



APR 10 1989

United States Department of the Interior

NATIONAL PARK SERVICE

P.O. BOX 37127

WASHINGTON, D.C. 20013-7127



MAR 30 1989

Memorandum

To: Regional Directors and Superintendents
From: Associate Director, Natural Resources
Subject: Results of Inventorying and Monitoring Questionnaire

Attached is a copy of the results of the Inventorying and Monitoring Questionnaire taken in the Spring 1988.

The results were taken from the responses received from each field unit, a copy has been forwarded to each field unit within your Region.

The number of parks answering the questionnaire is 183. The first column represents the number of parks that answered that particular question and the second column is the percent of the 183 parks that answered that particular question.

If you require additional information, please contact Theodore Sudia, Senior Scientist, or Dr. Albert Greene, Jr., Deputy Senior Scientist, (202) 343-2917.

J. Eugene Hester

Attachment

NATIONAL PARK SERVICE

INVENTORY QUESTIONNAIRE

(1988)

Questionnaire Sections:

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INVENTORY OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.*

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
A. BASIC INVENTORY						
1. Does the park have event records						
a. For events that are unique, unusual, or catastrophic (e.g., fire, volcanism, meteorologic events)?	94	52	87	48	24	13
b. For events that reasonably can be expected from historic records (e.g., fire, volcanism, meteorologic events)?	76	42	78	43	18	10
2. Does the park have maps						
a. That use imagery from satellites?	26	14	60	33	25	14
b. That use aerial photography?	125	69	88	48	12	7
c. That are topographic (e.g., 1:24,000 or best available scale)?	151	83	33	48	18	10
B. BIOLOGICAL INVENTORY MAPS						
1. Does the park have						
a. Cover type map?	75	41	39	21	16	9
b. Vegetation type map?	94	52	44	24	13	7
c. Species distribution map?	34	19	22	12	4	2
2. Does the park have permanent transects or plots?	84	46	25	14	13	7
3. Does the park have a species distribution map of animals of special interest in the following groups:						
a. Monera						
(1) Bacteria?	3	2	2	1	1	1
(2) Blue-green algae?	3	2	4	2	1	1

* = Regardless of how a question is phrased, the intent is to learn whether the information is in the park.

INVENTORY OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
b. Protozoa						
(1) Diatoms? _____	2	1	4	2	1	1
(2) Green algae? _____	4	2	6	3	2	1
(3) Marine brown algae? _____	2	1	4	2	3	2
(4) Red marine algae? _____	3	2	3	2	3	2
(5) Slime molds? _____	0	0	3	2	2	1
(6) Flagellates? _____	2	1	4	2	2	1
(7) Ciliates? _____	1	1	4	2	2	1
(8) Parasitic protozoans? _____	2	1	5	3	3	2
c. Fungi						
(1) Aquatic fungi? _____	0	0	3	2	1	1
(2) Water molds? _____	0	0	3	2	1	1
(3) Terrestrial fungi? _____	3	2	4	2	1	1
d. Animals						
(1) Sponges? _____	2	1	4	2	1	1
(2) Jellyfish? _____	1	1	4	2	1	1
(3) Flatworms? _____	2	1	3	2	0	0
(4) Flukes? _____	1	1	3	2	0	0
(5) Tapeworms? _____	1	1	3	2	0	0
(6) Round worms? _____	4	2	4	2	1	1
(7) Mollusks? _____	8	4	8	4	1	1
(8) Segmented worms? _____	4	2	5	3	1	1
(9) Spiders? _____	7	4	8	4	0	0
(10) Crustaceans? _____	5	3	11	6	2	1
(11) Insects? _____	14	8	9	5	2	1
(12) Starfish and Urchins? _____	5	3	7	4	2	1
(13) Vertebrates? _____						
(a) Mammals? _____	41	23	24	13	11	6
(b) Reptiles? _____	24	13	17	9	4	2
(c) Birds? _____	44	24	29	16	8	4
(d) Amphibians? _____	23	13	16	9	4	2
(e) Fish? _____	34	19	22	12	6	3
4. Does the park have a species distribution map of plants of special interest in the following groups:						

INVENTORY OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
4. (continued)						
a. Liverworts and mosses? _____	5	3	6	3	1	1
b. Club mosses? _____	5	3	5	3	1	1
c. Horse tails? _____	9	5	9	5	3	2
d. Ferns? _____	16	9	13	7	4	2
e. Conifers? _____	45	25	29	16	10	5
f. Flowering plants? _____	64	35	34	19	17	9
5. Does the park have home range maps for fauna of special interest in the vertebrate group:						
a. Mammals? _____	33	18	28	15	8	4
b. Reptiles? _____	7	4	12	7	2	1
c. Birds? _____	31	17	25	14	5	3
d. Amphibians? _____	5	3	11	6	1	1
e. Fish? _____	20	11	20	11	2	1
C. SPECIES INVENTORIES						
1. Does the park have a checklist of pre-dominant species or of species of special interest in the following groups of animals:						
a. Insects? _____	28	15	26	14	8	4
b. Starfish and Urchins? _____	4	2	10	5	1	1
c. Vertebrates						
(1) Mammals? _____	115	63	54	30	14	8
(2) Reptiles? _____	86	47	40	22	10	5
(3) Birds? _____	127	70	49	27	15	8
(4) Amphibians? _____	74	41	43	24	8	4
(5) Fish? _____	62	34	40	22	10	5
2. Does the park have a checklist of pre-dominant species or of species of special interest in the following group of plants:						

INVENTORY OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
2. (continued)						
a. Liverworts and mosses? _____	21	12	15	8	5	3
b. Club mosses? _____	21	12	14	8	6	3
c. Horse tails? _____	31	17	17	9	12	7
d. Ferns? _____	48	26	26	14	16	9
e. Conifers? _____	84	46	43	24	23	13
f. Flowering plants? _____	116	64	59	32	29	16
3. Does the park have information that identifies species that are:						
a. Rare? _____	126	69	67	37	18	10
b. Threatened? _____	127	70	62	34	16	9
c. Endangered? _____	129	71	65	36	13	10
d. Exotic? _____	128	70	74	41	21	12
D. POPULATIONS						
1. Does the park have measurements (standard procedures) for the inventory year on dispersion for the following vertebrates:						
a. Mammals? _____	20	11	18	10	8	4
b. Reptiles? _____	6	3	5	3	2	1
c. Birds? _____	20	11	18	10	8	4
d. Amphibians? _____	6	3	5	3	3	2
e. Fish? _____	11	6	12	7	4	2
2. Does the park have measurements (standard procedures) for the inventory year on population size (including density) for the following vertebrates:						
a. Mammals? _____	30	16	25	14	14	8
b. Reptiles? _____	7	4	7	4	1	1
c. Birds? _____	25	14	20	11	7	4
d. Amphibians? _____	5	3	6	3	3	2
e. Fish? _____	11	6	17	9	5	3

