much of offshore mariculture: global development opportunities from a spatial perspective*. Conference Proceedings of Conference on Offshore Mariculture 2014. Naples, Italy. April 9--11, 2014. (<http://www.offshoremariculture.com/home>). 13-24
- Griffis-Kyle, K.L. and J. Jenness. 2013. *Amphibian and insect biodiversity in created wetlands of the USAF, BMGR*. Annual report submitted to Luke Air Force Base 56 RMO/ESM. 67 pp.
- Griffis-Kyle, K.L. and J. Jenness. 2011. *Amphibian and insect biodiversity in created wetlands of the USAF, BMGR*. Annual report submitted to Luke Air Force Base 56 RMO/ESM. 41 pp.
- Jenness, J.S. 2009. *Analyzing raster elevation datasets*. *Earth Imaging Journal*. September / October 2009, 6(5):32-33.
- Beier, P., D. Majka and J. Jenness. 2007. *Conceptual steps for designing wildlife corridors*. CorridorDesign.org. Available at <http://corridordesign.org/dl/docs/ConceptualStepsForDesigningCorridors.pdf>
- Jenness, J.S. 2007. *Some thoughts on analyzing topographic habitat characteristics*: Originally published in June 2005 issue of *Remotely Wild* (newsletter of the GIS, Remote Sensing, and Telemetry Working Group of The Wildlife Society), and greatly expanded since then. Available at http://www.jennessent.com/downloads/topographic_analysis_online.pdf
- Dooley, J., J.S. Jenness, and J. Aguilar-Manjarrez. 2003. *The African Water Resource Database*. in Conf. Proc.; 21st International Cartographic Conference ICC 2003. International Cartographic Association (ICA). Durban, South Africa. p. 2154 - 2165.
- Jenness, J.S., P. Beier, J.L. Ganey, and C. Van Riper. 2000. *Effects of fire on Mexican spotted owls in Arizona and New Mexico*. M. S. Thesis. Northern Arizona University. Flagstaff, AZ. 131 pp.

PUBLICATIONS – MAPS

- Greater Walnut Canyon Region, in “Walnut Canyon” edition of *Plateau* magazine. 2016. Museum of Northern Arizona. Vol. 8, Num. 1. Map on foldout centerfold.
- Three maps describing Rio de Flag course and drainage basin, in “Picture Canyon” edition of *Plateau* magazine. 2014 – 2015. Museum of Northern Arizona. Vol. 8, Num. 1 & 2. All maps on foldout centerfold.

Colorado River Basin map, in preface of Martin, T. 2012. *Big water little boats – Moulty Fulmer and the first Grand Canyon dory on the last of the wild Colorado river*. Vishnu Temple Press, LLC. Flagstaff, Arizona, USA.

Food and Agriculture Organization of the United Nations (FAO). 2011. *Aquaculture production of aquatic animals for human consumption (tonnes) 2009*. Global Conference on Aquaculture 2010 – Farming the Waters for People and Food. Phuket, Thailand. Available at http://www.fao.org/fileadmin/templates/aquaculture_reviews/docs/Map_A8_high.pdf

PUBLICATIONS – ONLINE INTERACTIVE MAPS

Greater Grand Canyon Heritage Region Story Maps:

- Peoples of the Greater Grand Canyon Heritage Region
<http://springs.maps.arcgis.com/apps/MapSeries/?appid=799f72cc3d1e4ab195450358d265df17>
- Biota of the Greater Grand Canyon Heritage Region:
<http://springs.maps.arcgis.com/apps/MapSeries/?appid=3b48ab83d4be41c7890bc526a9f1df41>
- Mature and Old Growth Forest in the Greater Grand Canyon Heritage Region:
<http://springs.maps.arcgis.com/home/item.html?id=4514c22e01f0440ea68e939a465caf3d>
- Greater Grand Canyon Heritage Region
<http://springs.maps.arcgis.com/apps/Viewer/index.html?appid=851577e148d3446da8fddb02fc2afd78>

Desert Landscape Conservation Cooperative Story Maps:

- DLCC Species of Concern:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=15b696f26b2f446fb9295e699c79c84b>
- DLCC Species of Concern, Proportions:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=61bfdaf77e1045b69dc52a9b41680e6d>
- Temperature Change for 2046-2065:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=5da768bd36ab44c1a37189d36c69638d>
- Temperature Change for 2046-2065-IQR:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=77ce0dc0e7af40ffb59f38cae521751e>
- Precipitation Change for 2046-2065:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=83d65db07dab4e58a3ed589cf3087610>
- Precipitation Change for 2046-2065-IQR:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=e11ccc38c9c7496780943b4092606440>
- DLCC 1990 Population Density:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=f429714f241d4a539caf9faf439612d3>
- DLCC 2000 Population Density:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=f35461a09df64af0b06fbee33925d0c5>
- DLCC 2010 Population Density:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=454c47abd1b24222b4c688e628f4037c>
- DLCC Population Rate of Change: 1990 - 2010:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=da2e97cf194a43e8ad93aad877c9ef2>

Southern Rockies Landscape Conservation Cooperative Story Maps:

