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Education

Ph.D., Ecology (Wildlife Science), Utah State University, 1980
M.S., Resource Ecology, University of Michigan, 1974
A.B., with honors, Biology, Harvard University, 1972

Professional Experience

Professor of the Practice Emeritus of Environmental Decision Analysis, Nicholas School of the Environment, Duke University, 2017 - present

Professor of the Practice of Environmental Decision Analysis, Nicholas School of the Environment, Duke University, 2012-2017

Professor of the Practice of Environmental Decision Analysis and Director of Professional Studies, Nicholas School of the Environment, Duke University, 2005- 2012

Associate Professor of the Practice of Environmental Management and Director of Professional Studies, Nicholas School of the Environment and Earth Sciences, Duke University, 1994 – 2005

Assistant Professor, School of the Environment, Duke University, 1985-1994

Assistant Professor and Research Associate, School of Forestry and Environmental Studies, Duke University, 1982-1985

Research Ecologist, Crown Zellerbach Forestry Research Division, Wilsonville, Oregon, 1980-1982

Research Interests

Applications of decision analysis for environmental decisions and dispute resolution. Public involvement in environmental decision-making; collaborative planning. Conservation biology.

Publications

Refereed Journals

Gerber, L.R., M.C. Runge, R.F. Maloney, G.D. Iacona, C.A. Drew, S. Avery-Gomm, J. Brazill-Boast, D. Crouse, R.S. Epanchin-Niell, S.B. Hall, L.A. Maguire, T. Male, D. Morgan, J. Newman, H.P. Possingham, L. Rumpff, K.C.B. Weiss, R.S. Wilson, and M. Zablan. 2018. Endangered species recovery: A resource allocation problem. *Science* 362(6412): 284-286.

Olander, L., R. Johnston, H. Tallis, J. Kagan, L. Maguire, S. Polasky, D. Urban, J. Boyd, L. Wainger, and M. Palmer. 2018. Benefit relevant indicators: Ecosystem services measures that link ecological and social outcomes. *Ecological Indicators* 85:1262-1272.

Thompson, G.G., L.A. Maguire, and T. J. Regan. 2018. Evaluation of two approaches to defining extinction risk under the U.S. Endangered Species Act. *Risk Analysis* 38:1009-1035.

Olander, L., S. Polasky, J.S. Kagan, R.J. Johnston, L. Wainger, D. Saah, L. Maguire, J. Boyd, and D. Yoskowitz. 2017. So you want your research to be relevant? Building the bridge between ecosystem services research and practice. *Ecosystem Services* 26:170-182.

- Martin, T., A. Camaclang, H. Possingham, L. Maguire, and I. Chades. 2016. Timing of protection of critical habitat matters. *Conservation Letters* 10(3): 308-316.
- Wilson, R.S., D. J. Hardisty, R.S. Epanchin-Niell, M.C. Runge, K.L. Cottingham, D.L. Urban, L.A. Maguire, A. Hastings, P.J. Mumby, and D.P.C. Peters. 2016. A typology of time-scale mismatches and behavioral interventions to diagnose and solve conservation problems. *Conservation Biology* 30: 42-49.
- Burgman, M. A., Regan, H. M., Maguire, L. A., Colyvan, M., Justus, J., Martin, T. G. And Rothley, K. 2014. Voting Systems for Environmental Decisions. *Conservation Biology* 28: 322-332. doi: 10.1111/cobi.12209.
- Meretsky, V.J., L.A. Maguire, F.W. Davis, D.M. Stoms, J.M. Scott, D. Figg, D.D. Goble, B. Griffith, S.E. Henke, J. Vaughn, and S.L. Yaffee. 2012. A state-based national network for effective wildlife conservation. *Bioscience* 62: 970-976.
- Burgman, M., Carr, A., Godden, L., Gregory, R., McBride, M., Flander, L., and Maguire, L. 2011. Redefining expertise and improving ecological judgment. *Conservation Letters* 4:81-87.
- Wilson, R.S., Winter, P.L., Maguire, L.A., and Ascher, T. 2011. Managing wildfire events: Risk-based decision making among a group of federal fire managers. *Risk Analysis* 31:805-81.
- Justus, J., Colyvan, M., Regan, H., and L. Maguire. 2009. Buying into conservation: intrinsic vs. instrumental value. *Trends in Ecology and Evolution* 24(4):187-191.
- Gore, M.L., R.S. Wilson, W.F Siemer, H. Wiczorek Hudenko, C.E. Clarke, S.P. Hart, L.A. Maguire, and B.A. Muter. 2009. Application of risk concepts to wildlife management: Special issue introduction. *Human Dimensions of Wildlife* 14(5):301- 313.
- Maguire, L.A and E.A. Albright. 2005. Can behavioral decision theory explain risk averse fire management decisions? *Forest Ecology and Management* 211:47-58.
- Maguire, L.A. 2004. What can decision analysis do for invasive species management? *Risk Analysis* 24(4):859-868.
- Maguire, L.A. and E.A. Lind. 2003. Public participation in environmental decisions: Stakeholders, authorities and procedural justice. *International Journal of Global Environmental Issues* 3(2): 133-148.
- Maguire, L.A. 2003. Interplay of science and stakeholder values in Neuse River Total Maximum Daily Load process. *Journal of Water Resources Planning and Management* 129:261-270.
- Borsuk, M., R. Clemen, L. Maguire, and K. Reckhow. 2001. Stakeholder values and scientific modeling in the Neuse River watershed. *Group Decision and Negotiation* 10:355-373.
- Steelman, T. A., and L. A. Maguire. 1999. Understanding participant perspectives: Q-methodology in national forest management. *Journal of Policy Analysis and Management* 18(3):361-388.
- Maguire, L. A., G. F. Wilhere, and Q. Dong. 1995. Population viability analysis for red cockaded woodpeckers in the Georgia Piedmont. *J. Wildlife Mgmt.* 59:533-542.
- Maguire, L. A., and L. G. Boiney. 1994. Resolving environmental disputes: A framework incorporating decision analysis and dispute resolution techniques. *J. Environ. Mgmt.* 42:31-48.
- Maguire, L. A. and C. Servheen. 1992. Integrating biological and sociological concerns in endangered species management: Augmentation of grizzly bear populations. *Conservation Biology* 6:426-434

