

**POINT REYES NATIONAL SEASHORE
1996 YEAR-END REPORT**

In contrast to 1995, the monitoring workload at Point Reyes was considerably less in 1996. Two year postburn monitoring was completed on those plots located in Divide Meadow and on the Heims (MacDonald) ranch. The seven grass transects located on Tomales point north of Lower Pierce Ranch and the four brush plots located in the Chute Gulch burn unit were reread in 1996 to provide control data for both the grass and northern coastal scrub monitoring types. The data from the grassland plots on the elk range may also provide long-term vegetation data for use in the elk studies. All of the fire effects transects were located with a global positioning device in 1996 and are now part of the GIS database.

Four prescribed burns were conducted in 1996: Lime Kiln, McCurdy, McIssac and Heims Ranch II. The Lime Kiln and McCurdy burn units are two of several sites identified in the Olema Valley as part of a long term french broom control project. The McIssac burn was a range management burn conducted to decrease brush cover. The Heims Ranch burn is part of a continuing scotch broom control project. This was the third time this section of the unit was burned having been previously burned in 1993 and 1994 (see burn unit maps following page 6).

Plots to be monitored in 1997 and subsequent years are as follows:

<u>Burn unit</u>	<u>Burn Status</u>	<u>Year to be monitored</u>
Heims Ranch	1-year	1997
Heims Ranch	2-year	1998
Elk Range 3	5-year	1998
Divide Meadow	5-year	1999
RX9002	10-year	2000

TABLE 1. PLOT SUMMARY	Plot Type			TOTAL
	G	B	F	
Number of burn plots installed in previous years	0	24	2	26
Number of burn plots installed in 1996	0	0	0	0
Total number of burn plots installed	0	24	2	26
Total number of <i>control</i> plots installed	0	11	0	11 ⁱ
Total number of plots installed	0	35	2	37
Number of plots rejected to date	0	0	0	0
Total number of valid plots	0	35	2	37
Total number of plots burned in 1996	0	4	0	4
Total number of plots burned to date	0	24	0	24ⁱⁱ

i. These eleven control plots were originally installed as burn plots. Four of these plots are located in the Chute Gulch burn unit, seven are located on Tomales Point. Since there are no plans to burn either of these units, the eleven plots will now serve as control plots.

ii. Though nine plots have been burned more than once, each plot is counted only once in the plots burned to date totals.

See #9 under "Monitoring Type Information".

**POINT REYES NATIONAL SEASHORE
1996 YEAR-END REPORT**

TABLE 2. 1996 MONITORING SUMMARY	Plot Type			TOTAL
	G	B	F	
Number of plots installed in 1996	0	0	0	0
Number of burn plots read postburn in 1996	0	8	0	8
Number of <i>control</i> plots read postburn in 1996	0	11	0	11
Number of burn plots read immediate postburn in 1996	0	4	0	4
Number of burn plots reread preburn in 1996	0	0	0	0
Number of <i>control</i> plots reread preburn in 1996	0	0	0	0
Total number of plots visited in 1996	0	23	0	23

TABLE 3. 1997 MONITORING SUMMARY	Plot Type			TOTAL
	G	B	F	
Number of plots to be installed in 1997	0	0	0	0
Number of burn plots to read postburn in 1997	0	4	0	4
Number of <i>control</i> plots to read postburn in 1997	0	0	0	0
Number of burn plots to reread preburn in 1997	0	0	0	0
Number of <i>control</i> plots to reread preburn in 1997	0	0	0	0
Total number of plots to be visited in 1997	0	4	0	4

TABLE 4. POSTBURN PLOT SUMMARY	Plot Type			TOTAL
	G	B	F	
Immediate Postburn 1 2 3	0	24 9 4	0	37
1 Year Postburn 1 2	0	24 9	0	33
2 Year Postburn 1 2	0	24 5	0	29
3 Year Postburn (Control plots only)	0	11	0	11
5 Year Postburn	0	3	0	3

PROGRAM INFORMATION

Staff Participants

The following persons participated in fire effects monitoring at Point Reyes National Seashore in 1996:

Jeanne Taylor, GOGA
Michael Clary, GOGA
Leslie Allen, PORE
Pam Van der Leeden, PORE
Paul Reeberg, PGBSSO
Darrien Buchanan, VIP, Americorp

Many thanks to the Point Reyes staff for their assistance this year and in years past. ☺

Length of Season

The number of work days at Point Reyes in 1996 amounted to slightly less than one pay period.

CHANGES IN PROTOCOL

After consultation with Paul Reeberg, in 1996, height was recorded at the highest point on the sampling rod where the vegetation touched. In 1995, an average height of the vegetation at the sample point was recorded. The protocol followed in 1996 was the same protocol used in all years other than 1995.

