

Road(sides) to Recovery:

Controlling weed spread by
removing invasive plants along
Dispersal corridors

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Introduction

- Catalina Habitat Improvement and Restoration Program (CHIRP)
 - Responsible for mapping, prioritizing, removal, and monitoring of nonnative plant species on Catalina Island since 2002
 - Island-wide map created, species prioritized
 - Top priority weeds treated- 34 scheduled for eradication
 - Eradication program success made expansion possible
 - Began roadside weed removal project in 2009

Roadside Project Background

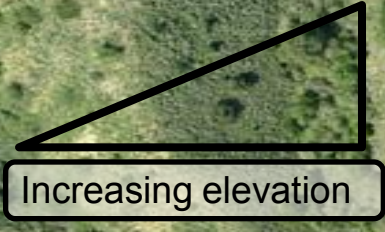
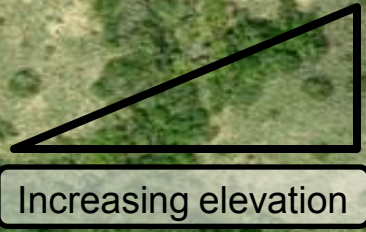
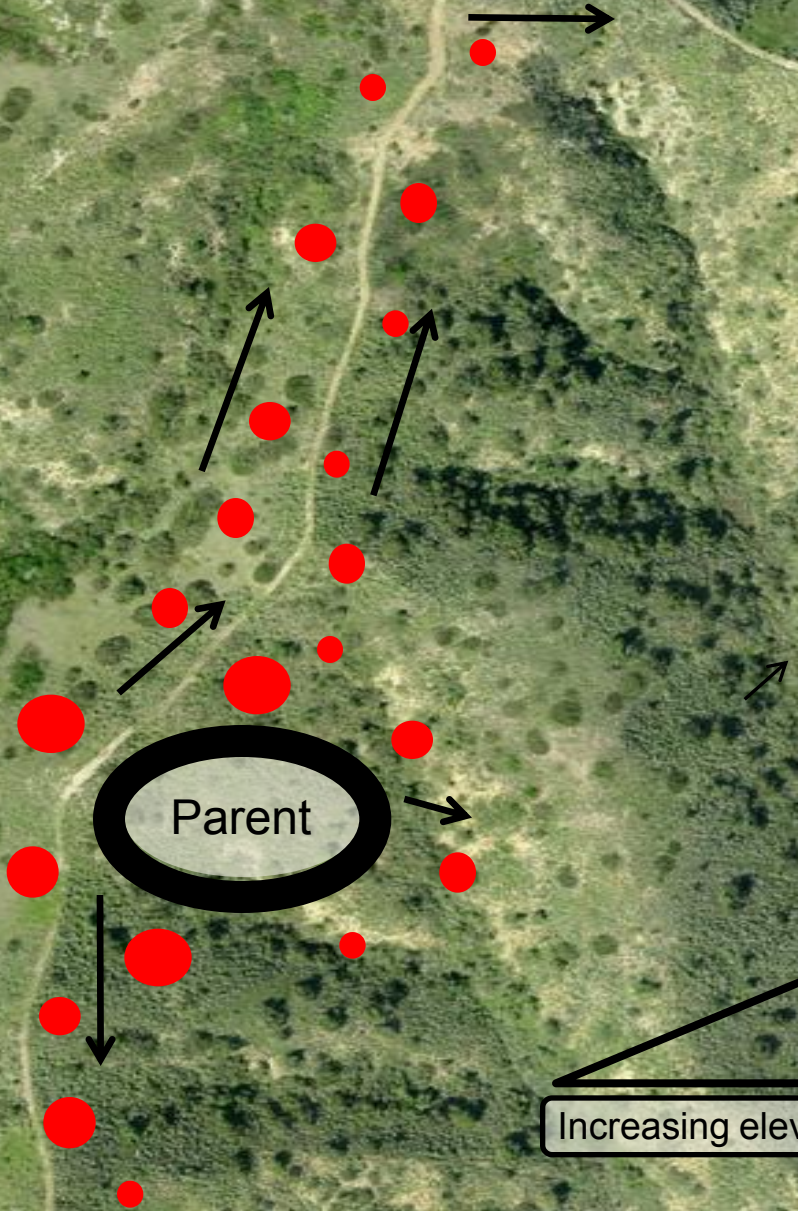
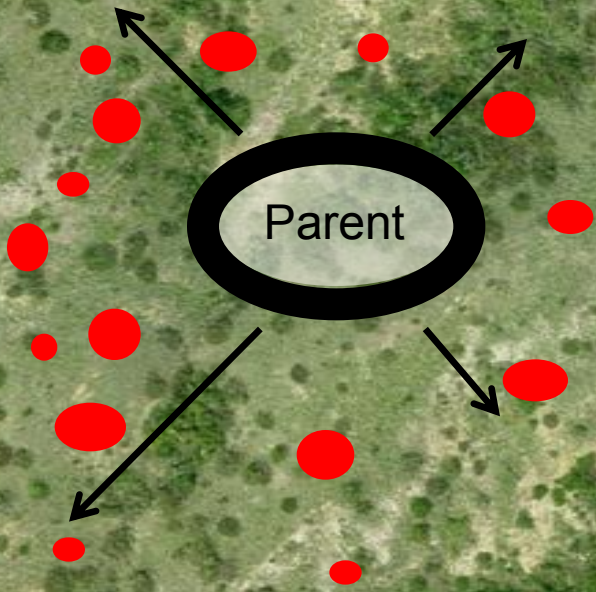
- *Scope*: all roads/trails on CIC property- 10,155 acres
 - Roads- 223 miles with 200 ft buffer
 - Trails- 37 miles with 20 ft buffer
- *The crew*: staff, volunteer, and contract labor
 - American Conservation Experience (ACE)
 - 6 person crew January-June (33,838 hours since 2009)
 - AmeriCorps NCCC
 - 11 person crew 1-2 days/week November- June
 - Alternative Spring Break, Sierra Club, etc.
 - Overseen by CIC supervisors