INVENTORY OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
3. Does the park have measurements for the inventory year period on age structure of the following vertebrates?						
a. Mammals? _____	13	10	20	11	10	5
b. Reptiles? _____	3	2	4	2	0	0
c. Birds? _____	6	3	6	3	1	1
d. Amphibians? _____	2	1	3	2	0	0
e. Fish? _____	7	4	13	7	3	2
4. Does the park have measurements for the inventory year period on dispersion for the following plants?						
a. Liverworts and mosses? _____	3	2	2	1	0	0
b. Ferns? _____	2	1	4	2	0	0
c. Conifers? _____	16	9	6	3	8	4
d. Flowering plants? _____	27	15	15	8	12	7
5. Does the park have measurements for the inventory year period on population size (including density) for the following plants?						
a. Liverworts and mosses? _____	2	1	2	1	2	1
b. Ferns? _____	1	1	4	2	1	1
c. Conifers? _____	16	9	8	4	10	5
d. Flowering plants? _____	26	14	15	8	13	7
E. MODELS						
1. Does the park have population models for the following animals:						
a. Mammals? _____	12	7	13	7	7	4
b. Reptiles? _____	2	1	5	3	1	1
c. Birds? _____	2	1	7	4	3	2
d. Amphibians? _____	1	1	2	2	0	0
e. Fish? _____	3	2	8	4	4	2

INVENTORY OF GEO-PHYSICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.*

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
A. BASIC INVENTORY						
1. Does the park have event records						
a. For events that are unique, unusual, or catastrophic (e.g., volcanism, fire, meteorologic events)?	101	56	80	44	22	1
b. For events that reasonably can be expected from historic records (e.g., volcanism, fire, meteorological events)?	85	47	77	43	14	
2. Does the park have maps						
a. That use imagery from satellites?	26	14	63	35	20	1
b. That use aerial photography?	122	68	75	42	17	
c. That are topographic (i.e., 1:24,000 or best available scale)?	148	82	83	46	17	
B. GEOLOGY						
1. Has the park developed geologic maps of bedrock at the reconnaissance level:						
a. Using 1:100,000 or 1:250,000 scale?	28	16	43	24	4	
b. Using 1:24,000 or 1:60,000 scale?	39	22	40	22	7	
2. Has the park developed special purpose maps showing						
a. Geology for local mineral deposits or claims?	28	16	45	25	4	
b. Geologic hazards (e.g., flood plain maps)?	52	29	65	36	9	
c. Channels and channel characteristics?	25	14	41	23	6	
d. Conterminous geothermal area activities?	10	6	20	11	6	

* Regardless of how a question is phrased, the intent is to learn whether the information is in the park.

INVENTORY OF GEO-PHYSICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
C. SOILS						
1. Does the park have a soils map for						
a. All the park? _____	70	39	64	36	4	2
b. Certain zones only (e.g., the developed areas)? _____	42	23	25	14	1	1
2. Is the age of the map for the period of						
a. 1970 - present? _____	71	39	39	22	3	2
b. 1950 - 1970? _____	30	17	14	8	1	1
c. 1930 - 1950? _____	5	3	2	1	1	1
d. Prior to 1930? _____	2	1	0	0	1	1
3. At what level of detail is the map:						
a. First order map: development? _____	9	5	7	4	0	0
b. Second order map: standard soil map? _____	73	41	34	19	3	2
c. Fourth order map: reconnaissance? _____	17	9	13	7	0	0
D. HYDROLOGY						
1. Has the park developed watershed maps? _____	29	16	33	18	8	4
2. Has the park developed special purpose maps for						
a. Groundwater (water table)? _____	16	9	25	14	1	1
b. Bathymetry? _____	14	8	14	8	2	1
c. Other? _____ (If other, specify): _____	18	10	10	6	1	1
3. Does the park have inventories that give descriptions of						
a. Streams? _____	56	31	28	16	6	3
b. Lakes? _____	40	22	20	11	6	3
c. Wetlands? _____	40	22	28	16	3	2
d. Groundwater? _____	29	16	29	16	3	2

INVENTORY OF GEO-PHYSICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
4. Does the park have temperature (minimum/maximum) data? _____	101	56	75	42	36	20
5. Does the park have turbidity data? _____	52	29	32	18	17	9
6. Does the park have stage and discharge information? _____	42	23	44	24	25	14
E. METEOROLOGY						
1. Does the park maintain historic records on the following:						
a. Precipitation? _____	117	65	89	49	38	21
b. Air temperature? _____	114	63	84	47	43	24
F. CHEMICAL CONTAINMENT						
1. Does the park maintain inventory of the following:						
a. Chemical control of exotic pests? _____	120	71	38	21	15	8
b. Baseline data on atmosphere input of organic compounds? _____	17	9	25	14	13	7
c. Non-point source surface water contamination? _____	25	14	24	13	9	5
d. Point source surface water contamination? _____	26	14	24	13	5	3
e. Groundwater contamination? _____	16	9	9	5	1	1
G. MODELS						
1. Does the park have hydrologic models for the area? _____	24	13	23	13	9	5
2. Does the park have, or have under development, meteorologic models for the area? _____	17	9	12	7	4	2
a. Any specific to wildfire suppression? _____	19	11	6	3	1	1
b. Any integrated with hydrologic models? _____	5	2	3	2	1	1

INVENTORY OF CHEMICAL ELEMENTS STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column. -- Place an "A" next to the "x" if data can be confirmed by an external laboratory.*

Has the park measured the following elements at any time in the past?	Surface Water		Atmospheric Deposition				Atmospheric			
			Wet		Dry		Gasses		Particulate	
	YES	%	YES	%	YES	%	YES	%	YES	%
1. pH	79	43	39	21	12	7	2	1	14	8
2. Conductivity	64	35	25	14	7	4	0	0	2	1
3. SO ₄ ⁼	35	19	22	12	10	5	3	2	14	8
4. PO ₄ ⁼	34	19	18	10	6	3	0	0	7	4
5. Cl ⁻	39	21	17	9	5	3	1	1	10	5
6. NO ₃ ⁻	44	24	19	10	7	4	2	1	13	7
7. NH ₄ ⁺	34	19	18	10	5	3	1	1	8	4
8. K ⁺	26	14	18	10	6	3	0	0	10	5
9. Na ⁺	32	18	18	10	6	3	0	0	13	7
10. Ca ⁺⁺	36	20	18	10	6	3	0	0	12	7
11. Mg ⁺⁺	32	18	17	9	6	3	0	0	11	6
12. SO ₂	14	8	9	5	4	2	19	10	12	7
13. CO ₂	19	10	5	3	3	2	5	3	3	2
14. O ₃	13	7	5	3	3	2	19	10	6	3
15. HNO ₃ NH ₃ NO _x	8	4	5	3	3	2	6	3	4	2
16. Trace metals	36	20	6	3	3	2	2	1	14	8
17. TSP	20	11	2	1	2	1	2	1	19	10
18. Halogenated hydrocarbons	10	5	2	1	1	1	1	1	2	1

