

file

June 7, 1987

To: Chief Ranger

From: Park Ranger MARY STAFFORD

Subject: Revegetation Progress Report

The following pages describe the results thus far achieved in the various revegetation projects at Craters of the Moon.

SPATTER CONES

The spatter cones area was revegetated with transplanted bitterbrush (Purshia tridentata) and limber pine (Pinus flexilis) seedlings of various ages. A total of 21 bitterbrush seedlings and three pine seedlings were planted on three different occasions (4/1/87, 4/22/87, and 5/2/87). The following two tables show the transplant date, where the seedlings were taken from, seedling measurements, status, and direction and distance from permanently-planted stakes. Since there are so few plants, I felt that we could measure them each year for growth evidence. A map of the area was drawn up, and standard operating procedures are being drafted for annual plant measurements. Currently, only four bitterbrush seedlings are alive and doing well, and another three are about 3/4 dead (ie just barely surviving). I haven't pulled the mostly-dead seedlings, so we can see if they make it.

HOUSING AREA

A total of 14 limber pines were transplanted: all plants came from the edge of Paisley Cone by the Loop Road. They were planted on 4/22 and 5/6. Tree height was measured and recorded for all 14 trees. Standard operating procedures are being formulated for measuring tree height each year. Thus far, all trees are living, though some are beginning to show some signs of dying. Since it is such a dry year, the area is watered at least once per week. Watering may continue all summer, depending on plant health. (See attached form)

DUMP SITE AND MARTIN MINE BURN SITES

In the fall of 1986, these areas were burned. Elymus seeds were scattered just prior to the first snowfall. The areas were visually checked early in the spring of 1987 when plant growth was noticed, and it did not appear that we had any success with scattering seeds. Transect plots were marked in all areas with steel re-bar. Standard operating procedures for monitoring all areas are being formulated.

VISITOR CENTER LAWN

On 5/13/87 we planted a total of 48 seedlings, consisting of the following: 12 bitterbrush, 7 desert parsley, 3 rabbitbrush, and 26 sagebrush. All plants came from the north end, on the north side of the dump road. We had most luck with sagebrush: currently, two sagebrush plants are dead, and five are marginal. One desert parsley plant is living, and no bitterbrush seedlings survived. We may have planted the bitterbrush too late in the growing season. It may be that the bitterbrush is just very difficult to transplant, as we have not had much luck with transplanting it in the spatter cones area. I plan to transplant more sagebrush, hoping that it is not too late in its growing phase.

Plans have been formulated by the maintenance staff to convert the island in front of the VC parking lot into a cinder garden. Because of their

work schedule, this will not be worked on until this fall (1987).

Standard operating procedures for monitoring the lawn section are being drafted.

SPATTER CONES REVEGETATION DATA

Transplant length, width, height data

May 2, 1987

Refer to "Spatter Cone Revegetation" map for transplant location details

Plant #	Transplant Date	Taken From	L/W/H (meters)	Direction from stake	Distance from stake	Status
=====	=====	=====	=====	=====	=====	=====
PUTR 1	4/22/87	A*	.13/.14/.11		120 .68 m.	OK
PUTR 2	4/22/87	A*	1st-yr seedl		140 1.1 m	Dead
PUTR 3	4/22/87	A*	.13/.17/.15		220 6.0 m	OK
PUTR 4	5/2/87	B*	.24/.33/.22	180	2.1 (PUTR3)	OK (replacement)
PUTR 5	4/22/87	A*	.11/.10/.07		50 .55 m	OK
PUTR 6	5/2/87	B*	.17/.12/.14		125 1.75 m	OK
PUTR 7	5/2/87	B*	.16/.10/.11		152 3.6 m	OK
PUTR 8	4/22/87	A*	.05/.06/.06		160 1.4 m	OK
PUTR 9	4/22/87	A*	.08/.07/.06		180 1.1 m	OK
PUTR 10	5/2/87	B*	.40/.54/.28		200 1.7 m	OK
PUTR 11	5/2/87	B*	.22/.33/.30		210 2.8 m	OK
PUTR 12	4/22/87	A*	.06/.05/.07		230 2.05 m	OK
PUTR 13	4/22/87	A*	.09/.05/.07		240 1.3 m	OK
PUTR 14	4/22/87	A*	.07/.07/.04		262 3.2 m	OK
PIFL 1	4/1/87	C*	seedling		250 5.6 m	OK
PIFL 2	4/1/87	C*	seedling		258 0.7 m	OK

NOTES: A* = Hill behind Superintendent's house
 B* = "Old Man in the Craters" pullout
 C* = Paisley Cone - roadside

Directions are in degrees from permanently-planted stakes. Refer to map for stake locations. (PUTR 4 is ~180 degrees from PUTR 3)

There were originally 7 PUTR first-yr seedlings planted;
 all died and only one was replaced with a bigger seedling.

