

Pacific Northwest Natural Area Program: A Successful Partnership

Sarah E. Greene

Forestry Sciences Laboratory
Pacific Northwest Forest and Range Experiment Station
USDA Forest Service
Corvallis, Oregon 97331

Robert E. Frenkel

Department of Geography
Oregon State University
Corvallis, Oregon 97331

Charles A. Wellner

439 Snyder Avenue
Moscow, Idaho 83843

ABSTRACT: The history of the natural area program in the Pacific Northwest (Oregon, Washington, and Idaho) began in 1931 with the establishment of the Metolius Research Natural Area in Oregon. The original USDA Forest Service program grew slowly in the 1930s and 1940s, and by the late 1950s included other federal agencies. In the late 1960s and early 1970s, a more formal approach to natural area establishment began with the formation of natural area committees and the publication of Research Natural Needs in Idaho - A First Estimate and Research Natural Area Needs in the Pacific Northwest. At that time, The Nature Conservancy and state agencies began to work on an informal basis with federal agencies in natural area establishment. In the 1980s, there is increased cooperation among the federal, state, and private sectors, with 188 established natural areas in Oregon, Washington, and Idaho. A map and a list of these natural areas are included.

INTRODUCTION

The need for a comprehensive and representative system of natural areas is widely accepted by scientific and land management communities. Although the conceptual definition of a natural area may cause some minor disagreements, consideration of a specific proposal and acceptable management plan for a natural area frequently leads to outright controversy. Conflicts often arise over who owns and manages the land, and private, state, and federal sectors each operate under different laws and resource priorities. There is intensified pressure on public lands today, for all kinds of competing resource uses, be they consumptive or nonconsumptive. Federal, state, and local laws and, increasingly, public input, affect decisions made for the allocation and management of every acre of public land. Because of the dominance of public ownership in the Pacific Northwest (52% of all land in Oregon, 29% in Washington, and 64% in Idaho [U. S. Department of

Interior 1982]) and the controversy over land use allocation and management, a strong cooperative natural area program has developed within which federal agencies play a central role. The purpose of this article is to describe the objectives of the federal research natural area program and to describe the history of federal planning of research natural areas in Oregon, Washington, and Idaho, and the cooperative program among federal, state, and private agencies that has recently emerged.

Protection of natural features on federal land occurs under a number of different jurisdictions and categories of land use -- national parks, national monuments, national wildlife refuges, designated wildernesses, special interest areas including scenic or botanic areas, areas of critical environmental concern, outstanding natural areas, and lastly research natural areas. The Research Natural Area (RNA) is the only category in common among federal land managing agencies; in fact, it is

used by at least six -- the Forest Service in the U.S. Department of Agriculture; the Bureau of Land Management, National Park Service, and Fish and Wildlife Service, all in the Department of the Interior; the Department of Energy; and the Department of Navy.

A very general definition for an RNA is found in A Directory of Research Natural Areas on Federal Lands of the United States of America (Federal Committee on Ecological Reserves 1977).

"A Research Natural Area is a physical or biological unit in which current natural conditions are maintained insofar as possible. These conditions are ordinarily achieved by allowing natural physical and biological processes to prevail without human intervention. However, under unusual circumstances, deliberate manipulation may be utilized to maintain the unique feature that the Research Natural Area was established to protect."

The overall goal of the federal RNA program is to preserve adequate examples of all the major ecosystem types in the country. Definitions of major ecosystem types vary among agencies and among regions of the country. RNAs on federal land are set aside for research and education, to provide study areas to gather baseline information, and to protect a full range of genetic diversity. Restrictions on research and educational use vary by agency, though all agencies agree that research should be nondestructive and that most educational use should be at the university level. Baseline data on ecological processes is central to sound land management policies. By understanding the processes operating on natural landscapes, land managers are able to better judge effects of their activities on the altered landscape. RNAs, which are usually a 1000 ha or less, can only do part of the job of protecting genetic diversity. In many instances the RNAs are not big enough to protect large mammals; however, they make an important contribution to protection of the genetic diversity of many plants and smaller animals.