* = a Quality Assurance Plan

INVENTORY OF CHEMICAL ELEMENTS STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column. -- Place an "A" next to the "x" if data can be confirmed by an external laboratory.*

Has the park measured the following elements at any time in the past?	A C C U M U L A T I O N I N									
	Animals		Soils		Live Vegetation		Litter		Lake Cores	
	YES	%	YES	%	YES	%	YES	%	YES	%
1. pH	0	0	15	8	2	1	3	2	5	3
2. Conductivity	5	3	5	3	0	0	1	1	3	2
3. SO_4^-	0	0	6	3	4	2	3	2	2	1
4. PO_4^-	0	0	7	4	3	2	2	1	2	1
5. Cl^-	0	0	3	2	2	1	2	1	1	1
6. NO_3^-	0	0	6	3	2	1	2	1	2	1
7. NH_4^+	0	0	3	2	1	1	2	1	1	1
8. K^+	1	1	10	5	2	1	2	1	1	1
9. Na^+	2	1	6	3	2	1	1	1	2	1
10. Ca^{++}	2	1	5	3	2	1	2	1	2	1
11. Mg^{++}	2	1	8	4	3	2	2	1	0	0
12. SO_2	0	0	2	1	1	1	1	1	0	0
13. CO_2	0	0	0	0	0	0	0	0	0	0
14. O_3	0	0	0	0	4	2	0	0	0	0
15. $\text{HNO}_3\text{NH}_3\text{NO}_x$	0	0	0	0	0	0	0	0	0	0
16. Trace metals	13	7	9	5	7	4	3	2	5	3
17. TSP	1	1	0	0	0	0	0	0	0	0
18. Halogenated hydrocarbons	3	2	2	1	1	1	0	0	1	1

* = a Quality Assurance Plan

INVENTORY OF HUMAN USE (ACTIVITIES) STUDIES

NOTE: Most historic areas of NPS have significant natural resources as well as historic/cultural resources. These park areas' inputs also would be appreciated.

INSTRUCTION: Place an "x" mark in the appropriate column.*

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
A. BASIC INVENTORY						
1. Does the park have event records of unique or unusual anthropological events occurring in/near the park, such as						
a. Migrations? _____	29	16	42	23	4	2
b. Disease epidemics? _____	26	14	40	22	4	2
c. Having to cope with drought? _____	21	12	36	20	2	1
d. Having to cope with flood? _____	34	19	40	22	4	2
e. Crime? _____	49	27	42	27	11	6
f. Other? _____	19	10	14	8	3	2
If other, specify: _____						
2. Do the park's event records indicate how these events affected humans' uses of the park during times of						
a. Migrations? _____	20	11	18	10	3	2
b. Disease epidemics? _____	21	12	20	11	3	2
c. Having to cope with drought? _____	15	8	21	12	2	1
d. Having to cope with flood? _____	26	14	24	13	1	1
e. Crime? _____	27	15	10	10	6	3
f. Other? _____	15	8	10	5	2	1
B. MAPS						
1. Does the park have maps indicating present use of areas for human activities						
a. That are within the park? _____	138	76	64	35	9	5
b. That are on conterminous lands outside the park? _____	82	45	66	36	4	2
2. Does the park have maps that indicate present use of conterminous land where the use flows over onto park land? _____	56	31	45	25	5	3

* Regardless of how a question is phrased the intent is to learn whether the information is in the park.

INVENTORY OF HUMAN USE (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
B. MAPS (continued)						
3. Does the park have maps indicating past use of land areas						
a. Within the park? _____	109	60	73	40	5	3
b. Conterminous with the park? _____	64	35	71	39	3	2
4. Does the park have maps indicating the kinds of park uses of land areas						
a. Within the park? _____	133	73	63	35	6	3
b. Conterminous with the park? _____	66	36	62	34	5	3
C. HUMAN ACTIVITIES						
1. Has the park identified each type of activity present, such as						
a. Farming? _____	82	45	29	16	3	2
b. Grazing? _____	93	51	35	19	2	1
c. Those connected with subsistence? _____	44	24	17	9	2	1
d. Forestry? _____	41	23	23	13	1	1
e. Mining? _____	65	36	30	16	3	2
f. Recreation						
(1) Hunting? _____	76	42	29	16	1	1
(2) Fishing? _____	101	55	31	17	4	2
(3) Skiing? _____	57	31	19	10	2	1
(4) Snowmobiling? _____	44	24	16	9	2	1
(5) Rock climbing? _____	53	29	19	10	1	1
(6) Mountain climbing? _____	35	19	15	8	1	1
(7) Spelunking? _____	33	18	11	6	1	1
(8) Hiking? _____	130	71	35	19	6	3
(9) Backpacking? _____	89	49	23	13	6	3
(10) Camping? _____	102	56	29	16	6	3
(11) Canoeing and/or kayaking? _____	68	37	19	10	3	2
(12) Boating (boat with engine)? _____	53	32	16	9	3	2
(13) Water skiing? _____	37	20	8	4	2	1
(14) Swimming? _____	64	35	19	10	2	1
(15) Sailboating? _____	32	21	9	5	1	1
(16) Scuba diving? _____	39	21	9	5	3	2
(17) Rafting? _____	38	21	13	7	2	1

INVENTORY OF HUMAN USE (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
C. HUMAN ACTIVITIES (continued)						
(18) Hang gliding? _____	30	16	11	6	1	1
(19) Looking at the scenery? _____	138	76	43	24	4	2
(20) Watching historic reenactments? _____	54	30	22	12	1	1
(21) Watching one of the performing arts? _____	43	24	20	11	1	1
(22) Picnicking? _____	146	80	40	22	4	2
(23) Other? _____ If "other," please specify. _____	35	19	8	4	0	0
g. Other? _____ If "other," please specify. _____	12	7	2	1	0	0
2. Has the park quantified the activities occurring within it, such as						
a. Farming? _____	44	24	14	8	3	2
b. Grazing? _____	57	31	17	9	1	1
c. Subsisting? _____	19	10	8	4	0	0
d. Forestry? _____	17	9	11	6	1	1
e. Mining? _____	40	22	18	10	4	2
f. Recreation? _____	115	63	36	20	11	6
g. Other? _____ If "other," please indicate what. _____	9	5	1	1	0	0
D. OWNERSHIP						
1. Has the park identified whether ownership is public or private for each area						
a. Within the park? _____	170	93	73	40	19	10
b. Conterminous with the park? _____	122	67	73	43	13	7
2. Has the park identified the owner for each area						