- SRLCC Species of Concern:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=2b3a76bfa2034daab8a84317009b4b6a>
- SRLCC Species of Concern, Proportions:

<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=3c4c71eb509e4819bfa39b8a516b0535>

- Temperature Change for 2046-2065:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=294293c8a44b4cb98bd4258182c57052>
- Temperature Change for 2046-2065-IQR:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=149c92fceb8499092fb6f2f6af8b113>
- Precipitation Change for 2046-2065:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=b100b3111c994521840a6c7180b70bc9>
- Precipitation Change for 2046-2065-IQR:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=b002a2b78df54265a50917a240779632>
- SRLCC 1990 Population Density:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=bf06358739ea4b1f97c4839547573a8b>
- SRLCC 2000 Population Density:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=dbfff047c0084a389dea0463cece6a01>
- SRLCC 2010 Population Density:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=e2cc3775067e4141a413e0b1a479d31b>
- SRLCC Population Rate of Change: 1990 - 2010:
<http://springs.maps.arcgis.com/apps/webappviewer/index.html?id=57caa840c96f49138050ad6044096ddb>

PRESENTATIONS

- Jenness, J.S. and L. Stevens. 2018. *Springs and spring-dependent species of the Colorado river basin, Southwestern USA*. 2018 Springs Ecosystem Symposium. June 4 - 6, 2018. Flagstaff, Arizona, USA.
- Jenness, J.S., L. Yocum, P. Fulé, and A. Thode. 2017. *Previous fires and roads limit wildfire growth in Arizona and New Mexico*. 14th Biennial Conference of Science & Management on the Colorado Plateau & Southwest Region. September 11 – 14, 2017. Flagstaff, Arizona, USA.
- Wynne, J.J., J. Jenness, M.D. Jhabvala, T.N. Titus, D. Billings. 2015. *Detecting terrestrial caves by applying topographic analysis techniques to thermal imagery*. Abstract #9029, 2nd International Planetary Caves Conference, Flagstaff, AZ.
- Aguiar-Manjarrez, J., J. M. Kapetsky, and J. Jenness. 2014. *The what, where and how much of offshore mariculture: global development opportunities from a spatial perspective*. Keynote Presentation, Offshore Mariculture Conference. April 9 – 11, 2014, Naples, Italy.
- Zylo, M., C. Chambers, T. Grubb, and J. Jenness. 2013. *Bald eagles wintering in northern Arizona select perches based on food availability, visibility, and cover*. Annual Meeting, The Wildlife Society, Arizona and New Mexico Chapters, Albuquerque, NM, USA.
- Iniguez, J., J. Jenness and E. Margolis. 2012. *2011 fire season: an overview*. Southwest Fire Ecology Conference. February 27 – March 1, 2012, Santa Fe, New Mexico, USA.
- Ward, J., M. Bond, J. Jenness, and J. Ganey. 2012. *Burn trends in conserved habitat of spotted owls: are there environmental factors that indicate less vulnerability to high-severity burns?* Southwest Fire Ecology Conference. February 27 – March 1, 2012, Santa Fe, New Mexico, USA.
- Griffis-Kyle, K.L. and J. Jenness. 2011. *Landscape connectivity: Evaluation of four methods for estimating least-cost paths for desert anurans*. 96th Annual Ecological Society of America Meeting. Austin, TX.
- Jenness, J., D. Majka and P. Beier. 2009. *Making good compromises in implementing wildlife corridor designs*. 10th Biennial Conference for Research on the Colorado Plateau. Flagstaff, AZ, USA.

- Beier, P., B. Brost and J. S. Jenness. 2009. *Conserving the arenas, not the actors: wildlife corridors for a changing climate*. The Wildlife Society 16th Annual Conference, Monterey, CA, USA.
- Beier, P. and J. Jenness. 2009. *Making good compromises in implementing wildlife corridor designs*. Annual Meeting, The Wildlife Society, Arizona and New Mexico Chapters, Gallup, NM, USA.
- Jenness, J. S., D. Majka and P. Beier. 2008. *Corridor Designer: Generating and Evaluating Corridors to Reconnect Fragmented Wildlife Habitats*. Quarterly Meeting, Northern Arizona GIS User Group. February 29, 2008, Camp Verde, AZ, USA.
- Jenness, J. S., J. Aguilar-Manjarrez, J. Dooley and C. Riva. 2008. *African water resource database: GIS-based tools for inland aquatic resource management*. Annual Meeting, American Fisheries Society, Arizona / New Mexico Chapter, Prescott, AZ, USA.
- Jenness, J. S. February 2007. *Some Thoughts on Analyzing Topographic Habitat Characteristics*. Annual Meeting, the Wildlife Society, Arizona and New Mexico Chapters, Albuquerque, NM, USA.
- Jenness, J. S. May 2006. *GIS Tools for Mapping and Analyzing Habitat Features using Digital Elevation Data*. Workshop on Predicting Salmon Habitat in Alaska. May 17 – 19, 2006, Sheraton Hotel. Anchorage, AK, USA.
- Jenness, J. S. June 1999. *Effects of Fire on Mexican Spotted Owls in Arizona and New Mexico*. Thesis Defense. Northern Arizona University, School of Forestry, College of Ecosystem Science and Management. Flagstaff, AZ, USA.
- Jenness, J. S., P. Beier and J. L. Ganey. February 1999. *Effects of Fire on Mexican Spotted Owls in Arizona and New Mexico*. Annual Meeting, the Wildlife Society, Arizona and New Mexico Chapters, Gallup, NM, USA.
- Jenness, J. S., P. Beier and J. L. Ganey. March 1999. *Effects of Fire on Mexican Spotted Owls in Arizona and New Mexico*. Mexican Spotted Owl Prescribed Fire Workshop, Prescott, AZ, USA.