HISTORY OF PACIFIC NORTHWEST FEDERAL NATURAL AREA PROGRAM

The natural area movement in the Pacific Northwest has a long and rich history. It involves state and federal agencies, the private sector, and

a number of colorful and influential people. The Forest Service initiated the designation, "natural area," in 1927 with the establishment of the Coconino Natural Area in Arizona. In the late 1960s, the name was changed to "Research Natural Area." The Forest Service in the Pacific Northwest soon followed with the establishment of the Metolius RNA in the Deschutes National Forest, Oregon, in 1931; the Quinault RNA in the Olympic National Forest, Washington, in 1932; and the Teepee Creek RNA in the Kaniksu National Forest, Idaho, in 1935. By the end of the 1930s, five RNAs had been established in Oregon and Washington together and three in Idaho.

In the 1930s and 1940s, RNA establishment was confined mostly to national forest lands. Scientists from the Pacific Northwest and Northern Rocky Mountain Forest and Range Experiment Stations recognized the importance of a natural area system and certain individuals took the initiative in locating potential sites. These areas generally represented the important forest types in the region. Identification of areas was made and proposals were discussed with the participating national forest and the appropriate regional office of the Forest Service. Alternatives were suggested, conflicts resolved, and eventually areas became established when signed by the chief of the Forest Service. In the 1940s, seven more RNAs were established. From the 1950s to the present, the RNA programs in Oregon and Washington and in Idaho have been parallel in development in some respects and have diverged significantly in others.

DEVELOPMENT OF THE PROGRAM IN OREGON AND WASHINGTON

In the 1950s scientists at the Pacific Northwest Forest and Range Experiment Station looked at a number of areas of federal ownership, other than Forest Service, for possible designation as RNAs. They felt several parcels were important enough to set aside as natural areas and began fostering the cooperation of other federal agencies in the establishment of RNAs. This was the beginning of what has become a strong interagency cooperative program. By the end of the 1950s, eighteen new RNAs had been established in the two states, mostly on national forest land.

Cooperation between the Pacific Northwest Region and the Experiment Station continued into the early 1960s, with the occasional collaboration of other

heritage plan has been adopted by the respective state legislature. The RNA Committee recognizes state plans and recommends their use on federal lands.

The Current Research Natural Area Program in Oregon and Washington

Through the establishment of the National Forest Management Act and the Federal Land Policy and Management Act, Congress mandated recognition and protection of natural diversity. Planning schedules and deadlines for land use plans became a reality, especially for the Bureau of Land Management and the Forest Service. The RNA Committee realized that if it were to continue to play an important role in the establishment and protection of natural areas, it would have to work within these land-use plans and the time constraints involved. A decision was made to hire a full-time research natural area scientist who would work with various agency personnel in the field in identifying, proposing, and implementing establishment of RNAs in the upcoming land use plans. This person would aid in the management of, use of, and research in the established and proposed RNAs. Financial support for this position comes from federal agencies either directly or through in-kind services. Not only does the RNA scientist act as a liaison between the federal agencies, but cooperates with the state natural area programs. This cooperation, which includes joint field trips, exchange of information, storage of information by heritage program data banks, research projects, and management assistance, is essential to the functioning of a multiownership, integrated program that avoids duplication and confusion. Because of the full-time RNA scientist position, the RNA Committee, which still meets twice a year, now deals less with technical issues and more with policy. At this time, twenty-five RNAs have been established in the 1980s and fifty to sixty are in the proposal stage. Figure 1 shows established federal RNAs and other natural areas in the Pacific Northwest.

The bulk of the files and documents relating to the Pacific Northwest Research Natural Area program are housed as part of Research Work Unit 4151 at the Forestry Sciences Laboratory, Pacific Northwest Forest and Range Experiment Station, in Corvallis, Oregon. Ongoing lists of research projects within RNAs and publications relating to RNAs are maintained on a word processor and are available to the public. An RNA library includes

information on other state and international natural area programs, as well as articles on natural area philosophy, management, and research.