Roadside Project Background

- *Why roadsides?*
 - Weed seed dispersal vector
 - Each grading can move seed 55-275 yards
 - Vehicles, hikers, and animals transport seed in mud
 - Good access
 - High percentage of satellite populations
 - First step towards eradication
 - ✓ Stop weeds from spreading (**containment**)
 - ✓ Create isolated populations (**reduction**)
 - Eliminate populations watershed by watershed (**eradication**)

Wildland Dispersal

Roadside Dispersal



Species Addressed



Target Species

Fennel (<i>Foeniculum vulgare</i>)
Harding grass (<i>Phalaris aquatica</i>)
Tree tobacco (<i>Nicotiana glauca</i>)
Russian thistle (<i>Salsola tragus</i>)
Rice grass (<i>Piptatherum miliaceum</i>)
Flax leafed broom (<i>Genista linifolia</i>)
Italian thistle (<i>Carduus pynoccephalus</i>)
Veldt grass (<i>Ehrharta calycina</i>)
Sweet Pea (<i>Lathyrus spp.</i>)
Statice (<i>Limonium sinuatum</i>)
Geranium (<i>Pelargonium x hortorum</i>)
Milk thistle (<i>Silybum marianum</i>)
Horehound (<i>Marrubium vulgare</i>)
Mock orange (<i>Pittosporum undulatum</i>)
Bridal creeper (<i>Asparagus asparagoides</i>)
English ivy (<i>Hedera helix</i>)
Orchard grass (<i>Dactylis glomerata</i>)
Periwinkle (<i>Vinca major</i>)

Treatment: Manual

Shovel/pulaski
N/A
Shovel/weed wrench
N/A
N/A
Hand pull/weed wrench
N/A
N/A
Hand pull
Hand pull
Hand pull
Hand pull
Hand pull/shovel
Hand pull
Grub and bag
Grub and bag
N/A
Grub and bag

Treatment: Chemical

Foliar Garlon 4/Glyphosate
Foliar Fusilade/Glyphosate
Cut stump Glyphosate
Foliar Glyphosate
Foliar Fusilade/Glyphosate
Cut stump Glyphosate
Foliar Glyphosate/Milestone
Foliar Glyphosate/Fusilade
N/A
N/A
Foliar Glyphosate
Foliar Glyphosate/Milestone
Foliar Glyphosate
Drill & squirt Glyphosate
Foliar Garlon 4/Glyphosate
N/A
Foliar Glyphosate
Foliar Garlon 4

Field Tools/Techniques



Mechanical:
Hand digging
Mowing

Chemical:
Truck mounted spray rigs
Backpack sprayers

Methods

- Map

- Presence/absence prior to project start
- Refined into general cover class as project progresses
 - *Light*- weeds inside buffer but not outside
 - *Medium*- weeds inside buffer and scattered outside
 - *Heavy*- large populations inside and outside buffer