RECOMMENDED CHANGES IN PROTOCOL

None at this time.

Most of the information contained in the next two sections is repeated from the 1995 year-end report, however, some additions and corrections have been made. Changes made in 1996 are written below the previous year's statement in italics.

EQUIPMENT INFORMATION

1. All equipment, supplies and data are stored in Bldg. 1069 of the Fire Management Office at Golden Gate NRA. The FMH program software and data is located on Sara Koenig's computer in the Resource Management Office at Point Reyes. A duplicate set of data is located at the Fire Management Office at Golden Gate NRA and with Paul Reeberg at WRO.

2. The original data sheets for each plot are located in the grey filing cabinet in Bldg. 1069. Plots are grouped by burn unit.

MONITORING TYPE INFORMATION

1. All future visits to the plots should follow the protocols as listed on the Monitoring type description sheets. These sheets are located in the top file drawer of the grey filing cabinet in Bldg. 1069.

2. The declination used in all mapping and compass work was 16° East. Although most of the problems with earlier compass directions, and plot azimuths, have been fixed there still might be some unforeseen problems. For this reason it should be noted that a declination of 23° East was used in the 1990 monitoring season.

3. The FMH species code list has been updated to correspond with the name changes found in The Jepson Manual. A list of all name changes has been made and can be found in the SPECIES CODE LIST file in the top drawer of the grey filing cabinet where the blank data forms are stored.

4. All BRDI1 plots have been changed to LOPE1 plots in Point Reyes. This is due to the greater frequency of *Lolium perenne* in the areas sampled. All of the index plot location data sheets and the computer files have been changed. No plot tags have been changed to date, however, all plots will be retagged by the summer of 1996.

New tags were attached to the stakes in 1996. The old tags have been left on for reference.

5. *Pinus remorata* has been changed back to *Pinus muricata* following the names changes in The Jepson Manual.

6. The brush belt width has been reduced from 3 meters to 2 meters in the LOPE monitoring type. In 1995, five-year postburn monitoring was completed on LOPE plots 1, 2 and 3. Since these plots had only 3 meter belt data, brush density was collected for both 2 and 3 meter.

7. Herbaceous data on PIMU1 plots should be collected on only the Q4-Q1 side of the transect. Belt density should be read 1 meter wide on the Q4-Q1 side of the plot. These changes were made due to the dense nature of the understory.

8. When measuring height on resprouting vegetation postburn, height should be measured on the new growth and not the old growth. By measuring the height of the new growth one can obtain an estimate of growth rate.

9. Those plots which have burned twice are distinguished by the number 2 after the species code. They are BAPI2 (9, 10), LOPE2 (4, 5, 6) and CYSC2 (2, 4, 5, 6).

Plots CYSC 2, 4, 5, 6 have now been burned a third time. They are distinguished by the code

CYSC3.

10.Plots BBAPI3D05 55, 56 and BCYSC4D05 53 (in 1995, CYSC3) found in the PORE subdirectory of the FMH program are not FMH plots but range plots on which brush density data was collected following FMH protocols.

11.In the FMH program Point Reyes data is in the PORE subdirectory. Make sure you are in the correct directory when entering new data. It is hard to move data from one directory to another

STATUS OF FIVE-YEAR BURN PLAN

Below is a copy of the five year burn plan as taken from the Fire Management Plan. This plan remains officially the same, however, since this list was compiled new burn units have been designated. The Point Reyes Fire Management plan is currently in the process of being rewritten wherein a new five-year burn plan will be developed. At this time no definite burn units have been designated for 1997.

**TABLE 5. FIVE YEAR BURNING PLAN
FY 1993-1997**

FY OF BURN	BURN NAME	ACRES	FMU	FIRE EFFECTS MONITORING TYPE
1993	RX-9301	100	II	Non-native annual grassland/ northern coastal scrub
1993	RX-9302	80	I	Non-native annual grassland/ northern coastal scrub
1993	RX-9303	100	I	Northern coastal scrub with scotch broom
1994	RX-9401	200	I	Non-native annual grassland/ northern coastal scrub
1994	RX-9402	80	II	Northern coastal scrub with scotch broom
1994	RX-9403	0.5	III	Bishop Pine Forest
1995	RX-9501	80	I	Non-native annual grassland/ northern coastal scrub
1995	RX-9502	200	I	Non-native annual grassland/ northern coastal scrub
1995	RX-9503	0.5	III	Bishop Pine Forest
1996	RX-9601	200	I	Non-native annual grassland/ northern coastal scrub
1996	RX-9602	200	I	Non-native annual grassland/ northern coastal scrub
1996	RX-9603	1	III	Bishop Pine Forest
1997	RX-9701	100	I	Non-native annual grassland/ northern coastal scrub

FY OF BURN	BURN NAME	ACRES	FMU	FIRE EFFECTS MONITORING TYPE
1997	RX-9702	100	I	Non-native annual grassland/ northern coastal scrub

STATUS OF THE FIVE-YEAR BURN PLAN (cont.)