There were originally 4 PIFL seedlings planted;
 two died and were not replaced.

PUTR = Purshia tridentata (Antelope bitterbrush)
 PIFL = Pinus flexilis (Limber pine)

PATTER CONES REVEGETATION DATA

Transplant length, width, height data

June 7, 1987

Refer to "Spatter Cone Revegetation" map for transplant location details

Plant #	Transplant Date	Taken From	L/W/H (meters)	Direction from stake	Distance from stake	Status
UTR 1	4/22/87	A*	.13/.14/.11	120	.68 m.	3/4 dead
UTR 2	4/22/87	A*	1st-yr seedl	140	1.1 m	Dead, gone
UTR 3	4/22/87	A*	.13/.17/.15	220	6.0 m	3/4 dead
UTR 4	5/2/87	B*	.24/.33/.22	180	2.1 (PUTR3)	Dead
UTR 5	4/22/87	A*	.11/.10/.07	50	.55 m	Dead, gone
UTR 6	5/2/87	B*	.17/.12/.14	125	1.75 m	3/4 dead
UTR 7	5/2/87	B*	.16/.10/.11	152	3.6 m	OK
UTR 8	4/22/87	A*	.05/.06/.06	160	1.4 m	Dead, gone
UTR 9	4/22/87	A*	.08/.07/.06	180	1.1 m	Dead, gone
UTR 10	5/2/87	B*	.40/.54/.28	200	1.7 m	Dead, not gone
UTR 11	5/2/87	B*	.22/.33/.30	210	2.8 m	Dead, not gone
UTR 12	4/22/87	A*	.06/.05/.07	230	2.05 m	OK
UTR 13	4/22/87	A*	.09/.05/.07	240	1.3 m	OK
UTR 14	4/22/87	A*	.07/.07/.04	262	3.2 m	OK
IFL 1	4/1/87	C*	seedling	250	5.6 m	OK
IFL 2	4/1/87	C*	seedling	258	0.7 m	Dead, gone

NOTES: A* = Hill behind Superintendent's house

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C* = Paisley Cone - roadside

Directions are in degrees from permanently-planted stakes. Refer to map for stake locations. (PUTR 4 is ~180 degrees from PUTR 3)

There were originally 7 PUTR first-yr seedlings planted; all died and only one was replaced with a bigger seedling.

There were originally 4 PIFL seedlings planted; two died and were not replaced.

UTR = Purshia tridentata (Antelope bitterbrush)

IFL = Pinus flexilis (Limber pine)

HOUSING AREA ISLAND REVEGETATION

Transplant height data

Current as of June 7, 1987

Plant #	Transplant Date	Height (m)	Status
PIFL 1	5/6/87	0.15	OK
PIFL 2	5/6/87	0.32	OK
PIFL 3	4/22/87	0.19	OK
PIFL 4	4/22/87	0.14	OK
PIFL 5	4/22/87	0.10	OK
PIFL 6	5/6/87	0.17	OK
PIFL 7	5/6/87	0.65	OK
PIFL 8	5/6/87	0.36	OK
PIFL 9	5/6/87	0.40	OK
PIFL 10	5/6/87	0.53	OK
PIFL 11	5/6/87	0.54	OK
PIFL 12	5/6/87	0.69	OK
PIFL 13	5/6/87	0.80	OK
PIFL 14	5/6/87	0.28	OK

NOTES: PIFL = Pinus flexilis (Limber Pine)

All trees were measured for greatest height

PIFL #14 is located by the Superintendent's house.

#1 is a small tree hidden by rabbitbrush across from quarters #22B. #4 is a small 4-seedlings-in-one plant. #13 is the last one before a large Douglas fir patch.

Trees of various sizes were planted on separate dates, so that in subsequent years we can determine optimum planting dates and optimum plant size for transplanting

All trees were taken from the side of Paisley Cone between "Registration Waterhole" and "Devil's Orchard" turnoff.