- Plan

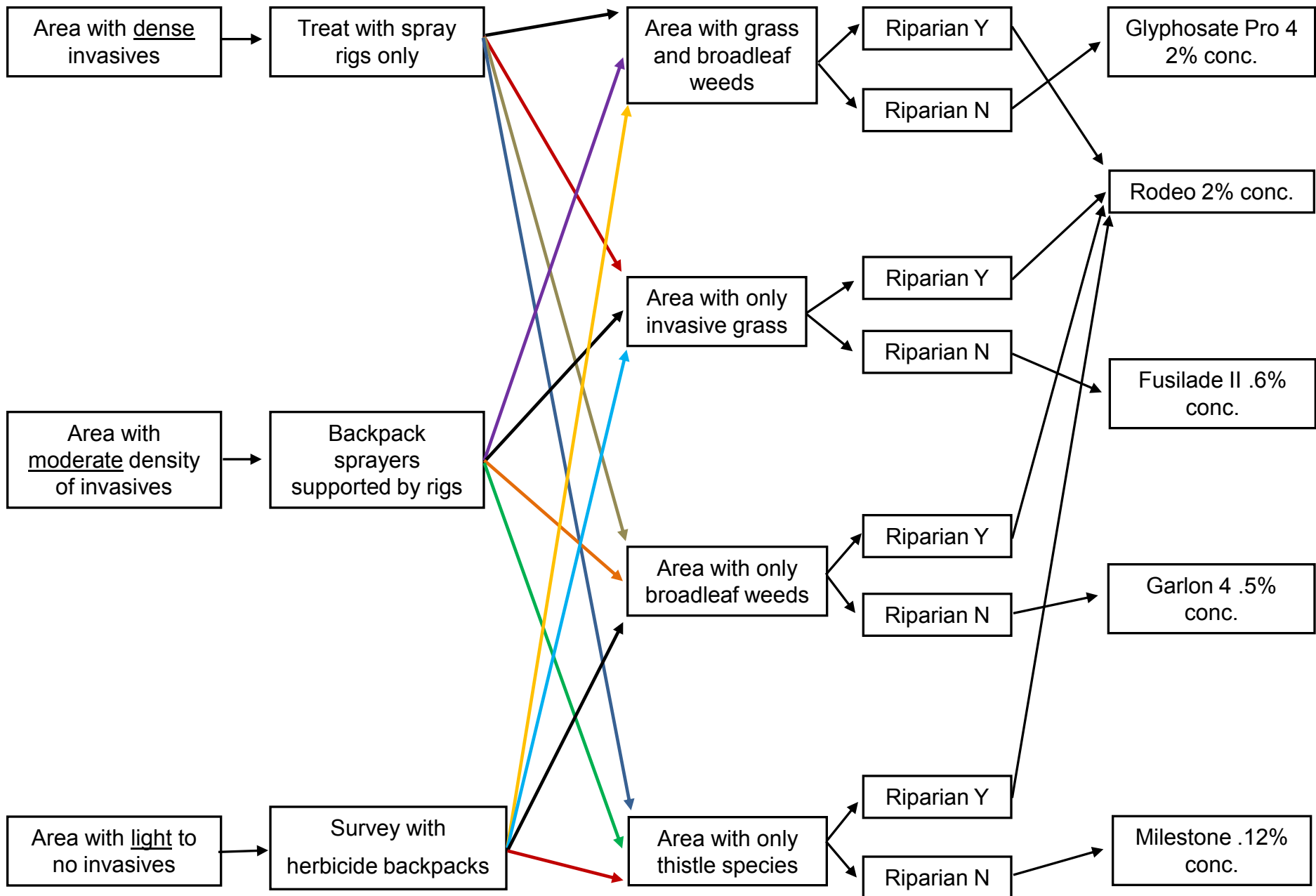
- Project area protocol dependent on cover class

