

# United States Biosphere Reserves Survey 2003



October 2003

United States Biosphere Reserves Association  
314 Conference Center Building  
Knoxville, Tennessee 37996-4138

## U. S. Biosphere Reserves Survey, 2003

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### **Acknowledgements**

The concept and conduct of this survey was supported by the Southern Appalachian Man and the Biosphere (SAMAB) Foundation, which provided assistance through the SAMAB coordinating office. Special thanks to Jane Johns for her assistance.

We are grateful to Dr. Barbara Weber and the USDA Forest Service for informing the biosphere reserve managers of the importance of this survey and the Forest Service's support of it.

## U. S. Biosphere Reserves Survey, 2003

### Summary and Conclusions

The 2003 Survey of U.S. Biosphere Reserves was concluded on September 22, 2003. On that same day the Department of State released a fact sheet stating that the United States had decided to rejoin the United Nations Educational, Scientific and Cultural Organization (UNESCO) and fully support its mission. Then on September 29<sup>th</sup>, first lady Laura Bush announced before a large international audience at UNESCO headquarters in Paris that the United States was ready to become actively involved again in UNESCO as of October 1<sup>st</sup>, and she stressed the importance of UNESCO's mission in the world.

One of UNESCO's important missions, which the United States actively promoted and helped to develop, is the establishment of a worldwide network of Biosphere Reserves. Forty-seven U. S. Biosphere Reserves participated in this program

In October 2000, the responsibility for the USMAB program was transferred from the Department of State to the Department of Agriculture, Forest Service. In May 2003 participants at the Fifth Conference of Science and Management of Protected Areas Association (SAMPAA), held in Victoria, BC, Canada, unanimously resolved to support the biosphere reserves program as a practical means to achieve collaboration, and to establish an effective and functional North American Biosphere Reserve network. At the same time the Forest Service restarted its efforts to establish a home and a new vision and mission for USMAB.

The United States Biosphere Reserves Association (USBRA) developed and conducted the 2003 survey to ask Biosphere Reserve managers or representatives for their input on the state and future of U. S. Biosphere Reserves and to compare the results with a similar survey conducted in 1995. (See Appendix B)

From the information compiled in this survey, we derive the following significant conclusions:

1. Most respondents perceive that there are several categories of obvious to highly significant management benefits of Biosphere Reserve status for their units and region. (Since the biosphere reserve program has been inactive in most areas for almost a decade, this response is notable.)
2. Almost all respondents say that support for the biosphere reserve program can be increased.
3. Ninety percent of the units are interested in planning a renewed program. Three-quarters of the areas are interested in planning collaborative activities with Canada and Mexico.
4. Thirty-four areas report that they have received expressions of concern or opposition to the biosphere reserve vs. 27 that have not. (The respondents were not asked to report the number of expressions of concern or opposition received in a given period of time, so the extent and degree of opposition cannot be

determined. However, only four areas reported that there was organized opposition.)

5. The greatest needs are:
  - Resources to implement biosphere reserve functions
  - Staff support to implement biosphere reserve functions
  - An enthusiastic local constituency for biosphere reserves through public education and local participation
  - More communication among biosphere reserve managers
  - Policy and guidance from home/host agencies/organizations

Other comments regarding needs emphasized that people do not know about Biosphere Reserves and their mission, so stronger public relations, education and participation programs were recommended by several respondents.

Biosphere Reserves with multiple units have special needs in that they require communication and coordination among their units, and funding for collaborative activities. For example, the coordinator for the Golden Gate Biosphere Reserve units describes the main stumbling block to establishing a significant program as a lack of core funding. This is a common problem that could be solved if USMAB and member agencies and organizations develop a strong mandate and support for integrating today's relatively independent science and resource management programs into systems that meet the needs of Biosphere Reserves, their communities, and their regions. In 1979, the Office of Science and Technology Policy (OSTP) and the Office of Management and Budget (OMB) recognized the value of MAB as an effective integrating mechanism for federal agency science and natural resource management programs. It is possible to integrate today's relatively independent science and resource management programs into systems that are more efficient and economical, and these can serve as models for adaptive management for sustainability of regions. A case study of the Southern Appalachian Biosphere Reserves and the SAMAB Program would provide useful guidance for efforts toward developing these models.

## 1. Introduction and Purpose

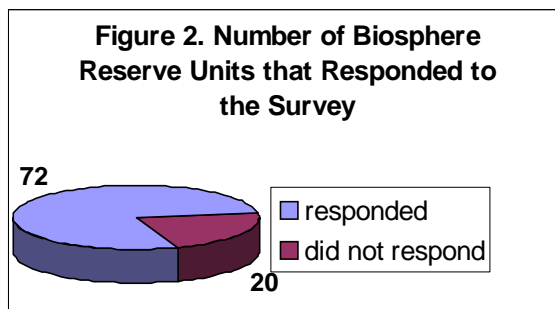
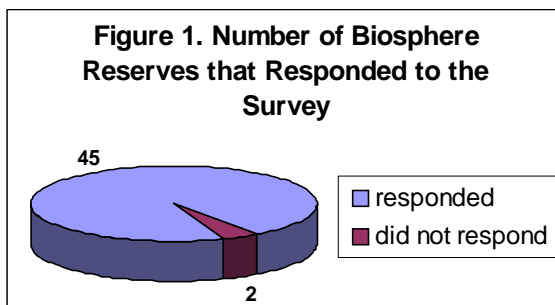
This survey was conducted to seek the input of biosphere reserve managers regarding the status of their biosphere reserves, and the reserves' capacity for future participation in a renewed program and in developing collaborative activities with Canadian and Mexican Biosphere Reserves. The results will be used along with those of a 1995 survey to help establish a new vision, mission and objectives for the U.S. Man and the Biosphere (USMAB) Program in support of the U.S. Administration's decision to rejoin the UN Educational, Scientific and Cultural Organization (UNESCO), and to participate fully in its mission of science and education, and helping countries protect their natural and cultural heritage.

The renewal of the USMAB Program is under leadership by the U.S. Department of Agriculture, Forest Service, with assistance from participating agencies and the United States Biosphere Reserves Association (USBRA).

The survey was administered by mail and was conducted between July 22 and September 22, 2003. A letter from Dr. Barbara Weber, the Forest Service's Deputy Chief for Research and Development, was sent to the biosphere reserve managers roughly one week prior to delivery of the survey. Because the USMAB program has been inactive for ten years, the contact list of biosphere reserve and biosphere reserve unit managers was somewhat out of date. In many cases, the survey administrators obtained correct contact information. This is reflected in the list of biosphere reserves, included here as Appendix A. There remains the possibility that some biosphere reserve units did not receive the survey because of out-of-date contact information. The introductory letter and the survey are included as Appendices C and D, respectively.

## 2. Response of Biosphere Reserve Representatives

There are 47 U.S. Biosphere Reserves, 10 of which have multiple units. One or more representatives from 45 of the 47 Biosphere Reserves, or 96%, responded to the survey. Representatives from 72 of the 92 units, or 78%, responded. Appendix A lists all the U.S. Biosphere Reserves.



