Chapter 5: Consultation and Coordination



CONSULTATION AND COORDINATION

PUBLIC INVOLVEMENT EFFORTS IN THE PLANNING PROCESS

Governmental agencies and the public have been invited to help during the scoping phase of this planning process to identify purpose, need, alternatives, and environmental issues. The scoping process began with a notice of intent to prepare an environmental impact statement, which was published in the *Federal Register* on April 2, 2003. The monument then conducted four open houses to inform the public of the planning process and to invite comments on work to date. The open houses were held in June 2003 and November 2003. Each time, one open house was conducted in Los Alamos and a second in Santa Fe.

The first set of open houses in June 2003 presented the need for action, a summary of research results to date, and a summary of existing NPS and national monument policies regarding resource conservation, wilderness management, and other topics relevant to whether action should be undertaken. Comments from these sessions, as well as written comments received as a result of the *Federal Register* notice, were integrated into the scope of the planning effort to refine purpose, need, and objectives; to produce a range of reasonable alternatives; and to supplement the list of issues and impact topics. Written and oral comments were received at these open house sessions.

After the need for action, purpose, objectives and constraints were further refined based on the results of the first set of open houses, a second set was held in November 2003. These sessions presented very specific objectives for each vegetative community (see *Desired Future Conditions for Piñon- Juniper Woodland [Purpose of and Need for the Plan* section]) in this EIS, and a preliminary set of alternatives for review and comment. They also introduced the concept of adaptive management. Written and oral comments were received. Impact topics or issues and suggestions for new alternatives either resulted in additions or changes to the existing scope, or were considered and rejected for reasons described in , *Impact Topics Dismissed from Further Analysis* (see *Purpose of and Need for the Plan* section), or *Alternatives Dismissed from Further Analysis* (see *Alternatives* section).

Any substantive comments (e.g., those bearing on the analysis in this environmental impact statement) are summarized below.

Summary of Comments received during public scoping workshops:

- II comment documents were received; five from first scoping session and six from second.
- All commented on whether intervention was necessary to restore piñon-juniper in a designated wilderness; 91% supported intervention, 9% suggested that additional substantiation was needed to support the need for mechanical action in the face of the piñon die- off.

- Nearly three- quarters of the respondents directly addressed whether intervention in the wilderness was acceptable to achieve stated objectives. Of this group, 50% said it was acceptable or desirable to sacrifice wilderness values to return the wilderness to a more natural state or to slow erosion and save cultural resources. Thirty- seven percent indicated caution should be used or disturbance minimized. One of eight who commented on this issue, or 11%, indicated is was not acceptable to use mechanized means to treat wilderness ("Mechanical treatment will destroy wilderness character, and impacts will persist for many decades or even centuries.") This person did not comment on the acceptability of treatment with hand tools.
- Of those who indicated a preference for one or another alternative, 72% (five of seven) indicated they preferred mechanized tools to accomplish the restoration more quickly; the other 28% said hand tools were preferable.
- Five of the commenters directly or indirectly addressed prescribed burning in the park. All indicated prescribed fire was desirable; two of these five asked that the park consider prescribed burning either instead of mechanical treatment (one) or in addition to mechanical treatment (one).

The remainder of the comments fall in the category of "miscellaneous." They include comments on the planning process (e.g., The first scoping hearing was vague and had no alternatives; The park is correct in designing alternatives to meet the Desired Future Conditions, as DFCs should not change from alternative to alternative; The park should include a strong minimum requirement analysis as per DO 41; The plan should have a zoning map and identify the maximum use of motorized tools in each zone; The park should coordinate with USFS and LANL in this effort; How is this related to the wilderness EIS, etc.); money (e.g., Bandelier National Monument should have more money to educate, assess and mitigate impacts from erosion); and suggested alternatives beyond those presented (e.g., widespread reseeding; reestablish beaver; hand remove exotics; inject herbicides in junipers; allow bark beetles to kill off trees.).

PREPARERS AND CONTRIBUTORS

Distribution List

Albuquerque Journal North, Navrot Miguel

Bureau of Land Management, John W. Whitney

Bureau of Land Management, Linda Rundell, State Director

Bureau of Land Management, Steve Anderson

Coalition of Arizona/ New Mexico Counties

Continental Divide Tai Alliance

DOE/NNSA Site Office, Ed Wilmot, Site Office Manager

Eight Northern Indian Pueblo Council

Forest Conservation Council

Forest Guardians

Forest Guild

Forest Trust

Friends of Bandelier, Dorothy Hoard, Director

Los Alamos County Commissioners

Los Alamos National Laboratory, Vicki D. Loucks, NHPA/NEPA Specialist

Los Alamos National Laboratory, Michael Anastasio, Director

Los Alamos Mesa Public Library

National Audubon Society, New Mexico Chapter, David Henderson

National Park Service, Robert Eaton, Regional Solicitor

New Mexico Wilderness Alliance, Michael Scialdone, Inventory Coordinator

New Mexico Wildlife Federation, Oscar Simpson, President

New Mexico Citizens for Clean Air & Water, Gary Sanders

New Mexico Department of Education

New Mexico Department of Game&Fish, Luke Shelby, Northwest Area Operations Chief

New Mexico Department of Game&Fish, Bruce Thompson, Director

New Mexico Department of Game&Fish, Steve Anderson, Habitat Specialist

New Mexico Department of Tourism, Secretary

New Mexico Earth First, Richard Ryan

New Mexico Energy, Minerals & Natural Resources

New Mexico Environment Department, Secretary

New Mexico Surface Water Quality Bureau, NOS Section, Betsy Reed

New Mexico Environmental Law Center

New Mexico House of Representatives, Peter Wirth

New Mexico House of Representatives, Thomas E. Swisstack

New Mexico House of Representatives, Luciano Varela

New Mexico House of Representatives, Jim R. Trujillo

New Mexico House of Representatives, Jane E. Powdrell- Culbert

New Mexico House of Representatives, Ben Lujan

New Mexico House of Representatives, James Roger Madalena

New Mexico House of Representatives, Jeanette O. Wallace

New Mexico Office of Indian Affairs

New Mexico Office of Cultural Affairs, Katherine Slick, State Historic Preservation Officer