INVENTORY OF HUMAN USE (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
2. (continued)						
a. Within the park? _____	153	84	63	35	17	9
b. Conterminous with the park? _____	90	49	30	44	8	4
3. Has the park identified the size class for each owner of an area						
a. Within the park? _____	84	46	38	21	15	8
b. Conterminous with the park? _____	37	20	52	29	5	3
4. Does the park have records of the total number of						
a. Public owners? _____	126	69	64	35	20	11
b. Private owners? _____	124	68	63	35	19	10
c. Public and private owners? _____	117	64	59	32	21	12
E. DEMOGRAPHY						
1. Has the park determined the human population in numbers (residents, visitors)						
a. Within the park? _____	147	81	58	32	16	9
b. In areas conterminous with the park? _____	30	16	71	39	6	3
2. Has the park determined age/sex distribution for the human population						
a. Within the park? _____	63	35	40	22	8	4
b. In areas conterminous with the park? _____	10	5	46	25	2	1
3. Has the park determined the educational level of human population						
a. Within the park? _____	44	24	30	16	8	4
b. In areas conterminous with the park? _____	10	5	32	18	6	3
4. Has the park determined the housing types and their locations						

INVENTORY OF HUMAN USE (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
4. (continued)						
a. Within the park? _____	140	77	52	29	16	9
b. In areas conterminous with the park? _____	33	18	57	31	6	3
5. Has the park determined the per capita income of human population						
a. Within the park? _____	36	20	41	23	11	6
b. In areas conterminous with the park? _____	8	4	60	33	7	4
6. Has the park determined the source of income for human population						
a. Within the park? _____	33	18	36	20	8	4
b. In areas conterminous with the park? _____	7	4	52	29	8	4
7. Has the park determined the nationalities of visitors to the park? _____	62	34	28	15	9	5
F. DOMESTIC ANIMALS						
1. Has the park determined the number of individuals of livestock? _____	41	23	15	8	5	3
a. Within the park? _____	76	42	27	15	3	2
b. In areas conterminous with park? _____	11	6	32	18	2	1
2. Has the park determined the number of live-stock species, groups, herds, flocks, gaggles, etc.						
a. Within the park? _____	70	38	29	16	1	1
b. In areas conterminous with park? _____	10	5	30	16	2	1
3. Has the park determined the commercial species used						
a. Within the park? _____	63	35	25	14	3	2
b. In areas conterminous with park? _____	8	4	29	16	4	2

INVENTORY OF HUMAN USES (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
4. Has the park determined the numbers of pets						
a. Within the park? _____	69	38	38	21	1	1
b. In areas conterminous with park? _____	8	4	9	5	1	1
5. Has the park determined the kinds of pets						
a. Within the park? _____	77	42	37	20	1	1
b. In areas conterminous with park? _____	7	4	10	5	1	1
6. Has the park determined the numbers of domestic animals other than pets						
a. Within the park? _____	53	29	24	13	1	1
b. In areas conterminous with park? _____	5	3	11	6	1	1
7. Has the park determined the kinds of domestic animals other than pets						
a. Within the park? _____	58	32	26	14	3	2
b. In areas conterminous with park? _____	7	4	10	5	1	1
G. LEGAL MATTERS						
1. Has the park identified acts, regulations, policies, etc. existing outside the park that affect the park area? _____	146	80	34	40	3	2
2. Has the park identified priorities of management activities related to humans, as to						
a. Type? _____	104	57	40	22	5	3
b. Frequency? _____	102	56	38	21	5	3
c. Scope? _____	100	55	37	20	4	2
H. EDUCATION ACTIVITIES						
1. Has the park identified any research/education/training activities in the area? _____	116	64	56	31	4	2

INVENTORY OF HUMAN USES (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
1. (continued)						
a. If so, has the park documented the type(s) of activity? _____	99	54	46	25	7	4
b. Has the park information, for each activity, as to						
(1) Number of staff? _____	75	41	52	29	7	4
(2) Kind(s) of staff? _____	77	42	52	29	7	4
(3) Budget? _____	62	34	43	26	10	5
(4) Facilities used? _____	74	41	50	27	5	3
I. REGIONAL LAND USE						
1. Has the park identified regional public facilities (e.g., hospitals, labs, libraries, etc.)? _____	135	74	82	45	4	2
2. Has the park identified public utilities available (e.g., water, electricity, etc.)? _____	152	84	86	47	7	4
3. Are there any areas in the park's region where <u>all</u> of the public facilities and utilities have not been identified? _____	42	23	35	19	1	1

NATIONAL PARK SERVICE

MONITORING QUESTIONNAIRE

(1988)

Questionnaire Sections:

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MONITORING OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
A. BASIC INVENTORY						
1. Does the park periodically update event records						
a. For events that are unique, unusual, or catastrophic (e.g., fire, volcanism, meteorologic events)?	92	51	63	35	14	8
b. For events that reasonably can be expected from historic records (e.g., fire, volcanism, meteorologic events)?	74	41	55	30	10	5
B. BIOLOGICAL INVENTORY MAPS						
1. Does the park routinely update						
a. Cover type map?	11	6	13	7	3	2
b. Vegetation type map?	22	12	19	10	4	2
c. Species distribution map?	14	8	13	7	2	1
2. Does the park routinely update permanent transects or plots?	41	23	13	7	11	6
3. Does the park routinely update a species distribution map of animals of special interest in the following groups:						
a. Monera						
(1) Bacteria?	0	0	2	1	0	0
(2) Blue-green algae?	1	1	2	1	0	0
b. Protozoa						
(1) Diatoms?	0	0	0	0	0	0
(2) Green algae?	0	0	1	1	0	0
(3) Marine brown algae?	0	0	1	1	0	0
(4) Red marine algae?	0	0	1	1	0	0

- NOTE: 1. "Periodically" means that the park updates the records at those times when specific issues develop.
2. "Routinely" means that the park updates the data consistently and no less often than seasonally.