**3. Does your area participate now?**

It is beneficial, when planning to rejuvenate an organization, to know the extent to which its participants still identify with the goals of the organization. Accordingly, two questions sought whether the units identified with biosphere reserve goals and whether their programs were consistent with biosphere reserve goals. Responses to these questions are reflected in Table 1. Although slightly less than half of responding units explicitly identify with the goals of biosphere reserves, a large majority of units, 86% of them, have programs that are consistent with the goals.

	Yes	No
Program identifies with Biosphere Reserve goals	24	28
Program is consistent with Biosphere Reserve goals	44	7

**4. Who participates?**

A wide range of types of groups are involved in the biosphere reserves' programs (see Table 2). Universities and other research organizations are involved at nearly every unit,<sup>1</sup> suggesting that the units have active research programs. Many of the units are lands held in trust by the Federal or state governments, so their frequent and significant participation is expected.

Local governments are involved extensively or substantially in 36% of the units. Another 32% of units report some involvement of local governments.

Among the organizations not significantly involved are religious and service organizations, foreign governments and international agencies, and other biosphere reserves. The latter demonstrates an absence of collaboration and information exchange among U.S. biosphere reserves.

Universities/research institutions	43
Federal agencies	41
State and regional agencies	30
Local staff	30
Conservation groups	25
Local governments	19
Schools	18
Resource users	16
Citizen volunteers	15
Foundations	9
Commercial enterprises	7
Native Americans	6
Economic development groups	5
Other Biosphere Reserves	4
International agencies and organizations	3
Foreign government agencies	3
Service organizations	1
Religious organizations	0

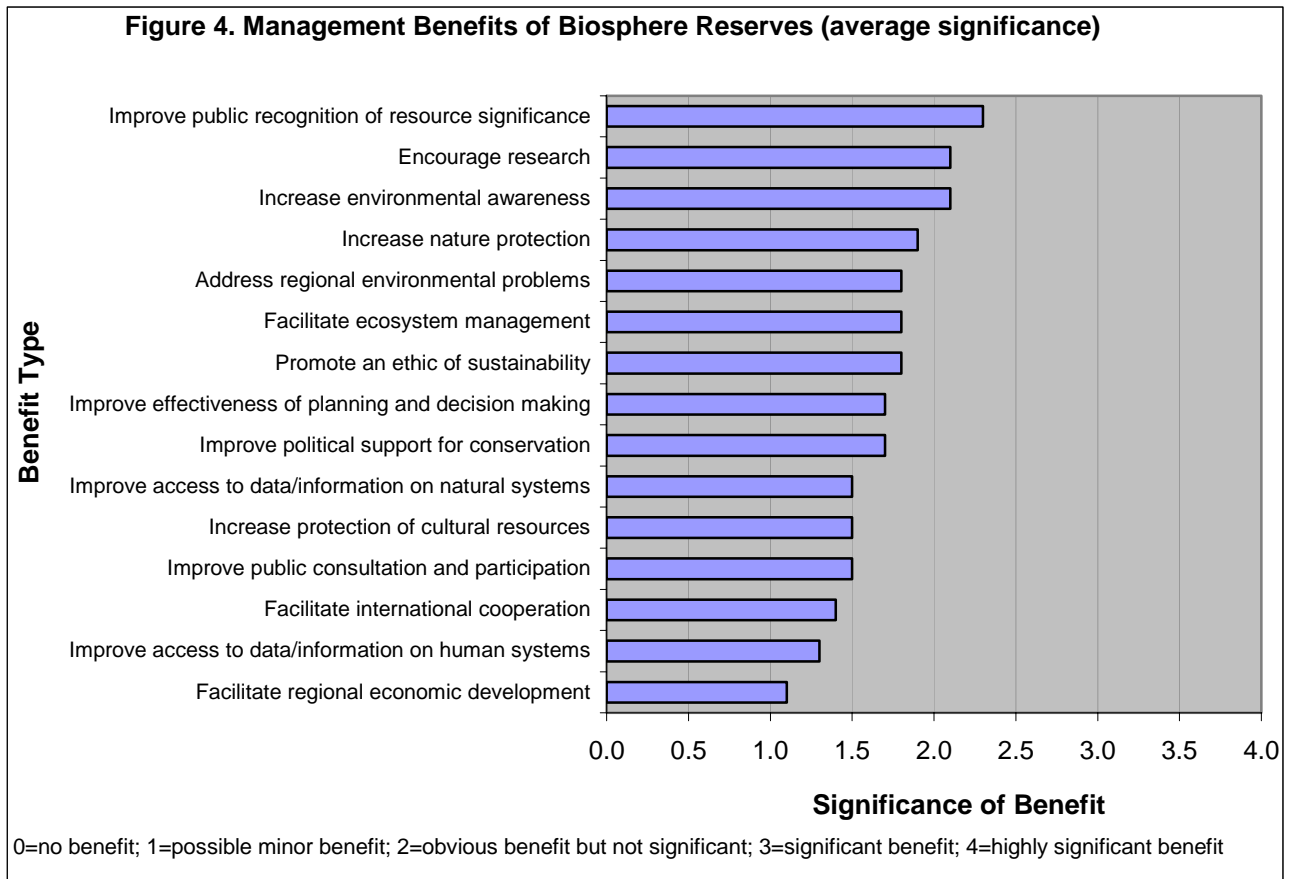
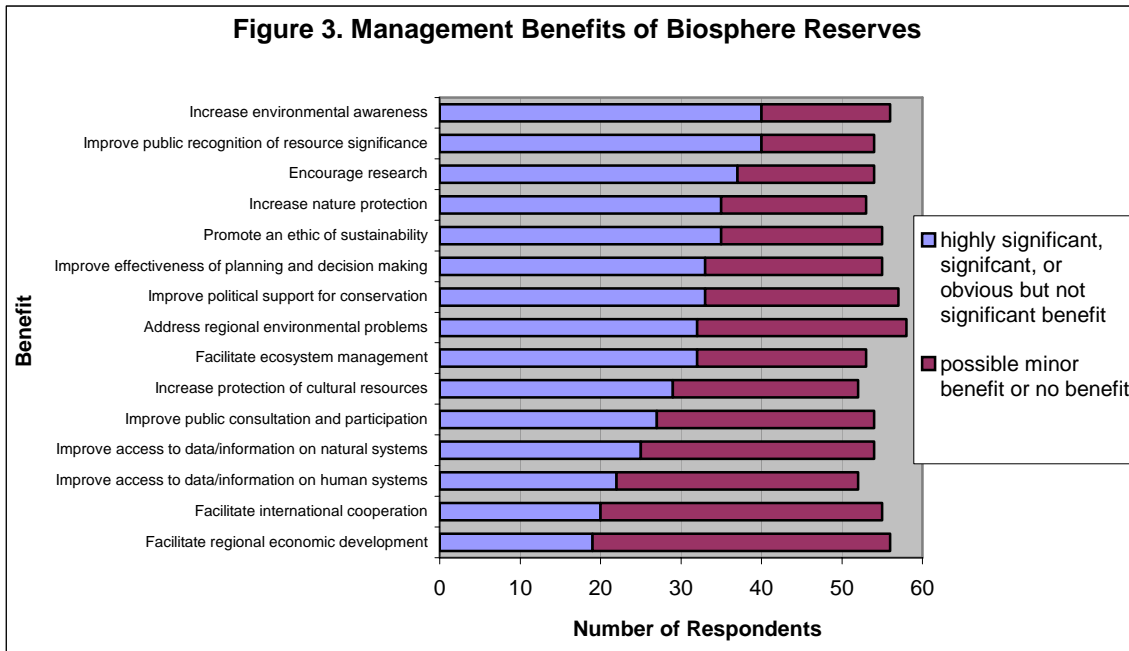
\* other categories of participation from which respondents could select were "some," "little," or "no" participation  
 \*\* n ranged from 46-50.