New Mexico Office of the Governor, Bill Richardson, Governor

New Mexico Senate, Steve Komadina

New Mexico Senate, John Grubesic

New Mexico Senate, Nancy Rodriguez

New Mexico Senate, Richard Martinez

New Mexico State, Commissioner of Public Lands

New Mexico State Land Office

New Mexico State Parks Division, Dave Simon, Director

New Mexico Wildlife Federation

Northern New Mexico Community College

Pueblo of Cochiti, Cippy Crazyhorse, Governor

Pueblo of Jemez, James Roger Madalena, Governor

Pueblo of Nambe, Dennis F. Vigil, Governor

Pueblo of Pojoaque, George Rivera, Governor

Pueblo of San Felipe, Sam Candelaria, Governor

Pueblo of San Ildefonso, James Mountain, Governor

Pueblo of San Juan, Earl Salazar, Governor

Pueblo of Santa Clara Michael Chavarria, Governor

Pueblo of Santo Domingo Julian Coriz, Governor

Pueblo of Taos, James Lujan, Sr., Governor

Pueblo of Tesuque, Gil Vigil, Governor

Pueblo of Zuni, Arlen P. Quetawki, Sr. Governor

Rio Arriba County Commissioners

Rewilding Institute, Dave Foreman

Robert F. Nicodemus Memorial Wilderness Project

Sandoval County Commissioners

Sangre de Cristo Audubon Society, Thomas & Carolyn Jervis

Santa Fe Community College

Santa Fe County Commissioners

Sierra Club, Central New Mexico Chapter

Sierra Club, Rio Grande Chapter

Sierra Club, Santa Fe Chapter

Sierra Club, Pajarito Chapter

Southwest Forest Alliance, Brian Nowicki

Southwest Headwaters, Thomas Ribe

SW Center for Biological Diversity, Brian Segee

The Nature Conservancy

University of New Mexico, Office of the President

resident

US House of Representatives, Tom Udall

US Senate, Jeff Bingaman

US Senate, Pete Domenici

US Army Corps of Engineers, Dana R. Hurst, LTC

US Department of Energy, Elizabeth Withers, Compliance Officer

US Department of Energy, Mark S. Sifuentes, NEPA Compliance Specialist

US Department of the Interior

US Fish & Wildlife Service, Eric Hein

US Forest Service, Sandy Hurlocker,

Espanola District Ranger

US Forest Service, Dolores Maese, Public Affairs Officer, SFNF

US Forest Service, Charles Jankiewicz, Ecosystem Specialist, SFNF

US Forest Service, John Peterson, Jemez District Ranger

US Forest Service, Joe Reddan, Peco District Ranger

US Forest Service, Los Alamos Office

US Forest Service, Mike Frazier, SFNF

US Forest Service, Martin Chavez, Forest

Supervisor, SFNF

Valles Caldera National Preserve, Jeffery

Cross, Executive Director

Western Network, Rosemary Romero

Wildlands Project, Robert E. Howard,

President

Table 29 provides information on authors and contributors of this document.

Table 29. List of Preparers and Contributors.

Name	Title/Role	Education	Experience		
NPS					
Darlene Koontz	Coontz Superintendent B.S. Forestry 24 y		24 years NPS		
John Mack	Chief, Resources Management. Responsible for ethnographics analysis.	B.S. Biology M.S. Fish and Wildlife Management	15 years NPS		
Jennifer	Park Planner	B.S. Ecology	3 years NPS		
Carpenter	Responsible for project management, public involvement, park team facilitation, document review, wildlife, special status species and park operations analysis.	M.S. Applied Ecology and Environmental Resources	6 years private sector environmental consulting 1 year state wildlife agency		
Brian Jacobs	Vegetation Specialist. Responsible for vegetation, soils and water resources	B.S. Systematic Botany M.S. Population Genetics	14 years NPS		
	impact analysis.				

^{*} complete distribution list including names of individuals not affiliated with any organization is available upon request to Bandelier National Monument

Name	Title/Role	Education	Experience			
Steve Fettig	Wildlife Biologist. Responsible for wildlife, special status species analysis.	B.A. Biology M.S. Wildlife Conservation	10+ years NPS			
Craig Allen	Senior Research Scientist. Responsible for soils/erosion data.	Ph.D. Ecology	18 years NPS/USGS/NBS			
Dave Rupert	Assistant Director Office of Indian Affairs and American Culture Intermountain Regional Office (NPS). Responsible for ethnographic resources analysis.	Ph.D. Anthropology	29 years experience in government sponsored anthropological research work.			
Kay Beeley	Cartographic Technician. Responsible for document graphics.	B.S. Environmental Planning and Management	19 years NPS			
Cynthia Herhahn	Archeologist. Responsible for cultural resource impact analysis.	M.S. Anthropology Ph.D. Anthropology	5 years NPS			
	Total Quality NEPA					
Heidi West	NEPA Specialist. Responsible for EIS team facilitation; wilderness, soundscape (in visitor experience) and health and safety impact analyses; and document review.	B.S. Biology M.A. Science Communication, M.S. Biology Ph.D. Environmental Science and Engineering	22 years in environmental planning (13 years involved with NPS NEPA planning).			
Kathie Joyner	NEPA Analyst. Responsible for visitor experience impact analysis and	B.A. Education M.A. Anthropology/ Archeology	26 years in environmental planning (state and federal environmental			