MONITORING OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.						
	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
b. (continued)						
(5) Slime molds? _____	0	0	1	1	0	0
(6) Flagellates? _____	0	0	1	1	0	0
(7) Ciliates? _____	0	0	1	1	0	0
(8) Parasitic protozoans? _____	0	0	1	1	0	0
c. Fungi						
(1) Aquatic fungi? _____	0	0	1	1	0	0
(2) Water molds? _____	0	0	1	1	0	0
(3) Terrestrial fungi? _____	1	1	1	1	0	0
d. Animals						
(1) Sponges? _____	3	2	0	0	0	0
(2) Jellyfish? _____	0	0	2	1	0	0
(3) Flatworms? _____	0	0	2	1	0	0
(4) Flukes? _____	0	0	2	1	0	0
(5) Tapeworms? _____	0	0	2	1	0	0
(6) Round worms? _____	0	0	1	1	0	0
(7) Mollusks? _____	2	1	2	1	0	0
(8) Segmented worms? _____	0	0	1	1	0	0
(9) Spiders? _____	2	1	2	1	1	1
(10) Crustaceans? _____	6	3	3	2	1	1
(11) Insects? _____	5	3	4	2	0	0
(12) Starfish and Urchins? _____	1	1	2	1	0	0
(13) Vertebrates? _____						
(a) Mammals? _____	27	15	16	9	4	2
(b) Reptiles? _____	8	4	6	3	2	1
(c) Birds? _____	29	16	13	10	5	3
(d) Amphibians? _____	9	5	5	3	1	1
(e) Fish? _____	17	9	12	7	2	1
4. Does the park routinely update a species distribution map of plants of special interest in the following groups:						

NOTE: 1. "Periodically" means that the park updates the record at those times when specific issues develop.

2. "Routinely" means that the park updates the data consistently and no less often than seasonally.

MONITORING OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.						
	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
4. (continued)						
a. Liverworts and mosses? _____	6	3	5	3	2	1
b. Club mosses? _____	5	3	3	2	2	1
c. Horse tails? _____	5	3	4	2	2	1
d. Ferns? _____	7	4	5	3	3	2
e. Conifers? _____	12	7	6	3	3	2
f. Flowering plants? _____	25	14	11	6	5	3
5. Does the park routinely update home range maps for fauna of special interest in the vertebrate group:						
a. Mammals? _____	23	13	12	7	4	2
b. Reptiles? _____	6	3	3	2	2	1
c. Birds? _____	21	12	12	7	4	2
d. Amphibians? _____	5	3	4	2	1	1
e. Fish? _____	9	5	6	3	3	2
C. SPECIES INVENTORIES						
1. Does the park routinely monitor predominant species or species of special interest in the following groups of animals:						
a. Insects? _____	22	12	9	5	2	1
b. Starfish and Urchins? _____	2	1	2	1	1	1
c. Vertebrates						
(1) Mammals? _____	62	34	25	14	3	4
(2) Reptiles? _____	18	10	12	7	8	4
(3) Birds? _____	59	32	27	15	9	5
(4) Amphibians? _____	14	8	10	5	1	1
(5) Fish? _____	23	13	17	9	3	2
2. Does the park routinely monitor predominant species or species of special interest in the following groups of plants:						

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MONITORING OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
2. (continued)						
a. Liverworts and mosses? _____	23	13	17	9	3	2
b. Club mosses? _____	7	4	4	2	2	1
c. Horse tails? _____	6	3	3	2	2	1
d. Ferns? _____	9	5	5	3	3	2
e. Conifers? _____	22	12	13	7	9	5
f. Flowering plants? _____	37	20	18	10	13	7
3. Does the park routinely monitor information that identifies species that are						
a. Rare? _____	77	42	41	23	8	4
b. Threatened? _____	84	46	43	24	7	4
c. Endangered? _____	75	41	36	20	10	5
d. Exotic? _____	75	41	36	20	10	5
D. POPULATIONS						
1. Does the park routinely monitor dispersion for the following vertebrates:						
a. Mammals? _____	19	10	21	12	3	2
b. Reptiles? _____	8	4	7	4	1	1
c. Birds? _____	15	8	12	7	3	2
d. Amphibians? _____	6	3	7	4	0	0
e. Fish? _____	11	6	14	8	3	2
2. Does the park routinely monitor population size (including density) for the following vertebrates:						
a. Mammals? _____	37	20	23	13	8	4
b. Reptiles? _____	6	3	7	4	1	1
c. Birds? _____	28	15	16	9	7	4
d. Amphibians? _____	7	4	8	4	1	1
e. Fish? _____	14	8	12	7	4	2

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MONITORING OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
3. Does the park routinely monitor age structure of the following vertebrates:						
a. Mammals? _____	18	10	15	8	7	4
b. Reptiles? _____	0	0	2	1	0	0
c. Birds? _____	7	4	3	4	1	1
d. Amphibians? _____	0	0	2	1	0	0
e. Fish? _____	5	3	10	5	3	2
4. Does the park routinely monitor growth of the following vertebrate groups:						
a. Mammals? _____	14	8	11	6	3	2
b. Reptiles? _____	2	1	2	1	2	1
c. Birds? _____	7	4	6	3	1	1
d. Amphibians? _____	2	1	4	2	0	0
e. Fish? _____	9	5	10	5	2	1
5. Does the park routinely monitor recruitment by the following:						
a. Mammals? _____	17	9	12	7	5	3
b. Reptiles? _____	2	1	4	2	0	0
c. Birds? _____	18	10	14	8	4	2
d. Amphibians? _____	2	1	4	2	0	0
e. Fish? _____	3	4	10	5	6	3
6. Does the park routinely monitor productivity of the following:						
a. Mammals? _____	21	12	14	8	4	2
b. Reptiles? _____	3	2	1	1	2	1
c. Birds? _____	18	10	13	7	4	2
d. Amphibians? _____	2	1	3	2	0	0
e. Fish? _____	11	6	12	7	3	2

NOTE: 1. "Periodically" means that the park updates the record at those times when specific issues develop.

2. "Routinely" means that the park updates the data consistently and no less often than seasonally.

MONITORING OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.							
	In the park?		Available to the park?		Are data computer based?		
	YES	%	YES	%	YES	%	
7. Does the park routinely monitor dispersion for the following plants?							
a. Liverworts and mosses? _____	1	1	1	1	0	0	
b. Ferns? _____	2	1	1	1	0	0	
c. Conifers? _____	5	3	3	2	0	0	
d. Flowering plants? _____	12	7	9	5	1	1	
8. Does the park routinely monitor population size (including density) for the following plants?							
a. Liverworts and mosses? _____	2	1	2	1	0	0	
b. Ferns? _____	4	2	2	1	1	1	
c. Conifers? _____	5	3	4	2	1	1	
d. Flowering plants? _____	17	9	7	4	3	2	
9. Does the park routinely monitor age structure for the following plants:							
a. Liverworts and mosses? _____	0	0	1	1	0	0	
b. Ferns? _____	1	1	1	1	0	0	
c. Conifers? _____	4	2	2	1	0	0	
d. Flowering plants? _____	6	3	3	2	1	1	
10. Does the park routinely monitor growth of the following plants:							
a. Liverworts and mosses? _____	4	2	1	1	0	0	
b. Ferns? _____	1	1	1	1	0	0	
c. Conifers? _____	8	4	3	2	2	1	
d. Flowering plants? _____	8	4	4	2	1	1	
11. Does the park routinely monitor productivity of the following plants:							

