



Yellow star-thistle control
using integrated pest management
Pinnacles National Park
Brent Johnson

yellow star-thistle

- Annual Species
- 50,000 seeds/plant
- Seeds last 3+ years in soil
- Summer Annual - Flowers in June/July
- Toxic to horses
- Displaces good forage/native species
- Millions of acres infested in CA

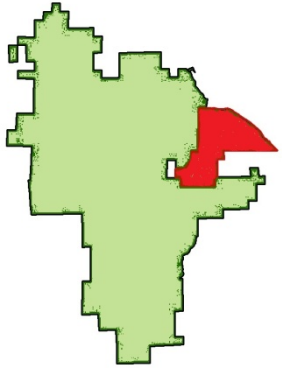
INTEGRATED PEST MANAGEMENT

- Herbicide
- Timed mowing
- Timed grazing
- Prescribed fire



Monument Expansion:

Acquisition of over
2000 acres in 2006



- Pinnacles Campground
- Historic Bacon & Butterfield Ranches
- Sandy Creek – CA Red-legged Frog habitat
- Valley Oak Savannah & Grassland



yellow star-thistle



Prescribed Burning Treatment June 2009



120 Acres of YST Burned



Goal: Flush YST Seed Bank

← 24 Nov. 2009
(5 months post-burn)



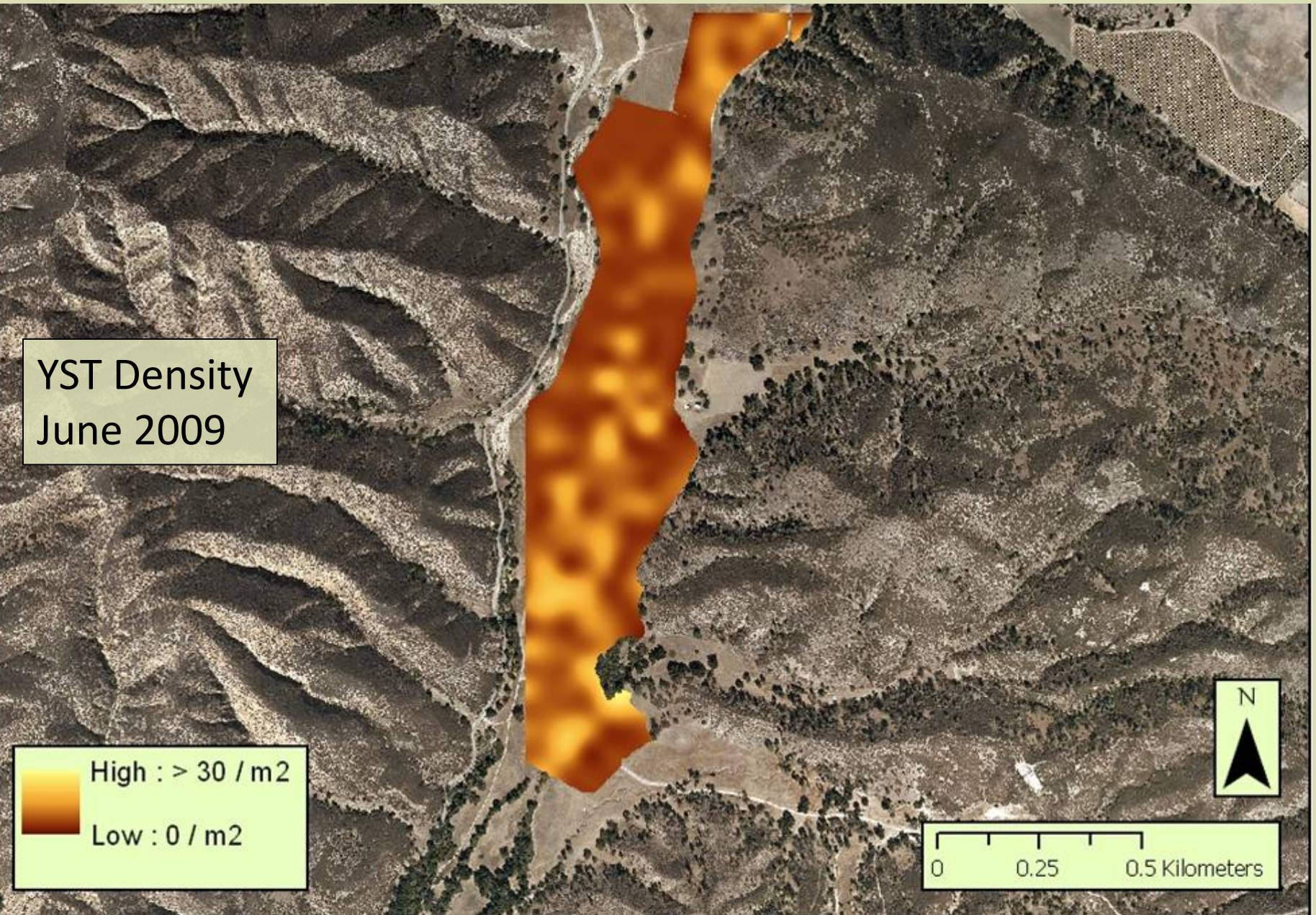
23 Apr. 2010 →
(10 months post-burn)



