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*Research – applying what works for you...*

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# *Research – applying what works for you ...*

## *Connection to management*

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### Appropriately scaled research can help:

- Provide framework for guiding adaptive management;
- Focus limited resources;
- Identify past land uses and source populations;
- Identify successful (and not) control treatments; and
- Guide post-control management

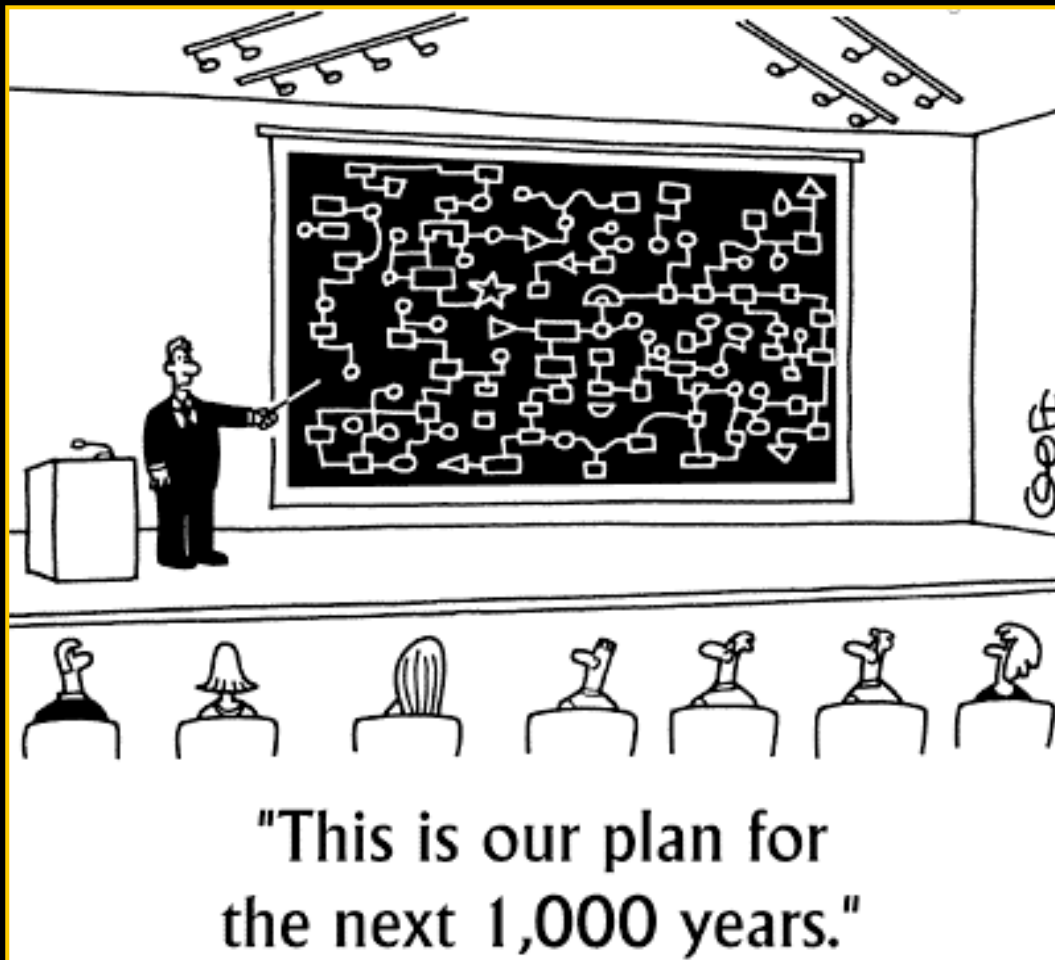


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# *Research – applying what works for you ...*

## *Considerations for selecting an appropriate scale*

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What is the:

- Need/Purpose
- Objective(s)
- Timeline
- Scale
- Staffing
- Funding
- Priority
- Compliance

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# *Research – applying what works for you ...*

## *Possible approaches to consider*

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- Conduct literature & database reviews
- Interview professional colleagues & researchers
- Review observations & existing management
- Analyze historic & aerial maps
- Establish and monitor treatment plots
- Conduct statistically valid research
- Other