- Treat

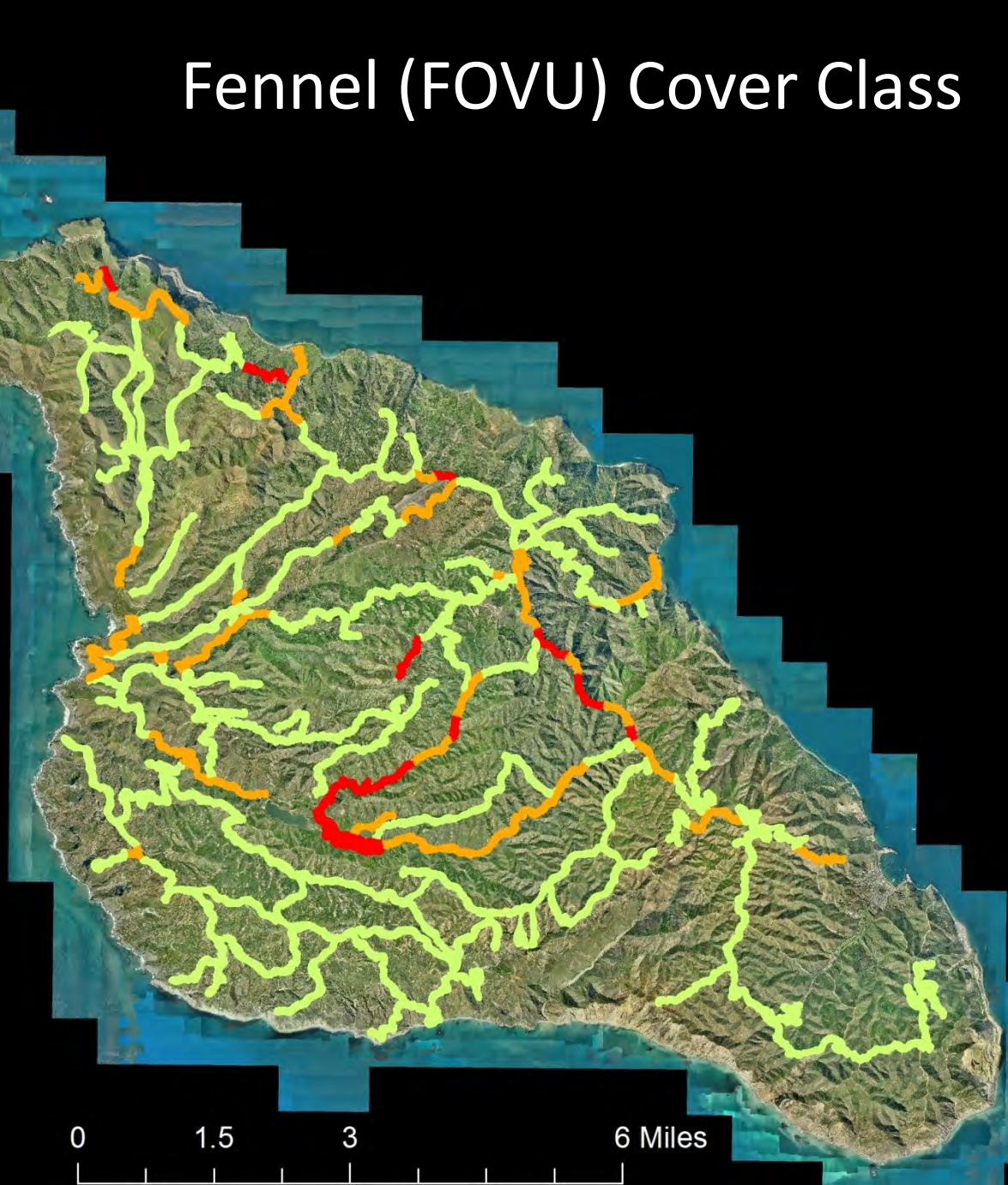
- Mechanical & Chemical methods

- Manual removal and mowing as site prep
- Spray rig and backpack application of Glyphosate Pro IV, Rodeo, Garlon 4, Fusilade II, and Milestone