- Maguire, L. A., and R. C. Lacy. 1990. Allocating scarce resources for conservation: Partitioning zoo space among tiger subspecies. *Conservation Biology* 4:157-166.
- Maguire, L. A., T. W. Clark, R. Crete, J. Cada, C. Groves, M. Shaffer, and U. Seal. 1988. Black-footed ferret recovery in Montana: A decision analysis. *Wildlife Soc. Bull.* 16:139-148.
- Harris, R. B., L. A. Maguire, and M. L. Shaffer. 1987. Sample sizes for simulating minimum viable population size. *Conservation Biology* 1:72-76.
- Maguire, L. A. 1986. Using decision analysis to manage endangered species populations. *J. Environ. Mgmt.* 22:345-360.
- Maguire, L.A. 1984. Influences of surrounding plants on densities of Pieris rapae (L.) eggs and larvae (Lepidoptera: Pieridae) on collards. *Env. Entomol.* 13:464-468.
- Maguire, L.A. 1984. Choosing host plant patch sizes for experiments on Pieris rapae (L.) populations (Lepidoptera: Pieridae). *Env. Entomol.* 13:459-463.
- Maguire, L.A. 1983. Influence of collard patch size on population densities of lepidopteran pests (Lepidoptera: Pieridae, Plutellidae). *Env. Entomol.* 12:1415-1419.
- Johnson, B.C., L.A. Maguire and D.R. Anderson. 1980. Determining time of death in mule deer by using potassium levels in the vitreous humor. *Wildlife Soc. Bull.* 8(3):249-252.
- Maguire, L.A., and J.W. Porter. 1977. A spatial model of growth and competition strategies in coral communities. *Ecological Modeling* 3:249-271.