TABLE 6. NEW BURNS DESIGNATED IN 1994 and 1995

YEAR DESIGNATED	BURN NAME	ACRES	FMU	FIRE EFFECTS MONITORING TYPE
1994	Divide Meadow	0.5	III	non-native annual grassland with scotch broom
1995	Grossi 95A	13	II	northern coastal scrub
1995	Grossi 95B	6	II	northern coastal scrub
1995	Grossi 95C	3	II	northern coastal scrub
1995	McIssac 95	10	*	northern coastal scrub
1995	Lime Kilns	1	III	non-native annual grassland with French broom
1995	Strain Hill	35	*	non-native annual grassland with French broom
1995	McCurdy Trail	35	*	non-native annual grassland with French broom

TABLE 7. BURNS COMPLETED SINCE 1993

YEAR BURNED (FY)	BURN NAME	ACRES	FMU	FIRE EFFECTS MONITORING TYPE
1993 (1994)	RX-9302 Elk Range 3	100	II	Non-native annual grassland/ northern coastal scrub/
1993 (1993)	RX-9303 MacDonald Ranch	100	II	Non-native perennial grassland/ northern coastal scrub/ scotch broom scrub
1994 (1995)	RX-9401 Heims Ranch, Phase II	100	II	Non-native perennial grassland northern coastal scrub/ scotch broom scrub
1994 (1995)	RX-9402 Heims Ranch	100	II	Non-native perennial grassland/ northern coastal scrub/ scotch broom scrub
1994 (1995)	RX-9403 Divide Meadow	0.5	III	Non-native annual grassland/ scotch broom scrub
1995 (1995)	RX-9501 Grossi 95C	3	II	Northern coastal scrub
1996 (1996)	RX-9601 Lime Kiln	1	III	Non-native annual grassland/ scotch broom scrub
1996 (1996)	RX-9602 McCurdy	35	*	Non-native annual grassland/ french broom scrub
1996 (1997)	RX-9603 Heims Ranch II	100	II	Non-native perennial grassland/ northern coastal scrub

YEAR BURNED (FY)	BURN NAME	ACRES	FMU	FIRE EFFECTS MONITORING TYPE
				scotch broom scrub
1996 (1997)	RX-9604 McIssac	10	*	Northern coastal scrub (crushed)

* On Golden Gate lands administered by Point Reyes.

APPENDIX A. MINIMUM PLOT CALCULATIONS

Monitoring Type	<i>Dominant Species</i>	# of plots	Minimum Plots	
			% confidence = 0.95	
			R= 20	R= 25
BAPI	<i>Baccharis pilularis</i>	10	17	11
CYSC	<i>Cytisus scoparius</i>	6	16	10
LOPE	<i>Lolium perenne</i>	17	60	39
PIMU	<i>Pinus muricata</i>	2	43	28

For brush plots, the number of minimum plots is calculated on the % relative cover of the dominant species. For forest plots, overstory tree density is the variable used to calculate minimum plots. Minimum plot calculations have been made using preburn data from all plots installed per monitoring type except in the CYSC monitoring type. Two new plots installed in 1994 (CYSC1 07, 08) have been placed in this monitoring type because Scotch broom was the target species in the burn unit in which they were installed. However, the species composition on the two plots is not similar enough to the original six plots to be included when calculating minimum number of plots.

APPENDIX B. PLOTS CLASSIFIED BY BURN UNIT AND MONITORING TYPE

Monitoring Type	Vegetation Type	<i>Dominant Species</i>	Plot Type	Current Plots
BAPI1	northern coastal scrub	<i>Baccharis pilularis</i>	B	8
BAPI2	northern coastal scrub (burned twice)	<i>Baccharis pilularis</i>	B	2
CYSC1	scotch broom/northern coastal scrub/non-native grassland	<i>Cytisus scoparius/ Baccharis pilularis/ Holcus lanatus</i>	B	4
CYSC2/ CYSC3	scotch broom/northern coastal scrub/non-native grassland (burned two and three times)	<i>Cytisus scoparius/ Baccharis pilularis/ Agrostis alba</i>	B	4
LOPE1	non-native grassland	<i>Lolium perenne</i>	B	14
LOPE2	non-native grassland (twice burned)	<i>Lolium perenne</i>	B	3

Monitoring Type	Vegetation Type	<i>Dominant Species</i>	Plot Type	Current Plots
PIMU1	bishop pine forest	<i>Pinus muricata</i>	F	2
TOTAL				37