SEMINARS PRESENTED

- Mahalanobis Distances. February 21, 2005. Invited Speaker. Presented to “Advanced Topics in Environmental Sciences and Policy” (NAU, ENV 698), instructed by Dr. John Prather.

POSTERS PRESENTED

- Jenness, J.S., L. Stevens, A. Springer and J. Ledbetter. *Springs Ecosystems and Climate Change Risk*
 Shown At: Desert Landscape Conservation Cooperative (DLCC) Climate-Smart Landscape Conservation Design Workshop. Tucson, Arizona, USA (August 4 – 6, 2015)
- Jenness, J.S., J. Ledbetter, L. Stevens and M. Joyce. *Springs of the Grand Canyon Region*
 Shown At: 35th Annual ESRI International User Conference. San Diego, California, USA (2015)
- Jenness, J.S. *Calculating the shape of the landscape with geographically-projected data*
 Shown At: 1) The Wildlife Society 17th Annual Conference. Snowbird, Utah, USA (2010)
- Jenness, J.S., D. Majka, B. Brost and P. Beier. *Corridor designer: A suite of ArcGIS tools to identify and evaluate corridors between fragmented habitat blocks*. Poster updated from 2007 version to include *Land Facet* tools.
 Shown At: 1) 30th Annual ESRI International User Conference. San Diego, California, USA (2010)
1st Place Winner, Best Instructional Presentation
 2) The Wildlife Society 17th Annual Conference. Snowbird, Utah, USA (2010)
- Jenness, J.S. *Calculating areas and centroids on the sphere with raster and vector data*
 Shown At: 1) The Wildlife Society 16th Annual Conference. Monterey, California, USA (2009)
- Jenness, J.S. *Surface areas and ratios from DEMs*.
 Shown At: 1) 29th Annual ESRI International User Conference. San Diego, California, USA (2009)

1st Place Winner, Best Instructional Presentation

Jenness, J.S. *Calculating areas and centroids on the sphere.*

- Shown At: 1) Arizona/New Mexico Wildlife Society Meeting. Albuquerque, New Mexico, USA (2008)
2) 28th Annual ESRI International User Conference. San Diego, California, USA (2008)

1st Place Winner, Best Instructional Presentation

Jenness, J.S. and J.J. Wynne. *Cohen's Kappa, classification tables and multi-criteria model selection process: an ArcView 3.x extension to verify and select spatially explicit predictive models.*

- Shown At: 1) US-IALE (United States – International Association for Landscape Ecology) 19th Annual Symposium. Las Vegas, Nevada, USA (March 30 - April 2, 2004)
2) Arizona/New Mexico Wildlife Society Meeting. Gallup, New Mexico, USA (2005)
3) 25th Annual ESRI International User Conference. San Diego, California, USA (2005)
4) The Wildlife Society 14th Annual Conference. Tucson, AZ, USA (2007)

Jenness, J.S. *Mahalanobis distances.*

- Shown At: 1) Arizona/New Mexico Wildlife Society Meeting. Gallup, New Mexico, USA (2005)
2) 25th Annual ESRI International User Conference. San Diego, California, USA. (2005)
3) The Wildlife Society 14th Annual Conference. Tucson, AZ, USA (2007)

Jenness, J.S. *Calculating surface area from digital elevation models.*

- Shown At: 1) Arizona/New Mexico Wildlife Society Meeting. Gallup, New Mexico, USA (2005)
2) 25th Annual ESRI International User Conference. San Diego, California, USA. (2005)

Jenness, J.S., B. Dickson, and P. Beier. *Analyzing animal movement: an ArcView 3.x extension for assessing animal movement and use of habitats.*

- Shown At: 1) 12th Annual Conference of the Wildlife Society. Madison, Wisconsin, USA (2005)
2) Arizona/New Mexico Wildlife Society Meeting. Flagstaff, Arizona, USA (2006)

Jenness, J.S. *Grid tools for ArcView 3.x.*

- Shown At: 1) Arizona/New Mexico Wildlife Society Meeting. Albuquerque, New Mexico, USA (2007)

Jenness, J.S. *Topographic position index (TPI) for ArcView 3.x.*

- Shown At: 1) Arizona/New Mexico Wildlife Society Meeting. Albuquerque, New Mexico, USA (2007)

Jenness, J.S. *Repeating shapes for ArcView 3.x. and ArcGIS.*

- Shown At: 1) Arizona/New Mexico Wildlife Society Meeting. Albuquerque, New Mexico, USA (2007)

