

LOCKEFORD PLANT MATERIALS CENTER

ANNUAL TECHNICAL REPORT

2002

A Technical Summary of Plant Materials Studies
at the Lockeford Plant Materials Center
Lockeford, California

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INTRODUCTION, HISTORY AND FACILITIES

The Lockeford Plant Materials Center (PMC) is a federally owned and operated facility under the administration of the California State Office of the USDA Natural Resources Conservation service. The Lockeford PMC produces plant materials in cooperation with California Resource Conservation Districts, University of California, Foundation Seed Service, Agriculture Cooperative Extension, and the California Crop Improvement Association.

The plant materials program began February 1935 with the Soil Conservation Service Plant Materials Nursery at Santa Paula, California. In 1939 a 60-acre Plant Materials Center was established at Pleasanton, California. In September 1972 the Pleasant PMC was moved to the current site at Lockeford California.

The California plant materials program and the Lockeford PMC provide plant science support to the USDA-NRCS California Field Offices. The California Plant Materials Center in Lockeford collects promising plants and tests their performance under a variety of soil, climatic and use conditions. Over the past fifty years, 31 plants have been released for commercial seed production to solve soil and water conservation problems.

The Lockeford plant materials center is 106.7 acres of prime farmland located along the Mokelumne River near Lockeford California. Irrigation water is available to all fields at the PMC. Initial and advance evaluation of new plant materials are conducted at this site. The PMC responsible for seed increase plantings of potentially valuable plant species and for the maintenance of seed stock of California cooperative releases. Field Evaluation Plantings (FEP's) are studies conducted away from the PMC at problem sites in cooperation with federal, state, municipal agencies, and private individuals.

PERSONNEL

STATE CONSERVATIONIST

Chuck Bell

Plant Resource Specialist

Tish Espinosa

The PRS is on the NRCS Davis Resource Technology Staff, supervised by the State Resource Conservationist, and has a office at the Lockeformd PMC.

NAT'L PLANT MATERIALS SPECIALIST

Richard White

PLANT MATERIALS CENTER STAFF

Position	Name	Start	End
PMC Manager	David Dyer	03/03/87	Present
Farm Supt.	Celm Avitia	04/12/76	Present
Gardener	Jim Hutson	02/01/88	Present

CALIFORNIA PLANT MATERIALS COMMITTEE

State Office

DIANE HOLCOMB - State Resource Conservationist

- State Biologist
JERRY REIOUX - State Forester
- State Range Ecologist
BOB FRY - State Agronomist
ALAN FORKEY - State Wetlands Biologist
CHARLES DAVIS - State Conservation Engineer
ANITA BROWN - Director of Public Affairs
LORI METZ - Representing State Soil Scientist

Area I

JOHN WEATHERFORD - Soil Conservationist
ANN FRANCIS - Landscape Ecologist
DENNIS MOORE - Area I Resource Conservationist

Area II

SALLY NEGRONI - Soil Conservationist
PHIL BLAKE - District Conservationist

Area III

JOE WILLIAMS - Cluster Agronomist
DAVE DURHAM - Soil Conservationist
PATRICK EVANS - Soil Conservationist

Area IV

RITA BICKEL - Area IV Resource Conservationist
PATTI NOVAK-ECHENIQUE - Range Ecologist

PMC

DAVE DYER - PMC Manager
TISH ESPINOSA - Plant Resource Specialist / Agronomist

MAJOR LAND RESOURCE AREAS SERVED

- 4 - CA. Coastal Redwood Belt
- 5 - Siskiyou - Trinity
- 14 - Central CA. Coastal Valleys
- 15 - Central CA. Coast Range
- 16 - CA. Delta
- 17 - Sacramento and San Joaquin Valleys
- 18 - Sierra Nevada Foothills
- 19 - S. CA. Coastal Plain
- 20 - S. CA. Mountains
- 21 - Klamath and Shasta Valleys
- 22 - Sierra Nevada Range
- 29 - S. Nevada Basin

NEWLY RELEASED PLANTS FROM THE LOCKEFORD PMC

LK 517f Germplasm Saltgrass *Distichlis spicata* 2001 # 9032700

Application for Selected Reproductive Material Certification

David A. Dyer, Plant Materials Center Manager, USDA Natural Resources Conservation Service, P.O. Box 68, Lockeford, California, 95237

Phone: 209-727-5319; E-mail: Dave.Dyer@ca.usda.gov

A. Genus: *Distichlis* Species: *spicata* (L.) Greene

Variety/ssp: Select class LK 517f Germplasm Common Name: Saltgrass

B. Origin of the material.

State: CA County: Tulare Elevation: 246 feet MLRA: 17f
Mean Annual Precipitation: 7 to 10 inches

C. Method of Selection for Selected and Tested Materials. LK 517f saltgrass was selected and tested by the USDA Natural Resources Conservation Service under accession number 9032700.

LK 517f saltgrass was collected from a native stand near Pixley, California at an elevation of 246 feet above sea level, (legal description T023S – R24E – S10). Employees of the NRCS (formerly the Soil Conservation Service) originally obtained the plant material on May 31, 1982. It was evaluated in a common garden at Lockford plant materials center against 70 other populations assembled from California. In 1993 six accessions were selected for advanced evaluations. In 1993, a replicated advanced evaluation planting of the six accessions was established near Winters, California. The advanced evaluation site had clay soils and was on the side slopes of an irrigation canal. In October 1994, an evaluation confirmed that accession number 9032700 was superior.

D. Botanical/Objective description of species. LK 517f saltgrass is a California native, perennial, warm season grass with extensive creeping, yellowish, scaly rhizomes forming large colonies. LK 517f is coarse-leaved with an average leaf width of .120 inches; average leaf length of 2.9 inches; average height of 8.0 inches.

E. Evidence for Selected Material supporting identity of the species and performance characteristics. LK 517f was not bred but selected for its overall performance and uniformity. It has been evaluated for foliage abundance and uniformity, vigor, and resistance to disease and drought.

Summary of performance data of LK517f saltgrass, *Distichlis spicata*. Randomized block plots with four replications. Evaluation taken October 1994 near Winters, California. F-A = Foliage Abundance, F-U = Foliage Uniformity, V = Vigor, DI = Disease, DR = Drought.

F-A	F-U	V	DI	DR
4	4.5	3	4	4

Rating criteria: 1= excellent, 9 = poor

F. Area of adaptation and primary use of Selected Materials. LK517f saltgrass primary adaptation is to MLRA 17f; However, it is also adapted to MLRA's 16, 18 and all of MLRA 17. Establishment should be in the late spring using rhizomes or plugs planted on one-foot centers. Irrigation water should be applied the first summer to ensure stand establishment. LK517f saltgrass is used for riparian restoration and bank and shoreline stabilization.

G. Procedure for maintaining planting stock. The Lockford PMC will maintain breeders and foundation planting stock.

H. Additional restrictions. None.

I. Reference specie sample sent with application forms.

J. Site description. The soil found at the collection site is a deep, poorly drained clay with a clay loam substratum. Slope is 0 to 1 percent. There is a perched water table at a depth of 3 to 6 feet. Annual rainfall is 7 to 10 inches.

K. Information to assist field inspectors. Average height 8.0 inches, average leaf width .120 inches, average leaf length 2.9 inches.

L. Literature review. There is a need for an adapted variety of saltgrass for use through out parts of central California for riparian restoration use and for bank and shoreline stabilization. Saltgrass does not grow straight, but sprawls and forms dense mats. It is a perennial California native grass and grows in or near marsh areas. It is a warm season grass, growing from April to November. Saltgrass can be used for forage. Also, it can tolerate both water logging and long periods of drought.

M. Availability of plant material. Rhizomes or plugs will be made available through the Foundation Seed Service, University of California, Davis.

1. Annual Technical Report – Los Lunas Plant Materials Center, 1980.
2. Reduction of Levee Erosion in the Sacramento – San Joaquin Delta, Department of Environmental Horticulture, UC Davis.
3. The Jepson Manual of Higher Plants of California, Hickman, Ed., 1993.
4. Saline Agriculture, International Affairs National Research Council, 1990.
5. Grass, an Identification Guide, Lauren Brown, 1979.

PLANT RELEASES FROM THE LOCKEFORD PMC

Scientific	Common	Release	Year
Arctostaphylos patula	greenleaf manzanita	Altura	1989
Atriplex canescens	fourwing saltbush	Marana	1979
Atriplex lentiformis	big saltbush	Casa	1979
Bromus carinatus	California brome	Cucamonga	1949
Bromus hordeaceus ssp.	soft chess	Blando	1954
Ceanothus cordulatus	mountain whitethorn	Maleza	1989
Ceanothus x flexilis	ceanothus	Cuesta	1991
Cleome isomeris	bladderpod	Dorado	1979
Dactylis glomerata	orchardgrass	Akaroa	1953
Dactylis glomerata	orchardgrass	Berber	1981
Elymus glaucus	blue wildrye	Mariposa	2000
Eriogonum fasciculatum	California buckwheat	Duro	1983
Eriogonum umbellatum var. polyanthum	sulphur flower buckwheat	Sierra	1987
Leymus triticoides	beardless wildrye	Rio	1991
Lolium rigidum	annual ryegrass	Wimmera 62	1962

Nassella cernua	foothill needlegrass	LK415f Germplasm	1998
Nassella pulchra	purple needlegrass	LK115d Germplasm	1998
Nassella pulchra	purple needlegrass	LK215e Germplasm	1998
Nassella pulchra	purple needlegrass	LK315d Germplasm	1998
Phalaris aquatica	koleagrass	Perla	1970
Purshia tridentata	bitterbrush	Lassen	1984
Trifolium hirtum	rose clover	MonteFrio	1991
Trifolium hirtum	rose clover	Wilton	1967
Vicia villosa ssp. varia	woollypod vetch	Lana	1956
Vulpia myuros	annual fescue	Zorro	1977

CURRENT STUDIES AND INITIAL AND ADVANCED EVALUATION PLANTINGS

The following studies were requested from NRCS field offices and relate to the Plant Materials Program and Lockeford PMC strategic plan and business plan. In many cases, the NRCS field office staff worked closely with Dave Dyer, PMC Manager, in developing these studies and in some locations they took the lead in data collection. Many landowners helped with site preparation, plot lay out, fencing, planting and application of treatment materials and management treatments. Also, due to NRCS field office and Lockeford PMC staff networking efforts, many NRCS partners and Conservation Districts helped make these studies happen.

Study Number 0610008B Nesella pulchra genetic analysis

Study Confirm diversity of Nesella pulchra with ARS and San Francisco urban office. A paper titled Nucleotide Sequence Variation Among Natural Populations and Commercial Germplasm Sources of Purple Needlegrass was developed and was sent to field offices as a technical note.

Purpose	Technology Development	Species	1
Funding:	other	Native	1
Duration	1998 - 2001	Accessions	10
National	Natural Areas 1.1	Accessions	0
Status	Active Plots:		0
	Type: Advanced	Evaluations	1
Evaluated:	Y		
<u>SWAPA+H:</u>	<u>NRCS</u>	<u>Resource</u>	
Human	CRP 10%	Buffers	
Plants	CTA 10%	Grazing Land Conservation	
Soil	EQIP 10%	Invasive species	
	EWP 10%	Native Species	
	GLCI 20%		
	UR 30%		
	WHIP 10%		

A paper titled "Mode of reproduction and amplified fragment length polymorphism variation in purple needlegrass (*Nassella pulchra*): utilization of natural germplasm sources" was developed. The paper was published in the British Journal of Molecular Ecology (2001) 10, 1165-1177. This paper was an USDA team effort involving the Agricultural Research Service, Natural Resources Conservation Service - Lockeford Plant Materials Center and San Francisco Urban Office.

The paper provides a source of information and background for personnel who are providing restoration and revegetation alternatives to landowners. It gives guidance on the genetic diversity of purple needlegrass and the result of distance from the seed source to the planting site. The USDA-ARS did the laboratory work and data analysis. LK315d purple needlegrass was determined to have a high level of genetic diversity and would be very appropriate for use in the eastern bay area and close enough to the San Francisco population to be considered for use in the western bay area.

Study Number 06C0003A Vegetative control of Medusahead

Study Evaluate Lana vetch broadcast seeding rates with P application for control of Medusahead.

Purpose Technology Development	Species 1
Funding: NRCS	Native 0
Duration 1999 - 2002	Accessions 1
National Rangeland 1.1	Accessions 0
Status Active	Plots: 18
Type: Advanced	Evaluations 1

Evaluated: Y

<u>SWAPA+H:</u>	<u>NRCS</u>		<u>Resource</u>
Animals	CRP	20%	Buffers
Human	CTA	20%	Grazing Land Conservation
Plants	EQIP	20%	Invasive species
Soil	GLCI	20%	Soil, Water, and Air Quality - Other
	WHIP	20%	

ABSTRACT

'Lana' vetch was broadcast seeded with phosphate fertilizer to determine the optimum seeding rate. 'Lana' vetch was successful the first year at the Jackson, California, site in controlling Medusahead when planted at 20 pounds of pure live seed per acre.

INTRODUCTION

Improved methods for the control of the invasive specie Medusahead, *Taeniatherum asperum*, are needed. Medusahead has invaded large areas of rangeland in California and western Oregon and its spread is continuing at a rapid rate. Over-seeding with 'Lana' vetch, *Vicia dasycarpa*, a self-perpetuating annual legume, appears to be a cost effective practical control (1). 'Lana' vetch can be broadcast seeded on rough terrain and established without seedbed preparation. Over-seeding with 'Lana' vetch results in improved forage quality and control of Medusahead. 'Lana' vetch is an improved

variety of woollypod vetch which is a reliable self-seeding winter-active annual legume developed by the USDA Natural Resources Conservation Service Lockeford Plant Materials Center. This study evaluated three different broadcast-seeding rates of 'Lana' vetch and phosphate fertilizer applications.