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# *Research – applying what works for you ...*

## *Reviewing the literature & contacting professionals*

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Pampas grass control –  
southern Marin watersheds

- 20 acres of cliff-face infestations
- 150 acres supporting isolated individuals





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# *Research – applying what works for you ...*

## *Reviewing the literature & contacting professionals*

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### Varied Control Treatments:

Cliffs and inaccessible areas –  
Rappelling and Imazapyr  
(Habitat) application

Inland and accessible –  
glyphosate (Roundup Pro) and  
mechanical treatments

# Research – applying what works for you ...

## Understanding a changing landscape – historical research

Historic & Cultural Resources at Lands End

Figure 10



**May & Associates, Inc.**  
 101 Clemente Street - San Francisco, CA 94111  
 (415) 771-2000 - www.mayassociates.com



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*Research – applying what works for you ...*  
*Understanding a changing landscape – determining rate of spread*

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Non-native tree stand expansion and spread of isolated individuals -  
Kirby Cove, Marin Headlands





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*Research – applying what works for you ...*  
*Understanding a changing landscape – prioritizing management*

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Before (2006)

Non-native tree, shrub and Cape ivy removal – Presidio's western bluffs



During (2006)



# *Research – applying what works for you ...*

## *Mattress wire weed – testing treatments*

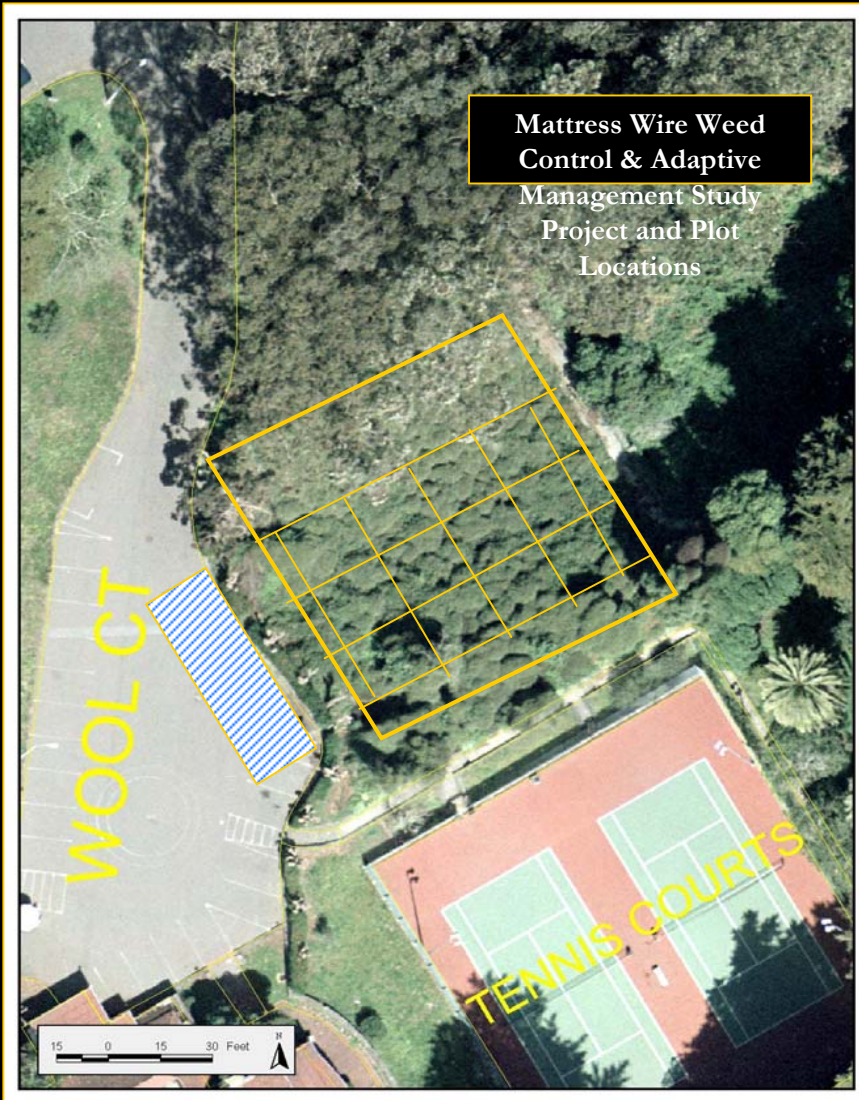
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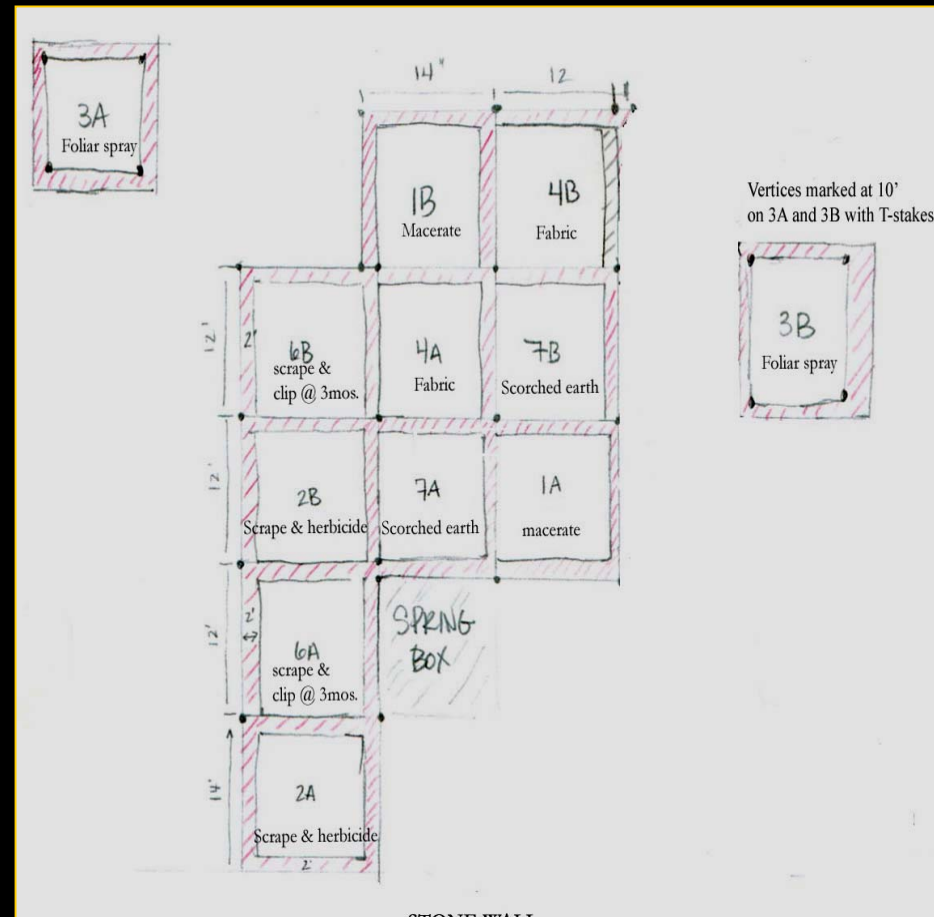


# Research – applying what works for you ...

## Mattress wire weed – evaluating & monitoring treatments



### Testing 6 treatments prior to control





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# *Research – applying what works for you ...*

## *Mattress wire weed – testing treatments*

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Evaluation included 2 years of monitoring plots for mortality and re-sprouts



- Initial treatment of cutting and scraping to bare soil and flaming resprouts resulted in greatest level of control



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*Research – applying what works for you ...*  
*Thoroughwort – adaptive management*

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# *Research – applying what works for you ...*

## *Thoroughwort – building an adaptive management strategy*

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### Research → Adaptive Management