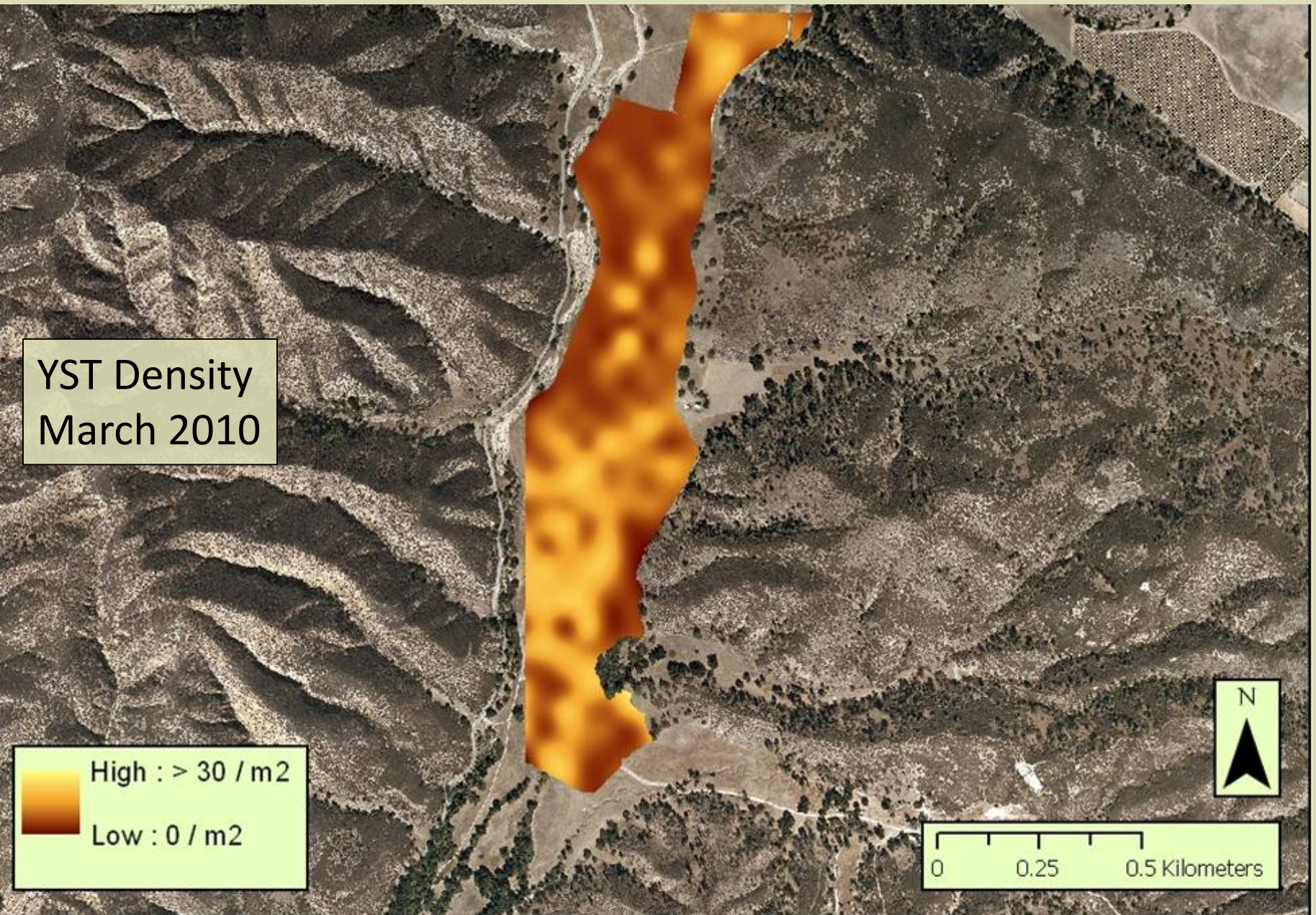
Broadcast Herbicide Treatment April 2010