METHODS AND MATERIALS

A randomized block design was used with three treatments and three replications. 'Lana' vetch was broadcast seeded at 12, 16, and 20 pounds of pure live seed (PLS) per acre near Jackson, California, (Camanche hunting club, 600 foot elevation, clay loam soil) and near Red Bluff, California, (1200 foot elevation, clay soil). Phosphate fertilizer with a 0-45-0 formulation was applied to all plots at the time of seeding at a 200 pounds per acre rate. The plots were 20 by 20 feet in size.

RESULTS AND DISCUSSION

'Lana' vetch exhibited poor performance at the Red bluff site. It did produce 13% ground cover by the end of the second year, which was not enough to control Medusahead.

'Lana' vetch showed excellent performance during the first year at the Jackson site. During the first year the 16 PLS pounds per acre rate had a 83.3 % average ground cover and the 20 PLS pounds per acre rate produced an 87.5 % average ground cover. 'Lana' vetch was successful during its first year of establishment and growth in controlling Medusahead. During the second year of evaluations there was a dramatic drop in the 'Lana' vetch ground cover that resulted in a lack of control of Madusahead. This decline was due to phosphate fertilizer not being applied the second year (1).

CONCLUSION

Where 'Lana' vetch is well adapted, it may be successfully broadcast seeded and used to control Medusahead in combination with applications of phosphate fertilizer. Phosphate fertilizer must be applied each year to maintain a high level of Lana vetch ground cover (1). The optimum seeding rate for Lana vetch is 20 PLS pounds per acre.

Table 1. Evaluation of 'Lana' vetch by treatments

<u>Location</u>	<u>Treatment</u> <u>(PLS #/acre)</u>	<u>Average % Cover</u> <u>(2000)</u>	<u>Average % Cover</u> <u>(2001)</u>
Red Bluff	12	3.3	5.0
	16	2.7	13.3
	20	3.0	8.3
Jackson	12	45.0	21.7
	16	83.3	20.0
	20	87.5	11.7

REFERENCES

- 1) Lana Vetch for Medusahead Control, Robert S. MacLauchlan, Journal of Range Management, Vol. 23, No 5, September 1970, pp. 351-353.

Study Number 06C0005Z Evaluation of native American basket weaving species

Study Develop germination, propagation and establishment methods. Seeking additional bear grass seed collections, initial bear grass collections had 0 germination. In 2003, PMC staff will make sedge root and seed collections at PMC and will determine best propagation methods. No evaluation data at this time. This study is related to a aboriginal management of the PMC riparian area.

Purpose Technology Development

Species 2

Funding: NRCS

Native 2

Duration 1999 - 2003

Accessions 2

National Natural Areas 1.1

Accessions 0

Status Active

Plots: 2

Type: Advanced

Evaluations 1

Evaluated: Y

<u>SWAPA+H:</u>	<u>NRCS</u>		<u>Resource</u>
Air	CTA	60%	Buffers
Animals	EQIP	30%	Native Species
Human	WHIP	10%	Outreach
Plants			
Soil			
Water			

Aboriginal Management of Riparian Environments in Central California

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Geography Graduate Group
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University of California, Davis
Davis, California 95616

Introduction:

Since submittal of the fellowship proposal in 2002, numerous events have led to the modification of scope and intent of the research that was proposed at that time. Specifically, the following have contributed to the modification of the research:

- 1) Instead of conducting research solely at the Cache Creek Nature Preserve (CCNP) in Woodland, California, a secondary research site has been secured at the Natural Resource Conservation Service's Plant Material Center (PMC) in Lockeford, California. The addition of this second research site broadens the scope of the work by doubling the number of transects for treatment analysis. Similarly, the two sites provide an opportunity for comparison between geographic locations.
- 2) A third party public entity not involved in this research objected to the treatments at the PMC research site, causing substantial delay in the final treatment of prescribed burning.
- 3) With the encouragement of community members and my graduate advisor, the focus of my research is currently evolving from a Master Thesis project toward Ph.D. dissertation research.

Considering the above noted changes to the scope and intent of this research, the goals, objectives, and hypotheses initially stated in my research proposal have been modified to reflect the current status of my research.

To summarize the proposal, the primary objective of this research is to identify the effects of prescribed fire on riparian ecosystems in central California. Specifically, this research will attempt to identify how fire can be used as a tool for resource management and conservation. Additionally, this research will attempt to define the historic and contemporary context for aboriginal land management practices and regimes in riparian ecosystems.

The hypotheses this research will attempt to verify are as follows:

1. Does native plant diversity and/or density increase following treatment (coppicing and burning)?
2. Which season of burn (spring or fall) minimizes adverse effects to native flora and fauna?
3. What is the intensity (temperature) and duration of fire in various vegetation types, and do these parameters vary seasonally?
4. How is fire management from a historic perspective different from fire management in the contemporary?
5. What is the fire history or regime within representative riparian ecosystems in central California?

Preliminary Findings:

Prescribed burns at the CCNP were carried out on November 20 and 27, 2002 respectively, and prescribed burn at the PMC was carried out on December 8, 2002. During these fire events, various observations were made of fire conditions and wildlife activity. The fires were generally low intensity with average flame heights less than 3 feet. Primary fuels ignited were leaf litter and woody fuels less than one inch in diameter along with grasses and forbes. During and after the fire events, community participants observed the activity levels of wildlife within the treated areas. Of the target species (small mammals, reptiles, and amphibians) identified for monitoring effects, no mortality was observed. Wildlife species observed included western fence lizard (*Sceloporous occidentalis*), cottontail rabbits (*Sylvilagus* spp.), and various passerine species. It is worthy to note that during the pre-burn trapping, only young of the year *S. occidentalis* were trapped or observed during the fall trapping period. No *S. occidentalis* were trapped at either site after November 5, 2002. However, during the fires at both the CCNP and PMC several adult *S. occidentalis* were observed active within the treated areas. Specifically, adults were observed moving about the charred and actively burning duff. The behavior of these individuals was noted as they burrowed into the warm ash in what appeared to be dust bathing. Similarly, various unidentified species of spiders were observed active within the burn areas, passing through flaming fronts and emerging on the other side apparently unharmed. Peak avifauna activity was observed within and above the burning area. Based on witness observations, it is presumed that avian activity focused around the foraging of insects, which were also active during the fires. Following the fires at the CCNP, it has been noted that mule deer (*Odocoileus hemionus*) activity increased within the burned areas. Specifically, the burned areas demonstrated an observed increase in tracks and bedding areas in comparison with unburned areas.

As stated in greater detail in the “Research Experience to Date” section below, there were difficulties in igniting the fuels at the PMC site. The observations of fire behavior between the fires at the CCNP and PMC exemplified the role weather conditions can have on fire properties. Fire behavior at both sites largely was regulated by fuel moisture and humidity. Thus, it was helpful to have several community members present to assist in ignition and spread of the fire. The figures below represent fire temperature and duration data collected at the CCNP on November 27, 2002 with an ambient air temperature of approximately 63 ° F, wind speed average of less than one mile per hour, and relative humidity of 30 percent.

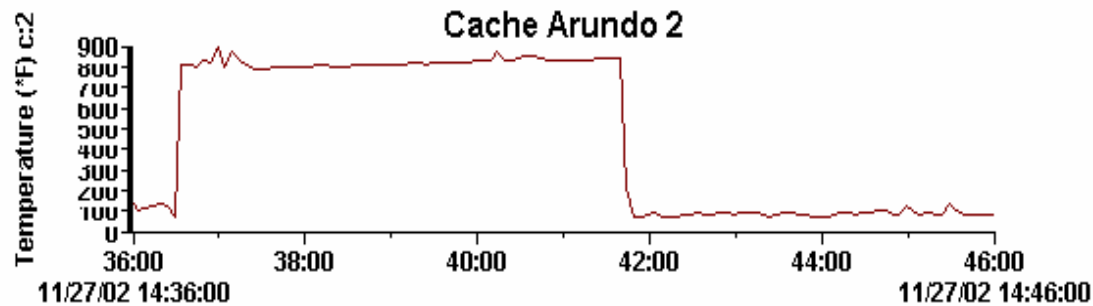


Figure 1. This graph depicts the intensity and duration of fire in *Arundo* wood chip duff. As exemplified by the graph, the fire in this fuel type under the burn conditions reached approximately 800 F and maintained this intensity for approximately five minutes.

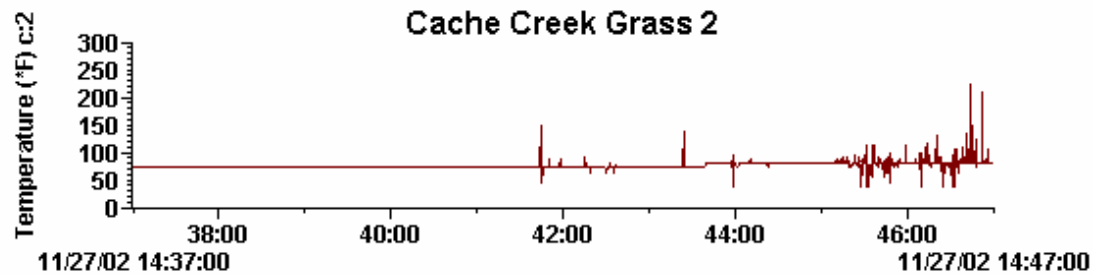


Figure 2. This graph depicts the intensity and duration of fire in a stand of *Carex barbarae*. As exemplified by the graph, the fire in this fuel type under the burn conditions reached approximately 275 F and maintained this intensity for only a few seconds. Additional peaks observed in this graph are likely representative of repeated dousing by the drip torch to test the data logger.

Field Experience to Date:

As indicated in the introduction, the delay in burn treatment at the PMC was initially caused by objections of a third party public entity. Specifically, this entity had been conducting biological monitoring that included stations within the research site at the PMC. Coordination with this entity began approximately one year prior to initiating research at this site. During previous discussions of this research, the entity appeared very supportive of the proposed research. However, as the target date for the burn treatment approached, the entity objected for fear that any burn treatment in the vicinity of their monitoring area might skew the results of their monitoring efforts. Several attempts were made to identify areas where their monitoring might have been affected by this research. However, the staff of the public entity refused to meet to work to a mutually agreeable implementation strategy. In order to maintain peace between the entity, community host, and the research, I delayed the burn treatment until their monitoring season was complete. This automatically meant that the objectives of burn timing following seasonal precipitation would not be met at the PMC. Discussion with community members led to a mutual agreement that we should still attempt to burn this season at the earliest possible date.

This posed another problem with scheduling a burn at the PMC. Specifically, the PMC is within the jurisdiction of the San Joaquin Valley Air Quality Control Board. Regulation of air quality within the San Joaquin Valley is among the most stringent in the United States. Due the season and weather patterns at the desired time of burning, permissible burn days were severely limited. The desired window to burn would have occurred approximately mid-November 2002. However, we were finally granted permission to burn on December 8, 2002. By this date, the PMC had received several inches of precipitation in the form of rain events and dense fog. Thus, many grasses had germinated and the burnable fuels had been dampened considerably. In consideration of the next possible burn day, it was decided to attempt to burn specific areas limited to plots surrounding and including the line transects. Considerable energy was devoted to accomplishing the burn objectives within these relatively small units. Regardless, we were able to achieve treatments within the desired units.

As result of these combined events, the hypotheses were modified to include comparison between fall and spring burning. Thus, this spring four new line transects will be established in the treatment areas at the CCNP and PMC to test seasonal variation in burn treatments.

Successes and Challenges:

Aside from the difficulties previously mentioned, the fieldwork has been quite successful. The CCNP graciously contracted the California Conservation Corps to complete the coppice treatment (i.e., ladder fuel removal) in the treatment area. At the PMC, community volunteers contributed 10 weekends of work to complete the coppice treatment. Since completion of the coppicing and fall burn prescriptions, additional volunteers have offered their assistance for future treatments and research needs.

One of the challenges of this research is coordination and timing of research activities between research sites and participatory communities. Through this process, I have learned the community extends beyond both the Native American and host communities at each research site as represented by recruitment of volunteers from outside of these communities

Lessons Learned Thus Far:

In any research, there must be room for modification of the applied research. I was not anticipating any difficulty in meeting my research objectives this season. However, the obstacles encountered have caused me to reconsider alternatives with the community and devise additional hypotheses that are believed to strengthen the value of this research. Essentially, the lesson is to maintain an open mind and be willing to deviate from the desired path of research when absolutely necessary.

Future Research Directions:

At present, multiple opportunities exist for this research to expand into new research sites and new research communities. Specifically, there has been some interest in furthering this research by investigating the role of fire in the conservation needs of the federally endangered riparian brush rabbit (*Sylvilagus bachmani riparius*). Specifically, species experts have expressed an interest in researching the effects of fire on the riparian brush rabbit. An unpublished report by Close and Williams¹ specifies the need to research the role of fire as a conservation tool for the riparian brush rabbit, and also cites the role of the California Indian Basketweavers Association (CIBA) as an integral partner in conducting this research. This

¹ Close, C.L. and D.F. Williams. date unknown. *Habitat Management for Riparian Brush Rabbits and Woodrats With Special Attention to Fire and Flood*. http://arnica.csustan.edu/esrpp/caswell_sum.htm

is research of interest to several community members and myself due to our resource conservation objectives and involvement with CIBA. Additionally, I have learned of similar research efforts in northern Australia among Aboriginal groups in Kakadu National Park. Preliminary research into fire and Aboriginal practices and policies in Australia demonstrates numerous avenues for comparative community participatory research. Largely, I see the potential research in Australia as an opportunity to study the continuity of continued Aboriginal land management practices as well as how policy within the region could serve as a model for how things might be improved in California. I have been offered the opportunity to pursue these options of broadening my research, however, further consideration is required to determine the practicality and feasibility of either of these options. Certainly both are of interest to me, and provide an interesting situation to diversify the participant pool into a larger research project.