<sup>1</sup> This question was directed only to respondents who reported that their program identified with biosphere reserve goals or was consistent with biosphere reserve goals.

## 5. Management benefits of biosphere reserves

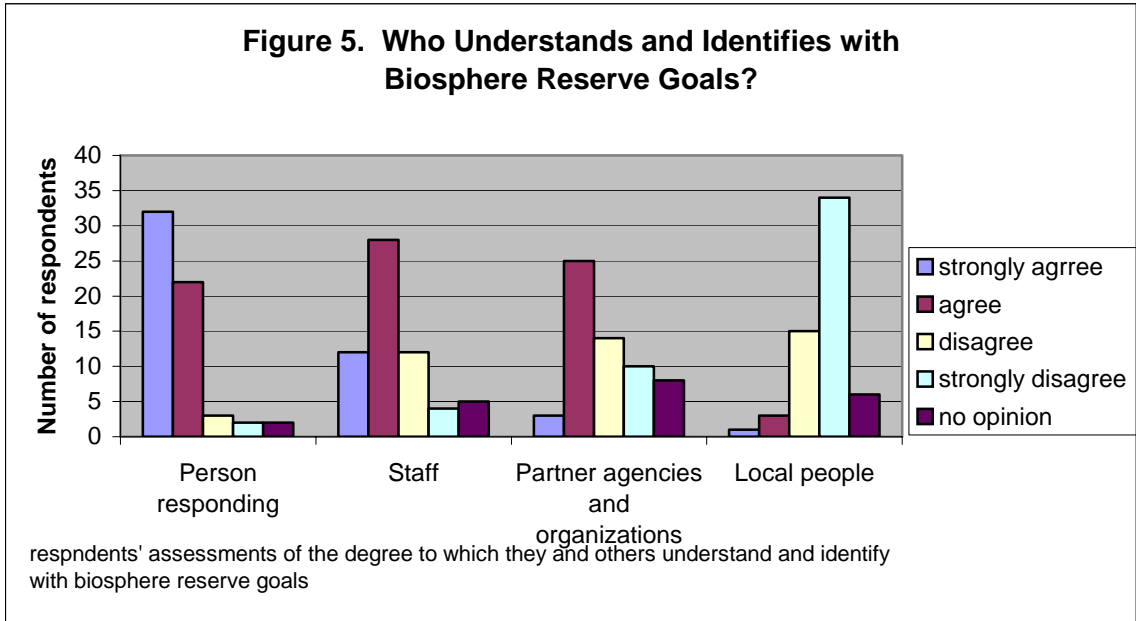
Respondents rated the significance of fifteen types of benefits that might be derived from status as a biosphere reserve. Using a five-point scale, respondents reported that the most significant benefits of biosphere reserve status are the improvement in public recognition of the resource significance, encouraging research, and increases in environmental awareness. Tallies of responses are provided in Table 3. The number of units that assigned highly significant, significant, or obvious benefit to the various types of benefits is identified in Figure 3. The average benefit rating assigned by respondents is reported in Figure 4.

<b>Table 3. Management Benefits of Biosphere Reserves (number of respondents citing <i>x</i> benefit level)</b>					
Benefit type	Highly significant benefit	Significant benefit	Obvious, but not significant	Possible minor benefit	No benefit
<i>Conservation</i>					
Public recognition of resource	10	16	14	9	5
Nature protection	3	14	13	10	8
Environmental awareness	6	10	24	10	6
Political support for conservation	1	12	20	13	11
<i>Cooperation</i>					
Public consultation and participation	2	6	19	16	11
Ecosystem management	5	10	17	14	7
International cooperation	4	5	11	22	13
<i>Information and communication</i>					
Research	10	8	19	9	8
Access information- natural systems	4	7	14	16	13
Access information- human systems	2	6	14	15	15
<i>Sustainable development</i>					
Promote ethic of sustainability	4	8	23	10	9
Address regional environmental problems	3	11	18	16	10
Facilitate regional economic development	2	3	14	13	24
Improve cultural resource protection	2	8	19	11	12
<i>Planning and operations</i>					
Improve planning and decision making	2	12	9	10	12
<b>Totals</b>	<b>60</b>	<b>134</b>	<b>258</b>	<b>193</b>	<b>162</b>



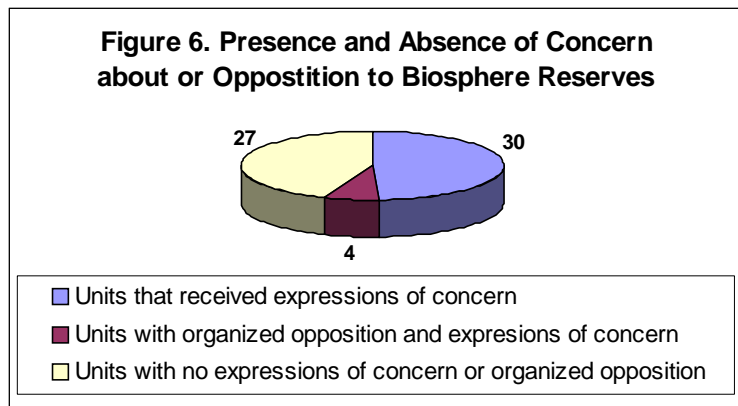
### 6. Who identifies with the goals?