Name	Title/Role	Education	Experience
	document review.		policy acts) and environmental resource compliance requirements.
Thomas A. Carr	Economist Consultant	J.D. Ph.D. Economics	10 years legal and 15 years economics and academic.
	U	RS	
Lisa Pine	Environmental Planner. Responsible for air quality impact analysis.	B.A. History M.A. Geography	7 years as environ- mental planner providing technical and management support on NEPA projects; 13 years in public involvement and meeting coordination/ facilitation.
David Jones	Senior Environmental Planner. Responsible for visual resources impact analysis.	B.S. Landscape Horticulture 2 years of graduate study in environmental planning	15 years as an environmental planner providing task and project management on NEPA projects. Technical expertise includes land use, recreation, wilderness, and visual resources.
Patti Steinholtz	Senior Environmental Planner. Responsible for technical and management support.	B.A. Communications	5 years as environmental planner providing technical and management support on NEPA projects.

References



REFERENCES

ABQ Journal

- 2004 "Peace, Quiet About to End" ABQ Journal on- line edition, June 9, 2004. Available at www.albuquerquejournal.com/north/opinion
- Albert, S., N. Luna, R. Jensen, and L. Livingston
 - 2004 Restoring biodiversity to Piñon- Juniper Woodlands. Ecological Restoration. 22:1.

Allen, Craig

- 1984. Montane Grasslands in the Landscape of the Jemez Mountains, New Mexico. Master's Thesis, University of Wisconsin. Madison, Wisconsin. 195pp.
- 1989 Changes in the landscape of the Jemez Mountains, New Mexico. PhD. Dissertation. University of California, Berkeley.
- 2000 Runoff, Erosion and Restoration Studies in Piñon- juniper Woodlands of the Pajarito Plateau. New Mexico Bureau of Mining and Mineral Resources. New Mexico Decision- Makers Field Guide. Socorro, NM.
- 2001a Runoff, Erosion, and Restoration Studies in Piñon- juniper Woodlands of the Pajarito Plateau. Pp. 24- 26 In: P.S. Johnson (ed.). Water, Watersheds, and Land Use in New Mexico. New Mexico Decision-Makers Field Guide No. 1. New Mexico Bureau of Mines and Mineral Resources, Socorro, NM.
- 2001b Fire and vegetation history of the Jemez Mountains. Pp. 29- 33 In: P.S. Johnson (ed.). Water, Watersheds, and Land Use in New Mexico. New Mexico Decision- Makers Field Guide No. 1. New Mexico Bureau of Mines and Mineral Resources, Socorro, NM.
- Lots of lightning and plenty of people: An ecological history of fire in the upland Southwest. Pp. 143-193. In: T.R. Vale (ed.), Fire, Native Peoples, and the Natural Landscape. Island Press, Covelo, CA.
- Ecological patterns and environmental change in the Bandelier landscape. Pp. 19-68. In: T.A. Kohler (ed.), Village Formation on the Pajarito Plateau, New Mexico: Archaeology of Bandelier National Monument. University of New Mexico Press, Albuquerque.
- 2006a Personal communications related to fire intervals within Ponderosa savanna and grassland systems, including data from a site (i.e. South Mesa) within the piñon-juniper woodland zone

- 2006b Personal communications and unpublished data relevant to changes in woodland density since 1850.
- 2006c Personnel communications and unpublished data on long term vegetation and soil monitoring efforts

Allen, C.D., and D.D. Breshears

- 1998 Drought- induced shift of a forest/woodland ecotone: rapid landscape response to climate variation. Proceedings of the National Academy of Sciences of the United States of America 95:14839-14842.
- (n.d.) Drought, tree mortality, and landscape change in the southwestern United States: Historical dynamics, plant- water relations, and global change implications. In: J.L. Betancourt (ed.), The 1950s Drought in the American Southwest: Hydrological, Ecological, and Socioeconomic Impacts. University of Arizona Press, Tucson.

Allen, C.D., J.L. Betancourt, and T.W. Swetnam

1998 Landscape changes in the southwestern United States: Techniques, long- term datasets, and trends. Pp. 71- 84. In: T.D. Sisk (ed.), Perspectives on the Land Use History of North America: A Context for Understanding our Changing Environment. U.S. Geological Survey, Biological Science Report USGS/BRD/BSR- 1998- 0003.

Allen, C.D., M. Savage, D.A. Falk, K.F. Suckling, T.W. Swetnam, T. Schulke, P.B. Stacey, P. Morgan, M. Hoffman, and J. Klingel

Ecological restoration of Southwestern ponderosa pine ecosystems: A broad perspective. Ecological Applications 12(5):1418-1433.

American National Standards Institute (ANSI)

- 1980 Sound Level Descriptors for Determination of Compatible Land Use, S3.23-1980.
- 1988 Quantities and Procedures for Description and Measurement of Environmental Sound, Part I, American, S21.9-1988

Arthur Carhart National Wilderness Training Center

2002 Minimum Requirements Decision Guide. Updated version April 2002. Bureau of Land Management, U.S. Forest Service, U.S. Fish and Wildlife Service, National Park Service. Arthur Carhart National Wilderness Training Center, Missoula, Mt.