Study Number 06C0007G Evaluation of selected plant materials for uptake of N and P after manure applications in pastures.

Study Select best species for manure N and P uptake. This study was converted to a cultivar trail due to the lack of a PMC laboratory. No evaluation data or laboratory data developed at this time. Perla koleagrass, Tonic plantain and Teton tall fescue was established at a high enough level in the plots to allow for plant clippings after manure and fertilizer treatments. The other species in the study did not get established.

Purpose Technology Development	Species 10
Funding: NRCS	Native 1
Duration 1999 - 2003	Accessions 10
National Cropland 4.1	Accessions 0
Status Active	Plots: 30
Type: Advanced	Evaluations 1
Evaluated: Y	

<u>SWAPA+H:</u>	<u>NRCS</u>		<u>Resource</u>
Human	CTA	20%	Buffers
Soil	EQIP	10%	Grazing Land Conservation
Water	FIP	10%	Nutrient Management
	SP	10%	Soil, Water, and Air Quality - Animal Waste Management - Beef
	WQ	50%	Soil, Water, and Air Quality - Animal Waste

Management - Dairy

Study Number 06C0009H Templeton range seeding trail

Study Select best cultivars and seed mixes. Field office and extension staff has the lead on this study. PMC and state range conservationist is helping with the evaluations. This seeding trail study which evaluated four seed mixes which were replicated three times and has three different grazing intensities (moderate, heavy and no grazing). Sixteen single species were seeded with three replications. The moderate grazing treatment appears to render the highest number of seedlings per square foot. The orchard grass has produced the most seedlings, far ahead of the other species. The extension service will provide data analysis and a joint paper is being developed.

Purpose Technology Development	Species 16
Funding: NRCS	Native 1
Duration 1999 - 2002	Accessions 16
National Rangeland 1.1	Accessions 0
Status Active	Plots: 48
Type: Advanced	Evaluations 1
Evaluated: Y	

<u>SWAPA+H:</u>	<u>NRCS</u>		<u>Resource</u>
Animals	CRP	30%	Buffers

Soil CTA 30% Grazing Land Conservation
 Water EQIP 10%
 GLCI 20%
 WQ 10%

Table 1. Plants and seeding rates used at Varian ranch

Microplot	Common Name	Scientific Name	Seeds per Pound	Seeding Rate Lb./Ac. (Bulk)	Seeds per Sq. Ft. (Bulk)	Grams per Microplot (Bulk)
1	Blue Wildrye	<i>Elymus glaucus</i>	135,300	18.5	57	3.1
2	Hard Fescue	<i>Festuca ovina</i>	565,000	18.5	240	3.1
3	Hardinggrass	<i>Phalaris tuberosa</i>	347,000	18.5	147	3.1
		<i>stenoptera</i>				
4	Orchardgrass	<i>Dactylis glomerata</i>	540,000	18.5	229	3.1
5	Perlagrass	<i>Phalaris tuberosa</i>	267,000	18.5	113	3.1
		<i>hirtiglumis</i>				
6	Slender Wheatgrass	<i>Agropyron trachycaulum</i>	160,000	18.5	68	3.1
7	Mix A:			18.5		3.1
	Hardinggrass (Holdfast) 33.3%	<i>Phalaris tuberosa</i>	347,000			
		<i>stenoptera</i>				
	Perlagrass 33.3%	<i>Phalaris tuberosa</i>	267,000			
		<i>hirtiglumis</i>				
	Orchardgrass (Paiute) 33.3%	<i>Dactylis glomerata</i>	540,000			

8	Mix B:			18.5	3.1
	Perlagrass 48%	<i>Phalaris tuberosa</i>	267,000		
		<i>hirtiglumis</i>			
	Slender Wheatgrass 26%	<i>Agropyron trachycaulum</i>	160,000		
	Hard Fescue 26%	<i>Festuca ovina</i>	565,000		
9	Mix C:			18.5	3.1
	Orchardgrass (Paiute) 50%	<i>Dactylis glomerata</i>	540,000		
	Hardinggrass (Holdfast) 25%	<i>Phalaris tuberosa</i>	347,000		
		<i>stenoptera</i>			
	Perlagrass 25%	<i>Phalaris tuberosa</i>	267,000		
		<i>hirtiglumis</i>			
10	Mix D			18.5	3.1
	Blue Wildrye 50%	<i>Elymus glaucus</i>	135,300		
	Orchardgrass 50%	<i>Dactylis glomerata</i>	540,000		
11	Bur Medic (Serena)	<i>Medicago polymorpha</i>		27.6	4.6
12	Bur Medic (Santiago)	<i>Medicago polymorpha</i>		27.6	4.6
13	Barrel Medic (Sephi)	<i>Medicago tribuloides</i>		27.6	4.6
14	Barrel Medic (Jemalong)	<i>Medicago tribuloides</i>		27.6	4.6
15	Sub. Clover (Seaton Park)	<i>Trifolium subterraneum</i>		27.6	4.6

16	Sub. Clover (Campeda)	<i>Trifolium subterraneum</i>	27.6	4.6
17	Sub. Clover (Nungarin)	<i>Trifolium subterraneum</i>	27.6	4.6
18	Sub. Clover (Koala)	<i>Trifolium subterraneum</i>	27.6	4.6
19	Sub. Clover (Losa)	<i>Trifolium subterraneum</i>	18.5	3.1
20	Persian Clover (Nitro Plus)	<i>Trifolium resupinatum</i>	27.6	4.6

Table 2. Evaluation of seed mixes at Varian ranch, May 2001.

Microplot	Species	Total Seedlings	Ave Green Seedlings							Ave Green Seedlings	Ave Height	% Seed Prod		Notes
		0.25 sq ft	0.25 sq ft	0.25 sq ft	0.25 sq ft	0.25 sq ft	0.25 sq ft	0.25 sq ft	0.25 sq ft	0.25 sq ft	in	Vigor	Prod	
1	HPO (Mix A)	22	19	13	18	16	14	10	13	3	7	0	Harding-33%; Perla-33%; Orchard-33%	

2	Campeda Sub Clover	2	0	5	2	2	0	5	2	<1	2	0	
3	Slender Wheatgrass	9	4	3	5	5	4	3	4	<2	5	0	
4	Harding Grass	4	9	5	6	2	5	3	3	<2	4	0	
5	Bl Wr/Orchard (Mix D)	17	14	12	14	17	11	12	13	5	9	10	
6	Hard Fescue	34	15	13	21	29	12	12	18	<1	7	0	Blue Wildrye-50%, Orchardgrass-50%
7	Seaton Sub Clover	1	4	6	4	1	1	2	1	<1	4	0	
8	HPO (unknown mix)	16	7	12	12	12	4	9	8	3	7	0	Harding, Perla, Orchard - % unknown
9	Santiago Bur Medic	3	13	10	9	0	0	0	0	<1	9	25	
10	Jemalong Barrel Medic	11	14	6	10	0	4	0	1	<1	8	0	
11	Blue Wildrye	9	25	8	14	9	25	8	14	8	10	20	
12	Orchard Grass	29	10	29	23	24	10	26	20	3	8	0	
13	Nitro Persian Clover	15	3	3	7	0	0	0	0	<1	7	0	
14	Perla Grass	13	4	14	10	2	2	4	3	<2	2	0	
15	OPH (Mix C)	17	24	33	25	13	19	22	18	3	6	0	Orchard-50%, Perla-25%, Harding-25%
16	Serena Bur Medic	8	12	5	8	0	12	1	4	<1	10	50	75% defoliated by insects/ro

17	Nungarin Sub Clover														dents grazed/tr ampled beyond recognitio n
18	Losa Sub Clover														grazed/tr ampled beyond recognitio n
19	Sephi Barrel Medic	12	2	0		5	5	0	0		2	<1	5	0	grazed by cattle; rodent/ra bbit pellets
20	Koala Sub Clover	0	2	1		1	0	0	0		0	<1	1	0	grazed by cattle; rodent/ra bbit pellets

Table 3. Evaluation of seed mixes and seedlings at Varian ranch, May 2001

Micro plot	Species	Total		Ave		Ave		Green		Ave		Ave		Ave		% Seed Prod			
		Seedlings		Seedlings		Seedlings		Seedlings		Seedlings		Seedlings		Height	Vigor				
		0.25 sq ft		0.25 sq ft		per sq ft		0.25 sq ft		0.25 sq ft		per sq ft		in					
12	Orchard Grass	29	10	29		23		91		24	10	26		20		80	3	8	0
15	OPH (Mix C)	17	24	33		25		99		13	19	22		18		72	3	6	0
6	Hard Fescue	34	15	13		21		83		29	12	12		18		71	<1	7	0

11	Blue Wildrye	9	25	8	14	56	9	25	8	14	56	8	10	20
1	HPO (Mix A)	22	19	13	18	72	16	14	10	13	53	3	7	0
5	Bl Wr/Orchard (Mix D)	17	14	12	14	57	17	11	12	13	53	5	9	10
8	HPO (unknown mix)	16	7	12	12	47	12	4	9	8	33	3	7	0
16	Serena Bur Medic	8	12	5	8	33	0	12	1	4	17	<1	10	50
3	Slender Wheatgrass	9	4	3	5	21	5	4	3	4	16	<2	5	0
4	Harding Grass	4	9	5	6	24	2	5	3	3	13	<2	4	0
14	Perla Grass	13	4	14	10	41	2	2	4	3	11	<2	2	0
2	Campeda Sub Clover	2	0	5	2	9	2	0	5	2	9	<1	2	0
19	Sephi Barrel Medic	12	2	0	5	19	5	0	0	2	7	<1	5	0
7	Seaton Sub Clover	1	4	6	4	15	1	1	2	1	5	<1	4	0
10	Jemalong Barrel Medic	11	14	6	10	41	0	4	0	1	5	<1	8	0
9	Santiago Bur Medic	3	13	10	9	35	0	0	0	0	0	<1	9	25
13	Nitro Persian Clover	15	3	3	7	28	0	0	0	0	0	<1	7	0
20	Koala Sub Clover	0	2	1	1	4	0	0	0	0	0	<1	1	0
17	Nungarin Sub Clover													
18	Losa Sub													

Clover														
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*Vigor Ratings: 1= Excellent, 9= Poor

Study Number 06C0012Z Evaluation of Perla grass for carbon levels and potential for biomass-to-ethanol and global climate change

Study Determine Perla carbon levels. UC Davis will do data analysis and results will be stated when this task is completed.

Purpose Technology Development

Species 1

Funding: NRCS

Native 0

Duration 2000 - 2005

Accessions 1

National Rangeland 1.1

Accessions 0

Status Active

Plots: 9

Type: Advanced

Evaluations 0

Evaluated: N

SWAPA+H: NRCS

Air	CRP	20%
Human	CTA	20%
	EQIP	10%
	GLCI	30%
	SP	20%

Resource

Buffers
Carbon Sequestration
Grazing Land Conservation
Soil, Water, and Air Quality - Other

SOIL NAME	Arbuckle	Cortina	Hillgate	Kimball
SOIL CLASSIFICATION	f-l, superactive thermic Typic Haploxeralfs	l-skel, superact thermic Typic Xerofluvents	fine, smectitic, thermic Typic Palexeralfs	f, active, thermic mollic Palexeralfs
SLOPE CLASS(ES) *	0 - 3 percent	nearly level	0-3 percent, 3-8 percent	0-3 percent, 3-8 percent
GEOMORPHIC POSITION	low terraces	alluvial fans and floodplains	low terraces	fan terraces
VEGETATION	range - annual grasses and forbs	rangeland	rangeland	annual grasses and forbs
DEPTH CLASS	very deep	very deep	very deep	very deep
RESTRICTION?	n/a	n/a	n/a; abrupt text chg to clay @ 19"	> 40" if present
DRAINAGE	well	somewhat excessively drained	moderately well drained	well drained
PERMEABILITY	moderately slow to slow	rapid	very slow and slow	very slow
SURFACE TEXTURE	sandy loam	grv sandy loam	loam	loam or gr loam
PARENT MATERIAL	alluvium from conglomerate/metased	mixed source gravelly alluvium	mixed alluvium	mixed alluvium
DEPTH TO CALCAREOUS?	n/a	n/a	> 38"	n/a
pH @ 20 cm *	6.2	6.4	6.3	5.7
SURF MSTR @ 15 BARS (%) *	4.6	4.2	6.1	4.9
C:N RATIO - SURFACE *	10	9	9	13

SOIL NAME	Myers	Newville	Parrish	Sehorn
SOIL CLASSIFICATION	fine, smectitic, thermic Aridic Haploxererts	fine, smectitic, thermic Mollic Palexeralfs	f, vermiculitic, mesic, Ultic Haploxeralfs	f, smect, thermic Aridic Haploxererts
SLOPE CLASS(ES) *	0-3 percent	3 - 10 percent +	10 - 30 percent	10 - 30 percent
GEOMORPHIC POSITION	basins	dissected terraces	uplands	uplands
VEGETATION		annual grass range	brushy range	range
DEPTH CLASS	very deep	moderately deep	moderately deep	moderately deep
RESTRICTION?	n/a	26"	26"	29"
DRAINAGE	well drained	well drained	well drained	well drained
PERMEABILITY	slow	slow	moderately slow to slow	slow
SURFACE TEXTURE	clay	gr loam	gr loam	clay loam
PARENT MATERIAL	mixed alluvium	softly consolidated alluvium	resid of Franciscan sed/metased	residuum from calc

				sand/shales
DEPTH TO CALCAREOUS?	25" +	n/a	n/a	25" +
pH @ 20 cm *	n/a	n/a	5.7	6.9
SURF MSTR @ 15 BARS (%) *	n/a	7.2	12	19.1
C:N RATIO - SURFACE *	n/a	10	20	10

SOIL NAME	Tehama	Zamora
SOIL CLASSIFICATION	f-s, mixed, thermic, Typic Haploxeralfs	f-s, mixed, thermic, Mollic Haploxeralfs
SLOPE CLASS(ES) *	0-3 percent, 3-8 percent	0-3 percent
GEOMORPHIC POSITION	fans and terraces	fans and terraces
VEGETATION	dry farmed crops	annual grasses/forbs, occas oaks
DEPTH CLASS	deep to very deep	deep
RESTRICTION?	n/a	n/a
DRAINAGE	well drained	well drained
PERMEABILITY	slow	moderately slow
SURFACE TEXTURE	silt loam	silt loam
PARENT MATERIAL	mixed alluvium	mixed alluvium
DEPTH TO CALCAREOUS?	n/a	51"
pH @ 20 cm *	6.5	7
SURF MSTR @ 15 BARS (%) *	5	11
C:N RATIO - SURFACE *	10	12

* - Soil Survey Tehama
County, CA (1967). Data
may be extrapolated from
geographically similar soils.