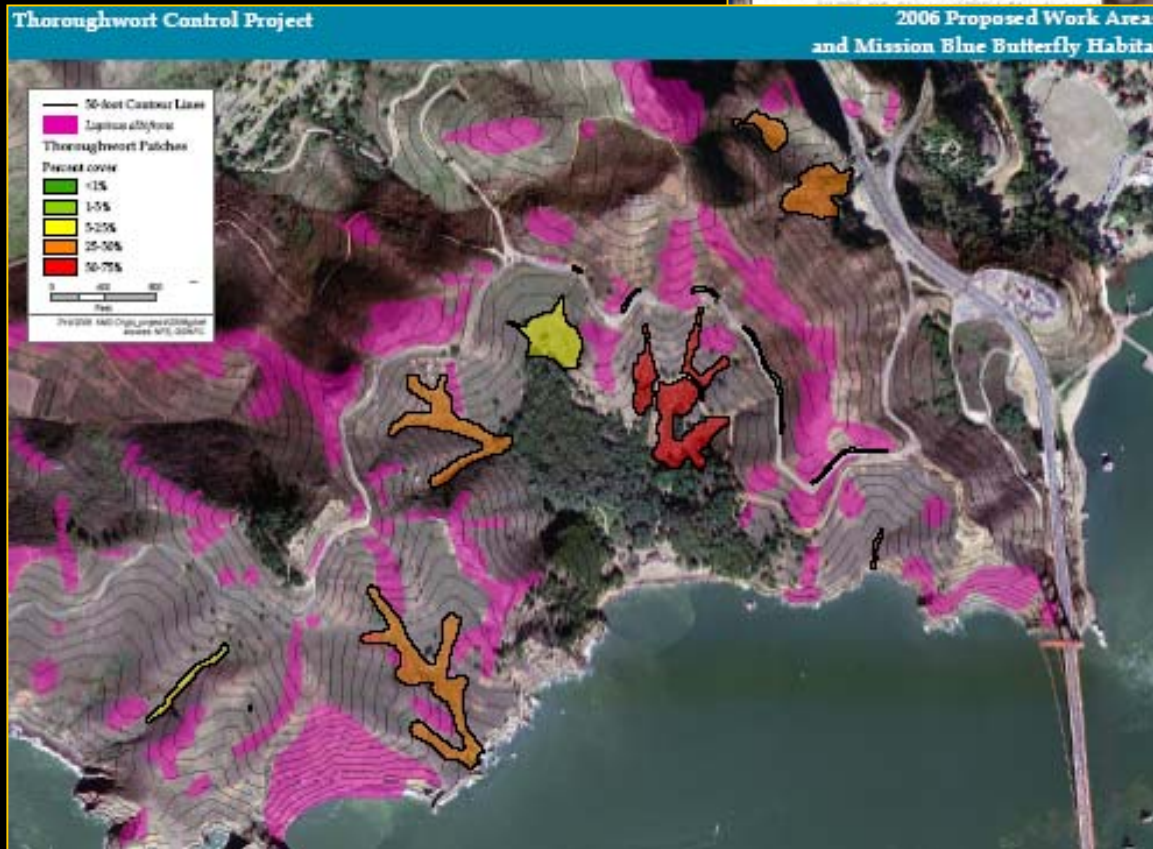
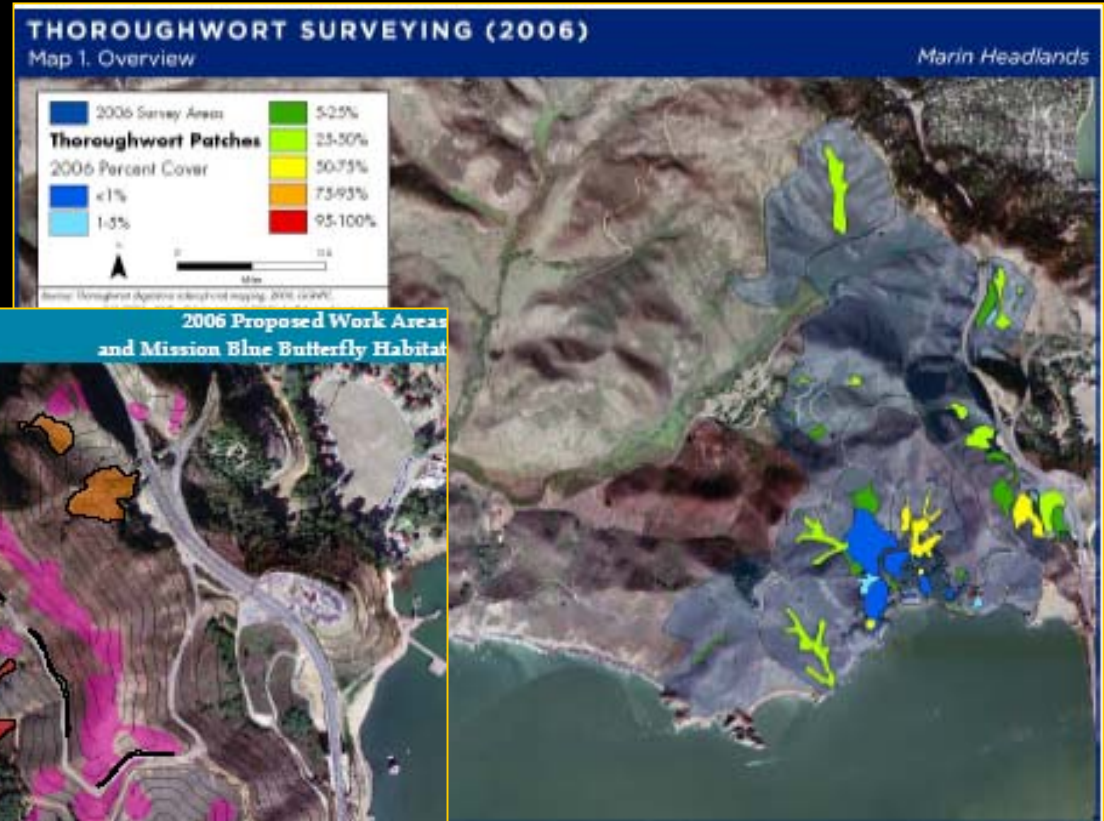
- Build understanding of species ecology
- Determine dispersal patterns
- Test varying control treatments
- Assess feasibility for volunteer-based control
- Evaluate success of previous control program (1998 – 2005)
- Re-assess distribution and density of infestations