Avarindakshan, B., A.S. Aravind, M.K. Vyawahare

2001 Analysis of on- ground and in-flight sound levels produced by Chetak and Pratap helicopters. Ind J. Aerospace Med 46(1), 2002

Barclay, A.D., J.L. Betancourt, and C.D. Allen.

(n.d.) Effects of seeding with ryegrass (*Lolium multiflorum*) on vegetation recovery following fire in a ponderosa pine (*Pinus ponderosa*) forest. International Journal of Wildland Fire.

Betancourt, J.L.

1993 Personal communication regarding packrat middens dating and age of piñon- juniper woodland areas in Bandelier area.

Bogan, Michael A., Keith Geluso, and Larisa Harding

Annual Report: 2003 Mammalian Inventory for Three Southern Colorado Plateau Network Parks, Bandelier National Monument, Chaco Culture National Historic Park, and El Malpais National Monument. U.S. Geological Survey, Fort Collins Science Center, Arid Lands Field Station, Department of Biology, University of New Mexico, Albuquerque, NM 87131. 26pp.

Bogan, M.A., C.D. Allen, E.H. Muldavin, S.P. Platania, J.N. Stuart, G.H. Farley, P. Melhop, and J. Belnap.

1998 Southwest. Pp. 543- 592. In: Mac, M.J., P.A. Opler, and P.D. Doran (eds.). National Status and Trends Report, U.S. Geological Survey, Washington, D.C.

Bondello, M. C.

The effects of high- intensity motorcycle sounds on the acoustical sensitivity of the desert iguana, *Diposaurus dorsalis*. M.A. Thesis, Biology Dept., California State University, Fullerton. 37 pp.

Bondello, M. C., A. C. Huntley, H. B. Cohen, and B. H. Brattstrom

The effects of dune buggy sounds on the telencephalic auditory evoked response in the Mojave fringe- toed lizard, Uma scoparia. Pages 58-89 in M.C. Bondello and B.H. Brattstrom, eds. The experimental effects of off- road vehicle sounds on three species of desert vertebrates. U.S. Dept. Inter., Bureau of Land Management, Washington, DC.

Brattstrom, B. H., and M.C. Bondello

1983 Effects of off- road vehicle noise on desert vertebrates. Pages 167- 206 in R.H. Webb and H.G. Wilshore, eds. Environmental effects of off- road

vehicles. Impacts and management in arid regions. Springer- Verlag, New York.

Brown, D.E., C.E. Lowe, and C.P. Pase

1980 A digitized systematic classification for ecosystems with an illustrated summary of the natural vegetation of North America. USDA For. Serv. Gen. Tech. Rep. RM-73, Ft. Collins, Colo. 93pp.

Buckley, K.J., J.C. Walterscheid, S.R. Loftin, and G.A. Kuyumjian.

2003 Progress Report on Los Alamos National Laboratory Cerro Grande Fire Rehabilitation Activities. LA- UR- 03- 7139. Los Alamos National Laboratory, Los Alamos, NM.

Carpenter, Jennifer.

2006 Personal communications regarding effect of Bandelier restoration activities on composition/density of wildlife within treatment areas, as well as communications related to future visitor center renovations.

Chan, Lit- Mian, and Weaver, Christopher S.

Assessment of Cost Effectiveness and Public Acceptance of Tier II Emission Standards for Handheld Equipment, California Air Resources Board Report, October 2, 1997.

Chong, G. W.

- 1992 Seventeen Years of Grazer Exclusion on Three Sites in Piñon- juniper Woodland at Bandelier NM, NM. Unpublished report on file at Bandelier National Monument, Los Alamos, NM.
- Revegetation of pinyon- juniper woodlands with native grasses. In: Managing Piñon- Juniper Ecosystems for Sustainability and Social Needs, Aldon, Earl F. and Douglas W. Shaw, eds. USDA Forest Service GTR RM- 236.
- Recommendations to Improve Revegetation Success in a Piñon- juniper Woodland in NM—A Hierarchical Approach. MS thesis, University of New Mexico, Albuquerque

Coker, Dale

2005 Personal communications regarding noise/views/visitor use in/around Bandelier National Monument

Cook, R.R., C.H. Flather, K.R. Wilson

2000 Faunal characteristics of the Southern Rocky Mountains of New Mexico: Implications for biodiversity analysis and assessment. Gen

Tech. Rep. RMRS- GTR- 58. Ft. Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 55p. [Be aware that I doesn't have a copy of this. I believe you cited it in the fire EA.]

Davenport, D. W.

- Soil Survey of Three Watersheds on South Mesa, BNM, NM.
 Unpublished final report on file at USGS Jemez Mountains Field
 Station
- Davenport, D. W., Wilcox, B.P. and Breshears, D. D.
 - Soil morphology of canopy and intercanopy sites in a piñon- juniper woodland. Soil Science Society Journal, 60:1881- 187.
- Davenport, D. W., D. D. Breshears, B. P. Wilcox, and C. D. Allen.
 - 1998 Viewpoint: Sustainability of Piñon- juniper Ecosystems—A Unifying Perspective of Soil Erosion Thresholds. Journal of Range Management 51 (2): 229–38.

Department of Energy (DOE)

- Dual Axis Radiographic Hydrodynamic Test (DARHT) Facility, Final EIS. DOE/EIS- 0228, 1995.
- 1998 Environmental Surveillance at Los Alamos during 1998.
- 2002 Proposed Relocation of Technical Area 18 Capabilities and Materials at the LANL, volume 1 of Final EIS. DOE/EIS- 0319, 2002.
- 2003 Environmental Assessment for the Proposed LANL Trails Management Program, September 2, 2003.
- Dominy, Lynne (Bandelier National Monument).
 - 2005 Personal communications related to visitor use.

