Control of Harding grass (*Phalaris aquatica*) at the Richmond Field Station, University of California, Berkeley

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The Watershed Project

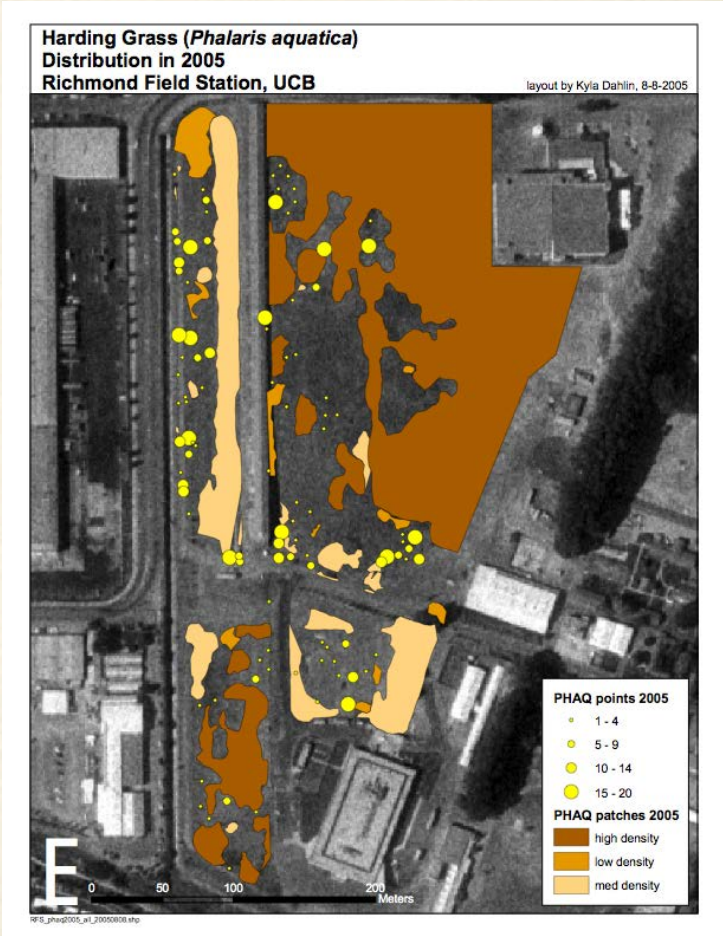
Outline

- Harding grass in the RFS grassland
- Monitoring Program
- Prioritization
- Control methods
- Conclusions

Map and photograph from *Richmond Field Station Working Paper,* U.C.Berkeley, 2002.

Harding grass in RFS grassland

- Association with cessation of mowing?
- Effect on soil topography
- Association with water table?



Locally rare and significant species

Prioritization and control of Harding grass

1. Prioritization: done through development of an innovative monitoring program
2. Control: experimentation with over 7 different methods