All other data from
OSD

**One square foot samples of biomass was sampled and weighed on a digital scale.
No new Perla planting biomass will be sampled until it is established.**

Table 1. Biomass Data

	Old Perla	Annual Range	New Perla
Sample 1 weight (grams/ft²)	56.4	16.6	Not sampled
Sample 2 weight (grams/ft ²)	57.7	24.2	Not sampled
Sample 3 weight (grams/ft ²)	51.9	25.2	Not sampled
Average weight (grams/ft ²)	55.33	22.0	N/A
Average Pounds per Acre	5,309	2,111	N/A

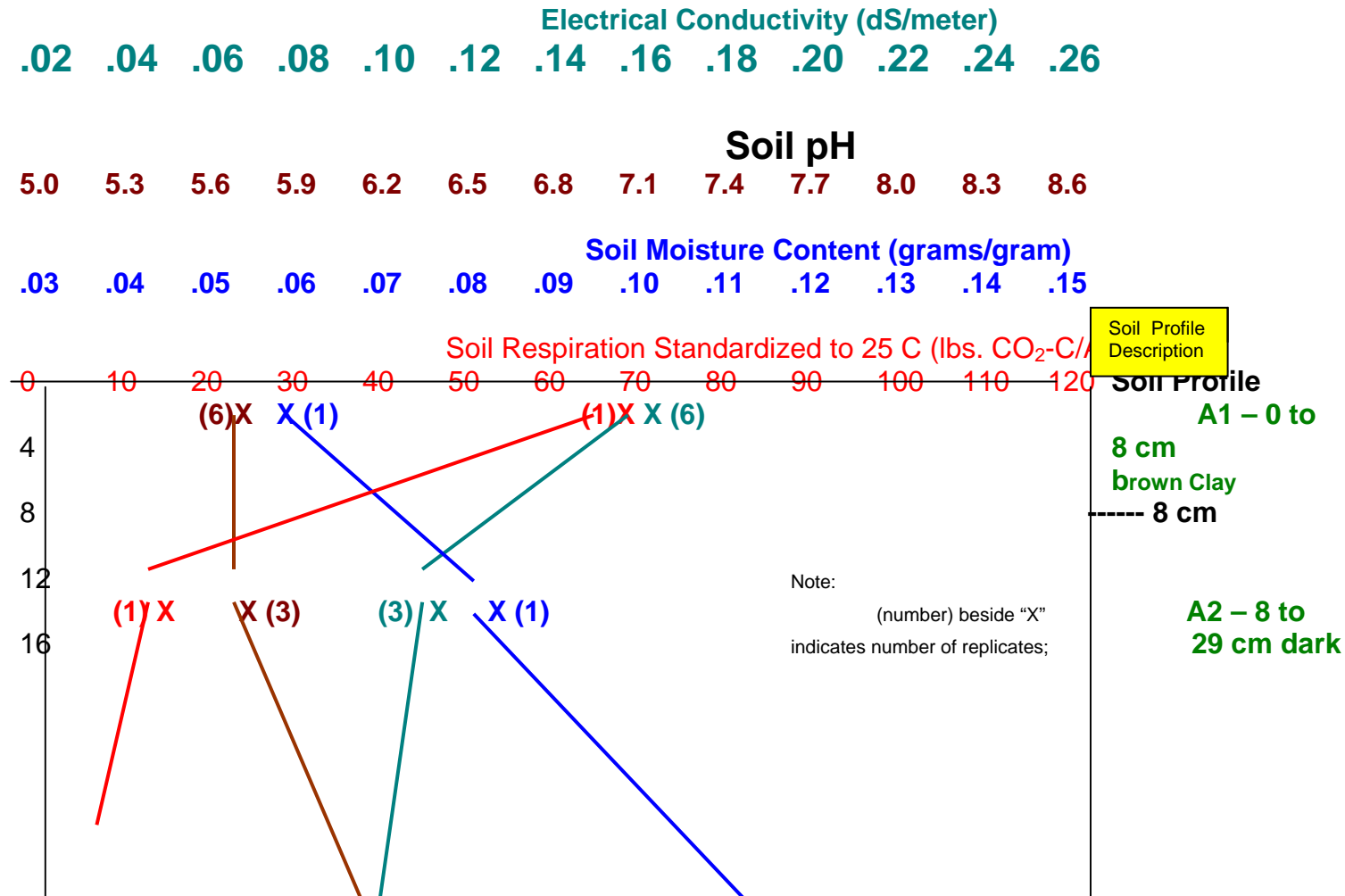
Roots were sifted from one square foot soil for each soil sampling depth and weighed on a digital scale for the 11-year old Perla and annual range grasses. No new Perla planting roots will be sampled until it is established.

Table 2. Root Data

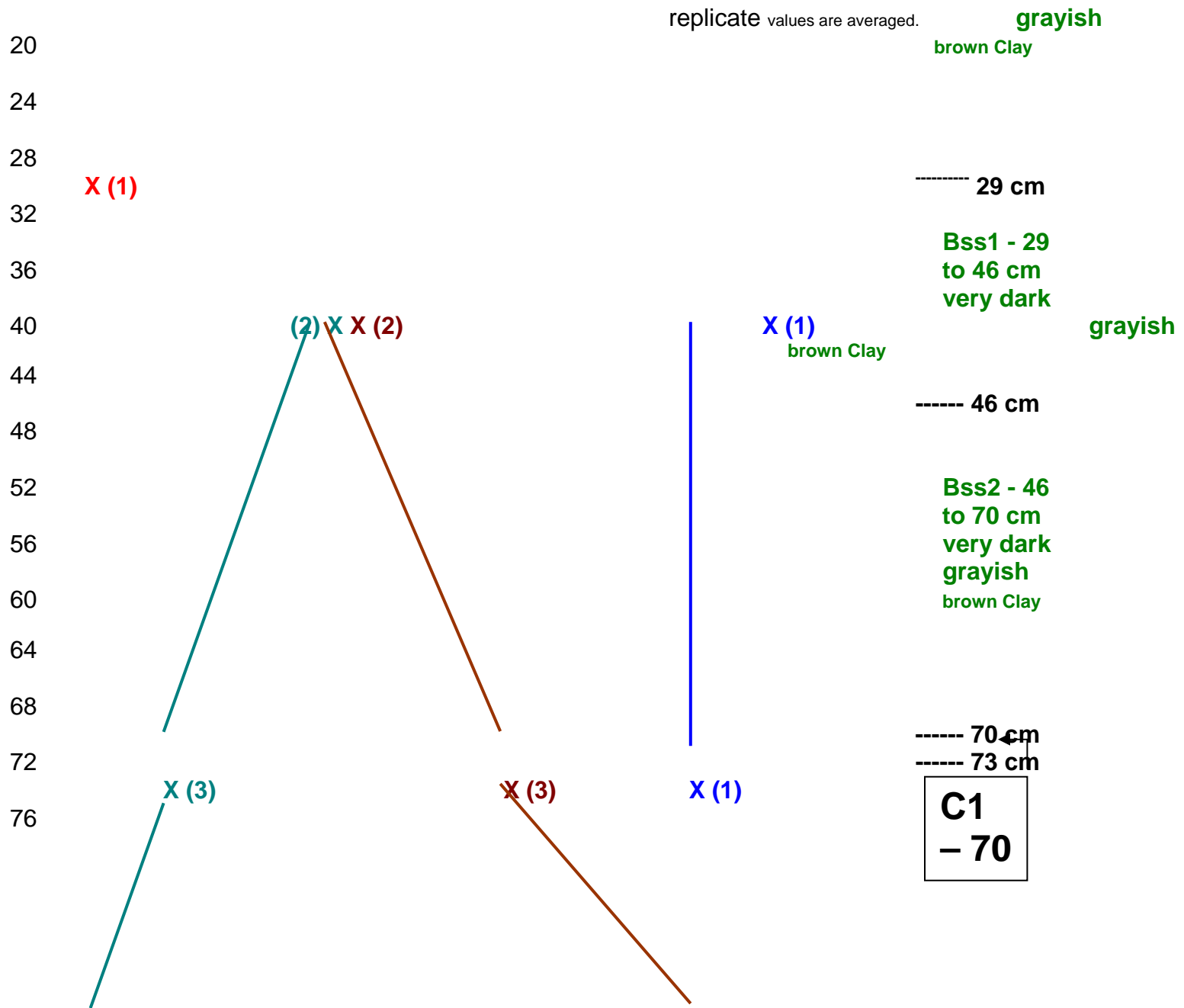
	Old	Annual Range	New Perla
--	------------	--------------	-----------

	Perla		
0 – 5 cm (grams/ft ²)	218.4	6.6	Not sampled
5 – 15 cm (grams/ft ²)	12.8	0.2	Not sampled
15 – 65 cm (grams/ft ²)	41.5	Not measurable	Not sampled
65 – 86 cm (grams/ft ²)	19.6	Not measurable	Not sampled
85 – 100 cm (grams/ft ²)	2.8	Not measurable	Not sampled
Profile Total (grams/ft ²)	295.1	6.2	N/A
Pounds / Acre (0 – 100 cm)	28,314	652.44	N/A

Pit 1. Yolo Conservation Field Trial, Yolo L&C Annual Range, Year 2001 Data



Depth (cm)



80
84
88
90

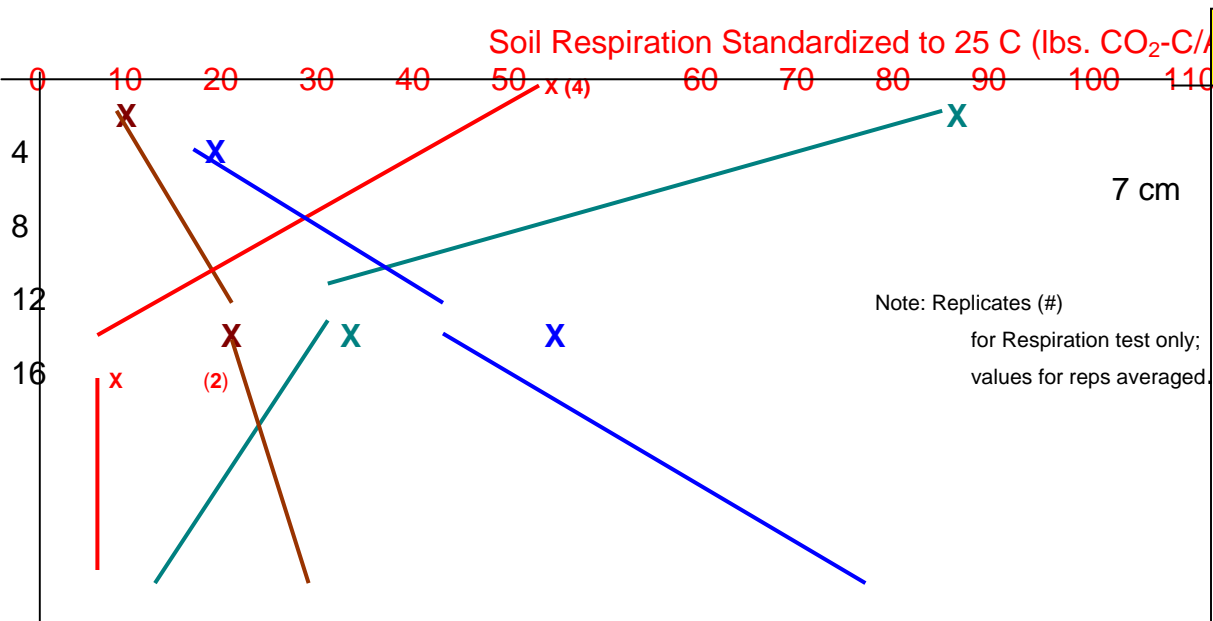
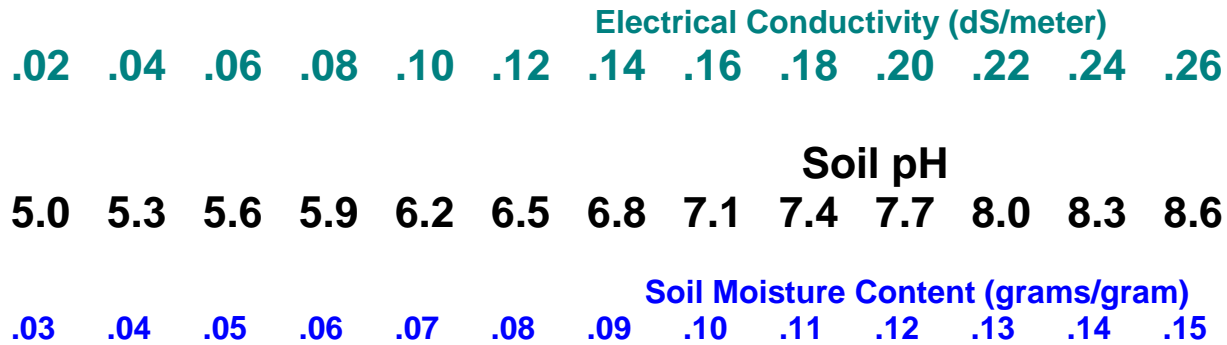
X (2)