Dumbauld, Jill

2003 Traditional Use Study of Bandelier National Monument: Ethnogeological Literature Review Chapter (draft). Bureau of Applied Research in Anthropology. Tucson: University of Arizona.

Environmental Systems Research Institure (ESRI).

2002 ArcView GIS 3.3. Redlands, CA. Release date: May 2002.

EPA

- Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. Report 550/9-74-004, March 1974.
- Final Guidance for Incorporating Environmental Justice Concerns in EPA's NEPA Compliance Analysis. Washington, DC.2005a EPA Greenbook Website, http://www.epa.gov/oar/oaqps/greenbk/, last updated on October 14, 2005.
- 2005a EPA Greenbook Website, http://www.epa.gov/oar/oaqps/greenbk/, last updated on October 14, 2005
- 2005b EPA National Ambient Air Quality Standards Website, http://www.epa.gov/air/criteria.html, last updated on July 29, 2005.

Farhar, B., & Dunlevy, P.

Native American issues in geothermal energy. Paper presented at Geothermal Resources Council, July.

Federal Aviation Administration

2005 Midwest Airspace Enhancement Environmental Assessment, December. Available at www.faa.gov/ats/nar/mase.htm

Fenneman, Nevin M.

1931 Physiography of Western United States. McGraw- Hill Book Company, Inc.

Fettig, Stephen M.

- 1996 A Checklist of Birds of Bandelier National Monument. Southwest Parks and Monuments Association, 221 North Court, Tucson, Arizona 85701.
- 1999 Degradation of Natural Quiet at Bandelier National Monument and the Bandelier Wilderness Area (draft 10- 24- 1999).
- 2000 Degradation of Ambient Natural Sound at Bandelier National Monument and the Bandelier Wilderness Area. Poster paper, 10/20/00.
- 2004 Park Flight Program, Bandelier National Monument, New Mexico, Autumn 2004. Report submitted to the National Park Foundation and in Resource Management Files, Bandelier National Monument, Los Alamos, New Mexico 87544.
- 2005 Personal communications regarding aircraft overflights, January 2006.

2006a Unpublished data. Avian response to watershed restoration.

2006b Personal communications regarding noise affecting Bandelier National Monument.

Frome, M.

1968 The National Forests of America. New York, NY: G.P. Putnam & Sons.

Fyfe and Olendorff

1976 Minimizing the Dangers of Nesting Studies on Raptors and Other Sensitive Species. Environment Canada Wildlife Service. Canadian Wildlife Society Occasional Paper No. 23.

Gramann, James

The Effect of Mechanical Noise and Natural Sound on Visitor Experiences in Units of the National Park System. Social Science Research Review, I(I), Winter.

Gottfried, G.J., T.W. Swetnam, C.D. Allen, J.L. Betancourt, and A. L. Chung-McCounbrey

1995 Piñon- juniper woodlands. Pp. 95- 132. In D.M. Finch and J.A. Tainter, (eds). Ecology, diversity, and sustainability of the Middle Rio Grande Basin. U.S. Forest Service General Technical Report. RM- GTR- 268.

Gramann, James

The Effect of Mechanical Noise and Natural Sound on Visitor Experiences in Units of the National Park System. Social Science Research Review, Vol. 1, No. 1, Winter 1999.

Gutzwiller, Kevin J.; Wiedenmann, Richard T.; Clements, Krista L.; Anderson, Stanley H

Effects of human intrusion on song occurrence and singing consistency in subalpine birds. The Auk (Allen Press) III(I); 28-37.

Hass, G.E., E. Hermann, R. Walsh

1986 "Wilderness values." Natural Areas Journal 6(2):37-43

Hastings, B.K., D.D. Breshears, and F.M. Smith

2005 Spatial variability in rainfall versus rainfall depth: implications for sediment yield. Vadose Zone J. 4: 500-504.

- Hastings, B.K., F.M. Smith, and B.F. Jacobs.
 - 2003 Rapidly eroding piñon- juniper woodlands in New Mexico: Response to slash treatment. Journal of Environmental Quality 32:1290- 1298.

Herhahn, Cynthia L.

- Assessing and Monitoring Condition of Archeological Sites in Bandelier National Monument, New Mexico. Paper presented at the George Wright Society Biennial Conference, April 14-18, 2003, San Diego, California.
- 2006 Personal communications regarding locations of cultural resources within Bandelier.

Herhahn, Cynthia, Genevieve Head, and Marianne Tyndall

2006 Final Report on Bandelier Site Assessment and Monitoring, 2002-2005. Report on file at Bandelier National Monument.

Hubbard, J.P.

1985 Peregine Falcon (Falco peregrinus). New Mex. Dept. Game and Fish, Handbook Spec. End. in New Mexico:BIRD/FA/FA/PE:1- 2.

Jacobs, B.F.

Fire maintenance of mechanically thinned woodland savannas:
Technical Report to Western National Parks Association. Unpublished report on file at Bandelier National Monument.

Jacobs, B. F., and R. G. Gatewood.

- Restoration Studies in Degraded Piñon- juniper Woodlands of North Central NM. Pp. 294- 298. In S.B. Monsen, R. Stevens, R.J. Tausch, R. Miller, and S. Goodrich (eds), Proceedings—Ecology and Management of Piñon- juniper Communities within the Interior West. USDA Forest Service, Proceedings RMRS- P- 9, Ogden, UR.
- 2002 Reintroduction of fire maintains structure in mechanically restored piñon- juniper savanna (New Mexico). Ecological Restoration 20(3).

