Research – applying what works for you…
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.
What is the:
• Need/Purpose
• Objective(s)
• Timeline
• Scale
• Staffing
• Funding
• Priority
• Compliance
Research – applying what works for you …
Possible approaches to consider

• 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
Research – applying what works for you …

Reviewing the literature & contacting professionals

Pampas grass control – southern Marin watersheds

• 20 acres of cliff-face infestations
• 150 acres supporting isolated individuals
Research – applying what works for you …
Reviewing the literature & contacting professionals

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

![Map of Historic & Cultural Resources at Lands End](Figure_10_historic.pdf)
Research – applying what works for you …
Understanding a changing landscape – determining rate of spread

Non-native tree stand expansion and spread of isolated individuals - Kirby Cove, Marin Headlands
Research – applying what works for you …
Understanding a changing landscape – prioritizing management

Non-native tree, shrub and Cape ivy removal – Presidio’s western bluffs
Research – applying what works for you …
Mattress wire weed – testing treatments
Research – applying what works for you …
Mattress wire weed – evaluating & monitoring treatments

Testing 6 treatments prior to control
Research – applying what works for you …
Mattress wire weed – testing treatments

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
Research – applying what works for you …

Thoroughwort – adaptive management
Research – applying what works for you …

Thorowwort – building an adaptive management strategy

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
Research – applying what works for you …

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

Select a level of research that meets your management needs!

Professor Pampas

Overwhelmed Manager