Ganey, J.L., W.B. Block, J.S. Jenness, B.E. Strohmeyer, S. Miller & D.P. Huebner. *Dietary overlap between sympatric Mexican spotted and great horned owls in Arizona.*

- Shown At: 1) Arizona/New Mexico Wildlife Society Meeting. Albuquerque, New Mexico, USA (2007)
2) The Wildlife Society 14th Annual Conference. Tucson, Arizona, USA (2007)

Majka, D., J.S. Jenness, and P. Beier. *Corridor designer: A suite of ArcGIS tools to identify and evaluate corridors between fragmented habitat blocks.*

- Shown At: 1) 27th Annual ESRI International User Conference. San Diego, California, USA. (2007)
2) The Wildlife Society 14th Annual Conference. Tucson, Arizona, USA (2007)
3) Arizona/New Mexico Wildlife Society Meeting. Albuquerque, NM, USA (2008)

Drake, J.C., Jenness, J.S., Goetting, J., Griffis-Kyle, K.L. 2014. *Testing a model for the prediction of isolated water sites in the Sonoran desert.*

- Shown At: 1) International Aridlands Conference. Lubbock, Texas August 13-18 (2018).

SOFTWARE PRESENTED

Jenness, J.S. 2010. *DEM Surface Tools* 30th Annual ESRI International Users Conference - Application Fair, San Diego, California.

1st Place winner, Best Desktop Application Category

Jenness, J.S., B. Brost and P. Beier. 2010. *Land Facet Corridor Designer*: 30th Annual ESRI International Users Conference - Application Fair, San Diego, California.

2nd Place winner, Best Desktop Application Category

- Jenness, J.S. 2009. *Surface Area and Ratio*. 29th Annual ESRI International Users Conference - Application Fair, San Diego, California. **2nd Place winner, Best Desktop Application Category**
- Jenness, J.S. 2008. *Tools for Graphics and Shapes*. 28th Annual ESRI International Users Conference - Application Fair, San Diego, California. **1st Place winner, Best Desktop Application Category**
- Majka, D., J.S. Jenness and P. Beier. 2007. *Corridor Designer: A Suite of ArcGIS Tools to Identify and Evaluate Corridors Between Fragmented Habitat Blocks*. 27th Annual ESRI International Users Conference - Application Fair, San Diego, California.
- Jenness, J.S. 2006. *Repeating Shapes for ArcView 3.x and ArcGIS*. 26th Annual ESRI International Users Conference - Application Fair, San Diego, California.
- Jenness, J.S. 2006. *Grid Tools for ArcView 3.x*. 26th Annual ESRI International Users Conference - Application Fair, San Diego, California.
- Jenness, J.S. 2006. *Topographic Position Index for ArcView 3.x*. 26th Annual ESRI International Users Conference - Application Fair, San Diego, California.
- Jenness, J.S. 2005. *Owl Project Map Generator and Data Entry Tool*. 25th Annual ESRI International Users Conference - Application Fair, San Diego, California.
- Jenness, J.S. 2005. *Grid and Theme Regression*. 25th Annual ESRI International Users Conference - Application Fair, San Diego, California.
- Jenness, J.S. 2005. *Script and Dialog Tools*. 25th Annual ESRI International Users Conference - Application Fair, San Diego, California.
- Jenness, J.S. 2004. *Mahalanobis distances*. 24th Annual ESRI International Users Conference - Application Fair, San Diego, California. **1st Place winner, Avenue Category**
- Jenness, J.S., J. Dooley, J. Aguilar-Manjarrez and C. Riva. 2004. *The African water resource database*. 24th Annual ESRI International Users Conference - Application Fair, San Diego, California. **2nd Place winner, Avenue Category**
- Jenness, J.S. 2004. *Calculating surface area from digital elevation models*. 24th Annual ESRI International Users Conference - Application Fair, San Diego, California.
- Jenness, J.S. and J.J. Wynne. 2004. *Kappa Statistics*. 24th Annual ESRI International Users Conference - Application Fair, San Diego, California.

CITATION LIST

According to Google Scholar, my work has been cited over 2,000 times.

- <http://scholar.google.com/citations?user=qaWDM-MAAAAJ&hl=en>

ORCID: <http://orcid.org/0000-0002-9448-1444>

SCOPUS Author ID: 36860756600, <http://www.scopus.com/authid/detail.url?authorId=36860756600>

WORKSHOPS PRESENTED

Majka, D., J.S. Jenness and P. Beier. *Corridor Designer Workshop: A Suite of ArcGIS Tools to Identify and Evaluate Corridors Between Fragmented Habitat Blocks*.

- Workshops Held At:
- 1) September 9, 2007: BLM Training Center in Phoenix, Arizona, USA.
 - 2) September 22, 2007: The Wildlife Society 14th Annual Conference. Tucson, AZ, USA
 - 3) October 12, 2007: The Nature Conservancy. Boulder, CO, USA.
 - 4) November 30, 2007: San Diego State University. San Diego, CA, USA.
 - 5) December 7, 2007: Elkhorn Slough. Watsonville, CA, USA.

Beier, P. and J.S. Jenness. *Wildlife Corridors for a Changing Climate*

Workshops Held At: 1) October 20, 2009: Forest Service Ecologists Annual Meeting, Traverse City, Michigan, USA.