Jacobs, B.F., Gatewood, R.G. and Allen, C.D.

- 2000 Ecological restoration of a wilderness and cultural landscape—paired watershed study. BNM; Interim Report to USFS, on file at BNM.
- 2002a Reintroduction of fire maintains structure in mechanically restored piñon- juniper savanna (New Mexico). Ecological Restoration 20(3).

2002b Watershed Restoration in Degraded Piñon-Juniper Woodlands: A Paired Watershed Study, Bandelier National Monument. Final Report to USGS- BRD. On file at Bandelier National Monument, Los Alamos, NM.

Johnson, M.

2005 Reflections—Timelessness of backpacking. Electronic document: http://www.thebackpacker.com/articles/reflect/art35.php. Accessed on December 3, 2005.

Johnson, T.

- 1983 Essential peregrine breeding habitat in Bandelier. National Park Service report, 5 pp.
- Responses of Breeding Peregrine Falcons to Human Stimuli. Southwest Raptor Management Symposium and Workshop. 1993.

Julius, C.

1999 A comparison of vegetation on three different soils at Bandelier National Monument, New Mexico, USA. University of Rheinischen Friedrich- Wilhelm, Bonn, Germany. Unpublished thesis.

Kellert, S.R.

1976 Perceptions of animals in American society. Transactions of the 38th North American Wildlife and Natural Resource Conference: 256- 266.

King, Sally

2005 Personal communications related to visitor use.

Kleintjes, P.K., B.F. Jacobs, and S.M. Fettig

Initial response of butterflies to an overstory reduction and slash mulching treatment of a degraded piñon- juniper woodland. Restoration Ecology 12:2.

Konstantinov, A.I.

Functional adaptations of the mammalian auditory system. Page 319 in R. Orbrel, C. Folk, and J. Pellantova, eds. Abstracts of papers. II. Congressus Theriologicus Internationalis, Brno, Czechoslovakia.

Landres, P.

2004 Managing wildness in designated wilderness. Frontiers of Ecology and the Environment 2:498-499.

Landres, P., M.W. Brunson, L. Merigliano, C. Sydoriak and S. Morton

2000 Naturalness and wildness: the dilemma and irony of managing wilderness. USDA Forest Service Proceeding RMRS- P- 15- VOL 5...

League for the Hard of Hearing

Noise Levels in Our Environment Fact Sheet. League for the Hard of Hearing website: www.lhh.org/noise/decibel.htm. Accessed 12/6/2005.

Lightfoot et al.

2000 Unpublished status report on long term ground dwelling arthropod monitoring efforts at Bandelier National Monument.

Loftin, S. R.

Initial Response of soil and understory vegetation to a simulated fuelwood cut of a piñon- juniper woodland in Santa Fe National Forest. Pp. 311- 314. In Monsen, S. B., Stevens, R., Tausch, R.J., Miller, R., and Goodrich, S., (eds.), Proceedings—ecology and management of piñon-juniper communities within the Interior West: USDA Forest Service, Proceedings RMRS_P_9, Ogden, UT.

Loomis, J. and R. Walsh

Future Economic Values of Wilderness in Payne, C., J.M. Bowker and P.C. Patrick, comps. The Economic Values of Wilderness: Proceedings of the Conference 1991, May 8-11, Jackson, WY. Gen. Tech. Rep. SE-78, Ahseville, N.C., USFS, Southeastern Forest Experiment Station: 81-90; Abstract only.

Los Alamos Meeting and Visitor Bureau (LAMVB)

2005 Tourism/Visitation in Los Alamos, April 18.

Lozer, T.

2005 Reflections—Why do we backpack?. Electronic document: http://www.thebackpacker.com/articles/reflect/art10.php. Accessed on December 3, 2005.

Lowry, J.H, R.D.Ramsey, K. Boykin, D. Bradford, P. Comer, S. Falzarano, W. Kepner, J. Kirby, L. Lang, J. Prior-Magee, G. Manis, L. O'Brien, K. Pohs, W. Rieth, T. Sajwaj, S. Schrader, K.A. Thomas, D. Schrupp, K. Schulz, B. Thompson, C. Wallace, C. Velasquez, E. Waller, and B. Wolk

2005 Southwest regional gap analysis project: final report on land cover mapping methods. RS/GIS Laboratory, College of Natural Resources, Utah State University, Logan, UT.

- Maher, T, Hogan, J.T. and Allen, C.D.
 - 2001 Erosion of Artifacts at the Frijolito Watershed, 1995-1999. Report on file at Bandelier National Monument.
- Manning, R. and W. Valliere
 - Environmental values, environmental ethics, and wilderness management—an empirical study. Internal Journal of Wilderness 2(2):27- 32. Abstarct only.
- McFadden, Les (University of New Mexico, Geology Department)
 - 2002 Personal communications regarding soil erosion.
- Mozzillo, E. O.
 - Management summary of the BAS survey. Unpublished report, Bandelier National Monument, Los Alamos, NM. In Sydoriak, C., (ed.), Resources management plan. Unpublished report, Bandelier National Monument, Los Alamos, NM.

Myers, N.