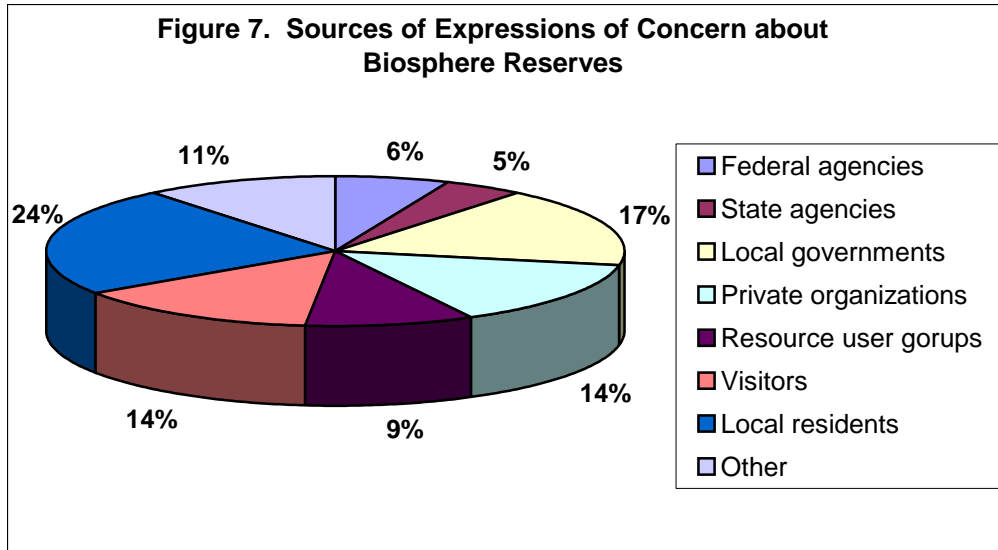
The survey asked respondents to address who—from among a set of parties that interact with biosphere reserves—understands and identifies with biosphere reserve goals. Respondents reported that they, themselves, do understand and identify with biosphere reserve goals. They report somewhat less understanding from their staff and partner agencies. Notably, they report relatively little understanding of biosphere reserve goals by local people.



### 7. Who's concerned or opposed?

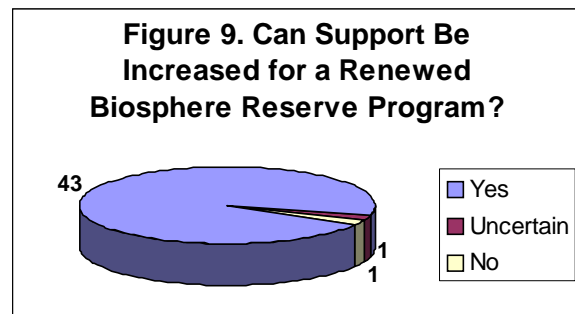
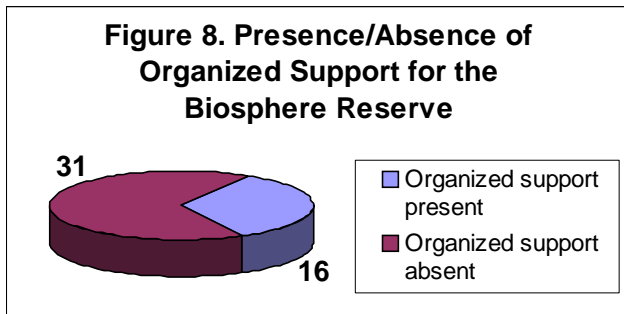
The survey sought information about expressions of concern or opposition to and organized opposition to biosphere reserves. Figure 6 presents a summary of this information. Forty-four percent of the reporting units report having no expressions of concern about or organized support to the biosphere reserve. Nearly half of respondents have had some expression of concern about the biosphere reserve. Based on the phrasing of the question, even an isolated expression of concern at any point in the reserve's history would have caused units to fall within this category. Only four reporting units—or 7%—have organized opposition to them. Figure 7 addresses the sources of the expressions of concern.





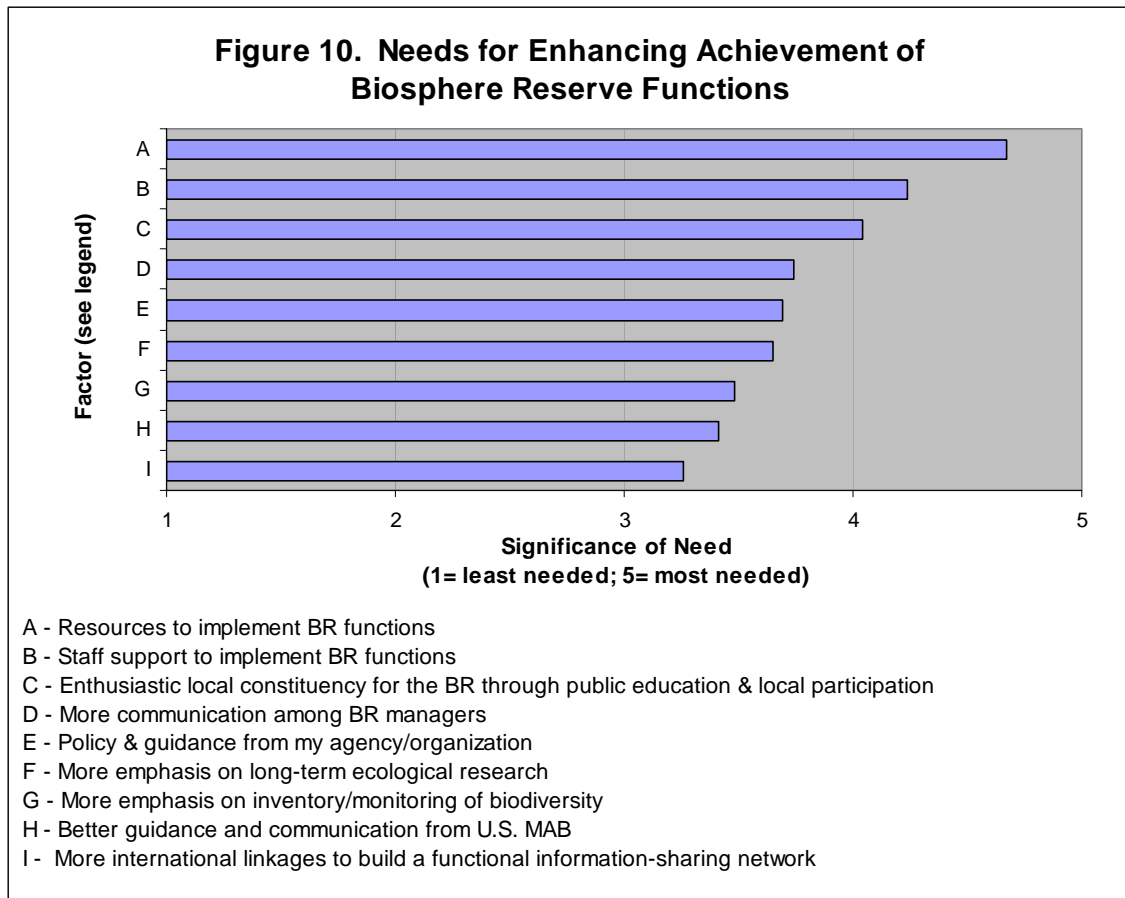
**8. Is there organized support for the biosphere reserve program?**

Respondents report organized support present for 34% of the units, and opportunity for improving support in nearly every unit. See Figures 8 and 9.



**9. What's needed?**

Respondents rated nine categories of potential needs for their importance. All the types of needs listed are considered by respondents, on average, to be at least of moderate significance. The two top needs relate to resource needs. The second two relate to public education and support, and information exchange across biosphere reserves. These are two areas in which the USBRA intends to focus its activities. The relative unimportance of international linkages—this item ranked last among the types of needs, but still falls above a “moderate” ranking—is somewhat inconsistent with respondents interest in planning collaborative activities with Canadian and Mexican Biosphere Reserves. Seventy-four percent of respondents expressed interest in planning collaborative activities with Canada and Mexico (see Section 10).