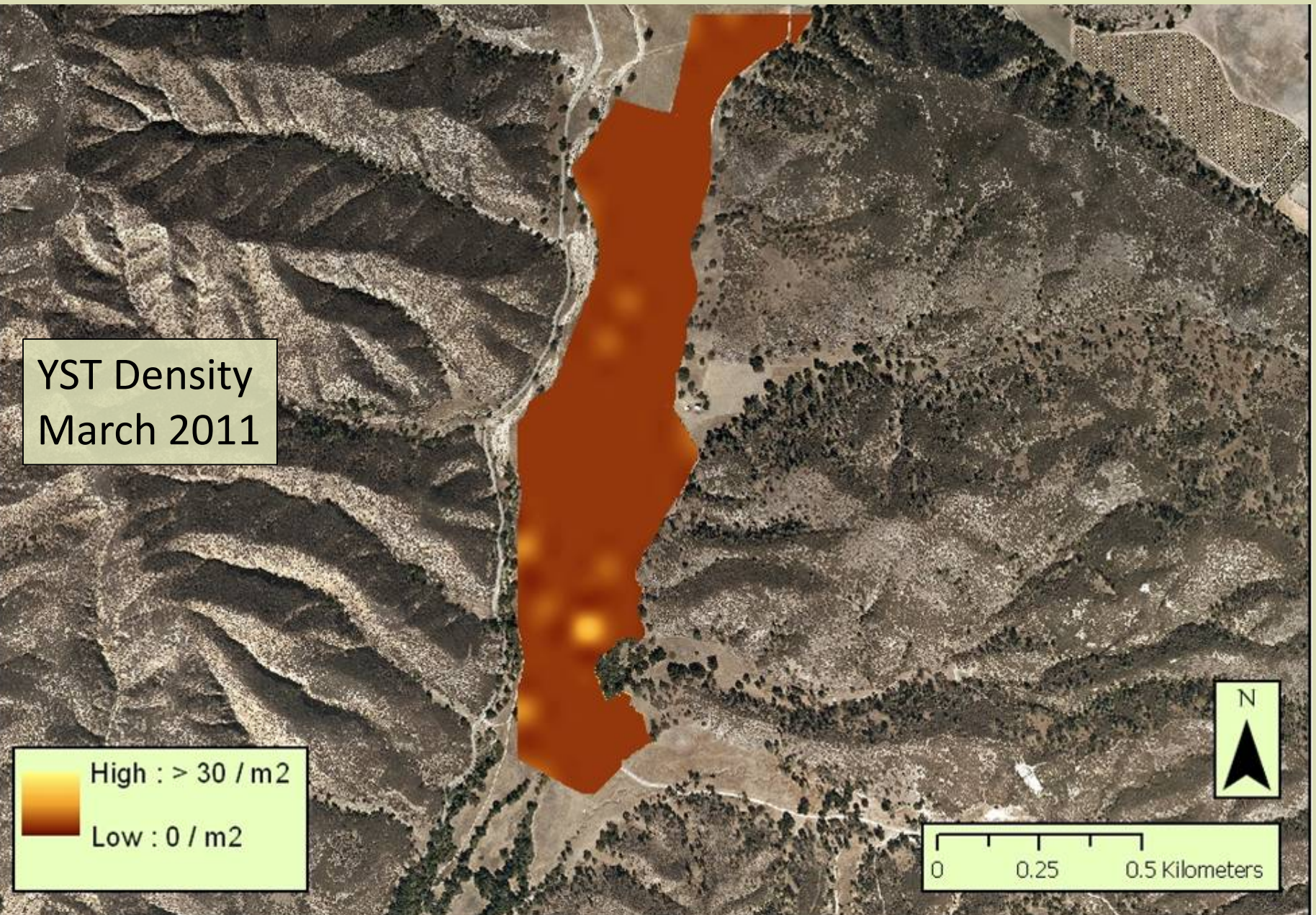
YST Density Before Any Treatments



YST Density After Prescribed Burning Treatment

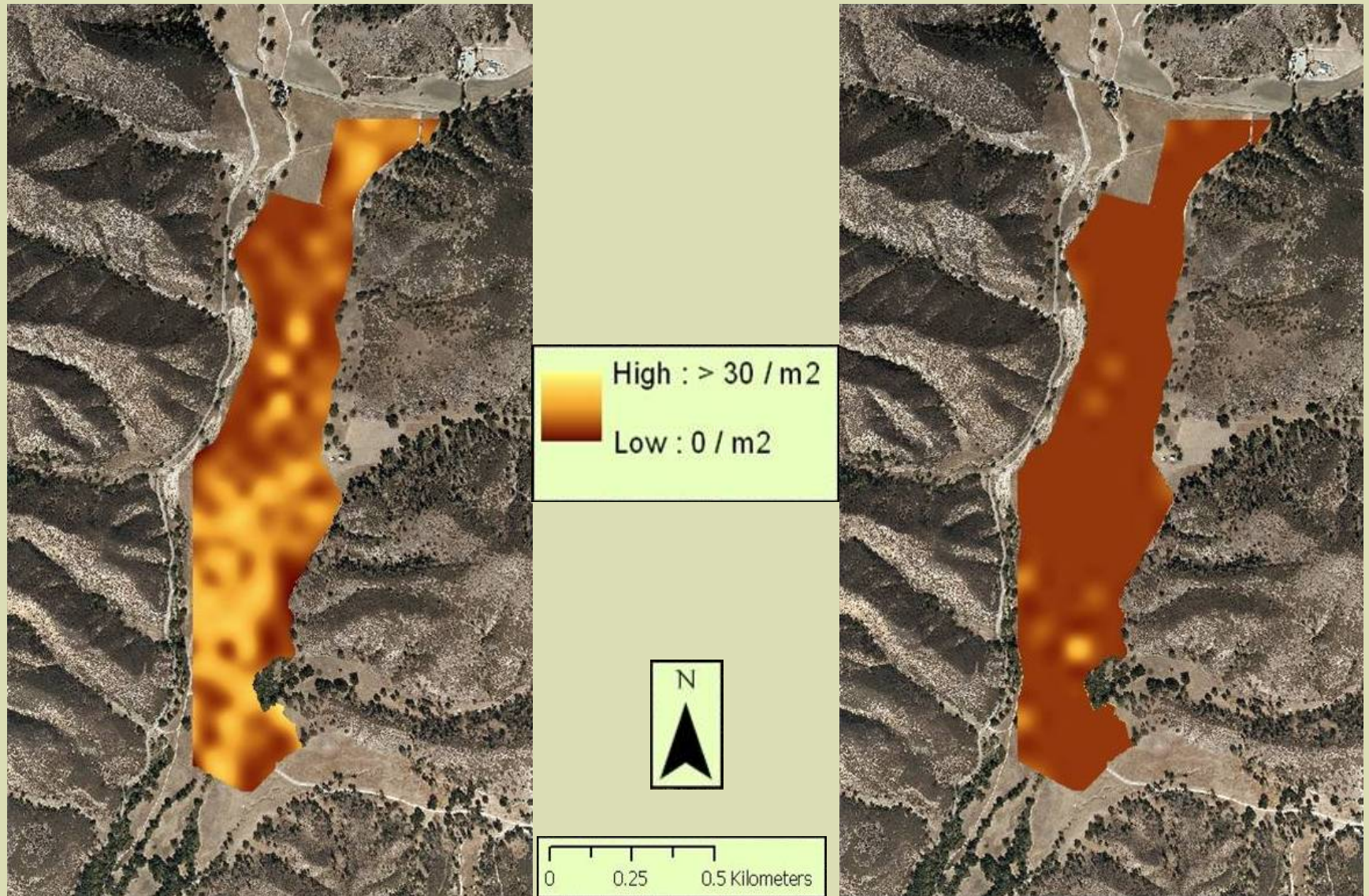


YST Density After Broadcast Herbicide Treatment



YST Density March 2010
(pre-spray)

YST Density March 2011
(1 year post-spray)



Prescribed Grazing Treatment

July 2010



Timed Mowing Treatments