CERTIFICATIONS

CERTIFIED GIS PROFESSIONAL 2005
GIS Certification Institute, <http://www.gisci.org>, Certification #00050453

ARCGIS DESKTOP PROFESSIONAL 2010
 *Esri Technical Certification Program, Verification #4BFCBRC2CJVE50RM*

ARCGIS DESKTOP DEVELOPER ASSOCIATE 2011
 *Esri Technical Certification Program, Verification #ESLE44QKKNEEYLG M*

PARTNERSHIPS

Jenness Enterprises: Esri Partner Network, Silver Tier NOVEMBER 2002 – PRESENT



SERVICE TO PROFESSIONAL ORGANIZATIONS

American Society for Photogrammetry and Remote Sensing	2000 – Present
American Ornithologists’ Union	1998 – Present
Association for Computing Machinery	2014 – Present
Ecological Society of America	2010 – Present
GIS Certification Institute	2008 – 2010
North American Cartographic Information Society	2006 – Present
Society of American Foresters	1989 – Present
Society for Conservation and GIS	2006 – Present
The Wildlife Society	1995 – Present
<i>Chairman, Spatial Ecology and Telemetry Working Group</i>	2008 – 2010, 2018 - Present
<i>Past-Chairman, Spatial Ecology and Telemetry Working Group</i>	2010 – 2018

JENNESS ENTERPRISES FEDERAL REGISTRATIONS

SAM: System for Award Management

- <https://www.sam.gov>
- DUNS: 010138993
- CAGE Code: 559A6

NSPIRES: NASA Solicitation and Proposal Integrated Review and Evaluation System

- <https://nspires.nasaprs.com/external/>
- DUNS: 010138993
- CAGE Code: 559A6

ADDITIONAL RELEVANT TRAINING

- DEVELOPING WEB APPS WITH ARCGIS API FOR JAVASCRIPT: ESRI Class. April 18 – 20, 2018.
- INTRODUCTION TO WEB DEVELOPMENT USING ARCGIS API FOR JAVASCRIPT: ESRI Class. March 28 – 30, 2018.
- SHARING CONTENT ON THE WEB: ESRI Class. May, 2015. Online
- BUILDING GEODATABASES: ESRI Class, April 2015. Online.
- INTRODUCTION TO R FOR FISHERIES SCIENTISTS: Workshop, Joint Annual AZ/NM American Fisheries Society & The Wildlife Society Meeting. February 2, 2012. Phoenix, AZ
- GIS PROGRAMMING 101 FOR ARCGIS 10 – PYTHON: GeoSpatial Training Services, December, 2010
- INTRODUCTION TO PROGRAMMING ARCOBJECTS WITH VBA: ESRI Class, November, 2005. Sacramento, CA
- EXTENDING THE ARCGIS DESKTOP APPLICATIONS: ESRI Class, December, 2005. Olympia, WA.
- LEARNING ARCGIS 9: ESRI Virtual Campus class, November 2004.
- WORKING WITH ARCVIEW SPATIAL ANALYST: ESRI Class, May, 2000. Chicago, IL
- PROGRAMMING WITH AVENUE: ESRI Class, June, 2000. Boulder, CO
- PROGRAMMING WITH VISUAL BASIC: Coconino Community College class. Jan-May, 2000. Flagstaff, AZ
- SUPERVISOR'S DEVELOPMENT COURSE: 2-week course held by Arizona Regional Community Policing Institute. May - June, 1998. Flagstaff, AZ
- SUPERVISOR TRAINING: US Forest Service. November, 1998. Flagstaff, AZ
- ARCINFO: Northern Arizona University Class. Jan-May, 1997. Flagstaff, AZ
- GLOBAL POSITIONING SYSTEM: U.S. Forest Service, 1994. Salt Lake City, UT

SKILLS

- A VARIETY OF SOFTWARE PACKAGES, including:
 - GIS: ArcView 3.3, Spatial Analyst 2.0, 3D Analyst, ArcINFO 7, PC/ArcINFO 3.5, ArcGIS (9.x, 10.x) , ArcGIS Server, ArcGIS Online
 - SPSS 9.0 and S-Plus 7, 8, R-Studio
 - Microsoft Office Software
 - Adobe Creative Suite (Photoshop CS5, Illustrator CS5, Acrobat 10, InDesign CS5, GoLive CS5)
 - Visual Basic 6 programming language
 - Visual Studio 2005 – 2017 programming languages
 - WordPerfect 10, Quattro Pro 8, Paradox 7, CorelDraw 6 and Corel PhotoPaint 6
 - ProCite 5, Zotero
 - Windows 95, 2000, XP, 7, 8, 10
 - Linux (Ubuntu [Unity], Korora [KDE], Mint [KDE])
- TRAINING: I have conducted multiple classes for FS personnel and others, teaching them about GIS, GPS and Radio Usage.
- PROGRAMMING LANGUAGES: Visual Basic, .NET, HTML, Javascript, and Avenue.
- Global Positioning System, especially Trimble products
- Radio telemetry
- Radio communications and frequency programming
- Statistical analysis
- Photography, especially wildlife and landscapes
- Creative and good at making things, especially field equipment
- Good with public interaction
- Experience in training groups of people
- Snowmobiles, ATVs, 4-wheel drive on bad roads
- Spotted owl surveying