To a question asking about other needs—in addition to those already listed—respondents suggested the following:

- More information about Biosphere Reserve and their functions. People don't know about biosphere reserves.
- The public should be made aware of the benefits of the program. More local publicity is needed.
- Education tools for a general audience; accessible, user-friendly information exchange.
- Specific education goals with local schools. Goals have to be long-term and consistent.
- A clear mission.
- Education programs to connect the program with the concept of sustainability.
- Better awareness of what is available to biosphere reserve managers through the MAB Program.
- Provide a framework for data sharing among biosphere reserves, especially those with similar ecological functions.
- Workshops on mutual areas of interest, and meeting with other biosphere reserve managers.
- A "Friends of the Biosphere Reserve" could be established in conjunction with existing Friends groups.

- More activity at the national level; policy level support, direction and resources.
- More private sector participation.
- Regional and national backing and funding; more state-local participation.
- A consistent congressional commitment.
- A more realistic biosphere reserve unit size.
- Support can be increased through international cooperation.
- The focus of the program should be on other countries and the leverage the program provides them in establishing and building their biosphere reserves.

## 10. Interest in future participation

<b>Biosphere Reserve Units' Expressions of Interest in Future Participation</b>			
	Yes	No	Possibly
Participate in planning a renewed Biosphere Reserve Program	51	5	-
Interested in planning collaborative activities with Canadian and Mexican Biosphere Reserves	43	11	4

Thirty-six units identified specific areas of interest for collaborative activities. These are listed in Appendix B.



**U.S. Biosphere Reserves  
October 2003**

- = Biosphere Reserve  
 X = Responded to survey  
 O = Did not respond

Below is a list of U.S. Biosphere Reserves and their administrative unit(s), if applicable. The (\*\*\*\*) indicates the ownership or administering entity for each site. The following acronyms are used:

- NPS - National Park Service, Department of Interior  
 NOAA - National Oceanic and Atmospheric Administration, Department of Commerce  
 FWS - U.S. Fish & Wildlife Service, Department of Interior  
 FS - Forest Service, Department of Agriculture  
 ARS - Agricultural Research Service, Department of Agriculture  
 DOE - Department of Energy  
 BLM - Bureau of Land Management, Department of Interior  
 Private - Denotes Some Form of Private Ownership  
 Complex - Denotes Multiple Ownership

■	X	Aleutian Islands National Wildlife Refuge	FWS
■	X	Beaver Creek Experimental Watershed	FS
■	X	Big Bend National Park	NPS
■	X	Big Thicket National Preserve	NPS
■	X	California Coast Ranges Biosphere Reserve (8 units)	
	O	Elder Creek Area of Critical Environmental Concern	BLM
	O	Heath & Marjorie Angelo Coast Range Preserve	U of CA
	X	Jackson Demonstration State Forest	CA Dept. of Forests
	X	Landels-Hill Big Creek Reserve	U of CA
	O	Redwood Experimental Forest	FS
	X	Redwood National Park	NPS
	X	North Coast Redwoods District State Park (3 sub-units)	
	X	Del Norte Coast Redwoods State Park Jebediah Smith Redwoods State Park Prairie Creek Redwoods State Park	CA Dept. of Parks and Recreation
	O	Western Slopes of Cone Peak, Los Padres National Forest	FS

☐	X	Carolinian-South Atlantic Biosphere Reserve (11 units)	
	O	Blackbeard Island and Wolf Island National Wildlife Refuges	FWS
	O	Cape Lookout National Seashore	NPS
	O	Cape Romain National Wildlife Refuge	FWS
	O	Capers Island Heritage Preserve	SC Department of Natural Resources, Marine Resources Division
	X	Cumberland Island National Seashore	NPS
	O	Gray's Reef National Marine Sanctuary	NOAA
	X	Hobcaw Barony (North Inlet)	Complex Private
	O	Little St. Simons Island	Private
	O	Santee Coastal Reserve and Washo Reserve	SC Dept. of Natural Resources; The Nature Conservancy
	X	Tom Yawkey Wildlife Center	SC Dept. of Natural Resources
☐	X	Cascade Head Experimental Forest & Scenic Research Area	FS
☐	X	Central California Coast Biosphere Reserve	
☐	X	Central Gulf Coastal Plain Biosphere Reserve	
	X	Appalachicola National Estuarine Research Reserve	NOAA
☐	X	Central Plains Experimental Range	ARS
☐	X	Champlain-Adirondack Biosphere Reserve (3 units)	
	O	Adirondack Park Agency	Private
	X	Green Mountain National Forest	FS
	O	Mount Mansfield State Natural Area	VT Agency of Natural Resources
☐	X	Channel Islands Biosphere Reserve (2 units)	
	X	Channel Islands National Park	NPS
	O	Channel Islands National Marine Sanctuary	NOAA
☐	X	Coram Experimental Forest	FS
☐	X	Denali National Park and Biosphere Reserve	NPS
☐	X	Desert Experimental Range	NPS
☐	X	Everglades National Park (with Dry Tortugas National Park)	NPS

☐	X	Fraser Experimental Forest	FS
☐	X	Glacier Bay-Admiralty Island Biosphere Reserve (2 units)	
	X	Admiralty Island National Monument	FS
	X	Glacier Bay National Park and Preserve	NPS
☐	X	Glacier National Park	NPS
☐	X	Golden Gate Biosphere Reserve (15 units)	
	X	Audubon Canyon Ranch	
	O	Bolinas Lagoon Preserve and Cypress Grove Preserve	Private
	O	Bodega Marine Reserve	U of CA
	O	Cordell Bank National Marine Sanctuary	NOAA
	X	Farallon National Wildlife Refuge	FWS
	X	Golden Gate National Recreation Area (manages Pt. Reyes, Muir Woods, Ft. Point)	NPS
	X	Gulf of the Farallones National Marine Sanctuary	NOAA
	O	Jasper Ridge Biological Preserve	Stanford U
	O	Marin Municipal Water District	Marin County, CA
	O	Mount Tamalpais State Park	CA Dept. of Parks and Recreation
	X	Point Reyes National Seashore	NPS
	X	Presidio Trust	
	O	San Francisco Peninsular Watershed	City of San Francisco, CA
	X	Tomales Bay State Park	CA Dept. of Parks and Recreation
	X	Samuel P. Taylor State Park	CA Dept. of Parks and Recreation
☐	X	Guanica Commonwealth Forest Reserve	Puerto Rico Dept. of Natural Resources
☐	X	Hawaiian Islands Biosphere Reserve (2 units)	
	O	Hawaiian Volcanoes National Park	NPS
	X	Haleakala National Park	NPS
☐	X	H.J. Andrews Experimental Forest	FS
☐	X	Hubbard Brook Experimental Forest	FS
☐	X	Isle Royale National Park	NPS
☐	X	Jornada Experimental Range	ARS
☐	O	Konza Prairie Research Natural Area	The Nature Conservancy