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MONITORING OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
11. (continued)						
a. Liverworts and mosses? _____	1	1	1	1	0	0
b. Ferns? _____	2	1	1	1	0	0
c. Conifers? _____	3	2	2	1	1	1
d. Flowering plants? _____	6	3	4	2	2	1
E. PHOTOGRAPHY						
1. Does the park routinely monitor (analyze) satellite imagery of						
a. Park land? _____	4	2	23	13	11	6
b. Conterminous lands? _____	3	2	24	13	12	7
2. Does the park routinely monitor high elevation aerial imagery (i.e., 1:60,000 minimum) for						
a. Park land? _____	7	4	22	12	7	4
b. Conterminous lands? _____	6	3	19	10	4	2
3. Does the park routinely monitor low elevation aerial imagery (i.e., 1:24,000 minimum) for						
a. Park land? _____	18	10	16	9	4	2
b. Conterminous lands? _____	11	6	18	10	4	2
4. Does the park periodically make permanent photos of						
a. Species? _____	65	36	26	14	1	1
b. Habitats? _____	67	37	24	13	3	2
c. Present landscape? _____	94	52	29	16	2	1

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MONITORING OF BIOLOGICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
5. Does the park periodically attempt to update its file of photos of the historic landscape of different periods?	92	51	28	15	2	1
F. MODELS						
1. Does the park periodically update population models for the following animals:						
a. Mammals?	10	5	8	4	3	2
b. Reptiles?	3	2	1	1	0	0
c. Birds?	6	3	6	3	2	1
d. Amphibians?	2	1	1	1	0	0
e. Fish?	3	2	3	2	1	1
2. Does the park periodically update population models for the following plants:						
a. Liverworts and mosses?	2	1	1	1	0	0
b. Ferns?	2	1	0	0	0	0
c. Conifers?	3	2	2	1	0	0
d. Flowering plants?	5	3	2	1	0	0
3. Does the park periodically update population models integrated into community models?	4	2	2	1	1	1
4. Does the park periodically update its refined community models?	5	3	2	1	1	1

NOTE: 1. "Periodically" means that the park updates the record at those times when specific issues develop.
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MONITORING OF GEO-PHYSICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.						
	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
A. BASIC INVENTORY						
1. Does the park periodically update event records						
a. For events that are unique, unusual, or catastrophic (e.g., volcanism, fire, meteorologic events)?	119	65	67	37	13	7
b. For events that reasonably can be expected from historic records (e.g., volcanism, fire, meteorological events)?	90	49	61	34	9	5
2. Does the park routinely update maps						
a. That use imagery from satellites?	4	2	28	15	8	4
b. That use aerial photography?	30	16	33	18	7	4
c. That are topographic (i.e., 1:24,000 or best available scale)?	45	25	36	20	6	3
B. GEOLOGY						
1. Does the park routinely update geologic maps of bedrock at the reconnaissance level:						
a. Using 1:100,000 or 1:250,000 scale?	4	2	22	12	4	2
b. Using 1:24,000 or 1:60,000 scale?	5	3	22	12	3	2
2. Does the park periodically update special purpose maps showing						
a. Geology for local mineral deposits or claims?	22	12	26	14	2	1
b. Geologic hazards (e.g., flood plain maps)?	27	15	28	15	3	2
c. Channels and channel characteristics?	19	10	20	11	4	2
d. Conterminous geothermal area activities?	13	7	13	7	2	1

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MONITORING OF GEO-PHYSICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
C. SOILS						
1. Does the park routinely update a soils map for						
a. All the park? _____	5	3	13	7	2	1
b. Certain zones only (e.g., the developed areas)? _____	5	3	12	7	1	1
2. At what level of detail is the map:						
a. First order map: development? _____	5	3	4	2	1	1
b. Second order map: standard soil map? _____	23	13	19	10	3	2
c. Fourth order map: reconnaissance? _____	1	1	3	2	0	0
D. HYDROLOGY						
1. Does the park routinely update watershed maps? _____	3	2	19	10	0	0
2. Does the park routinely update special purpose maps for						
a. Groundwater (water table)? _____	4	2	11	6	2	1
b. Bathymetry? _____	1	1	7	4	4	2
c. Other? _____	5	3	5	3	0	0
(If other, specify): _____						
3. Does the park routinely update inventories that give descriptions of the following:						
a. Streams? _____	20	11	17	9	6	3
b. Lakes? _____	12	7	10	5	4	2
c. Wetlands? _____	8	4	14	8	4	2
d. Groundwater? _____	5	3	12	7	2	1

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MONITORING OF GEO-PHYSICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
4. Does the park routinely monitor temperature (minimum/maximum) data? _____	85	47	47	26	27	15
5. Does the park routinely monitor turbidity data? _____	32	18	23	13	11	6
6. Does the park routinely monitor stage and discharge information? _____	28	15	28	15	15	8
E. METEOROLOGY						
1. Does the park routinely update records on the following:						
a. Precipitation? _____	123	68	68	37	42	23
b. Air temperature? _____	114	63	64	35	38	21
2. Does the park routinely measure atmospheric properties at closest available stations? _____	51	28	33	18	15	8
a. If "yes" does the measuring include:						
(1) Insulation? _____	13	7	6	3	3	2
(2) Recording hygrothermograph? _____	51	28	20	11	4	2
3. Does the park routinely monitor for						
a. CO ₂ ? _____	7	4	15	8	6	3
b. O ₃ ? _____	26	14	19	10	12	7
4. Does the park routinely monitor the ionizing radiation background level? _____	8	4	7	4	3	2

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MONITORING OF GEO-PHYSICAL STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
F. CHEMICAL CONTAINMENT						
1. Does the park routinely monitor the following:						
a. Chemical control of exotic pests?	102	56	36	20	17	9
b. Baseline data on atmosphere input of organic compounds?	9	5	15	8	8	4
c. Non-point source surface water contamination?	26	14	20	11	9	5
d. Point source surface water contamination?	26	14	18	10	7	4
e. Groundwater contamination?	23	13	21	12	6	3
G. MODELS						
1. Does the park periodically update hydrologic models for the area?	8	4	14	8	7	4
2. Does the park periodically update meteorologic models for the area?	7	4	19	10	7	4
a. Any specific to wildfire suppression?	16	9	13	7	8	4
b. Any integrated with hydrologic models?	4	2	11	6	5	3