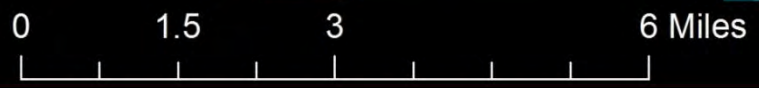
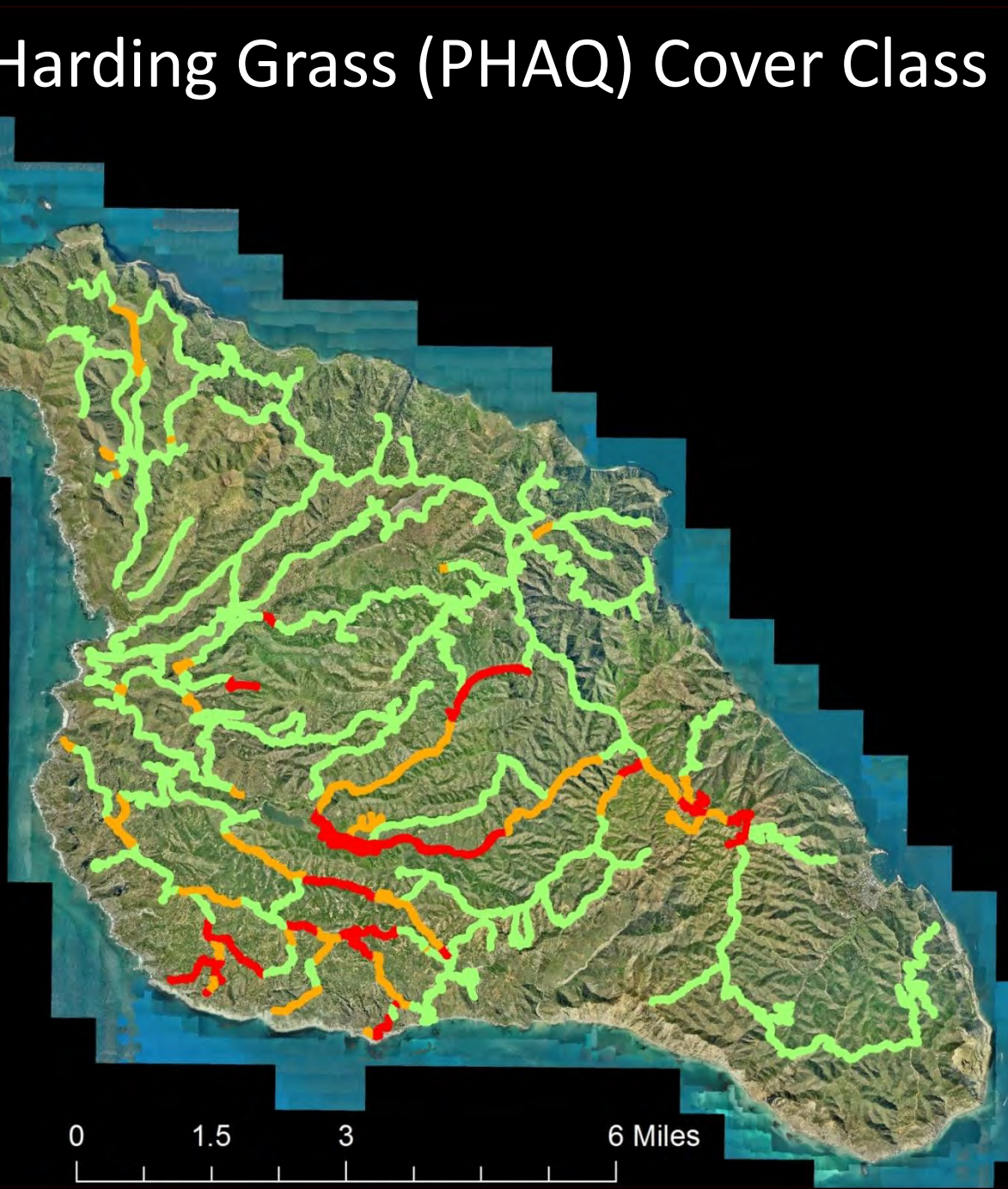
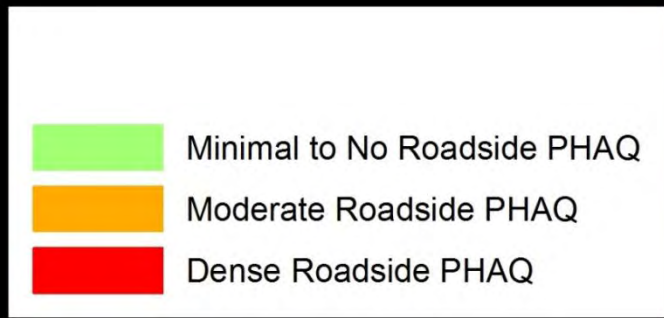
223 miles of road
85 spray days per year
3 spray rigs
= .88 miles/rig/day