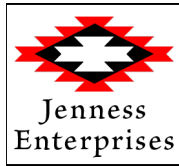
FOREST SERVICE AWARDS RECEIVED

Wings Across the Americas Conservation Award from the U.S. Forest Service International Program	2018
Certificate of Merit for sustained superior performance in providing GIS and other technical support to scientists and other personnel in RM-4251	August, 2005
Certificate of Merit for exceptional performance in developing technical GIS support tools to aid in a study on the effects of fuels treatments on Mexican spotted owls and their prey.	August, 2003
Certificate of Merit for Superior Achievement in support of on-going efforts to design and implement a population monitoring program for the Mexican Spotted Owl	September, 1999
Certificate of Merit for Outstanding Efforts in Support of a Program to Monitor Population Trend of Mexican Spotted Owls	September, 1998
Certificate of Merit for Exceptional Service in Efforts to Recover the Threatened Mexican Spotted Owl	September, 1994
Certificate of Merit For Performing Beyond Normal Expectations in the Research on the Ecology of the Mexican Spotted Owl	September, 1993
Certificate of Merit for Excellence in Spotted Owl Research	October, 1992
Certificate of Merit for Excellence in Spotted Owl Research	September, 1991

GRANTS RECEIVED

Effects of wildfires in Mexican Spotted Owl territories on occupancy rates. (U. S. Forest Service, 1996. \$110,000.)

EMPLOYMENT HISTORY

**INDEPENDENT CONSULTANT**

Jenness Enterprises
GIS Analysis and Application Design
 3020 N. Schevene Blvd.
 Flagstaff, AZ 86004 USA

JANUARY 2000 – PRESENT

Flagstaff, Arizona and Rome, Italy

SUPERVISOR: Self-Employed
 Many References Available

My business primarily involves developing customized GIS applications to help researchers and managers analyze and use spatial information. I also conduct analyses on spatial data, mainly to identify habitat characteristics of wildlife species. A small sample of my contracts include:

- A long-term contract with the University of Arizona and the Saguaro project (<http://www.scieds.com/saguaro/index.html>) to develop the GIS software for the Saguaro educational modules.
- A long-term contract with Northern Arizona University to develop corridor software to reconnect fragmented habitat patches, using both focal-species based habitat suitability methods and land facet landscape morphology methods (see <http://www.corridordesign.org>).
- Multiple long-term contracts with the United Nations Food and Agriculture Office in Rome, Italy. Projects included software development to analyze watershed characteristics and upstream/downstream consequences of management actions (with software distributed to developing countries in Africa), multiple projects to analyze world marine datasets to identify marine aquaculture potential, and co-authorship of an ArcGIS training manual. These contracts required me to relocate to Rome for 3 months.
- A long-term contract with Public Safety Network in Ventura, California, to develop tools to analyze 911 cell phone calls.
- A contract with the University of Montana to develop software to analyze human-grizzly bear conflicts on private lands in Montana.
- A contract with Helmut Kruckenbug of the University Osnabrück in Germany, to develop software to help identify European white-fronted goose migration routes.
- A contract with Jan Ekebom of the University of Turku in Finland, to develop software to help analyze Finnish coastal biodiversity.
- Several contracts with McLennan County 9-1-1 (Waco, Texas) to develop applications to help their emergency service agencies.

I conduct business through my web site at <http://www.jennessent.com>. I have developed a number of free ArcView and ArcGIS applications that have been downloaded over 250,000 times, each of which has an on-line manual and description that will allow you to review my work. Several of my extensions and posters have won awards at the annual ESRI International User Conferences. I encourage anyone considering this résumé to review my extensions to get a sense of the quality and type of GIS services that I can provide. The web addresses for my ArcView 3.x and ArcGIS extensions are http://www.jennessent.com/arcview/arcview_extensions.htm and http://www.jennessent.com/arcgis/arcgis_extensions.htm.

I am also skilled at Visual Basic and I've written (and offer for sale) a popular measurement unit conversion program (*Unit Converter*, see http://www.jennessent.com/unit_conv/index.htm).

My business **Jenness Enterprises** is a Silver Tier member of the Esri Partner Network.

ADJUNCT PROFESSOR AND GIS INSTRUCTOR

*Northern Arizona University
School of Forestry
200 E. Pine Knoll Drive
Flagstaff, AZ 86011 USA*

SEPTEMBER 2012 - PRESENT*Flagstaff, Arizona*

SUPERVISOR: Dr. Jim Allen
(928) 523-5894

I teach courses in basic GIS concepts to Forestry students in the NAU Professional Forestry Program. These courses covers fundamental GIS topics such as projections and datums, characteristics of spatial data and basic spatial analysis and cartography, with special attention given to forestry-related labs and examples. The courses also give the students practical experience using Esri's ArcGIS Desktop software.

I teach a graduate-level class in GIS and Spatial Analysis covering more advanced topics including surface analysis, proximity and connectivity, and interpolation.