☐	X	Land Between the Lakes	Tennessee Valley Authority
☐	X	Luquillo Experimental Forest	FS
☐	X	Mammoth Cave Area Barren River Area Development District, BRADD	NPS and Complex
☐	X	Mojave & Colorado Deserts Biosphere Reserve (5 units)	
	O	Anza-Borrego Desert State Park	CA Dept. of Parks and Recreation
	O	Death Valley National Monument	NPS
	O	Joshua Tree National Monument	NPS
	X	Philip L. Boyd Deep Canyon Desert Center	U of CA
	O	Santa Rosa Wildlife Management Area, San Bernadino National Forest	FS
☐	X	New Jersey Pinelands Biosphere Reserve	Pinelands Commission, Complex
☐	X	Niwot Ridge Biosphere Reserve	U of CO
☐	X	Noatak National Preserve (2 units)	
	X	Gates of the Arctic National Park	NPS
	X	Noatak National Preserve	NPS
☐	X	Olympic National Park	NPS
☐	X	Organ Pipe Cactus National Monument	NPS
☐	X	Rocky Mountains National Park	NPS
☐	X	San Dimas Experimental Forest	FS
☐	O	San Joaquin Experimental Range	ARS
☐	X	Sequoia-Kings Canyon National Parks	
☐	X	South Atlantic Coastal Plain Biosphere Reserve	
	X	Congaree Swamp National Monument	NPS
☐	X	Southern Appalachian Biosphere Reserve (6 units)	
	X	Coweeta Hydrologic Laboratory	FS
	X	Grandfather Mountain	Private
	X	Great Smoky Mountains National Park	NPS
	X	Mt. Mitchell State Park	NC Dept. of Environmental Health & Natural Resources
	X	Oak Ridge National Environmental Research Park	DOE
	X	Tennessee River Gorge	Private
☐	X	Stanislaus-Tuolumne Experimental Forest	FS
☐	X	Three Sisters Wilderness, Deschutes National Forest	FS
☐	X	University of Michigan Biological Station	U of MI

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<input checked="" type="checkbox"/>	X	Virgin Islands National Park & Biosphere Reserve	NPS
<input checked="" type="checkbox"/>	X	Virginia Coast Reserve	The Nature Conservancy
<input checked="" type="checkbox"/>	X	Yellowstone National Park	NPS

## APPENDIX B

**COOPERATION WITH CANADIAN AND MEXICAN BIOSPHERE  
RESERVES: AREAS OF INTEREST  
from Survey of U.S. Biosphere Reserves, September 2003**

The following U. S. Biosphere Reserves are interested in planning collaborative activities with Canada and Mexico as of September 22, 2003:

**Big Bend National Park (NPS)**

Location: Texas (Brewster County); Biogeographic Province: Chihuahuan  
Contact: Dr. Denny Fenn, Southwest Biological Sciences Center, 2255 N. Gemini Drive, Flagstaff, AZ 86001; ph. 928 556 7094

Areas of interest: desert reptiles, water quality and flow, river use along the Rio Grande

**Big Thicket National Preserve (NPS)**

Location: Texas (Ange, Hardin, Tyler Counties); Biogeographic Province: Austroriparian  
Contact: Chuck Hunt, Regional Issues Coordinator, 3785 Milam, Beaumont, TX 77701; ph. 409 839 209; chuck\_hunt@nps.gov

Areas of interest: exchange of information on similar vegetation communities in northern Mexico.

**California Coast Ranges- Jackson Demonstration State Forest (California Dept. of Forests)**

Location: California (Mendocino County); Biogeographic Province: Oregonian  
Contact: Marc J. Jamieson, Jackson Forest, 802 N. Main St., Fort Bragg, CA 95437; Marc.jamieson@fire.ca.gov

Areas of interest: Sharing forest management and ecosystem research ideas and results; promoting forest research and attracting funding and researchers; shared tours or other forms of communication; shared promotion and study of sustainable resource management.

**California Coast Ranges- Redwood National and State Parks**

Location: California (Del Norte, Humboldt Counties); Biogeographic Province: Oregonian  
Contact: Aida Parkinson, Environmental Specialist, Redwood National and State Parks, P.O. Box 7, Orick, CA 95555; ph. 707 464 6101 x5203; aida\_parkinson@nps.gov  
Areas of interest: Effects of timber management on watershed structure and function; old growth forest ecology and community structure; near-shore marine ecosystems

**Carolinian-South Atlantic- Cumberland Island National Seashore (NPS)**

Location: Georgia (Camden County); Biogeographic Province: Carolinian-South Atlantic  
Contact: Andy Ferguson, Cumberland Island National Seashore, P.O. Box 806, St. Mary's GA 31558; Andy\_Ferguson@nps.gov

Areas of interest: Migratory birds; long-term ecological research; sea-level changes

**Carolinian-South Atlantic- Hobcaw Barony (North Inlet)**

Location: South Carolina (Georgetown County); Biogeographic Province: Carolinian-South Atlantic

Contact: Dennis H. Allen, Director, The Baruch Marine Field Laboratory, University of South Carolina, Columbia, SC 29208; ph. 803 777 5288

Area of interest: Ecological research and long-term monitoring

**Cascade Head Experimental Forest and Scenic Research Area (USFS)**

Location: Oregon (Grant County); Biogeographic Province: Oregonian

Contact: Sarah Greene, Manager, Forest Ecologist, Pacific NW Research Station, Forest Service Lab, 3200 Jefferson Way, Corvallis, OR 97331; ph. 541 570 7360; sgreene@fs.fed.us

Areas of interest: long-term forest research plots

**Central Gulf Coastal Plain- Apalachicola National Estuarine Research Reserve (Florida Department of Environmental Protection)**

Location: Florida (Franklin County); Biogeographic Province: Austroriparian, (Louisiana-Gulf of Mexico)

Contact: Seth Blich, Manager, Marjory Stoneman Douglas Building, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000

Areas of interest: Collaboration on a variety of projects- Monarch butterfly migration; upland, wetland, marine, estuarine resource management, education and outreach.

**Central Plains Experimental Range (USDA- Agricultural Research Service)**

Location: Colorado (Weld County); Biogeographic Province: Grasslands

Contact: Jack Morgan, Research Leader, Rangelands Resources Research Unit, 1701 Center Avenue, Ft, Collins, CO 80526; ph. 307 772 2433 x 103

Areas of interest: As a USDA Agriculture Research Service Station, and member of the NSF- funded Long Term Ecological Research (LTER) network, the Station does considerable research in grassland ecology, with emphasis in land and atmosphere interactions, global change biology, grazing systems research, weed invasions, biodiversity, paleo-ecology etc. This is one of the most active and productive grassland research stations in the world, and could serve as a source of information on many topics important to biosphere reserves.