X (1)

Siltstone

Cr - 73 cm+

Pit 2. Yolo Conservation Field Trial, Pete's Valley Perennial Range, Year 2001 Data



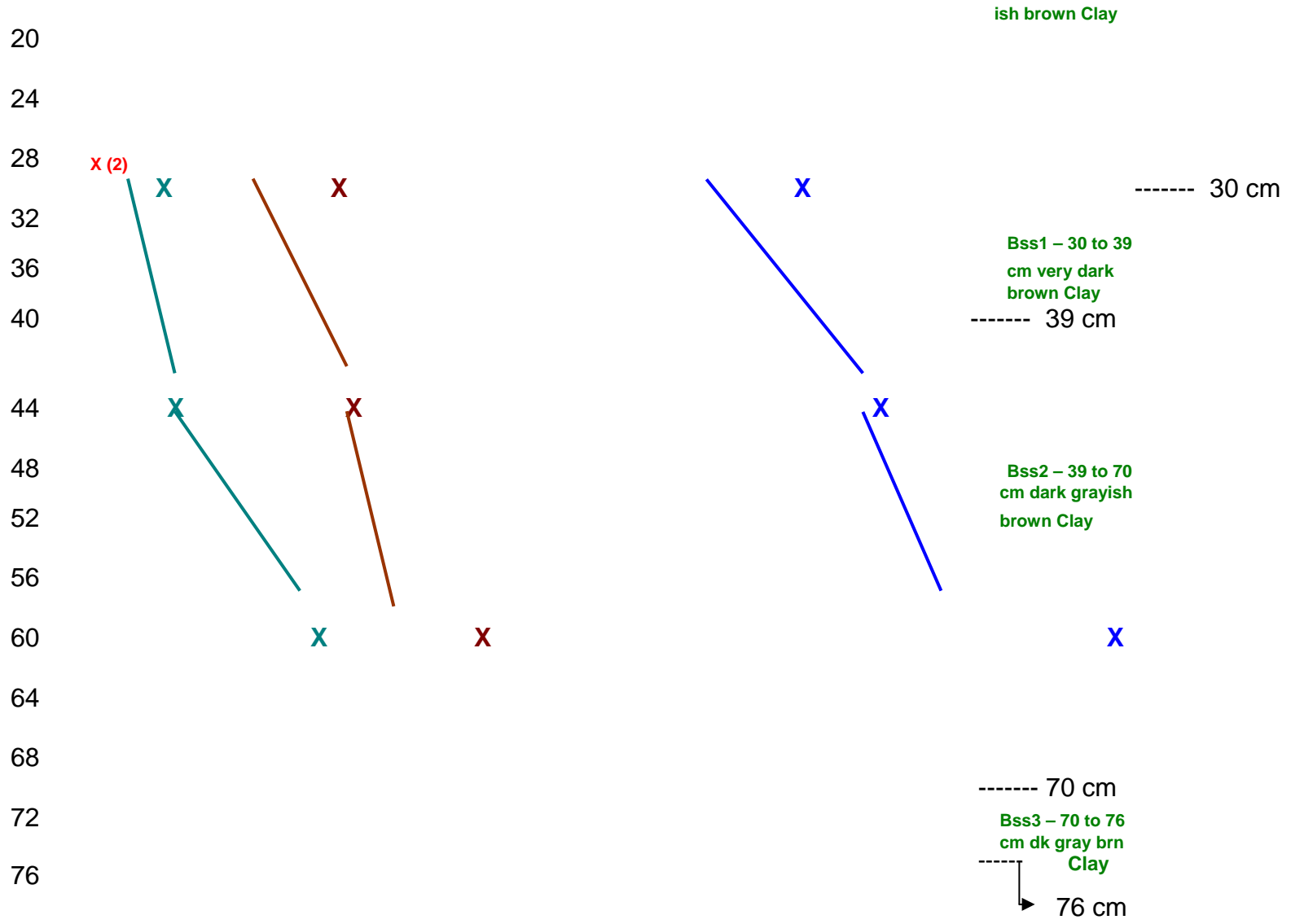
Soil Profile Description

Ap - 0 to 7 cm
dk gray brown
----- Silty Clay

A1 - 7 to 30 cm
very dk gray-

Note: Replicates (#)
for Respiration test only;
values for reps averaged.

(cm)

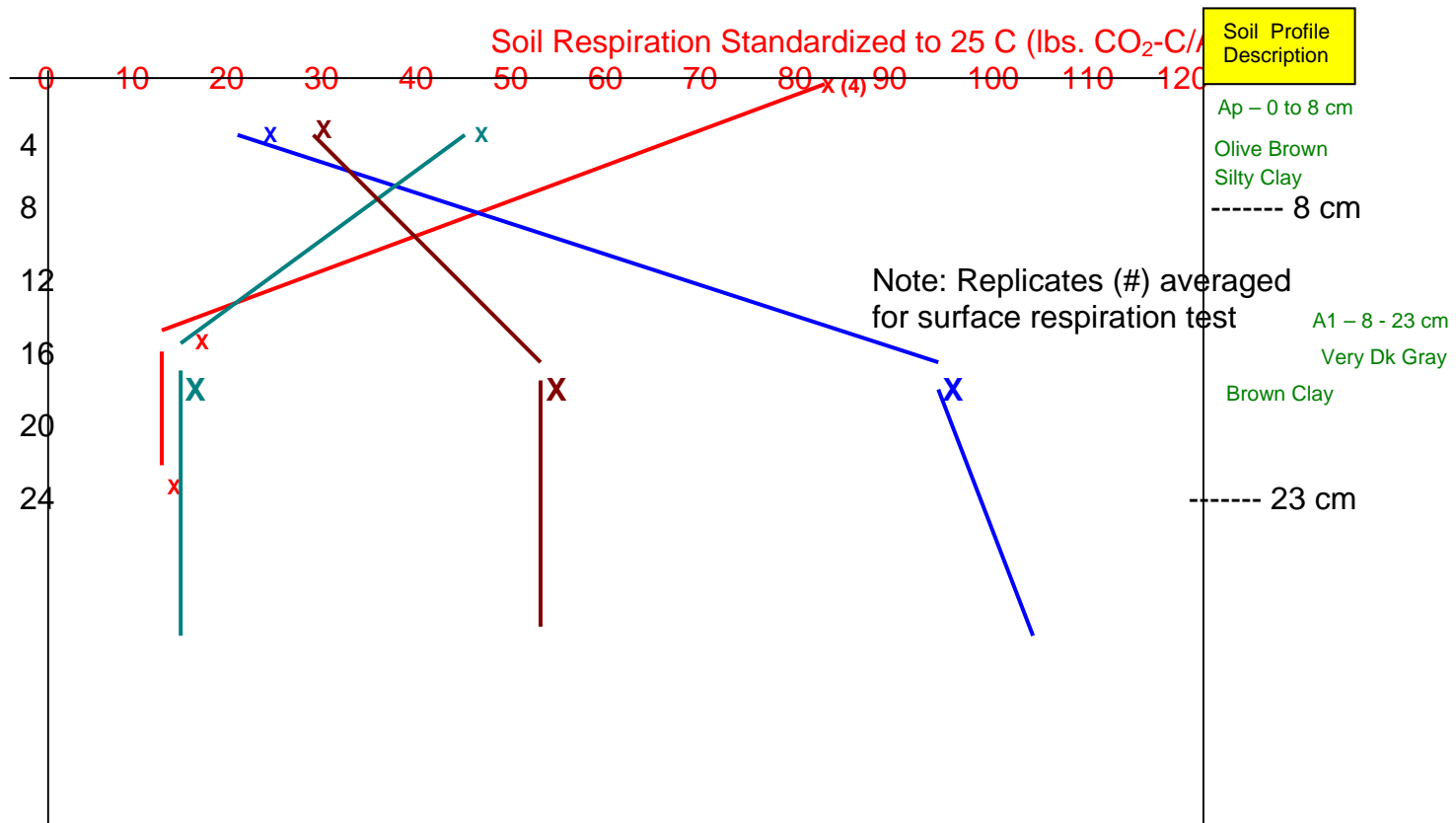


Pit 3. Yolo Conservation Field Trial, Yolo L&C Perennial Range, Year 2001 Data

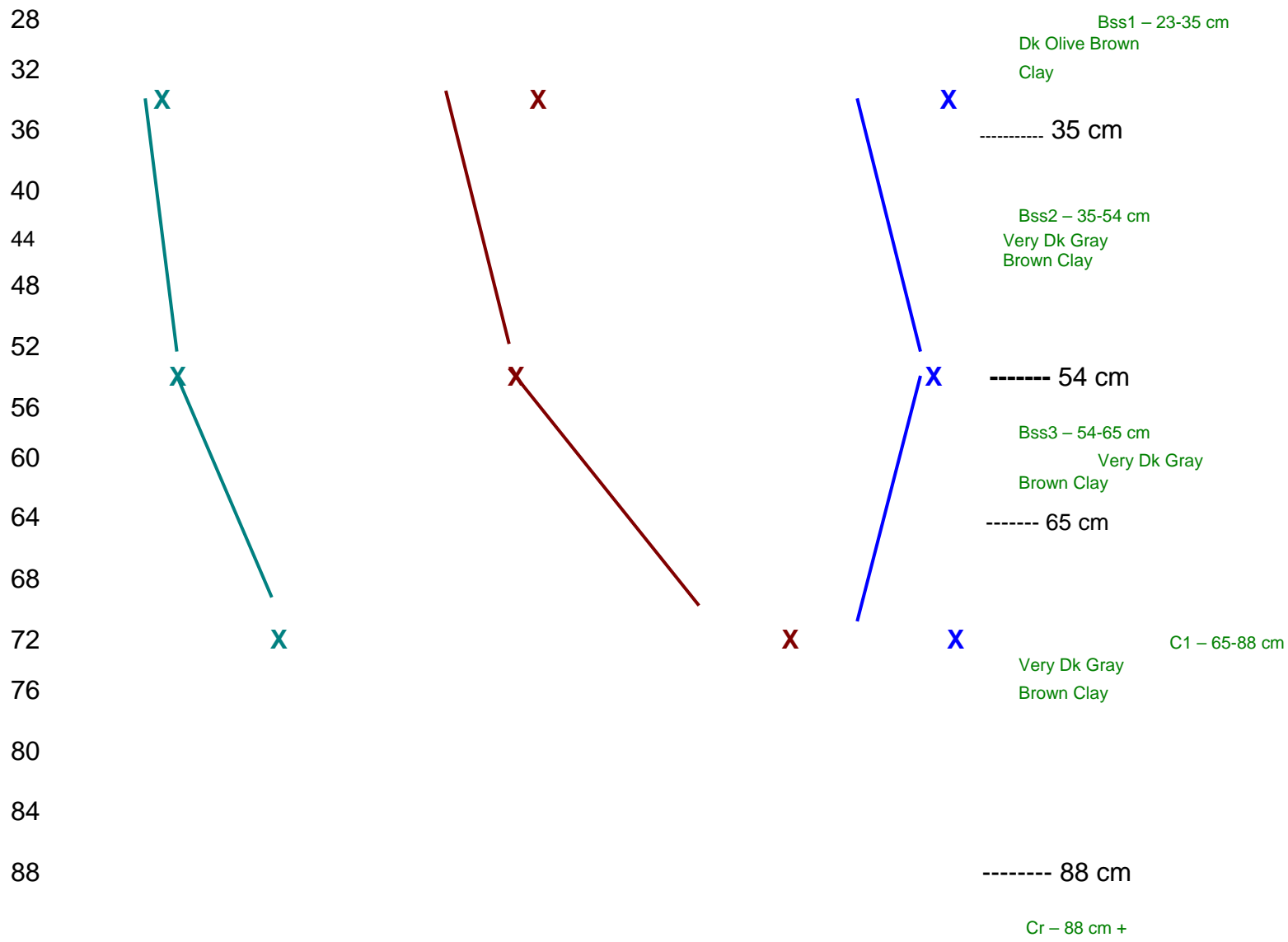
Electrical Conductivity (dS/meter)
 .02 .04 .06 .08 .10 .12 .14 .16 .18 .20 .22 .24 .26

Soil pH
 5.0 5.3 5.6 5.9 6.2 6.5 6.8 7.1 7.4 7.7 8.0 8.3 8.6

Soil Moisture Content (grams/gram)
 .03 .04 .05 .06 .07 .08 .09 .10 .11 .12 .13 .14 .15



Depth (cm)



Bio-mass eucalyptus clone selections study

Study Select best clone for bio-mass use. Eucalyptus Improvement association is the project leader with four sites in California. EIA has data collection and analysis lead and they will make final selections. EIA has had a very low level of activity in recent years and has collected no data in the past five years. EIA has been requested to complete this study. No action to date.