I have taught a separate introductory GIS class (FOR 425: Forest Management Applications in GIS) for the NAU School of Forestry Undergraduate Fire Ecology Certificate program.

Award: I was honored as the 2013 Teacher of the Year by the NAU School of Forestry Xi Sigma Pi Honor Society.

GIS ANALYST

*Springs Stewardship Institute
Museum of Northern Arizona
3101 N Fort Valley Road
Flagstaff, AZ 86001 USA
<http://www.SpringStewardshipInstitute.org>*

DECEMBER 2014 - PRESENT*Flagstaff, Arizona*

SUPERVISOR: Jeri Ledbetter
(928) 774-5211, ext. 231 or (928) 699-4501

Dr. Larry Stevens
(928) 774-5211, ext. 231

I perform GIS analysis on issues related to springs, focusing mainly on potential threats to springs due to climate change, human population trends and general evolving conditions at spring locations. I also help maintain the online Springs Stewardship Institute (SSI) MySQL database, and I develop tools to interact between the MySQL RDBMS and the SSI ArcGIS Server geodatabase. I also generate online story maps and feature services illustrating springs-related issues, using ArcGIS Online and ArcGIS Server.

GIS DEVELOPER

*Public Safety Network
Boar's Head Corporation
9972 Creek Road
Oak View, CA 93022*

JANUARY 2009 - SEPTEMBER 2011*Flagstaff, Arizona*

SUPERVISOR: Kurt Warner
(805) 895-2200

I developed a large suite of tools to aid our company in analyzing cell phone 911 call patterns with the purpose of improving the routing of calls to the appropriate emergency response agency. These tools also analyzed the distribution of cell towers to see if they were efficiently located and designed to handle current call patterns, and to do advanced jurisdictional analysis based on potentially overlapping polygons (representing police and sheriff jurisdictions) and buffer distances from highways (representing California Highway Patrol jurisdictions). I also designed numerous tools to do various custom analyses and to produce graphic and spatial datasets that could be delivered online to our clients.

GS-9 WILDLIFE BIOLOGIST

MAY 1998-JAN 2001, JULY 2002-JUNE 2006

*U. S. Forest Service
Rocky Mountain Experimental Station
2500 S. Pine Knoll Drive
Flagstaff, AZ 86011 USA*

Flagstaff, Arizona

SUPERVISOR: Dr. Joseph Ganey
(928) 556-2156 or (928) 556-2001

Dr. Ann Lynch
(520) 388-8372

I helped to design and conduct a large-scale Mexican spotted owl monitoring project extending over six National Forests in Arizona and New Mexico. I trained and supervised 8 biological technicians capturing and banding owls in primarily wilderness areas of the Gila National Forest in southern New Mexico.

I spent several months analyzing landscape characteristics of our study area to look for correlates with our spotted owl demographic data. This GIS work was almost entirely my responsibility although I trained others to assist me in some aspects of it. Over the course of this project I had to collect, organize and often create large amounts of data in numerous formats including ArcInfo coverages in various projections and datums, ArcView shapefiles, Digital Raster Graphics, ArcInfo Grids, ArcInfo TINs, digital imagery, Digital Elevation Models (DEM and SDTS), and simple database files. I am very proficient with ArcGIS, ArcView 3.x, Spatial Analyst, 3D Analyst, Avenue Programming and Visual Basic Programming.

In addition to modeling landscape characteristics for our spotted owl monitoring project, I often assisted other scientists in our lab with various GIS and GPS projects. I worked with a visiting scientist from Australia on a project to estimate vegetation type and soil moisture using infrared aerial photography and the ERDAS IMAGINE software, and I have assisted numerous graduate students working in our office by writing specific ArcView applications to aid them in their research.

I conducted a GIS-based analysis of historic disease and insect damage patterns in the Pinaleno, Chiricahua, Catalina and Huachuca mountains.

I received four awards for Outstanding Efforts in support of the Spotted Owl Monitoring Program during these years.

GRADUATE ASSISTANT

1996-1998

*School of Forestry
Northern Arizona University
NAU P.O. Box 15018
Flagstaff, AZ 86011 USA*

Flagstaff, Arizona

SUPERVISOR: Dr. Paul Beier
(928) 523-3031

I designed and conducted a highly GIS- and Statistics-intensive thesis project examining the effects of various levels of forest fire burning within Mexican spotted owl territories. This project required me to hire and supervise 6 technicians to survey 64 spotted owl territories in remote locations of Arizona and New Mexico. I developed my own index of topographic roughness using Digital Elevation Models and ArcView Spatial Analyst. I was awarded my Master's degree in May, 2000 and my thesis was published by NAU in June, 2000.

GS-7 SUPERVISORY BIOLOGICAL TECHNICIAN

1994-1996

*U. S. Forest Service
Rocky Mountain Experimental Station
2500 S. Pine Knoll Drive
Flagstaff, AZ 86004 USA*

Flagstaff, Arizona

SUPERVISOR: Dr. Joseph Ganey
(928) 556-2156 or (928) 556-2001

From the summer of 1994 through the spring of 1995 I hired for and supervised a spotted owl juvenile dispersal study in which I was responsible for keeping track of widely-roaming juvenile owls from aircraft and from the ground. In the summer of 1995 I designed and initiated a spotted owl home range telemetry study on the Chevelon ranger district. In this case I hired, trained and supervised 3 employees to trap spotted owls and monitor their activities in the canyons around Chevelon.