RFS Grassland Monitoring Data Sheets

Range and distribution of locally rare plant species

Date: _____ **Reporter**: _____

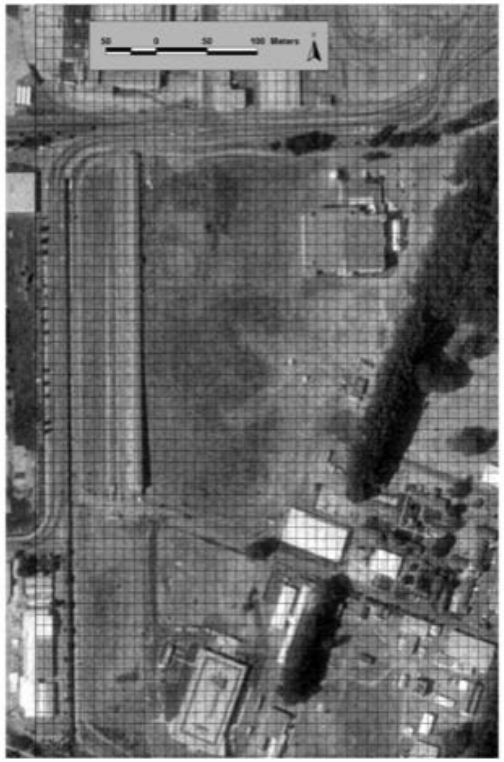
Plant Species Monitored: _____

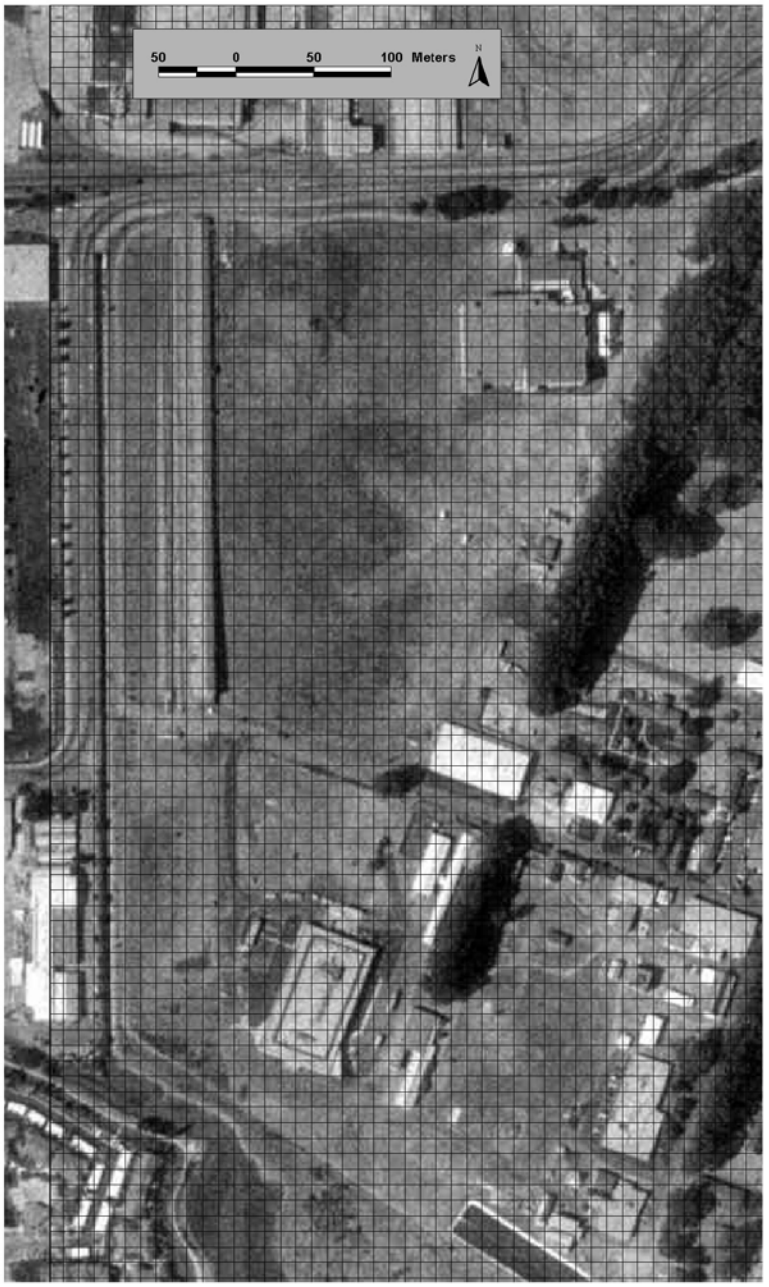
Plant Phenology: (circle one) vegetative flower seed

Species abundance with 10-meter grid:

- 0 – 10 (red),
- 11 – 25 (blue),
- 26 – 50 (green),
- 51 – 100 (orange),
- greater than 100 (brown)