- 2004 USGS- WRD. Preliminary Results from Surface Runoff and Suspended Sediment Studies: Hydrologic Response to Watershed Restoration. Interim Report to Bandelier.
- National Institute for Occupational Safety and Health (NIOSH)
 - 2006 Occupational Noise Exposure, Recommendations for a Noise Standard. NIOSH website: www.cdc.gov/niosh/98-126a.html. Accessed 7/8/2006.
- National Park Service, U.S. Department of the Interior
 - 1977 Master Plan, Bandelier National Monument.
 - 1990 *Statement for Management*, Bandelier National Monument. Bandelier National Monument, Los Alamos, NM.
 - Report to Congress on Effects of Aircraft Overflights on the National Park.
 - 1995a Resource Management Plan, Los Alamos, NM 87544. 357 pp + appendices.
 - 1995b Bandelier National Monument Visitor Study. Summer 1995, Report #76, Visitor Services Project, Cooperative Park Studies Unit, University of Idaho.

- 1997 Fire Management Plan, Bandelier National Monument. Los Alamos, NM.
- 1998 Cultural Resource Management Guideline, NPS-28
- 1999a Degradation of Natural Quiet at Bandelier National Monument and the Bandelier Wilderness Area.
- 1999b Director's Order #50B and Reference Manual 50B: Occupational Safety and HealthProgram. Washington, D.C.: NPS Office of Policy. Accessed on the Internet at http://data2.itc.nps.gov/npspolicy/DOrders.cfm.
- NPS unpublished data 1999, 2000
 - 2000a *Strategic Plan* FY 2000–2005, Bandelier National Monument. Bandelier National Monument, Los Alamos, NM.
 - 2000b Environmental Assessment Regarding the Management of the Tsankawi Unit, Bandelier National Monument. Los Alamos, NM.
 - 2000c Degradation of Ambient Natural Sound at Bandelier National Monument and the Bandelier Wilderness Area (poster paper).
 - 2000d DO 47 "Soundscape Preservation and Noise Management."
 - 2001 *Director's Order 12: Conservation Planning, Environmental Impact Analysis, and Decision- making.* Washington, D.C.: NPS Office of Policy.
 - Guidance White Paper #2: What Constitutes Appropriate Conservation and Restoration Activities in Wilderness? National Park Service, National Wilderness Steering Committee.
 - 2004b Environmental Assessment, *Fire Management Plan*. Bandelier National Monument, New Mexico.
 - 2004c Hibner, C.D., Special Project Soil Survey of Bandelier National Monument. Unpublished report on file at Bandelier National Monument, Natural Resource Conservation Service, USDA.
 - 2005a Bandelier National Monument, Fire Management Plan.
 - 2005 Unpublished data regarding hand cutting of piñon and juniper. Unpublished report on file with Bandelier natural resources staff.
 - 2005b Asmis data dictionary (cultural). Archeological Sites Management Information System, Version 3.00 Data Dictionary. Archeology Program, National Center for Cultural Resources, National Park Service U.S. Department of the Interior, Washington, DC.

- 2005c Isle Royale National Park Wilderness and Backcountry Management Plan and Environmental Impact Statement, July 2005.
- (n.d.) http://www2.nature.nps.gov/mpur/index.cfm (park visitation statistics).
- 2006a Management Policies, Washington D.C.
- 2006b Vegetation Management Plan, Bandelier National Monument.
- 2006c Peregrine Falcon Habitat Management Plan in Bandelier National Monument, Los Alamos, NM.

New Mexico Department of Game and Fish

2000 Personnel communications regarding bald eagle

New Mexico Natural Heritage Program

2006 Special Status Species found in Sandoval County, New Mexico. Natural Heritage New Mexico Database:

http://nhnm.unm.edu/query_bcd/bcd_county_results.php?output=
httml

New Mexico Wilderness Alliance

2006 President Signs Ojito Wilderness Act of 2005! Available at website: www.nmwild.org/campaigns/ojito. Accessed 2/13/2006.

Oertel

2004 Baseline Monitoring Studies. Unpublished report on file at Bandelier National Monument.

Olsen, P. and J. Olsen,

Alleviating the impacts of human disturbance on the breeding peregrine falcon. Corella Journal of Australian Bird Study Association 2(1): 1-7.

O'Meara, Nathaniel

2003 Traditonal Use Study of Bandelier National Monument: Ethnobotanical Literature Review Chapter. Bureau of Applied Research in Anthropology. Tucson: University of Arizona.

Oregon Department of Transportation.

2002 Peregrine Falcon Management Plan., 2002 – 2007. Division of Environmental Services, Salem, Oregon.

Ortiz, A., Ed.

1979 Southwest: Handbook of North American Indians, Vol. 9. Washington, DC: Smithsonian Institution.

Pacific Coast American Peregrine Falcon Recovery Team

1982 Coast Recovery Plan for the American Peregrine Falcon (*Falco peregrinus anatum*). Fish and Wildlife Service, Denver, CO.

Parker, Pat and Tom King

nd Guidelines for Evaluating and Documenting Traditional Cultural Properties. National Register Bulletin #38. U.S. Dept of the Interior, National Park Service Interagency Resources Division. Washington D.C.

Parker, J.D. and R. Koesler

Urban populations as an impact on wilderness: a study of values in the Los Angeles Basin. In: Kulhavy, D.L and M.H. Legg, eds. Wilderness and Natural Areas in Eastern North America: Research, Management and Planning. Nacogdoches, TX, Stephen F. Austin State University, Arthur Temple College of Forestry, Center for Applied Studies: 245-249. Abstract Only.

Potter, L. D.

1985 Re- evaluation Studies of Grazing Exclosure Plots, Bandelier National Monument. Unpublished report on file at Bandelier National Monument, Los Alamos, NM.

Reid, K. D., B. P. Wilcox, D. D. Breshears, and L. MacDonald.

Runoff and Erosion in a Piñon- juniper Woodland—Influence of Vegetation Patches. Soil Science Society of America Journal 63:1869–79.