DEVELOPMENT OF THE PROGRAM IN IDAHO

During the 1960s establishment of RNAs in Idaho was informal and proceeded by the initiative of individual organizations. The 1968 *Directory of Research Natural Areas on Federal Lands* (Federal Committee on Research Natural Areas 1968) listed ten established RNAs on Bureau of Land Management in Idaho, yet none of these RNAs were recommended or officially established. Early RNA designation was a cooperative effort of the Intermountain Forest and Range Experiment Station and the Northern Region (Montana, Northern Idaho, Northeastern Washington, North Dakota, and Northwestern South Dakota) and Intermountain Region (Southern Idaho, Nevada, Utah, and Western Wyoming).

In 1967, the Intermountain Station in cooperation with the Northern and Intermountain Regions formed RNA Committees. Station Assistant Director Charles Wellner served as chairman of both committees. This organization initiated a more formal approach and increased the activity in the establishment of RNAs on national forests in both regions. "Habitat types" as defined by Daubenmire and Daubenmire (1968) were the basis for defining RNA needs (Wellner 1969). The Forest Service RNA committees identified a number of candidate RNAs in Idaho and adjacent states that eventually became established. In 1971 the two committees began to operate more independently. Also in 1971, the Intermountain Station director and the regional foresters instructed the RNA Committees to coordinate the Forest Service program with other agencies and universities in Idaho.

Role of Natural Areas Coordinating Committee in Idaho

Wellner retired from the Forest Service in 1973 and immediately became a Forest Service volunteer. He and Frederic Johnson of the College of Forestry, Wildlife, and Range Sciences, University of Idaho, planned a natural areas workshop. The workshop, held in April 1974 in Boise, drew participants mainly from government agencies, the timber industry, and academic institutions. The workshop resulted in the formation of six technical committees: grasslands and

This group conducted inventories of actual and potential preserves on all ownership (U. S. Department of the Interior 1977).

In 1977, a cooperative effort between the Department of Natural Resources, four state resource departments, and The Nature Conservancy was initiated to classify natural area needs within the state following the format provided by the federal "yellow book" and the established natural heritage approach of The Nature Conservancy. In 1981 the legislature amended the Natural Areas Preserve Act and established the Washington Natural Heritage Program within the Department of Natural Resources. The principal objectives of the program are to classify natural area resources, to maintain an inventory of these resources, and to provide assistance in the selection and protection of natural areas. The program is given general direction by the advisory council.

Advisory to the Washington Department of Natural Resources, the fifteen-member Washington Natural Heritage Advisory Council, appointed by the Commissioner of Public Lands, recommends establishment of typical and unique sites for dedication and registration in the Washington Natural Area Preserve System. The council is supported by a small staff, which oversees the program under the Department of Natural Resources. The program has completed the State of Washington Natural Heritage Plan (Washington Department of Natural Resources 1985), manages seventeen state natural areas (Figure 1), and maintains a register of natural areas.

Idaho Program

The most recent development in Idaho is the formation of an Idaho Natural Heritage Program, which was created in 1984 under contract between the Idaho Department of Fish and Game and The Nature Conservancy Western Regional Office. Its mission is greatly enhanced by the existing regional ecological classification pioneered by Daubenmire (Daubenmire and Daubenmire 1968) and extended by others (Tisdale 1979, Steele et al. 1981, Hironaka et al. 1983, Steele et al. 1983, Cooper et al. 1985). Idaho, without legislation for establishing state natural areas, is dependent largely on the new heritage program, the Idaho Chapter of The Nature Conservancy, and the Idaho Natural Areas Coordinating Committee for natural area activities on state and private lands.

PRIVATE SECTOR

Representing the private sector, The Nature Conservancy, a nonprofit corporation dedicated to protecting significant natural areas, has established preserves throughout the Pacific Northwest, participated in the development of natural area need plans (natural heritage plans), and in the inventory of natural areas, mostly on private lands. Three critical activities in The Nature Conservancy's operation are important to the regional program: identification of natural areas through natural heritage programs; protection of natural areas through acquisition, easement, and agreement; and stewardship involving preserve management. In 1984 there were forty preserves of research natural area quality owned and managed by The Nature Conservancy in the Pacific Northwest: twenty-three in Oregon, seventeen in Washington, and four in Idaho (Figure 1).