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MONITORING OF CHEMICAL ELEMENTS STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column. -- Place an "A" next to the "x" if data can be confirmed by an external laboratory.*

Is the park monitoring routinely the following elements?	Surface Water		Atmospheric Deposition				Atmospheric			
			Wet		Dry		Gasses		Particulates	
	YES	%	YES	%	YES	%	YES	%	YES	%
1. pH	54	30	31	17	3	2	0	0	5	3
2. Conductivity	47	26	22	12	2	1	0	0	2	1
3. $\text{SO}_4^{=}$	23	13	18	10	3	2	3	2	9	5
4. $\text{PO}_4^{=}$	23	13	17	9	2	1	1	1	4	2
5. Cl^-	29	16	18	10	3	2	0	0	7	4
6. NO_3^-	28	15	19	10	4	2	3	2	9	5
7. NH_4^+	21	12	21	12	3	2	0	0	4	2
8. K^+	18	10	19	10	3	2	1	1	7	4
9. Na^+	19	10	18	10	3	2	1	1	9	5
10. Ca^{++}	23	13	17	9	2	1	0	0	6	3
11. Mg^{++}	23	13	18	10	3	2	0	0	6	3
12. SO_2	7	4	5	3	2	1	14	8	6	3
13. CO_2	12	7	3	2	0	0	4	2	2	1
14. O_3	6	3	3	2	2	1	20	11	2	1
15. $\text{HNO}_3\text{NH}_3\text{NO}_x$	4	2	4	2	1	1	3	2	1	1
16. Trace metals	18	10	5	3	1	1	3	2	1	1
17. TSP	8	4	2	1	0	0	3	2	11	6
18. Halogenated hydrocarbons	4	2	2	1	0	0	0	0	0	0

NOTE: "Routinely" means that the park updates the data consistently and no less often than seasonally.

* = a Quality Assurance Plan

MONITORING OF CHEMICAL ELEMENTS STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column. -- Place an "A" next to the "x" if data can be confirmed by an external laboratory.*

Is the park monitoring routinely the following elements?	A C C U M U L A T I O N I N									
	Animals		Soils		Live Vegetation		Litter		Lake Cores	
	YES	%	YES	%	YES	%	YES	%	YES	%
1. pH	1	1	7	4	0	0	0	0	1	1
2. Conductivity	0	0	3	2	0	0	0	0	1	1
3. SO ₄ ⁼	0	0	2	1	2	1	0	0	2	1
4. PO ₄ ⁼	1	1	3	2	0	0	0	0	1	1
5. Cl ⁻	0	0	1	1	0	0	0	0	2	1
6. NO ₃ ⁻	0	0	3	2	0	0	0	0	2	1
7. NH ₄ ⁺	0	0	1	1	0	0	0	0	2	1
8. K ⁺	1	1	4	2	0	0	0	0	2	1
9. Na ⁺	0	0	3	2	0	0	0	0	2	1
10. Ca ⁺⁺	1	1	2	1	0	0	0	0	2	1
11. Mg ⁺⁺	1	1	3	2	0	0	0	0	2	1
12. SO ₂	0	0	2	1	0	0	0	0	2	1
13. CO ₂	0	0	0	0	0	0	0	0	0	0
14. O ₃	0	0	1	1	1	1	0	0	1	1
15. HNO ₃ NH ₃ NO _x	1	1	0	0	0	0	0	0	0	0
16. Trace metals	2	1	3	2	2	1	1	1	1	1
17. TSP	1	1	0	0	0	0	0	0	1	1
18. Halogenated hydrocarbons	1	1	0	0	0	0	0	0	0	0

NOTE: "Routinely" means that the park updates the data consistently and no less often than seasonally.

* = a Quality Assurance Plan

MONITORING OF HUMAN USE (ACTIVITIES) STUDIES

NOTE: Most historic areas of NPS have significant natural resources as well as historic/cultural resources. These park areas' inputs also would be appreciated.

INSTRUCTION: Place an "x" mark in the appropriate column.						
	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
A. BASIC INVENTORY						
1. Does the park periodically update its unique or unusual anthropological events occurring in/near the park, such as						
a. Migrations? _____	23	13	19	10	4	2
b. Disease epidemics? _____	23	13	23	13	2	1
c. Having to cope with drought? _____	24	13	21	12	1	1
d. Having to cope with flood? _____	32	18	24	13	2	1
e. Crime? _____	57	31	29	16	10	5
f. Other? _____	9	5	5	3	1	1
If other, specify: _____						
2. Does the park periodically record its events to indicate how these events affected human's uses of the park during times of						
a. Migrations? _____	20	11	11	6	1	1
b. Disease epidemics? _____	20	11	12	7	1	1
c. Having to cope with drought? _____	20	11	12	7	1	1
d. Having to cope with flood? _____	30	16	15	8	3	2
e. Crime? _____	45	25	14	8	5	3
f. Other? _____	7	4	2	1	0	0
B. MAPS						
1. Does the park routinely update its maps indicating present use of areas for human activities						
a. That are within the park? _____	63	35	23	13	2	1

NOTE: 1. "Periodically" means that the park updates the records at those times w specific issues develop.
 2. "Routinely" means that the park updates the data consistently and no le: often than seasonally.

MONITORING OF HUMAN USE (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
B. MAPS (continued)						
b. That are on conterminous lands outside the park? _____	27	15	26	14	2	1
2. Does the park routinely update maps that indicate use of conterminous land where the use flows over onto park land? _____	29	16	18	10	1	1
C. HUMAN ACTIVITIES						
1. Does the park routinely monitor each type of activity present, such as	48	26	19	10	4	2
a. Farming? _____	53	29	22	12	6	3
b. Grazing? _____	17	9	8	4	2	1
c. Those connected with subsistence? _____	20	11	13	7	3	2
d. Forestry? _____	33	18	15	8	3	2
e. Mining? _____						
f. Recreation						
(1) Hunting? _____	53	29	22	12	3	2
(2) Fishing? _____	54	30	20	11	5	3
(3) Skiing? _____	28	15	14	8	2	1
(4) Snowmobiling? _____	23	13	11	6	1	1
(5) Rock climbing? _____	30	16	12	7	2	1
(6) Mountain climbing? _____	18	10	10	5	2	1
(7) Spelunking? _____	17	9	8	4	2	1
(8) Hiking? _____	81	45	22	12	4	2
(9) Backpacking? _____	58	32	20	11	5	3
(10) Camping? _____	81	45	25	14	5	3
(11) Canoeing and/or kayaking? _____	42	23	14	8	4	2
(12) Boating (boat with engine)? _____	41	23	12	7	5	3
(13) Water skiing? _____	18	10	8	4	1	1
(14) Swimming? _____	35	19	8	4	2	1
(15) Sailboating? _____	25	14	5	3	1	1
(16) Scuba diving? _____	26	14	7	4	2	1
(17) Rafting? _____	22	12	12	7	3	2