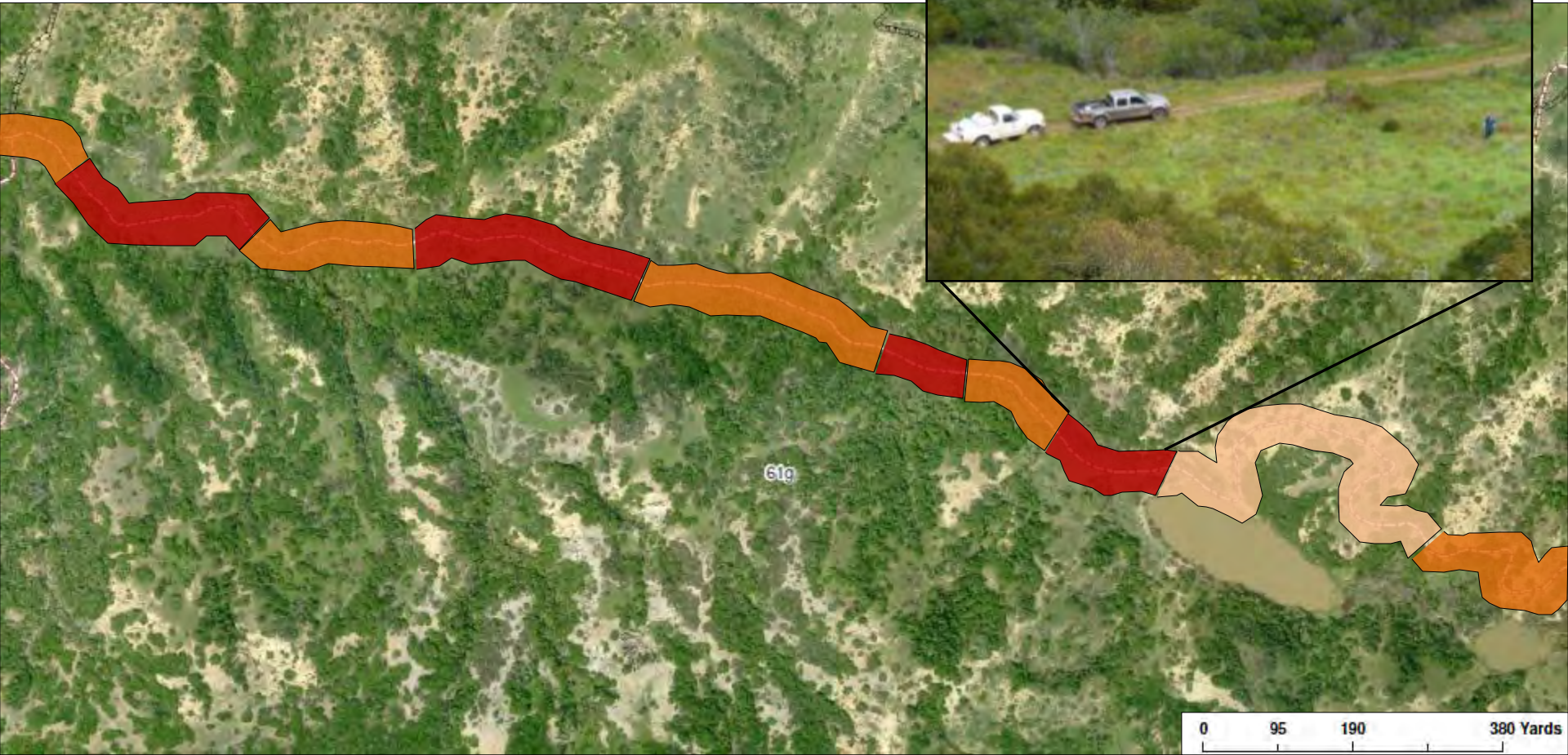
Fennel (FOVU) Cover Class






Harding Grass (PHAQ) Cover Class

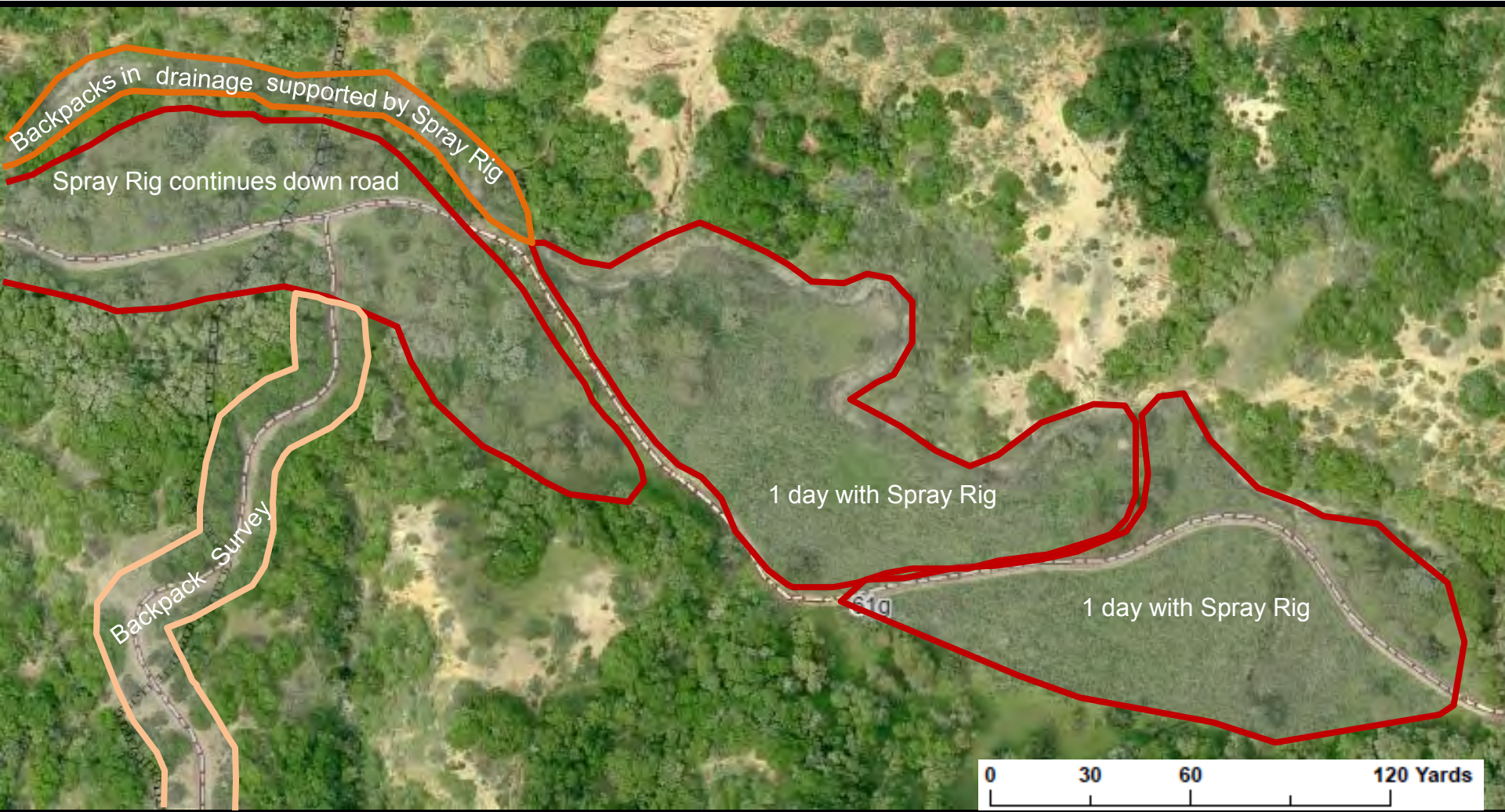


Sample Project Area: Bullrush Canyon



-  = Spray Rig only
-  = Backpacks supported by Spray Rig
-  = Backpacks only

Bulrush Canyon in Detail



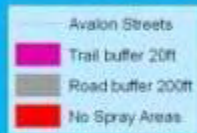
The Future

Take on large populations in upper areas of watersheds (reduction)

Pilot fennel eradication on channel side drainage

Eradication goal with enough long-term support

Candidate fennel eradication watersheds



Avalon

2 1 0 2 4 Miles

Challenges and Lessons

- **Monthly crew turnover**
- **Road and weather conditions**
- **Remote treatment locations**
- **Seasonal phenology**

- **Communication with satellite crews is vital**
- **Thorough mapping required**
- **Partnerships HUGELY important**
- **Site prep with mowing *vitaly* important for efficacy and worker safety in dense areas**
- **QA/QC must be done**
- **Thorough training a MUST**

Thank You



•Roadside film crew

(vimeo.com/13427885)