A Northwest Office of The Nature Conservancy was opened in 1972 in Portland to cover six regional states, including Alaska. The office subsequently was instrumental in developing pilot programs in natural area classification and inventory in both Washington and Oregon during the early 1970s. This regional office became the Oregon state office in 1980 and has since worked closely with the state Natural Heritage Advisory Council, often under contract. The Nature Conservancy staff includes a public lands protection planner to work with the Natural Heritage Advisory Council and the Research Natural Area Committee.

The Nature Conservancy's program in Washington was mostly confined to state chapter activities until 1977 when the Washington Natural Heritage Program was initiated in cooperation with the state Department of Natural Resources. In 1979 a Washington Field Office of The Nature Conservancy was established in Seattle with a staff of three, now expanded to six. The Washington Nature Conservancy has acquired seventeen preserves, assisted in purchasing five state-owned preserves, and has participated in thirteen cooperative projects with government agencies other than the Department of Natural Resources.

In Idaho, The Nature Conservancy has begun a natural heritage program staffed by two scientists under a two-year contract with the nongame

ESTABLISHED NATURAL AREAS IN OREGON (87)

Sym.	Name**	Ownership*	Area(ha)	Sym.	Name**	Ownership*	Area(ha)
AC	Abbott Creek RNA	USFS	1,077	AK	Maple Knoll RNA	FWS	40
AD	Agate Desert Preserve	TNC	11	AR	McCall Preserve at Rowena	TNC	68
AS	Ashland RNA	USFS	570	AS	Metolius RNA	USFS	533
BY	Bagby RNA	USFS	227	RE	Metolius River Preserve	TNC	12
BB	Bastendorf Bog Preserve	TNC	4	RB	Mickey Basin RNA	BLM	227
BC	Beatty Creek RNA	BLM	160	RI	Middle Santiam RNA	USFS	463
BJ	Blue Jay RNA	USFS	85	RC	Mill Creek RNA	USFS	330
-BH	Boardman RNA	BOD	2,095	RO	Mohawk RNA	BLM	119
BL	Borax Lake Preserve	TNC	65	RF	Mulltorpor Fen Preserve	TNC	33
BS	Brewer Spruce RNA	BLM	85	RY	Myrtle Island RNA	BLM	11
BR	Bull Run RNA	USFS	146	RB	Nesika Beach Preserve	TNC	14
CS	Camas Swale RNA	BLM	113	RC	Neskowin Crest RNA	USFS	476
CA	Camassia Preserve	TNC	11	RM	North Myrtle Creek RNA	BLM	97
CC	Canyon Creek RNA	USFS	283	NP	North Powder Thelypodium Preserve	TNC	1
CH	Carolyn's Crown RNA	BLM	105	OD	Ochoco Divide RNA	USFS	777
CH	Cascade Head Preserve	TNC	113	OR	Ollalie Ridge RNA	USFS	291
CY	Cherry Creek RNA	BLM	239	OP	Onion Peak Preserve	TNC	17
CF	Cogswell-Foster Preserve	TNC	45	PB	Pigeon Butte RNA	FWS	28
CR	Coquille River Falls RNA	USFS	202	PJ	Poker Jim Ridge RNA	FWS	259
CI	Cox Island Preserve	TNC	76	PO	Port Orford Cedar RNA	USFS	454
DL	Douney Lake Preserve	TNC	41	PF	Pringle falls RNA	USFS	545
EK	East Kiger Plateau RNA	BLM	502	PU	Pueblo Foothills RNA	BLM	1,020
ED	Eight Dollar Mountain Preserve	TNC	9	RS	Rockaway Cedar Swamp Preserve	TNC	20
EM	Elk Meadows RNA	BLM	83	RC	Rooster Comb RNA	BLM	291
FC	Flynn Creek RNA	USFS	271	SM	Saddleback Mountain RNA	BLM	55
FH	Fox Hollow RNA	BLM	65	SR	Sandy River Gorge Preserve	TNC	214
GL	Gold Lake Bog RNA	USFS	188	SC	Silver Creek RNA	BLM	259
GM	Goodlow Mountain RNA	USFS	510	SF	South Fork Willow Creek RNA	BLM	92
GS	Grass Mountain RNA	BLM	295	SS	Steens Mountain Summit NMCA	SLB	191
NL	Harney Lake RNA	FWS	12,000	SL	Stinking Lake RNA	FWS	626
HP	High Peak-Moon Creek RNA	BLM	618	ST	Stockade Mountain RNA	BLM	308
HS	Moneycombs RNA	BLM	4,830	SY	Sycan Marsh Preserve	TNC	9,557
NR	Morse Ridge RNA	BLM	243	TH	Tater Hill RNA	BLM	68
IC	Indian Creek RNA	USFS	401	TB	The Butte RNA	BLM	16
JC	Jordan Craters RNA	BLM	12,709	TI	Tom Tom Lake RNA	BLM	616
LG	Lawrence Memorial Grassland Pres.	TNC	158	MC	Wheeler Creek RNA	USFS	135
LR	Limpy Rock RNA	USFS	760	MM	Wildcat Mountain RNA	USFS	405
LB	Little Blitzen RNA	BLM	1,028	MH	Wildhaven Preserve	TNC	65
LS	Little Sink RNA	BLM	32	WF	Willamette Floodplain RNA	FWS	97
LW	Little Wildhorse RNA	BLM	97	WI	Willow Creek Preserve	TNC	5
LD	Long Draw RNA	BLM	198	WS	Winchuck Slope NMCA	SLB	78
LF	Lost Forest RNA	BLM	3,628	WB	Woodcock Bog RNA	BLM	112
LT	Lower Table Rock Preserve	TNC	304	WP	Wren Prairie Preserve	TNC	4
NH	Nahogany Mountain RNA	BLM	130				