Purpose Release

Species 1

Funding: Other

Native 0

Duration 1991 - 2002

Accessions 30

National Forestland 1.1

Accessions 0

Status Active

Plots: 120

Type: Initial

Evaluations 0

Evaluated: N

<u>SWAPA+H:</u>	<u>NRCS</u>		<u>Resource</u>
Air	CTA	40%	Buffers
Human	FIP	20%	Carbon Sequestration
Plants	UR	20%	Soil, Water, and Air Quality - Other

Eucalyptus evaluation for windbreak use study.

Study Release improved windbreak tree. One selection has been made and the development of a release notice is in progress. No new data has been collected in the past year.

PurposeRelease **Species** 45

Funding: NRCS

Native 0

Duration1982 - 2001

Accessions 52

National Cropland 3.1

Accessions 2

Status Active

Plots: 52

Type: Initial

Evaluations 1

Evaluated: Y

<u>SWAPA+H:</u>	<u>NRCS</u>		<u>Resource</u>
Air	CTA	40%	Buffers
Animals	EQIP	30%	Carbon Sequestration
Human	UR	30%	Soil erosion and sediment control - Agriculture
Soil			Soil, Water, and Air Quality - Other

Evaluation of saltgrass study

Study Release developed.

Purpose Release

Species 1

Funding: Other

Native 1

Duration 1981 - 2001

Accessions 40

National Water Quality 3.1

Accessions 1

Status Completed

Plots: 40

Type: Advanced

Evaluations 1

Evaluated: Y

<u>SWAPA+H:</u>	<u>NRCS</u>		<u>Resource</u>
Animals	CTA	20%	Buffers
Plants	EWP	20%	Invasive species
Soil	UR	10%	Native Species
Water	WHIP	10%	Riparian
	WQ	20%	Soil erosion and sediment control - Agriculture
			Soil erosion and sediment control - Urban

Application for Selected Reproductive Material Certification

Name/Address of Applicant/Collector

David A. Dyer, Plant Materials Center Manager, USDA Natural Resources Conservation Service, P.O. Box 68, Lockeford, California, 95237

Phone: 209-727-5319; E-mail: Dave.Dyer@ca.usda.gov

A. Genus: *Distichlis* Species: *spicata* (L.) Greene

Variety/ssp: Select class LK 517f Germplasm Common Name: Saltgrass

C. Origin of the material.

State: CA County: Tulare Elevation: 246 feet MLRA: 17f

Mean Annual Precipitation: 7 to 10 inches

C. Method of Selection for Selected and Tested Materials. LK 517f saltgrass was selected and tested by the USDA Natural Resources Conservation Service under accession number 9032700.

LK 517f saltgrass was collected from a native stand near Pixley, California at an elevation of 246 feet above sea level, (legal description T023S – R24E – S10). Employees of the NRCS (formerly the Soil Conservation Service) originally obtained the plant material on May 31, 1982. It was evaluated in a common garden at Lockford plant materials center against 70 other populations assembled from California. In 1993 six accessions were selected for advanced evaluations. In 1993, a replicated advanced evaluation planting of the six accessions was established near Winters, California. The advanced evaluation site had clay soils and was on the side slopes of an irrigation canal. In October 1994, an evaluation confirmed that accession number 9032700 was superior.

D. Botanical/Objective description of species. LK 517f saltgrass is a California native, perennial, warm season grass with extensive creeping, yellowish, scaly rhizomes forming large colonies. LK 517f is coarse-leaved with an average leaf width of .120 inches; average leaf length of 2.9 inches; average height of 8.0 inches.

M. Evidence for Selected Material supporting identity of the species and

performance characteristics. LK 517f was not bred but selected for its overall performance and uniformity. It has been evaluated for foliage abundance and uniformity, vigor, and resistance to disease and drought.

Summary of performance data of LK517f saltgrass, *Distichlis spicata*. Randomized block plots with four replications. Evaluation taken October 1994 near Winters, California. F-A = Foliage Abundance, F-U = Foliage Uniformity, V = Vigor, DI = Disease, DR = Drought.

F-A	F-U	V	DI	DR
4	4.5	3	4	4

Rating criteria: 1= excellent, 9 = poor

N. Area of adaptation and primary use of Selected Materials. LK517f saltgrass primary adaptation is to MLRA 17f; However, it is also adapted to MLRA's 16, 18 and all of MLRA 17. Establishment should be in the late spring using rhizomes or plugs planted on one-foot centers. Irrigation water should be applied the first summer to ensure stand establishment. LK517f saltgrass is used for riparian restoration and bank and shoreline stabilization.

O. Procedure for maintaining planting stock. The Lockford PMC will maintain breeders and foundation planting stock.

P. Additional restrictions. None.

Q. Reference specie sample sent with application forms.

R. Site description. The soil found at the collection site is a deep, poorly drained clay with a clay loam substratum. Slope is 0 to 1 percent. There is a perched water table at a depth of 3 to 6 feet. Annual rainfall is 7 to 10 inches.

S. Information to assist field inspectors. Average height 8.0 inches, average leaf width .120 inches, average leaf length 2.9 inches.

T. Literature review. There is a need for an adapted variety of saltgrass for use

through out parts of central California for riparian restoration use and for bank and shoreline stabilization. Saltgrass does not grow straight, but sprawls and forms dense mats. It is a perennial California native grass and grows in or near marsh areas. It is a warm season grass, growing from April to November. Saltgrass can be used for forage. Also, it can tolerate both water logging and long periods of drought.

M. Availability of plant material. Rhizomes or plugs will be made available through the Foundation Seed Service, University of California, Davis.

References:

6. Annual Technical Report – Los Lunas Plant Materials Center, 1980.
7. Reduction of Levee Erosion in the Sacramento – San Joaquin Delta, Department of Environmental Horticulture, UC Davis.
8. The Jepson Manual of Higher Plants of California, Hickman, Ed., 1993.
9. Saline Agriculture, International Affairs National Research Council, 1990.
10. Grass, an Identification Guide, Lauren Brown, 1979.

Time Spent on Activities for Lockeford PMC

State = CA

<u>Technology</u>		<u>Technology</u>		<u>Seed/Plant</u>	
Releases	5 %	Written:	10 %	Foundation:	20 %
Technology	15 %	Oral:	5 %	Field	10 %
		Other:	5 %	Funded Production:	0 %
Subtotal	20 %	Subtotal	20 %	Subtotal	30 %

**Maintenance and
Facility or Land** 30 %

Other 0 %

Publications for Lockeford PMC

Fiscal Year 2002

- R.Perez and D.Dyer 2001. Lockeford PMC poster. Lockeford PMC poster, Fresno, CA. 12-13-2001. 1p.
D.Dyer 2002. Escondido, LA, Somis Trip Report. Lockeford PMC, Lockeford, CA. 1-24-2002. 5p.
D.Dyer 2002. Lockeford PMC 2001 Annual Technical Report. NRCS, Lockeford, CA. 2001. 48p.
D.Dyer 2002. Lockeford PMC year 2001 progress report of activities. Lockeford PMC, Lockeford. 3-26-2002. 4p.
D. Dyer and T. Espinosa 2002. Lockeford PMC and PM Program Success Stories. Lockeford PMC, Lockeford. 1. 3p.
Audrey Cooper 2002. Lockeford is little-known research hub. Stockton Record, D.Dyer provided all input, Stockton, CA. Aug. 19, 2002. 2p.

Presentations for Lockeford PMC

Presentations for

CAPMC Listing

Fiscal Year 2002

Date

Title: Use of the Plant Materials program with arundo control CFT.

Presenter D.Dyer

Location Somis

Date 10/3/01

Title: PMC tour

Presenter D.Dyer

Location PMC

Date 10/4/01

Title: PMC tour of native grass areas

Presenter D.Dyer

Location PMC

Date 10/23/01

Title: PM program overview and its use for buffers

Presenter D. Dyer

Location PMC

Date 11/29/01

Title: PM program overview, PMC tour and plants role in BMP's.

Presenter D.Dyer

Location PMC

Date 12/6/01

Title: PM program overview and jobs in USDA

Presenter D.Dyer

Location PMC

Date 1/14/02

Title: Native plants used in landscapes

Presenter D.Dyer

Location Rincon, CA

Date 1/15/02

Title: Native plants used in restoration and demonstration sites.

Presenter D.Dyer

Location Willson High School East LA

Date 1/28/02

Title: Lockeford PMC studies and programs

Presenter D.Dyer

Location Lockeford, CA

Date 2/12/02

Title: Plant Materials program use in developing Tule lake CFT for wind erosion control.

Presenter D.Dyer **Location** Tule Lake, CA
Date 2/22/02
Title: Review of weed mapping issues, weed studies and CalFed grants

Presenter D. Dyer **Location** CDFA Sacramento, CA
Date 3/5/02
Title: CalFed proposal recommendations

Presenter D.Dyer **Location** Davis, CA
Date 3/14/02
Title: New Emp. Training, tour of PMC

Presenter D.Dyer **Location** PMC Lockeford
Date 4/16/02
Title: PM program and PMC activities

Presenter D.Dyer **Location** PMC
Date 5/21/02
Title: PMC maintance and budgets

Presenter D.Dyer **Location** Lockeford PMC
Date 5/23/02
Title: CA tour of plant materials

Presenter D.Dyer, T. Espinosa, J. **Location** central CA
Date 6/6/02
Title: NEDS new staff training

Presenter D.Dyer, T. Espinosa **Location** PMC
Date 6/10/02

Title: Ag in the class room
Presenter D.Dyer **Location** PMC

Date 6/19/02
Title: PMC studies overview and PMC tour
Presenter D.Dyer, T. Espinosa **Location** PMC

Date 7/18/02
Title: New staff training for NEDS
Presenter D.Dyer and T. Espinosa **Location** Lockeford PMC
Date 7/24/02
Title: SECP training on plant materials
Presenter D.Dyer and T. Espinosa **Location** Lockeford PMC

Date 7/29/02
Title: NRCS weed/invasive sp. Control efforts
Presenter D. Dyer **Location** Sacramento CDFA

Date 8/22/02
Title: Plant Materials Program
Presenter D.Dyer **Location** Lockeford PMC

Date 9/12/02
Title: Review of PM Program and PMC for NEDS new staff
Presenter D.Dyer and T. Espinosa **Location** Lockeford PMC

Date 9/19/02
Title: The PM program and PMC
Presenter D.Dyer **Location** Lockeford PMC

Customers Assisted by Lockeford PMC

Date	Customer Name	Affiliation	Cust. Type	Gen.	Race	Information	How Prov.	Staff	Time
9/24/02	Dennis Moore	lake planting and evaluation of CA	NRCS Area Office, in person		DAD	OT 960 ICST.	Male	White	Tule
9/23/02	Rob Wilson	Coop ext. service in person	DAD	CO 960	Male	White Susanville			Planting of invasive sp.
9/16/02	Barny Johansing	tempelton	CO	Male	White	Review production issues of Perla		phone	DAD
9/16/02	Christian Davis	drill contacts phone Center, CA	Sacramento Service DAD	15		FO	Male	White	Range
9/16/02	Jake Sigg	CA Native plant soc. Monterey co. e-mail	DAD	CO 90	Male	White			Veldt grass use in
9/16/02	Martha Mallery	of native plants and park	Ca Native Plant Soc. phone	DAD	20	CO	Fema	White	Review
9/16/02	Phil Hogan	Woodland Service process water e-mail Center, CA	DAD	FO 10	Male	White			Kenaf used to clean
9/16/02	Russ Hass	PM Technical	OT	Male	White	Review of NPS agreement drafts		e-mail	DAD

300

Advisor - National
Park Service, CO

9/16/02	Shelby Gatlin weed calendar	e-mail State Office	California NRCS SO DAD 60	Fema	White	Review of			
9/13/02	Don Hankins person DAD	UC DAVIS 45	CO	Male	American Indian/	PMC study of sedges in			
9/13/02	Lisa Thrrell	USDA USFS	CO	Fema	Unknown	Porpagation methods	e-mail	DAD	10
9/13/02	Ron Stutts 15	USFS	CO	Male	Unknown	NASA Moon tree listing on web site	e-mail	DAD	
9/13/02	Wade Anderson activites and projects	e-mail Center, OK	Cherokee Service FO DAD 5	Male	White	International			
9/11/02	Ilona Smith 240	California NRCS SO State Office	SO	Fema	White	Native plant landscape guide review	in person	DAD	
9/11/02	Robert Bailey shipping of Oak trees	in person Center, CA	Redding Service FO JH 1200	Male	White	Growing and			
9/6/02	Bob Long person DAD	Placerville Service 120 Center, CA	FO	Male	White	Seeding review	in		
9/6/02	Chip Bouril e-mail DAD	Napa Service Center, 5	FO	Male	White	Steam restoration plants			

		CA											
9/6/02	Phil Hogan planting e-mail	Woodland Service DAD Center, CA	45	FO	Male	White							Review of hedgerow
9/5/02	Rita Bickel CFT proposal	NRCS Area Office, phone CA	DAD 30	OT	Fema	White							vineyard and wetland concept review.
9/5/02	Todd Golder 10	Willows Service Center, CA		FO	Male	White	Burber seed location of source				phone	DAD	
9/3/02	Phil Hogan sheets e-mail	Woodland Service DAD Center, CA	15	FO	Male	White							Plants data base fact
8/30/02	Barny Johansing	Rancher	GE	Male	White	How to grow Perla seed				phone	DAD	60	
8/30/02	Rob Wilson Research at	Coop ext. service phone	DAD 45	CO	Male	White							Invasive sp. (white top) Susanville
8/26/02	Audrey Cooper story on PMC	in person		Stockton Record DAD 200	GE	Fema				White			Helped with
8/26/02	Dr. Mary Geigerm	Mich. State Univ	GE	Fema	White	native plant restoration				phone	DAD	20	
8/26/02	Patrick Evens of tree/range CFT	Placerville Service phone Center, CA	DAD 30			FO				Male	White		Review