Rich, T. D., C. J. Beardmore, H. Berlanga, P. J. Blancher, M. S. W. Bradstreet, G. S. Butcher, D. W. Demarest, E. H. Dunn, W. C. Hunter, E. E. Iñigo- Elias, J. A. Kennedy, A. M. Martell, A. O. Panjabi, D. N. Pashley, K. V. Rosenberg, C. M. Rustay, J. S. Wendt, T. C. Will.

Partners in Flight North American Landbird Conservation Plan. Cornell Lab of Ornithology. Ithaca, NY. [Online version available at http://www.partnersinflight.org/cont_plan/default.htm].

Rothman, H.

1988 Bandelier National Monument: An Administrative History. National Park Service, Division of History, Southwest Cultural Resources Center. Santa Fe, NM.

Ruscavage-Barz, S.M.

1999 (Draft) Fire in the Hole: The Effects of Fire on Subsurface Archaeological Materials. Manuscript in prep, on file Bandelier National Monument, New Mexico.

Sanderson, E.W.; Jaiteh, M.; Levy, M.A.; et al.

2002 The human footprint and the last of the wild. BioScience 52:891-904.

Steffen, A.

2002. The Dome Pilot Project: Extreme Obsidian Fire Effects in the Jemez Mountains, New Mexico. Pp. 159- 202. In: J.M. Lloyd, T.M. Origer, and D.A. Fredrickson, (eds.). The Effects of Fire and Heat on Obsidian. Cultural Resources Publication, Anthropology- Fire History, U.S. Department of the Interior, Bureau of Land Management.

Swetnam, T.W., C.D. Allen, and J.L. Betancourt.

Applied historical ecology: Using the past to manage for the future. Ecological Applications 9:1189- 1206.

Sydoriak, Charisse A., Craig D. Allen, and Brian F. Jacobs.

2001 Would Ecological Landscape Restoration Make the Bandelier Wilderness More or Less of a Wilderness? Wild Earth, Winter 2000/2001.

Trainer, S.F. and R.B. Norgaard

Recreation fees in the context of wilderness values. Journal of Park and Recreation Administration 17(3):100-115. Abstract only.

Traylor, D, L. Hubbell, N. Wood, and B. Fielder.

The 1977 La Mesa Fire Study: An investigation of fire and fire suppression impact on cultural resources in Bandelier National Monument. Southwest Cultural Resources Center, Professional Paper No. 28. Cultural Resources Management, Division of Anthropology, National Park Service, Santa Fe.

Turner, M.G.; Romme, W.H.; and Tinker, D.B.

2003 Surprises and lessons from the 1988 Yellowstone fires. Frontiers in Ecology and the Environment 1:351-358.

Udall, S.L.

1963 Plenary address as the eighth biennial wilderness conference. San Francisco, CA. March 9.

- U.S. Air Force, Institute for Environmental Safety and Occupational Health
 - 2003 Risk Analysis. Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations. Revised December 2003.
- U.S. Department of Transporation (USDOT)
 - 2001 Advisory Circular. Noise levels for U.S. Certificated and Foreign Aircraft. Dated 11/14/01
- U.S. Fish and Wildlife Service (USFWS)
 - 1995 U.S Fish and Wildlife Service (USFWS). 1995. Recovery Plan for the Mexican Spotted Owl: Vol. I. U.S. Department of the Interior, Fish and Wildlife Service. Albuquerque, NM.
 - 2002 Birds of conservation concern 2002. Division of Migratory Bird Management, Arlington, Virginia. 99 pp. [Online version available at http://migratorybirds.fws.gov/reports/bcc2002.pdf]
 - Final Summary Biological Opinion on the effects to the Mexican spotted owl from the proposal to implement the *Fire Management Plan*, Bandelier National Monument, New Mexico. New Mexico Ecological Field Services Office, Albuquerque.

Veenhuis, J.E.

2002 Effects of Wildfire on the Hydrology of Capulin and Rito de los Frijoles Canyons, Bandelier National Monument, New Mexico. U.S. Geological Survey Water- Resources Investigations Report 02- 4152, Albuquerque, New Mexico.

Visibility Information Exchange Web System.

2005 Visibility Information Exchange Web System (VIEWS), http://vista.cira.colostate.edu/views, 2005

Wear, Ben

2006 Personal Communication related to air quality.

Wilcox, B. P., and Breshears, D. D.

Hydrology and ecology of pinyon- juniper woodlands: conceptual framework and field studies. In: Desired future conditions for piñon-juniper ecosystems, 1994 August 8- 12, Flagstaff, AZ: USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Report, RM- 258.

- Wilcox, B. P., J. Pitlick, C. D. Allen, and D. W. Davenport.
 - 1996a Runoff and Erosion from a Rapidly Eroding Piñon- juniper Hillslope. Pp. 61-77. In M.G. Anderson, and S.M. Brooks (eds). Advances in Hillslope Processes, Volume 1. New York: John Wiley & Sons Ltd.
- Wilcox, B.P., B.D. Newman, C.D. Allen, K.D. Reid, D. Brandes, J. Pitlick, and D.W. Davenport.
 - 1996b Runoff and erosion on the Pajarito Plateau: Observations from the Field. Pp. 433- 439. In New Mexico Geological Society Guidebook, 47th Field Conference, Jemez Mountains Region.
- Wilcox, B.P., D.D. Breshears, and C.D. Allen.
 - 2003 Ecohydrology of a resource- conserving semiarid woodland: Temporal and spatial scaling and disturbance. Ecological Monographs 73(2):223-239.

Wilderness Society

n.d. Data related to public lands designated as wilderness; www.wilderness.org.