# Research – applying what works for you ...

## Thoroughwort – adaptive management

Prioritizing patch treatment and contract-based control areas





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*Research – applying what works for you ...*  
*Undertaking academic research – Cape ivy control*

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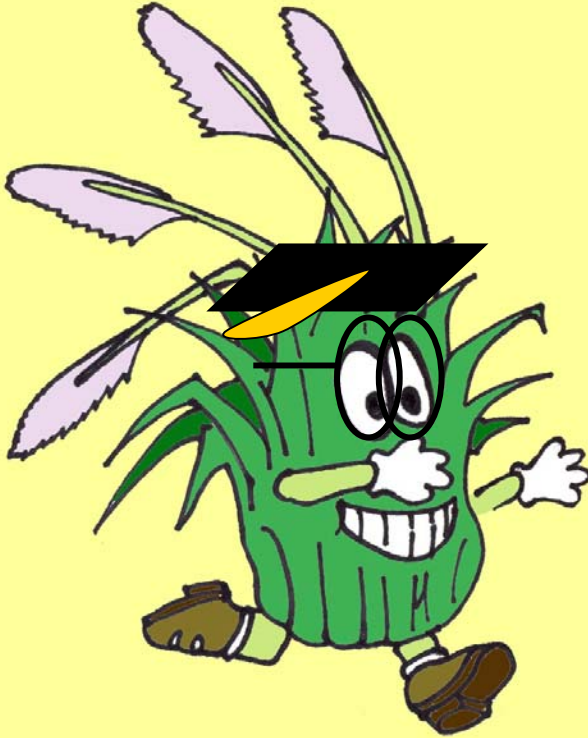




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# Research – applying what works for you ...

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Professor Pampas

Overwhelmed  
Manager



Select a level of  
research that  
meets your  
management  
needs !