8/22/02	Lauren Hastings proposal review requests Ninth St Room 630	CALFED 1416 e-mailDAD	CO 15	Fema	White	CALFED
8/20/02	Mike Wackman of PMC and use of PMC for Pombo	House of Rep. Cong. in person	DAD	CO 200	Male	WhiteReview endangered sp. Recovery
8/13/02	Chuck Bell 120	California NRCS SO State Office	Male White	Vulnerability Assessment notes and review	e-mail	DAD
8/6/02	Tom Jones	USDA-ARS Utah State Univ.	CO Male White	Native seed for genitic study	mail	DAD 100
8/2/02	Ken Weaver weed study	Susanville Service e-mail Center, CA	FO DAD 70	Male White	Squirreltail seed for	
8/1/02	Sharon benes study mail	JH	CSU Fresno 45	CO Fema	White	Rio seed for
7/25/02	Rick Aguayo Mojave yucca	Apple Valley Service phone Center, CA	FO DAD 60	Male	Hispanic	Processing facilities for plant
7/19/02	Fredrico Mier in a landscaping project	School Prin.	Calivares High in person	GE DAD	Male 120	Hispanic Plant to use
7/17/02	Terry Huff 420	Concord Service Center, CA	FO Male White	Reviewed and provided ideas for new irrigated ag. Land development in the Livermore area.	in person	DAD

6/18/02	Ann Francis	Alturas Service Center	FO	Fema	White	Review of willow bioeng. Standards for use in Fresno	mail	DD	90
6/18/02	Bob Long	Placerville Service phone Center	DD	FO	Male	White	Sp recommendation for at Jackson.		20
6/18/02	Vic Smothers	School training site development Center	Escondido e-mail DD	FO	Male	White	High		12
6/14/02	Phil Hogan	Woodland Service in person Center	DD	FO	Male	White	Review of 800 ac. At Producers for using tomato waste. Recommended sp to use and other uses of waste and property.		420
6/13/02	Victor Schaff	California NRCS State Office	CO	Male	Hispanic	PMC releases	in person	DD	90
6/6/02	Steve Schoenig	mapping issues e-mail State Office	California NRCS DD	CO	Male	White	weed		10
6/5/02	Steve Griffith	USDA-ARS 420	CO	Male	White	Collecting grass plot samples for ethonol study	in person	DD	
6/3/02	Razi Syed	LA area	GE	Male	Asian/ Pacific	Native plant low water use in landscaping in LA area. 310-439-2146	phone	DD	20
6/3/02	Sylvia	Red Bluff Service	FO	Fema	White	Release papers on			

many PMC Hickenlooper	mail	DD	60			Center cultivars	
5/30/02John grasses for Weatherford Center	Woodland Service in person	FO DD	420	Male	White	Root samples on native carbon CFT	
5/30/02John thissel plots Weatherford Center	Woodland Service in person	FO DD	120	Male	White	Evaluation of yellow star	
5/28/02Rita Bickel locate and send	NRCS Area Office mail	OT DD	45	Fema	White	Ag handbook 339,	
5/23/02John Anderson production review	in person State Office	California NRCS CO DD	30	Male	White	seed	
5/20/02Russ Haas	Colorado NRCS State Office	SO	Male	White	NPS project review	in person DD	250
5/15/02Alicia Flammia Danthonia	e-mail	UCD DD	GE 15	Fema	Hispanic	Propagation advice on californica.	
5/15/02Bryan Largay in relation to the same		San Cruz co e-mail DD	RCDGE 20	Male	White	spread of RIO sp in river areas.	
5/15/02Chris Locke	Stockton	CO	Male	White	Native plant planting	in person DD	15
5/15/02Dennis Moore strain trail planting at tule Center		Yreka Service in person	FO DD	Male	1800 lake, 40 acc.	White	Intercenter

5/15/02	Ed Tallyn	California NRCS State Office	SO	Male	White	Review of new MLRA map	in person	DD	45
5/15/02	Gary Shmit 15	USDA- FS	GE	Male	White	Meeting to review seed zones.		phone	DD
5/15/02	Hank Wyman	California NRCS State Office	SO	Male	White	Review PM program and tour of PMC	in person	DD	American Indian/ 60 with Acs
5/15/02	Holley 10	IT corp	GE	Fema	White	Rooting depth of grasses and ET rates		phone	DD
	Bushman	619-533-7329							
5/15/02	John Anderson	Woodland	CO	Male	White	seed production fields	in person	DD	Review of
5/15/02	Lauren Hastings	CALFED 1416	CO	Fema	White	calfed paper work on phone	DD	20	review of
		Ninth St Room 630				proposals			
5/15/02	Millissa Trader	USGS Las Vegas	GE	Fema	White	mail	DD	12	Tech note 38
		702-914-2206							
5/15/02	Phil Blake	Napa Service Center	FO	Male	White	range CFT,	phone	DD	Willow study evaluation, vineyard erosion study.
			DD	30					
5/15/02	Randy Suthard	UCD-Soils	GE	Male	White	students reviewed soil pits	in person	DD	Ten UCD
				5		at PMC.			
5/15/02	Stan Young	Utah Crop imp ass.	GE	Male	White	phone	DD	20	Growing Rio in Utah.

435-797-2082

5/15/02	Steve Griffith	USDA-ARS	CO	Male	White	Ethanol grass samples of PMC	in person	DD
600						grasses, related to carbon CFTs		
5/15/02	Steve Schoenig		sacramento		CO	Male	White	review of
	weed projects	phone	DD	15				
5/15/02	Tim Walls	Mendocino Co	RCD	GE	Male	White	Willow use in a stream	
	erosion site.	phone	DD	20				
5/15/02	Victor Schaff	somis	CO	Male	Hispanic	seed production of NRCS varieties	phone	DD
25								
5/7/02	Steve Griffith	USDA-ARS	CO	Male	White	provide seed samples for germination	in person	JH
120						study		
4/30/02	Erik Beardsley		Red Bluff Service	FO	Male	Hispanic	Grass clipping	
	at Burrows ranch for	in person	DD	600		carbon CFT		
		Center						
4/24/02	John	Woodland Service	FO	Male	White	Root sampling of native		
	grasses for	in person	DD	1200		carbon CFT		
	Weatherford	Center						
4/23/02	Carl Striby	Templeton Service	FO	Male	White	Evaluation of range		
	seeding plots	in person	DD	660				
		Center						
4/22/02	Bob Long	Placerville Service	FO	Male	White	Evaluation of Lana		
	vetch plots at	in person	DD	180		Comanche hunting club.		
		Center						

3/27/02	Lauren Hastings	CALFED 1416	CO	Fema	White	Review of
	CalFed proposals. e-mail	DD 900				
	Ninth St Room 630					
3/27/02	Lauren Hastings	CALFED 1416	CO	Fema	White	Review of
	CalFed proposals e-mail	DD 950				
	Ninth St Room 630					
3/27/02	Lauren Hastings	CALFED 1416	CO	Fema	White	Reviewed
	and reccommended funding	in person	DD	950		
	Ninth St Room 630			in regards to 110 CalFed proposals which totaled \$480,000,000. RCDs, Govt. , Univ., and NGOs developed these proposals to work on water quality and invasive sp. Issues. Spent a total of 100 hr on this work.		
3/26/02	Dave Zoldoski	Fresno State Univ.		GE	Male	White
	Reference for proposal.	phone DD 10				
	Center For Irrg. Tech.					
3/26/02	Emilo Ranka UC Davis	GE	Male	Hispanic	Native plant propagation for field day	phone DD
	13					
3/26/02	Mark Venis	Vetiver works	GE	Male	Unknown	Use of vetiver grass in NRCS programs
						phone DD 15
3/26/02	Sam Aslan	Indio Service Center	FO	Male	Other	Use of mustard as a
	cover crop	phone DD 10				

2/6/02 15	Anita Brown	California NRCS State Office	SO	Fema	White	Use of grasses for bio-energy production	e-mail	DD
2/6/02	Ceci	Susanville Service obtaining range seed e-mail Dale-Cesmat	DD	FO 80	Fema White	Selection, use and Center for study at Susanville.		
2/6/02	Erik Beardsley	CFT planning. phone	NRCS Area Office DD	OT 20	Male	Hispanic	Tule lake	
2/6/02	James Komar	info for Tule lake CFT	NRCS Area Office e-mail	OT DD	Male	White	Soil quality	14
2/6/02	Lincoln Smith	research workshop. e-mail	USDA-ARS DD	GE 75	Male	White	Ideas for turf	
2/6/02	Patrick Evans	control in new tree planting Center	Placerville Service in person	DD	FO 180	Male	White	Brush area CFT review.
2/6/02	Richard hillside natural Campbell	Lancaster Service in person Center	DD	FO 600	Male	Black	Willson High School resources education and demonstration area.	
2/6/02	Rincon Indians	Landscape plan for Rincon Indians.	Escondido in person	GE DD	Unkn	American Indian/		600
2/6/02	Ron Tiller	UCD	GE	Male	Unknown	Info. On Atriplex confertifolia propagation.	e-mail	DD 20
2/6/02 1500	Sandra Higa	Alturas Service Center	FO	Fema	White	Tule lake CFT development and	in person	DD
		meeting with all interested agencies.						

2/6/02	Steve Jewett	Somis Service Center	FO	Male	White	Arundo CFT and cover
crop CFT	in person	DD	600			review.
2/6/02	Troy Bailey	Bailey Seed	GE	Male	White	Berber foundation seed request, total
120						in person JH
						50 AC in OR.
1/11/02	Bob Joy	Hawaii Plant	OT	Male	White	Review of W. PM notes
		Materials Specialist				e-mail
			DD			10
1/11/02	Chuck Cambra		Kamprath seed	CO	CO	Male
Blando foundation seed			phone	DD	12	Hispanic
1/11/02	Dan Ogle	Idaho Plant	OT	Male	White	National PM meeting agenda items
10						e-mail
		Materials Specialist				DD
1/11/02	Dolly Choi	Inland Empire West	CO	Fema	Asian/ Pacific	Oak propagation,
restoration	phone	DD	20			education program.
1/11/02	Erik Beardsley		NRCS Area Office	OT	Male	Hispanic
draft proposals on	e-mail		DD	120		Review CFT
						range/carbon
1/11/02	Glenn	Hoolehua Plant	OT	Male	Asian/ Pacific	Farm show info. On conservation
20						phone
	Sakamoto	Materials Center				DD
						tillage.
1/11/02	James Komar		NRCS Area Office	OT	Male	White
soils data for Tule lake			e-mail	DD	15	Review of

1/11/02	Jason Jackson	Escondido Service Center	phone DD	30	FO	Male	White	Review	
1/11/02	Lisa Hokholt	San Francisco Urban Office	phone DD	20	OT Fema	White		Stipa genetics paper for	
1/11/02	Mandy Tu	The Nature Conservancy of Oregon	CO	Fema	Asian/ Pacific	Veg. Guide use for invasive sp. Control and restoration.	phone DD		
1/11/02	Patrick Evans	Placerville Service Center	in person	DD	FO	175 areas	Male	White	
1/11/02	Paul Benedict	NRCS Area Office	phone DD	15	OT	Male	White	Review S. and Somis. Also reviewed Riverside conservation center.	
1/11/02	Phillip Blake	Napa Service Center	phone DD	20	FO	Male	White	Develop willow/salt tol.	
1/11/02	Stephen Jewett	Somis Service Center	phone DD	15	FO	Male	White	Review 1-16-2002.	
12/13/01	Bob Long	Red Bluff Service Center	in person	DD	FO	Male	120	White	FP seed for

12/13/01 shipments DoFreso	Carolyn phone Center	Fresno Service DD 20	FO	Fema	Unknown	FP seed
12/13/01 grass seed order for field	Cheryl Zelus Center	Templeton Service in person	JH	FO 480 planting use	Fema	White Native
12/13/01 order shipping	Dave Duraham phone Center	Fresno Service JH 10	FO	Male	White	FP seed
12/13/01 orders for pasture, wildlife	Dave Duraham Center	Fresno Service in person	FO JH	Male 780 area, CAT bank, idle farm land restoration.	White	5 FP seed
12/13/01 order for stream CAT	Dave Simpson in person Center	Stockton Service JH 3	FO	Male	White	FP seed
12/13/01 order shipment	Dave Simpson phone Center	Stockton Service JH 5	FO	Male	White	FP Seed
12/13/01 seed planting for cover	Doug Petters	Hanson trust phone DD	UC CO 20	Male crops	White	Info on Sulla
12/13/01 soil - plant interactions	Emmett Cartier Center	Concord Service phone DD	FO 10	Male	White	Soil survey ,

12/13/01 propagation info for a grass	Larry Branham Center	Red Bluff Service phone JH 10	FO	Male	White	FP plant
12/13/01 person JH	Lori Metz 60 Center	Willows Service	FO	Fema	White	Seed for FP in
12/13/01 range seeding	Lori Metz phone Center	Willows Service JH 5	FO	Fema	White	FP order for
12/13/01 School conservation Campbell	Richard phone Center	Lancaster Service DD 10	FO	Male	Black	Willson High demo site, planning review trip.
12/13/01 wetlands to control Penn	Tom Suarez mine Utility District	East Bay Municipal in person DD	CO	30	Male	White Use of copper waste coming into Pardee
12/10/01 mulching and weed free Appleton	Harold	Prnuski-Chatham phone DD 20	CO	Male	Unknown	Reveg. , forage information.
12/10/01 overview and PMC MacLean	Jennifer in person State Office	California NRCS DD 120	SO	Fema	White	PM Program operations training
12/10/01 collections of four stipa native	Tom Jones State Univ.	USDA-ARS Utah mail DD 60	CO	Male	White	Seed grasses for gene study.
12/3/01 30	Ann Francis Alturas Service Center	FO	Fema	White	Propagation of oaks, FP request	e-mail DD