Additional duties during this time included:

- *Snowmobile/ATVs/Defensive Driving:* I was one of the designated snowmobile and ATV trainers in our office. For a time I was responsible for maintaining our fleet of vehicles and I taught defensive driving courses for new employees.
- *Radios:* In an effort to create a safer working environment, I developed a radio communications program for our office in which we now have access to all USFS Region 3 radio frequencies, several AZ State Land Department frequencies and a number of weather channels.

I received two awards for Excellence in Spotted Owl Research during these two years.

GS-5 BIOLOGICAL TECHNICIAN

1990 – 1994

*U. S. Forest Service
Rocky Mountain Experimental Station
2500 S. Pine Knoll Drive
Flagstaff, AZ 86004 USA*

Flagstaff, Arizona

SUPERVISOR: Dr. Joseph Ganey
(928) 556-2156 or (928) 556-2001

I participated in and supervised a number of projects relating to spotted owl research. One of my primary duties was to trap, band, attach radios to and monitor great horned and Mexican spotted owls as part of a home range and habitat study, and I was listed as a secondary author on two papers resulting from this work. I have also participated in a great deal of small mammal trapping in a mark-and-recapture study we conducted concurrent with the home range/habitat study.

I supervised 13 technicians in the summer of 1993 gathering habitat data for the home range/habitat study and I received an award for innovations I developed on this project. During the winter of 1993-1994 I hired, trained and supervised 6 technicians who traveled throughout Arizona, New Mexico and southern Utah compiling US Forest Service spotted owl data for use by the Mexican spotted owl recovery team.

I was also responsible for learning and using Global Positioning System equipment for our research and served as a consultant with other scientists to help them utilize the technology. I taught classes on GPS to both Forest Service personnel and NAU students and I wrote a paper that was used in the USFS Nationwide Forestry Applications Program GPS training manual.

I received 2 awards for Excellence in Spotted Owl Research during these four years.

BIOLOGICAL TECHNICIAN

SUMMER 1988 & 1989

*U. S. Forest Service
Cibola National Forest
Mt. Taylor Ranger District
Grants, NM 87020 USA*

Grants, New Mexico

SUPERVISOR: Paula Crumpton
(505) 287-8833

I conducted wildlife and rare plant surveys, fought forest fires, and supervised volunteer groups in the construction of wildlife habitat improvement structures.

FIRE PREVENTION PROGRAM VOLUNTEER

1986

*U. S. Forest Service
Santa Catalina Ranger District
Tucson, AZ 87515*

Tucson, Arizona
SUPERVISOR: Ted Moore
(928) 629-5101

I helped to assemble and present programs on fire prevention and safety and hiking safety to various elementary schools in Tucson, Arizona.

CRISIS COUNSELOR - VOLUNTEER

*Victim/Witness Services of Coconino County
13 N. San Francisco Street, Suite 201
Flagstaff, AZ 86001 USA*

1987 - 1999

Flagstaff, Arizona
SUPERVISOR: Joanie Smith
(928) 779-6163

I have over 11,000 hours on-call experience as a crisis counselor. I assisted local law enforcement agencies and the Flagstaff Medical Center by providing on-site crisis intervention for victims of crime and crisis, including such things as rape, suicide, child abuse and molestation, death of loved ones (ranging from accidental and natural death to suicide and homicide), domestic violence and substance abuse. I supervised and helped train inexperienced volunteers. Victim/Witness Services was recognized as the Flagstaff Organization of the Year during my tenure there.

I received two awards for Volunteer of the Month and one award for Volunteer of the Year from Victim/Witness Services during my 12 years there.

RELEVANT REFERENCES

Dr. Joseph Ganey, Research Wildlife Biologist.

US Forest Service, Rocky Mountain Research Station.

2500 S. Pine Knoll Drive

Flagstaff, AZ 86004

jganey@fs.fed.us

(928) 556-2156 or (928) 556-2001

Dr. José Aguilar-Manjarrez, Fishery Resources Officer.

Aquaculture Management and Conservation Service (FIMA)

Food and Agriculture Organization of the United Nations (FAO)

Viale delle Terme di Caracalla – 00100 Rome, Italy

Jose.AguilarManjarrez@fao.org Tel. (39) 06 57055452 Fax. (39) 06 57053020

Dr. Paul Beier, Regents Professor

Northern Arizona University, College of Ecosystem Sciences, School of Forestry

PO Box 15018

Flagstaff, AZ 86011-5018

Paul.Beier@nau.edu

(928) 523-9341 or (928) 523-3031

INTERESTS AND ACTIVITIES

I grew up on the Navajo reservation in northeastern Arizona and I still have a strong attachment to the Navajo culture. My hobbies are maps, hiking, computer programming, wildlife photography, woodworking, playing guitar, simple electronics and studying history (especially World War II and the Holocaust). I love to build things.

Signed:



Jeff Jenness