Comments: _____



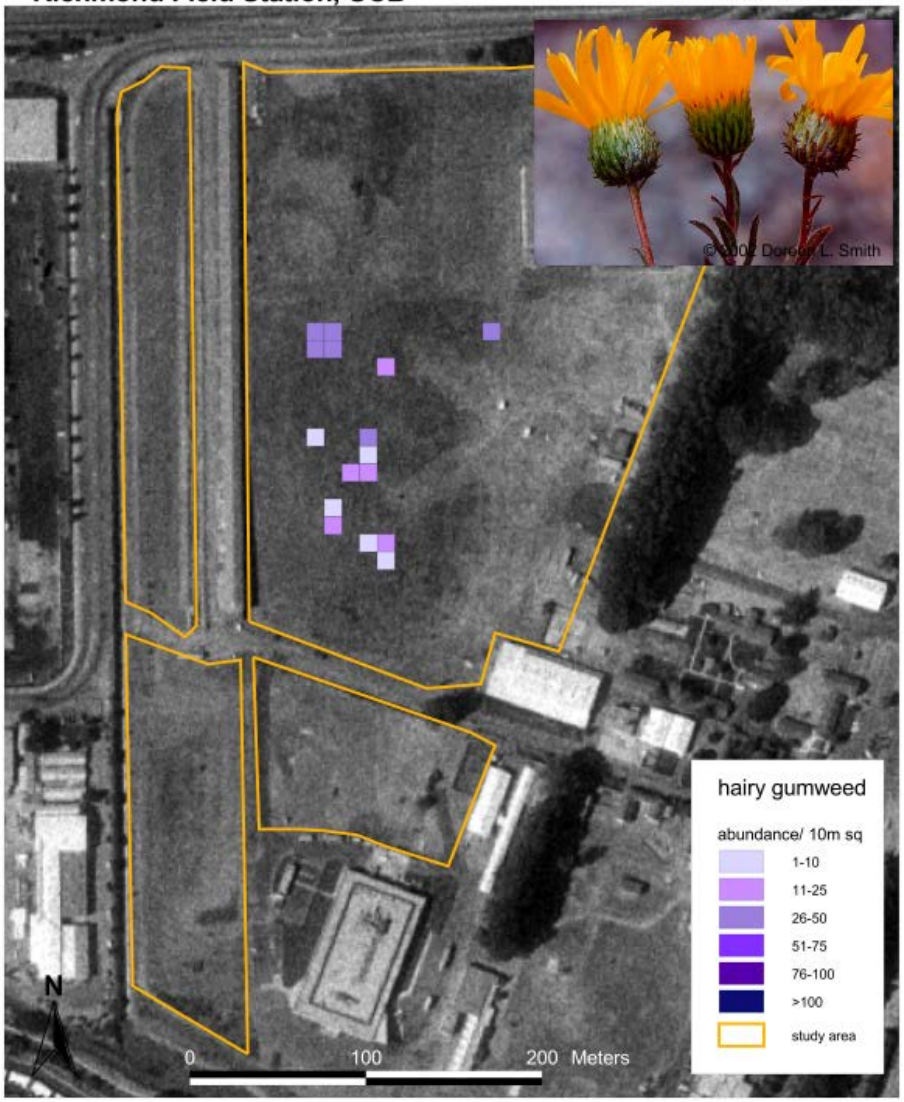


Distribution and Abundance of Brown-head Rush (Juncus phaeocephalus) Richmond Field Station, UCB