**Channel Islands (NPS)**

Location: California (Santa Barbara, Ventura Counties); Biogeographic Province: Californian-Subtropical East Pacific

Contacts: Russell Galipeau, Superintendent, Channel Islands National Park, 1901 Spinnaker Drive, Ventura, CA 93001; ph. 805 658 5702; fax 805 658 5799; email: Russel\_Galipeau@nps.gov; and: Gary E. Davis, Visiting Chief Scientist, Ocean Programs, U. S. National Park Service, Washington, D.C. 20005; ph. 202 513 7178 or 805 658 5707; Email: Gary\_Davis@nps.gov

Areas of interest: Marine reserves and island ecological restoration

### **Coram Experimental Forest (USFS)**

Location: Montana (Missoula County); Biogeographic Province: Rocky Mountains  
Contact: Dr. Ward McCaughey, Forestry Sciences Lab, P.O. Box 8089, Missoula, MT 59807; ph. 406 329 2125; fax 406 329 2124; Email: wmccaughey@fs.fed.us

Areas of interest: Coram supports the continuation of cooperative Biosphere Reserve activities with Glacier National Park and Waterton Lakes National Park. The central issue facing the Biosphere Reserve managers is to engage a changing and rapidly growing population in understanding and supporting ecosystem uses that are compatible with sustaining the remarkable biological diversity in these watersheds. (U. S. MAB, 1995, "Biosphere Reserves in Action, Case Studies of the American Experience")

### **Denali National Park and Preserve (NPS)**

Location: Alaska; Biogeographic Province: Yukon Taiga  
Contact: Philip N. Hooge, PhD, Assistant Superintendent for Resources, Science and Learning, P.O. Box 9, Denali Park, AK 99755; ph. 907 683 9581; Email: Philip\_hooge@nps.gov

Areas of interest: Collaboration with Canadian Parks would be productive and beneficial.

### **Everglades National Park and Fort Jefferson National Monument (NPS)**

Location: Florida (Collier, Dade and Monroe Counties); Biogeographic Province: Floridian- West Indian, Everglades  
Contact: Robert Johnson, Everglades National Park, 40001 State Road 9336, Homestead, FL 33034; ph. 305 224 4240

Areas of interest: Information sharing. Principal monitoring and research themes are ecosystem restoration, surface hydrology, water quality, marine ecosystems, and vertebrate ecology.

### **Glacier National Park (NPS)**

Location: Montana (Flathead, Glacier Counties); Biogeographic Province: Rocky Mountains  
Contact: Bruce Hayden, Regional Issues Specialist, Glacier National Park, West Glacier, MT 59936; ph 406 888 7913; fax: 406 888 7946; Email: bruce\_hayden@nps.gov

Areas of interest: The Waterton Biosphere Reserve in Canada is already linked with the Glacier Biosphere Reserve in many ways (a joint World Heritage site). Areas of interest include heritage tourism and sustainable economic development.

**Glacier Bay-Admiralty Island (USFS)**

Location: Alaska; Biogeographic Province: Sitkin

Contact: Lance Lirum, Fish, Wildlife and Ecology Biologist, Admiralty National Monument, 8465 Old Dairy Road, Juneau, AK 99801: ph. 907 790 7479; Email: llirum@fs.fed.us

Areas of interest: Sharing with Canadian reserves that have similar habitats. Primary interest would be in “what works” for various ecological and sociological problems and study areas.

**Golden Gate- Audubon Canyon Ranch**

Location: California; Biogeographic Province: Californian

Contact: Daniel Gluesenkamp, Ph.D., Audubon Canyon Ranch, Habitat Protection and Restoration, P.O. Box 1195, Glen Ellen, CA 95476; ph. 707 935 8417; Email: gluesenkamp@egret.org

Areas of interest: Invasive species; research along latitudinal gradients; strategies and methods for integration of local populations into conservation plans.

**Golden Gate- Golden Gate National Recreation Area (NPS)**

Location: California (Marin, San Francisco Counties); Biogeographic Province: Californian

Contact: Daphne Hatch, Chief of Natural Resource Management and Science, or Brian O’Neil, Golden Gate National Recreational Area, Fort Mason, Building 201 San Francisco, CA 94123; email GOGA\_Superintendent@nps.gov

Areas of interest: Possibly extend an existing program through Partners-in- Flight and Park Flight programs and their collaborators in the U.S. and Central America.

**Golden Gate- Gulf of the Farallones National Marine Sanctuary (National Oceanic and Atmospheric Administration)**

Location: California; Biogeographic Province: Californian- Temperate East Pacific

Contact: Edward Ueber, Cordell Bank and Gulf of the Farallones, Fort Point Building, San Francisco, CA 90123

Areas of interest: Marine/terrestrial interactions, ecosystem restoration, traditional land use systems, wildlife population dynamics are principal monitoring and research themes.

**Guanica and Luquillo (Guanica- Puerto Rico Department of Natural Resources and Luquillo Experimental Forest- USFS)**

Location: Puerto Rico; Biogeographic Province: Greater Antillean

Contact: Dr. Ariel Lugo, Director, International Institute of Tropical Forestry, USDA Forest Service, P.O. Box 25000, Rio Piedras, PR 00928-5000; ph. 787 766 5335; fax 787 766 6263; email: [alugo@fs.fed.us](mailto:alugo@fs.fed.us)

Area of interest: Community participation

**H. J. Andrews Experimental Forest and Three Sisters Wilderness (USFS)**

Location: Oregon (Grant, Deschutes, Lane, and Linn Counties); Biogeographic Province: Sierra-Cascade

Contact: Ruby Seitz, Wildlife Biologist, Biosphere Reserve Coordinator, McKenzie Ranger District, 57600 McKenzie Highway, McKenzie Bridge, OR 97413

Areas of interest: Now developing a project with biologists in the Sierra Manantlan Biosphere Reserve in Mexico.

**Hubbard Brook Experimental Forest (USFS)**

Location: New Hampshire (Grafton County); Biogeographic Province: Lake Forest

Contact: Ian Halm, Site Manager, Hubbard Brook Experimental Forest, 234 Mirror Lake Road, Campton, NH 03223; ph. 603 487 7142

Areas of interest: Acid rain research; watershed studies

**Isle Royale**

Location: Michigan (Keweenaw County); Biogeographic Province: Lake Forest- Great Lakes

Contact: Jean Battle, Chief, Natural Resource Management Division, Isle Royale National Park, P.O. Box 39, Houghton, MI 49931; ph. 906 483 3145; Email: [Jean\\_Battle@nps.gov](mailto:Jean_Battle@nps.gov)

Areas of interest: Canada: Boreal forest systems and Great Lakes systems; Mexico: Neotropical migrant species.

**Jornado Experimental Range (USDA Agriculture Research Service)**

New Mexico (Dona Ana County); Biogeographic Province: Chihuahuan

Contact: Dr. Kris Havstad, Jornada Experimental Range, New Mexico State University, P.O. Box 30003- MSC 3JER, Las Cruces, NM 88003-0003; ph. 505 646 4842; [khavstad@nmsu.edu](mailto:khavstad@nmsu.edu)

Areas of interest: The focus of the U.S. Biosphere Reserve Program should be to boost international sites. Jornada is involved in collaborative activities with Mexico, and thinks this works best as a local initiative.

**Mammoth Cave (NPS)**

Location: Kentucky (Emerson, Hart Counties); Biogeographic Province: Eastern Forest

Contact: Jack Eversole, Services Coordinator, Barren River Development District; P.O. Box 90005; Bowling Green, KY 42102; ph 270 781 2381

Areas of interest: Sharing information with both Canada and Mexico, which have significant cave and karst resources. Sharing information would also be helpful in climate monitoring and human response to variability.