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MONITORING OF HUMAN USE (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.						
	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
C. HUMAN ACTIVITIES (continued)						
(18) Hang gliding? _____	20	11	4	2	0	0
(19) Looking at the scenery? _____	87	48	21	12	4	2
(20) Watching historic reenactments? _____	45	25	12	7	4	2
(21) Watching one of the performing arts? _____	29	16	9	5	2	1
(22) Picnicking? _____	83	46	18	10	4	2
(23) Other? _____	13	7	3	2	0	0
If "other," please specify. _____						
g. Other? _____	3	2	1	1	1	1
If "other," please specify. _____						
2. Does the park routinely quantify the activities occurring within it, such as						
a. Farming? _____	29	16	9	5	4	2
b. Grazing? _____	39	21	12	7	5	3
c. Subsisting? _____	9	5	3	2	0	0
d. Forestry? _____	10	5	4	2	0	0
e. Mining? _____	23	13	10	5	3	2
f. Recreation? _____	103	57	31	17	13	10
g. Other? _____	10	5	2	1	1	1
If "other," please indicate what. _____						
D. OWNERSHIP						
1. Does the park routinely monitor whether ownership is public or private for each area						

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MONITORING OF HUMAN USE (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
D. OWNERSHIP (continued)						
a. Within the park? _____	117	64	47	26	12	7
b. Conterminous with the park? _____	50	27	49	27	10	5
2. Does the park routinely monitor ownership for each area						
a. Within the park? _____	113	62	43	24	13	7
b. Conterminous with the park? _____	43	24	51	28	5	3
3. Does the park routinely monitor the size class for each owner of an area						
a. Within the park? _____	62	34	26	14	11	6
b. Conterminous with the park? _____	22	12	34	19	5	3
4. Does the park routinely monitor records to learn the total number of						
a. Public owners? _____	73	40	42	23	13	7
b. Private owners? _____	69	33	46	25	13	7
c. Public and private owners? _____	60	33	44	24	15	8
E. DEMOGRAPHY						
1. Does the park routinely monitor the human population in numbers (residents, visitors)						
a. Within the park? _____	126	69	45	25	16	9
b. In areas conterminous with the park? _____	14	8	44	24	6	3
2. Does the park routinely monitor the age/sex distribution for human population						
a. Within the park? _____	26	14	25	14	3	2
b. In areas conterminous with the park? _____	2	1	23	13	3	2

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MONITORING OF HUMAN USE (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
3. Does the park periodically monitor the educational level of human population						
a. Within the park? _____	22	12	16	9	6	3
b. In areas conterminous with the park? _____	1	1	21	12	6	3
4. Does the park routinely monitor the housing types and their locations						
a. Within the park? _____	94	52	36	20	9	5
b. In areas conterminous with the park? _____	12	7	35	19	4	2
5. Does the park periodically monitor the per capita income of human population						
a. Within the park? _____	15	8	24	13	4	2
b. In areas conterminous with the park? _____	4	2	29	16	6	3
6. Does the park routinely monitor the source of income for human population						
a. Within the park? _____	16	9	19	10	4	2
b. In areas conterminous with the park? _____	2	1	31	17	6	3
7. Does the park routinely monitor the nationalities of visitors to the park? _____	37	20	20	11	4	2
F. DOMESTIC ANIMALS						
1. Does the park routinely monitor the number of individuals of livestock? _____						
a. Within the park? _____	51	28	19	10	5	3
b. In areas conterminous with park? _____	3	2	27	15	1	1

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MONITORING OF HUMAN USES (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.						
	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
2. Does the park routinely monitor the number of livestock species, groups, herds, flocks, gaggles, etc.						
a. Within the park? _____	48	26	20	11	3	2
b. In areas conterminous with park? _____	3	2	23	13	0	0
3. Does the park routinely monitor the commercial species used						
a. Within the park? _____	33	18	16	9	1	1
b. In areas conterminous with park? _____	2	1	22	12	1	1
4. Does the park periodically monitor the numbers of pets						
a. Within the park? _____	61	34	27	15	1	1
b. In areas conterminous with park? _____	4	2	10	5	3	2
5. Does the park periodically monitor the kinds of pets						
a. Within the park? _____	59	32	26	14	1	1
b. In areas conterminous with park? _____	5	3	9	5	1	1
6. Does the park routinely monitor the numbers of domestic animals other than pets						
a. Within the park? _____	45	25	19	10	2	1
b. In areas conterminous park? _____	5	3	16	9	2	1
7. Does the park routinely monitor the kinds of domestic animals other than pets						
a. Within the park? _____	51	28	18	10	2	1
b. In areas conterminous with park? _____	4	2	11	6	1	1

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MONITORING OF HUMAN USES (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
G. LEGAL MATTERS						
1. Does the park routinely update its identification of acts, regulations, policies, etc. existing outside the park that affect the park area? _____	126	69	74	41	4	2
2. Does the park routinely identify priorities of management activities related to humans as to _____						
a. Type? _____	92	51	36	20	3	2
b. Frequency? _____	90	49	36	20	3	2
c. Scope? _____	84	46	34	19	3	2
H. EDUCATION ACTIVITIES						
1. Does the park routinely identify any research/education/training activities in the area? _____	108	59	52	29	4	2
a. If so, does the park document the type(s) of activity? _____	83	46	38	21	14	8
b. Does the park routinely update its information, for each activity, as to _____						
(1) Number of staff? _____	66	36	38	21	7	4
(2) Kind(s) of staff? _____	66	36	38	21	7	4
(3) Budget? _____	64	35	39	21	9	5
(4) Facilities used? _____	71	39	38	21	6	3
I. REGIONAL LAND USE						
1. Does the park routinely update its identification of regional public facilities e.g., hospital, labs, libraries, etc.)? _____	82	45	55	30	5	3

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MONITORING OF HUMAN USES (ACTIVITIES) STUDIES

INSTRUCTION: Place an "x" mark in the appropriate column.

	In the park?		Available to the park?		Are data computer based?	
	YES	%	YES	%	YES	%
2. Does the park routinely update its identification of public utilities available (e.g., water, electricity, etc.)?	36	47	59	32	2	1
J. OTHER SOCIAL SCIENCE STUDIES						
1. Is the park carrying out any other social science studies at this time? (Use only columns 1, 2, 5, and 6 for the answer.)	31	17	6	3	12	7
2. Is the park carrying out any econometric studies at this time? (Use only columns 1, 2, 5, and 6 for the answer.)	10	5	2	1	5	3

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