ESTABLISHED NATURAL AREAS IN IDAHO (32)

Sym.	Name**	Ownership*	Area(ha)
BC	Bannaek Creek RNA	USFS	177
BR	Bear Creek RNA	USFS	157
BL	Bottle Lake RNA	USFS	105
BH	Bruneau Marsh NA	ISPR	8
CC	Canyon Creek RNA	USFS	379
CH	China Cup Butte RNA	BLM	65
BH	Bautrich Memorial Preserve	TNC	346
EC	Elk Creek Exlosure RNA	USFS	44
GJ	Gibson Jack Creek RNA	USFS	895
GR	Grassland Kipuka NA	BLM	65
GC	Gunbarrel Creek RNA	USFS	648
HG	Hunt Girl Creek RNA	USFS	609
IR	Idlers Best Nature Preserve	TNC	13
IB	Iron Bog RNA	USFS	177
KH	Kaniku Marsh RNA	USFS	73
KA	Kipuka RNA	NPS	243
LA	Lochsa RNA	USFS	519
LW	Louman RNA	USFS	154
MM	Mary McCroskey State Park NA	IDPR	607
MP	McCannon Pond NA	ISU	49
MC	Meadow Canyon RNA	USFS	1,571
MD	Montford Creek RNA	USFS	118
MO	Moose Meadow Creek RNA	USFS	411
DC	O'Hara Creek RNA	USFS	2,834
PP	Ponderosa Peninsula NA	IDPR	121
PM	Pony Meadows RNA	USFS	591
SC	Silver Creek Preserve	TNC	518
SR	Snake River Birds of Prey NA	BLM/TNC	10,815
SS	Stapp Soldier Creek Preserve	TNC	40
TC	Teepee Creek RNA	USFS	267
UF	Upper Fishhook RNA	USFS	130
WF	West Fork Wink Creek RNA	USFS	259

**Natural area names:

- BSA Biological Study Area
- NA Natural Area
- NAP Natural Area Preserve
- NMCA Natural Heritage Conservation Area
- RNA Research Natural Area

*Ownership of natural areas:

- BLM Bureau of Land Management, U.S. Dept. of Interior
- BWR Dept. of Natural Resources, State of Washington
- BOD U.S. Dept. of Defense
- DOE U.S. Dept. of Energy
- FWS Fish and Wildlife Service, U.S. Dept. of Interior
- IDPR Idaho Dept. of Parks and Recreation
- ISU Idaho State University
- NPS National Park Service, U.S. Dept. of Interior
- SLB State Land Board, State of Oregon
- TNC The Nature Conservancy
- USFS Forest Service, U.S. Dept. of Agriculture
- UW University of Washington
- WDG Washington Dept. of Game
- WSU Washington State University

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