Invited Book Chapters

- Maguire, L.A. 2017. Using concepts of biodiversity value in structured decision-making. Pp. 241- 250 in *The Routledge Handbook of Philosophy of Biodiversity*, J. Garson, A. Plutynski, and S. Sarkar, eds. Routledge, London and New York.
- Maguire, L.A. 1999. Social perspectives. Pp 639-665, Chapter 19, in *Maintaining Biodiversity in Forest Ecosystems*, M. L. Hunter, Jr., ed. Cambridge University Press, Cambridge, Great Britain.
- Maguire, L. A. and H. Sondak. 1998. Can using decision analysis and dispute resolution techniques to solve environmental problems help promote equity? Pp. 97-120 in *Statistics in Ecology and Environmental Monitoring 2: Risk Assessment and Decision Making in Biology*, D. J. Fletcher, L. Kavalieris, and B. F. J. Manly, eds. Otago University Press, Dunedin, New Zealand.
- Maguire, L.A. 1994. Science, values and uncertainty: A critique of The Wildlands Project. Pp. 267-272 in *Environmental Policy and Biodiversity*, R.E. Grumbine, ed. Island Press, Covelo, California.
- Maguire, L.A. 1991. Using decision analysis to manage endangered species. Pp. 139-152 in *Challenges in the Conservation of Biological Resources: A Practitioner's Guide*, D.J. Decker, M.E. Krasny, G. R. Goff, C. R. Smith, and D. W. Gross, eds. Westview Press, Boulder, Colorado.
- Maguire, L.A., R. C. Lacy, R. J. Begg, and T.W. Clark. 1990. An analysis of alternative strategies for recovering the eastern barred bandicoot (*Perameles gunnii*). Pp. 147-164 in *Management and Conservation of Small Populations*, T.W. Clark and J. H. Seebeck, eds. Chicago Zoological Society, Chicago.
- Maguire, L. A. 1989. Managing black-footed ferret populations under uncertainty: An analysis of capture and release decisions. Pp. 268-292 in *Conservation Biology and the Black-footed Ferret*, U.S. Seal, M. Bogan, T. Thorne, and S.F. Anderson, eds. Yale University Press, New Haven.

Maguire, L. A. 1988. Decision analysis: An integrated approach to ecosystem exploitation and rehabilitation decisions. Pp. 105 – 122 in *Rehabilitating Damaged Ecosystems*, Vol. II., J. Cairns Jr., ed. CRC Press, Boca Raton, Florida.

Maguire, L.A. 1987. Decision analysis: A tool for tiger conservation and management. Pp. 475 - 486 in *Tigers of the World*, R.L. Tilson and U. S. Seal, eds. Noyes Press, Park Ridge, New Jersey.

Maguire, L.A., U. S. Seal, and P.F. Brussard. 1987. Managing critically endangered species: A case study of the Sumatran rhino. Pp. 141 – 158 in *Viable Populations for Conservation*. M.E. Soule, ed. Cambridge University Press, Cambridge.

Selected Essays

Maguire, L.A. and J. Justus. 2008. Why intrinsic value is a poor basis for conservation decisions. *Bioscience* 58:910-911.

Maguire, L.A. 1996. Making the role of values in conservation explicit. *Conservation Biology* 10:914-916.

Maguire, L.A. 1991. Risk analysis for conservation biologists. *Conservation Biology* 5:123-125.

Recent Technical Reports, Proceedings and Theses

Lydia Olander, Robert J. Johnston, Heather Tallis, Jimmy Kagan, Lynn Maguire, Steve Polasky, Dean Urban, James Boyd, Lisa Wainger, and Margaret Palmer. 2015. *Best Practices for Integrating Ecosystem Services into Federal Decision Making*. Durham: National Ecosystem Services Partnership, Duke University. doi:10.13016/M2CH07t.

Maguire, L. 2014. Multi-criteria Evaluation for Ecosystem Services: A Brief Primer. <http://sites.nicholasinstitute.duke.edu/ecosystemservices/files/2014/08/MCDA-Primer-Maguire.pdf>.

Selected Papers at Professional Meetings and Invited Seminars

*Maguire, L.A. Decision analysis: dealing with trade-offs and uncertainty. Keynote speaker, symposium on Applications of Decision Analysis for Wildlife Population Management, The Wildlife Society 23rd annual conference, Raleigh, NC, October 2016.

*Maguire L., Cottingham K., Epanchin-Niell R., Hardisty D., Hastings A., Mumby P., Peters D., Runge M., Urban D., Wilson R. Ecosystems: They Move Too Fast, They Move Too Slow, Conservation Suffers. Poster presentation, International Congress on Conservation Biology, Montpellier, FR, August 2015.

Maguire, L.A. Invited speaker. Is multicriteria analysis for ecosystem services “scale-able”? ACES (A Community on Ecosystem Services) National Conference, Arlington, VA, December 2014.

Selected Service Activities

SESYNC working group on Developing Decision Tools to Facilitate Recovery Planning under the Endangered Species Act, October 2015 - present.

Panel member, NAS Committee on Evaluation of Landscape Conservation Cooperatives. February – December 2015.

Co-leader (with Alan Hastings) of an invited project at the National Socioenvironmental Synthesis Center (SESYNC), Annapolis, MD, the Fundamentals working group on Mismatched Human and Ecological Timescales and Consequences for Environmental Management. June 2013 – present.

NCEAS and SESYNC working group on A Framework for Evaluating Ecosystem Services for Federal Land Management Agencies, fall 2012 - fall 2014.