**New Jersey Pinelands (Pinelands Commission)**

Location: New Jersey (Atlantic, Burlington, Camden Counties); Biogeographic Province: Eastern Forest

Contact: John C. Stokes, Executive Director, New Jersey Pinelands Commission; P.O. Box 7, New Lisbon, NJ 23413; ph. 609 894 9342

Areas of interest: Sharing research and management experience with Biosphere Reserves that share similar ecological attribute or similar management structure can be very helpful.

**Noatak – Gates of the Arctic National Park Preserve, Yukon-Charley Rivers National Preserve (NPS)**

Location: Alaska; Biogeographic Province: Alaska Tundra

Contact: Tom Liebscher, Chief of Resources, Gates of the Arctic national Park Preserve, 201 First Avenue, Fairbanks, AK 99701; ph. 907 455 0620; fax 907 455 0601; Email: Thomas\_Liebscher@nps.gov

Areas of interest: Collaborative research; migratory birds (Park Flight Program), Convention on Threatened and Endangered Species (CITES)

**Organ Pipe Cactus (NPS)**

Location: Arizona (Pima County); Biogeographic Province: Sonoran

Contact: Bill Wellman, Superintendent, Organ Pipe Cactus National Monument, Route 1, Box 100, Ajo, AZ 85321: ph. 520 387 7661 x 7500; fax 520 387 7144; Email: Bill\_Wellman@nps.gov

Areas of interest: Organ Pipe is part of the International Sonoran Desert Alliance, which is seeking to promote cooperative protection of resources, ecologically sound economic development, and is applying research and local indigenous knowledge to issues and needs. There should be good opportunity for renewed biosphere reserve activity.

**San Dimas Experimental Forest (USFS)**

Location: California (Los Angeles County); Biogeographic Province: Californian

Contact: Peter Wohlgemuth, Forest Manager, San Dimas Experimental Forest, 4955 Canyon Crest Drive, Riverside, CA 92507: ph. 909 680 1538: email: pwohlgemuth@fs.fed.us

Areas of interest: Would entertain the notion of participating in collaborative activities that fit their on-going program. Principal monitoring and research themes are watershed processes; fire effects on ecosystems; evolution research; global climate change; long-term monitoring of hydrology, stream chemistry and climate parameters.

**Sequoia and Kings Canyon National Parks (NPS)**

Location: California (Fresno, Tulare Counties); Biogeographic Province: Sierra-Cascade  
Contact: David M. Graber, PhD, Sr. Science Advisor/ GMP Coordinator, Sequoia and Kings Canyon National Parks, 47050 Generals Highway, Three Rivers, CA 93271-9651; ph. 559 565 3143; fax 559 565 3177; Email: david\_graber@nps.gov

Areas of interest: Areas that clearly demonstrate how there would be either some benefit to our reserve (e.g. improved resource management, better scientific integration, etc.) or strong conservation and economic benefit to the larger region.

**Southern Appalachians- SAMAB Coordinating Office**

Location: Tennessee (Knox County); Biogeographic Province: Eastern Forest  
Contact: Robb Turner, Executive Director, Southern Appalachian Man and the Biosphere Program (SAMAB), 314 Conference Center Building, Knoxville, TN 37996-4138: ph. 865 974 4583; fax 865 974 4609

Areas of interest: Holding workshops and meetings; developing a North American information network based on the Southern Appalachian Information Node (SAIN) of the National Biological Information Infrastructure (NBII)

**Southern Appalachians- Grandfather Mountain**

Location: North Carolina; Biogeographic Province: Eastern Forest  
Contact: Harris Prevost, Grandfather Mountain, P.O. Box 129, Linville, NC 28646; ph. 1-800 468 7325; Email: Harris@grandfather.com

Area of interest: Information sharing and hosting of meetings with Canadian and Mexican Biosphere Reserve representatives.

**Southern Appalachians- Great Smoky Mountains National Park**

Location: Tennessee (Blount Cocks, Sevier Counties); North Carolina (Haywood, Swain Counties)  
Contact: Lawrence A. Hartmann, PhD., Chief, Resource management and Science, Great Smoky Mountains National Park, 107 Park Headquarters Road, Gatlinburg, TN 37738; ph. 865 436 1245; Email: larry\_hartmann@nps.gov

Areas of interest: Preservation and research activities. Migratory birds are a natural fit.

**Southern Appalachians- Coweeta Hydrologic Laboratory (USFS)**

Location: North Carolina (Macon County)  
Contact: Jim Vose, Coweeta Hydrologic Laboratory, 3160 Coweeta Lab Road, Otto, NC28763-9218; ph. 828 524 2128; fax 828 369 6768

Areas of interest: Comparative studies of watershed hydrology and ecology.

**Southern Appalachians- Oak Ridge National Environmental Research Park  
(Department of Energy)**

Location: Tennessee (Anderson and Roane Counties)

Contact: Dr. Patricia D. Parr, ORNL Area Manager and Research Park Manager, Oak Ridge National Lab, Bldg. 1505, MS 6038, P.O. Box 2008, Oak Ridge, TN 37831-6038; ph. 865 576 8123, Email:par@ornl.gov

Areas of interest: One of our Biosphere Reserve strengths is environmental research; possible areas of collaboration are global climate change, air quality, hydrological and geochemical cycling, ecosystem dynamics and remediation/restoration.

**Southern Appalachians- Mount Mitchell State Park (North Carolina Parks)**

Location: North Carolina

Contact: Jack L. Bradley Jr., Superintendent, Mount Mitchell State Park, 2388 State Highway 128, Burnsville, NC 28714; ph. 828 675 4611; fax 828 675 9655

Areas of interest: Resource management; land protection

**Stanislaus-Tuolumne Experimental Forest**

Location: California (Tuolumne County); Biogeographical Province: Sierra-Cascade

Contact: Glenn Gottschall, Deputy forest Supervisor, or Dan Young, Forest Staff Supervisor, Stanislaus National Forest, 19777, Greenley Road, Sonora CA 95370; ph. 209 532 3671; fax: 209 533 1890; Emails: ggottschall@fs.fed.us; dyoung@fs.fed.us

Area of interest: Principal monitoring and research themes are climate and insects. Collaboration is conditional based on financial support and involvement of research staff.

**Virginia Coast Reserve (The Nature Conservancy)**

Location: Virginia (Northampton County); Biogeographic Province: Virginian-Mid Atlantic

Contact: Stephen N. Parker, Director, Virginia Coast Reserve, The Nature Conservancy, Box 158, Nassawadox VA 23413; ph. 804 442 3049; fax 804 442 5418

Areas of interest: Migratory birds; marine issues; hemispheric planning; research, education, collaboration and information exchange.

## APPENDIX C

(Letter from Dr. Barbara Weber and Vernon Gilbert)  
(not electronically saved)

# United States Biosphere Reserves 2003



Source: <http://www2.unesco.org/mab/bios1-2.html>