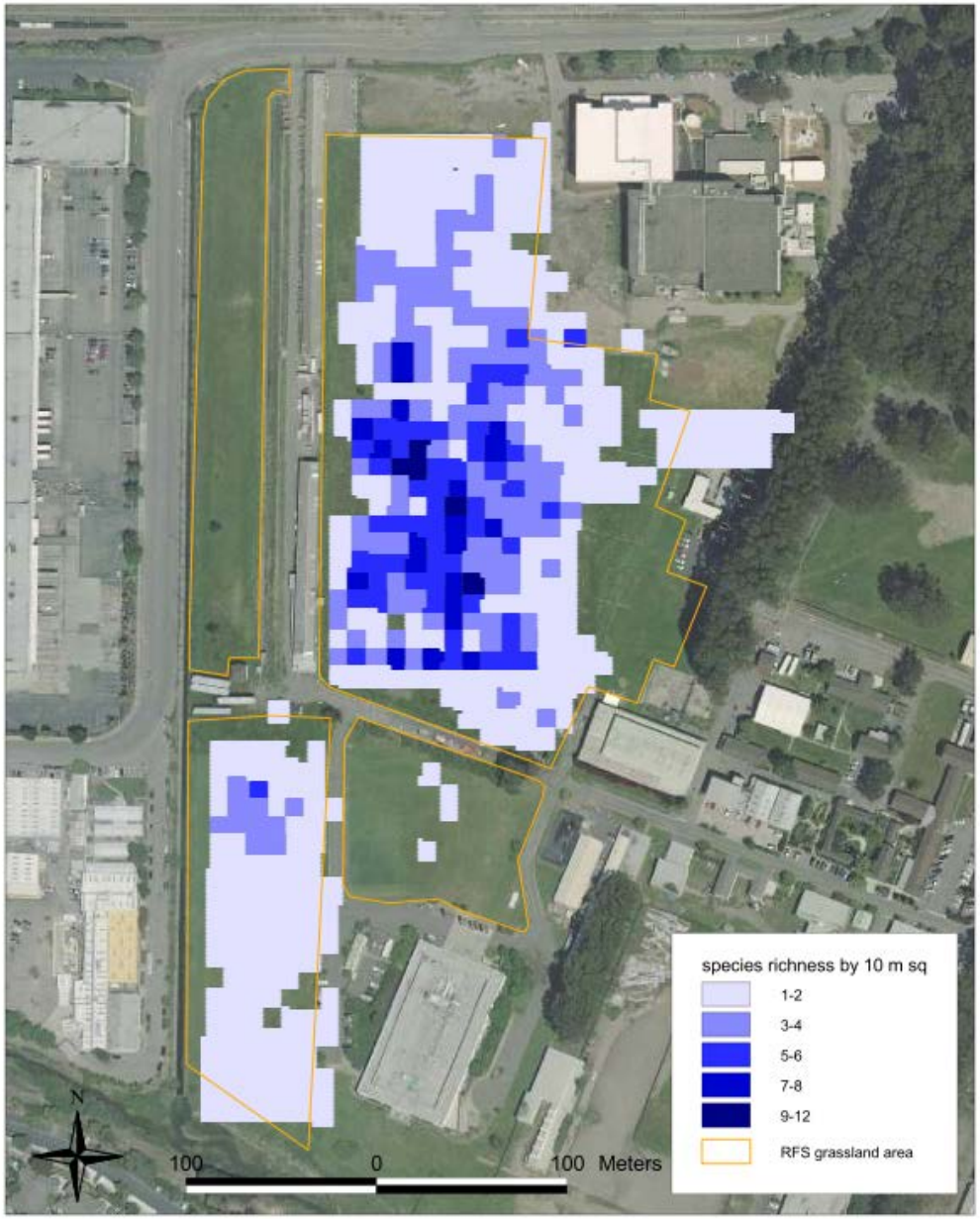
layout by Tom Elliott, 6-22-2005

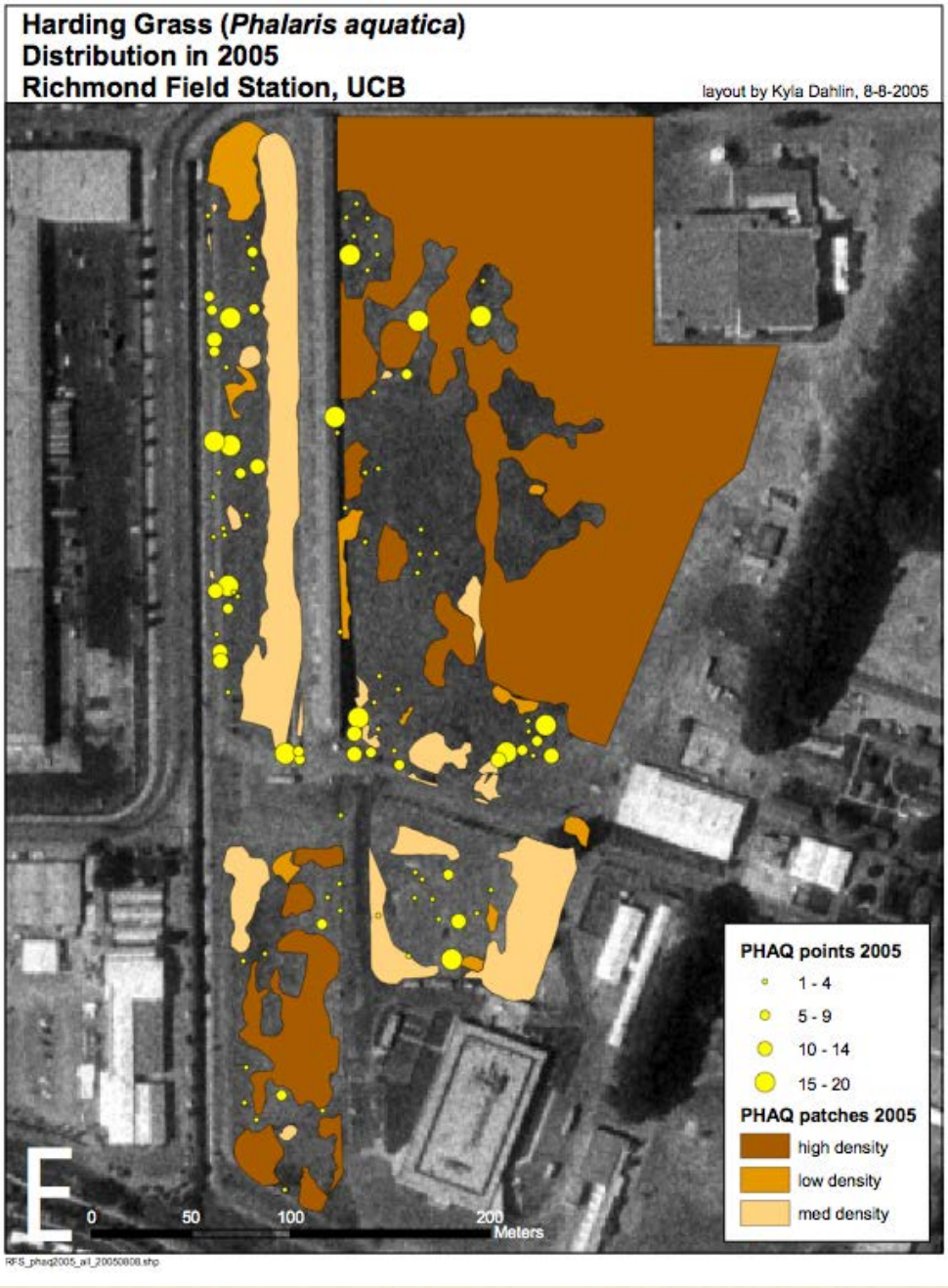
Distribution and Abundance of Hairy Gumweed (Grindelia hirsutula var. hirsutula) Richmond Field Station, UCB