12/3/01 15	Carlton Malstom	Mich. State Univ.	GE	Fema	Unknown	Bolando brome seeding rates and use	phone	DD
12/3/01 15	Jinnifer Kujawski	National Plant Materials Center	OT	Fema	White	Info.on national PLANTS Newsletter, topics	phone	DD
12/3/01 PI187309	Michael Anthony	Sanoma State Univ. phone	GE DD	10	Male	Unknown	Ehrharta calycina	
12/3/01	Rita Bickel info, with Tech	NRCS Area Office phone	OT DD	10	Fema	White	CTF, FP and weeds	
11/16/01		David Simpson blower out and hooked to Center	Stockton Service in person	FO CA	Male 90	White	Got straw 4x4 dodge, did maintance and prep. For equipment to go off center.	
11/16/01		Marcel Smith FP with Lana vetch and P, Utility District	East Bay Municipal in person	DD	CO 360	Male	WhitePlanted Planted study to determine level of P to use to control invasive sp.	
11/13/01		Alfred Ramos on Sulla vetch	Somis Service Center DD	10	FO	Male	Hispanic Info	
11/13/01		Bruce Munda development of fire e-mail Materials Specialist	Arizona Plant DD	130	OT	Male	White	Review and rehab. brochure

11/13/01 vetch for use in	Doug Petters phone	Hanson trust UC CO DD 30		Male	White	Info on sulla
11/13/01 note 16 using rice hulls to Sakamoto	Glenn Materials Center	Hoolehua Plant phone DD	OT 15	Male	Asian/ Pacific	PM tech seed very small seed.
11/13/01 use in CA	Mark Venis phone	N/A DD	GE 20	Male	Unknown	Info on Vetaver grass
11/5/01 30	Lisa Hokholt San Francisco	FO	Fema	White	Stipa seeding issues, how far the source seed can be away from the restoration project.	e-mail DD
11/5/01 10	Marta Lutz Red Bluff	CO	Fema	White	PMC info on NRCS plants to use in watershed areas, brochure	mail DD
11/5/01 Native grass propagation info.	Richard Cronn PNW Research	Corvallis USDA FS e-mail DD		15	CO	Male Unknown
10/31/01 Arundo CFT review	Alfred Ramos phone	Somis Service Center DD		6	FO	Male Hispanic
10/31/01 CFT development	Charles Diehl phone Center	Yreka Service DD		5	FO	Male White Wind erosion

10/31/01 review of	Chile group in person	Chile GE DD 2400	Male	Hispanic	Chile group of 5 persons
				buffer and WQ issues in and near stream areas and popular trees used to remove N and P. Worked with Napa, Concord, Modesto, Jamestown staffs.	
10/31/01 CFT development	Dennis Moore phone	Red Bluff AO DD 8	OT	Male	White Wind erosion
10/31/01 types and lab tests needed	James Komar Office	Red Bluff Area phone DD	OT 8	Male	White Soil sample for Petaluma manure use study
10/31/01 manure use study, soil	Jon Gustafson	Petaluma phone DD	FO 12	Male	White Plan for samples and lab tests needed.
10/31/01 study needs, FO requests	Paul Benedict	Riverside AO phone DD	OT 5	Male	White CFT and
10/31/01 on willow study, napa river, to	Phillip Blake	Napa Service Center phone DD	FO 13	FO	Male White Ideas find out salt tol. Levels, plant at different ele.
10/31/01 conservation and demo area Campbell	Richard Center	Lancaster Service phone DD	FO 7	Male	Black Backyard development
10/31/01 assistance request	Sandra Higa phone Center	Alturas Service DD 10	FO	Fema	White Stream team

10/12/01	John	Woodland Service FO	Male	White	collected field
data, 216 soil samples, Weatherford Center		in person DD	1320		
			two root evaluations on native grasses for carbon seq., at J. Anderson farm		
10/12/01	Lucy Adams	Eva Butler and Ass.	GE	Fema	Black Native
grass performance standards		phone DD 35			
			and specs. For Sacramento flood retention basins.		
10/12/01	Marcia Gibbs	1170 N Lincoln CO	Fema	White	Saltgrass
propagation and source		phone DD 15			
10/12/01	Norman	Fort Collens, CO CO	Male	Unknown	Info on wetland instructors for
10	Melven				phone DD
			Wetland Sci. Ist. Course at Davis, Wetland weeds issues		
10/12/01	Richard Cronn	USDAFS	GE	Male	Unknown Info on
propagation of Calamagrostis		e-mail DD 15			
			breweri		
10/12/01	Steve Jewett	Somis Service Center	FO	Male	WhiteStream
restoration, sp. Use in		phone DD 20			
			grasswater way, Arundo CFT, Cover crop CFT		
10/5/01	Bruce Verhei	Olympia, WA	GE	Male	American Indian/
e-mail DD 13					
					Beargrass propagation
10/5/01	Erik Beardsley	Red Bluff AO	OT	Male	Hispanic CFT carbon
and root guidance	phone	DD 60			

10/5/01	Judy Harrington propagation and materials	Fort Collins, CO e-mail DD	GE 11	Fema	Black	Saltgrass
10/5/01	Ken Weaver review phone	Susanville Service DD Center	FO 20	Male	White	Invasive sp. Seeding
10/5/01	Larry Branham native grass filter strip	Red Bluff Service phone DD Center	FO 15	Male	White	FP review,
10/5/01	Larry Pollard 53	MN GE	Male	White	Use of native grass seed drills in CA	in person DD
10/5/01	Mike 10 McElhiney	Modesto Service Center	FO	Male	White	Modesto JC projects and studies phone DD
10/5/01	Ron Alves 73	Modesto, CA GE	Male	White	Joint studies and projects with Modesto JC	in person DD
9/28/01	Ann Francis 60	Alturas Service Center	FO	Fema	White	restoration site and carbon seq. Review phone DD
9/28/01	Emmett Cartier planting guidance	phone Livermore DD 20	FO	Male	White	Restoration

PMC Seed Production of NRCS Releases by CAPMC

Foundation

Certified Seed

Common Seed

Release/Symb	lbs.	\$/lbs.	Valu	lbs.	\$/lbs.	Valu	lbs.	\$/lbs.	Valu	Total
Akaroa / DAGL	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Berber / DAGL	350	\$10.00	\$3,500	0	\$0.00	\$0	0	\$8.00	\$0	\$3,500
Blando / BRHOH	0	\$0.00	\$0	0	\$0.00	\$0	0	\$2.00	\$0	\$0
Cucamonga / BRCA5	70	\$10.00	\$700	0	\$0.00	\$0	0	\$6.00	\$0	\$700
Cuesta / CEFL4	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Dorado / CLIS	20	\$10.00	\$200	0	\$0.00	\$0	0	\$0.00	\$0	\$200
Duro / ERFA2	6	\$40.00	\$240	0	\$0.00	\$0	0	\$0.00	\$0	\$240
Lana / VIVIV8	0	\$0.00	\$0	0	\$0.00	\$0	0	\$1.20	\$0	\$0
Lassen / PUTR2	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
LK115d Germplasm / NAPU4	1	\$40.00	\$40	0	\$0.00	\$0	0	\$50.00	\$0	\$40
LK215e Germplasm / NAPU4	1	\$50.00	\$50	0	\$0.00	\$0	0	\$50.00	\$0	\$50
LK315d Germplasm / NAPU4	1	\$50.00	\$50	0	\$0.00	\$0	0	\$50.00	\$0	\$50
LK415f Germplasm / NACE	1	\$50.00	\$50	0	\$0.00	\$0	0	\$40.00	\$0	\$50
Maleza / CECO	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Marana / ATCA2	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Mariposa / ELGL	10	\$40.00	\$400	0	\$0.00	\$0	0	\$15.00	\$0	\$400
MonteFrio / TRHI4	0	\$0.00	\$0	0	\$6.00	\$0	0	\$4.00	\$0	\$0
Panoche / BRRU2	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Perla / PHAQ	50	\$10.00	\$500	0	\$0.00	\$0	0	\$7.00	\$0	\$500
Rio / LETR5	20	\$50.00	\$1,000	0	\$0.00	\$0	0	\$40.00	\$0	\$1,000

Sierra / ERUMP	15	\$40.00	\$600	0	\$30.00	\$0	0	\$0.00	\$0	\$600
Wilton / TRHI4	0	\$0.00	\$0	0	\$0.00	\$0	0	\$4.00	\$0	\$0
Wimmera 62 / LORI	0	\$0.00	\$0	0	\$0.00	\$0	0	\$1.00	\$0	\$0
Zorro / VUMY	150	\$9.00	\$1,350	0	\$8.00	\$0	0	\$7.00	\$0	\$1,350
Total Value for CA:	695		\$8,680	0		\$0	0		\$0	\$8,680
Grand Totals:	695		\$8,680	0		\$0	0		\$0	\$8,680

PMC Vegetative Production of NRCS Releases

Release / Symbol	Type	Clas	Amount	Value	Total
Dorado / CLIS	Liners	Foundation/G1	200	\$3.00	\$600
Dorado / CLIS	Container	Foundation/G1	500	\$4.00	\$2,000
	Total for Release:		700		\$2,600
Duro / ERFA2	Liners	Foundation/G1	3,200	\$3.00	\$9,600
	Total for Release:		3,200		\$9,600
LK115d Germplasm / NAPU4	Liners	Foundation/G1	2,000	\$0.20	\$400
	Total for Release:		2,000		\$400
Marana / ATCA2	Container	Foundation/G1	500	\$3.00	\$1,500
	Total for Release:		500		\$1,500
Rio / LETR5	Liners	Foundation/G1	21,600	\$0.20	\$4,320
Rio / LETR5	Liners	Foundation/G1	4,400	\$0.20	\$880
	Total for Release:		26,000		\$5,200

Sierra / ERUMP	ContainerFoundation/G1	500	\$4.00	\$2,000
	Total for Release:	500		\$2,000
	Total for State (all releases):	32,900		\$21,300
	Grand Total (all states, all releases):	32,900		\$21,300

Other Production for CAPMC

Vegetative Production:

Stock Type	Amount	Purpose	Comment
Liners	19000	field planting	
Liners	55000	field planting	
Liners	15000	reimbursable	NPS
Liners	5000	field planting	

Commercial Seed Production of NRCS Lockeford PMC Releases

Release/Symb	Foundation			Certified Seed			Common Seed			Total
	lbs.	\$/lbs.	Valu	lbs.	\$/lbs.	Valu	lbs.	\$/lbs.	Valu	
Akaroa / DAGL	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Berber / DAGL	0	\$10.00	\$0	0	\$0.00	\$0	2000	\$8.00	\$16,000	\$16,000
Blando / BRHOH	0	\$0.00	\$0	0	\$0.00	\$0	100000	\$2.00	\$200,000	\$200,000
Cucamonga / BRCA5	0	\$10.00	\$0	0	\$0.00	\$0	30000	\$6.00	\$180,000	\$180,000
Cuesta / CEFL4	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0

Dorado / CLIS	0	\$10.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Duro / ERFA2	0	\$40.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Lana / VIVIV8	0	\$0.00	\$0	0	\$0.00	\$0	120000	\$1.20	\$144,000	\$144,000
Lassen / PUTR2	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
LK115d Germplasm / NAPU4	0	\$40.00	\$0	0	\$0.00	\$0	200	\$50.00	\$10,000	\$10,000
LK215e Germplasm / NAPU4	0	\$50.00	\$0	0	\$0.00	\$0	300	\$50.00	\$15,000	\$15,000
LK315d Germplasm / NAPU4	0	\$50.00	\$0	0	\$0.00	\$0	150	\$50.00	\$7,500	\$7,500
LK415f Germplasm / NACE	0	\$50.00	\$0	0	\$0.00	\$0	200	\$40.00	\$8,000	\$8,000
Maleza / CECO	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Marana / ATCA2	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Mariposa / ELGL	0	\$40.00	\$0	0	\$0.00	\$0	3000	\$15.00	\$45,000	\$45,000
MonteFrio / TRHI4	0	\$0.00	\$0	200	\$6.00	\$1,200	9000	\$4.00	\$36,000	\$37,200
Panoche / BRRU2	0	\$0.00	\$0	0	\$0.00	\$0	0	\$0.00	\$0	\$0
Perla / PHAQ	0	\$10.00	\$0	0	\$0.00	\$0	10000	\$7.00	\$70,000	\$70,000
Rio / LETR5	0	\$50.00	\$0	0	\$0.00	\$0	2000	\$40.00	\$80,000	\$80,000
Sierra / ERUMP	0	\$40.00	\$0	60	\$30.00	\$1,800	0	\$0.00	\$0	\$1,800
Wilton / TRHI4	0	\$0.00	\$0	0	\$0.00	\$0	5000	\$4.00	\$20,000	\$20,000
Wimmera 62 / LORI	0	\$0.00	\$0	0	\$0.00	\$0	100000	\$1.00	\$100,000	\$100,000
Zorro / VUMY	0	\$9.00	\$0	500	\$8.00	\$4,000	40000	\$7.00	\$280,000	\$284,000
Total Value for CA:	0		\$0	760		\$7,000	421850		\$1,211,500	\$1,218,500
Grand Totals:	0		\$0	760		\$7,000	421,850		\$1,211,500	\$1,218,500