layout by Tom Elliott, 6-22-2005

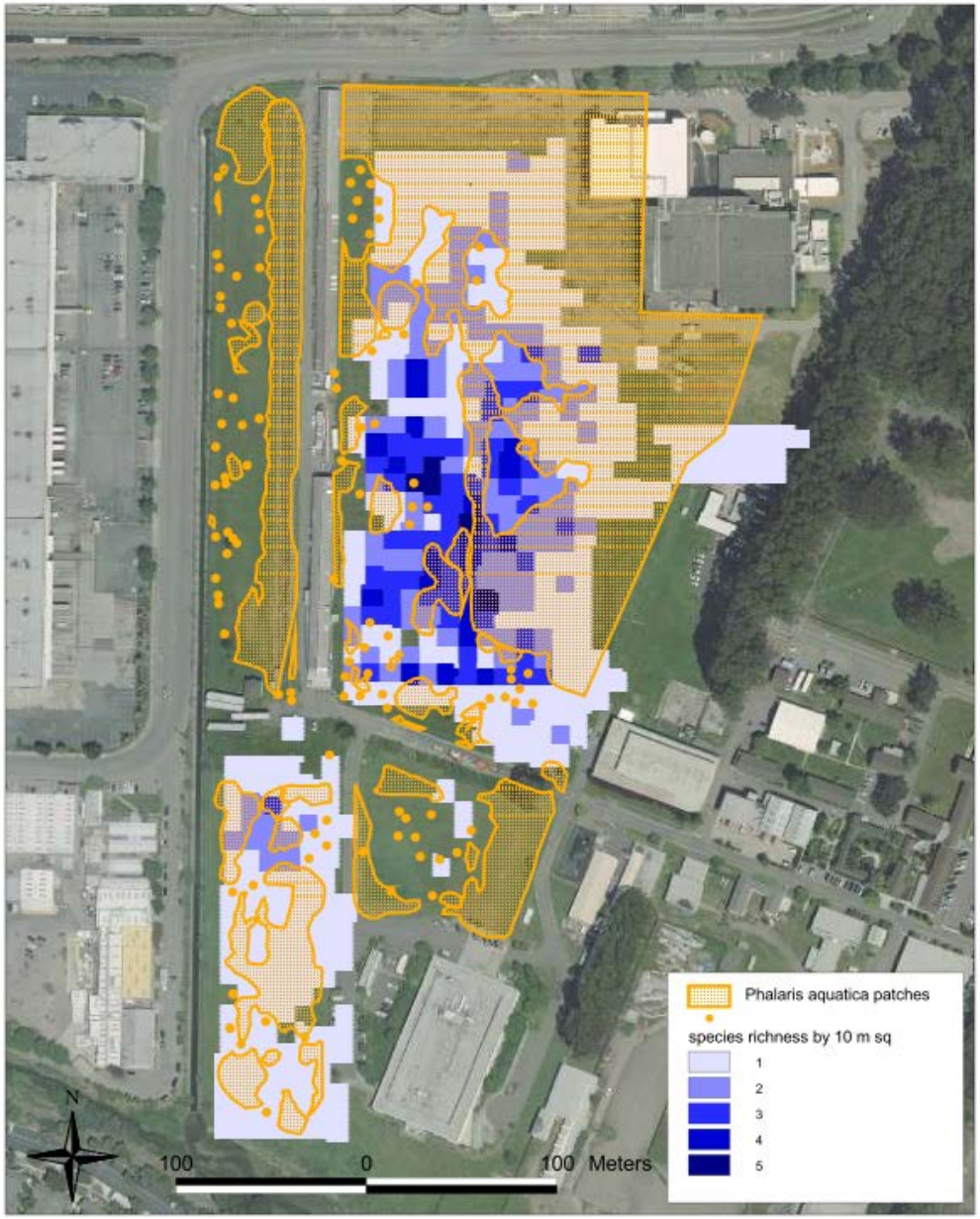


Grassland Species Richness
Richmond Field Station, UCB




Harding Grass (*Phalaris aquatica*)
Distribution in 2005
Richmond Field Station, UCB
layout by Kyla Dahlin, 8-8-2005
PHAQ points 2005
1 - 4
5 - 9
10 - 14
15 - 20
PHAQ patches 2005
high density
low density
med density
0
50
100
200
Meters
RFS_phaq2005_all_20050808.shp

Grassland Native Species Richness and Harding Grass Extent
Richmond Field Station, UCB



Experimental control methods

- Hand Removal
- Herbicide: one application, May
- Straw mulch
- Mowing & brushcutting
- Scraping
- Limited experience: Hydro-mechanical obliteration, herbicide followed by sheet mulch, carpet cover

Hand removal

Herbicide, one application

Straw mulch

Mowing and brushcutting

Scraping

Hydro-mechanical obliteration

Other treatments

- Herbicide followed by sheet mulch
- Carpet cover

Conclusions

- Resources are limited! Must prioritize
- Hand removal: effective but not practical
- Herbicide: to be determined
- Straw mulch: effective in conjunction with other treatments
- Mowing & Brushcutting: useful
- Scraping: promising
- Hydro-mechanical obliteration: initially disappointing...

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- Watershed Project staff and interns

References

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