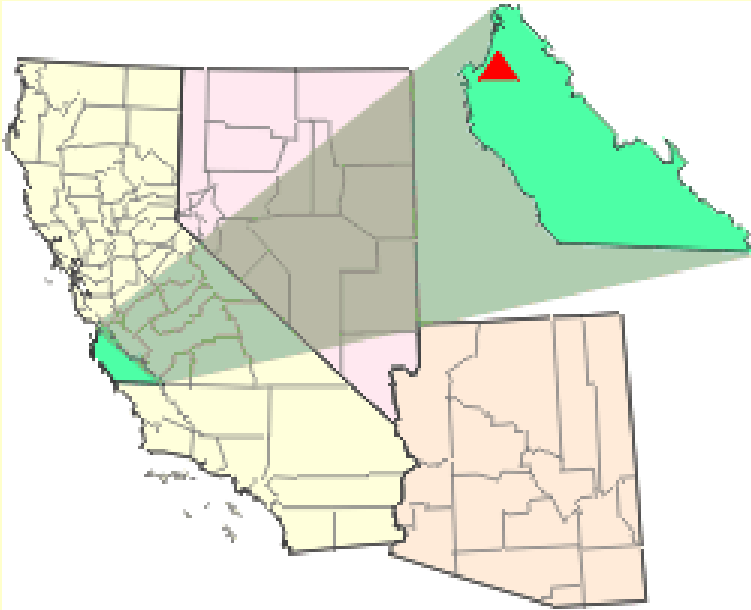




Alternative Bedding Sites for Grazing Sheep on Ft. Ord: A Proposed Method for Weed Management

By:
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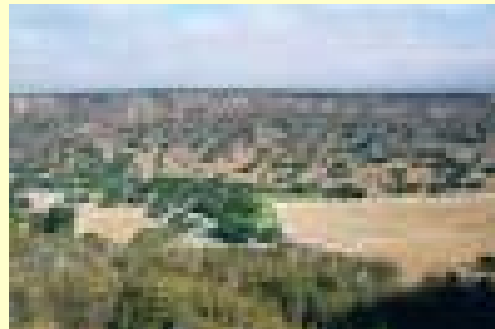
Ft. Ord: Established 1917



Ft. Ord Today



- **BLM Public Lands (8,000 acres)**
- **CSUMB (1,300 acres)**
- **18,000 acres yet to be transferred.**



Why Manage Weeds?



- 8.5 million acres or 5% of BLM land that have a serious weed problem (BLM, 1996).
- BLM spends millions of dollars each year to manage weeds.
- Out-compete native plant communities.

Project Purpose and Goals

- What were common geographic features of current bedding sites?
- Find new bedding sites in close proximity to invasive weed sites.
- Prevent overgrazing.

Ft. Ord Grazing Areas



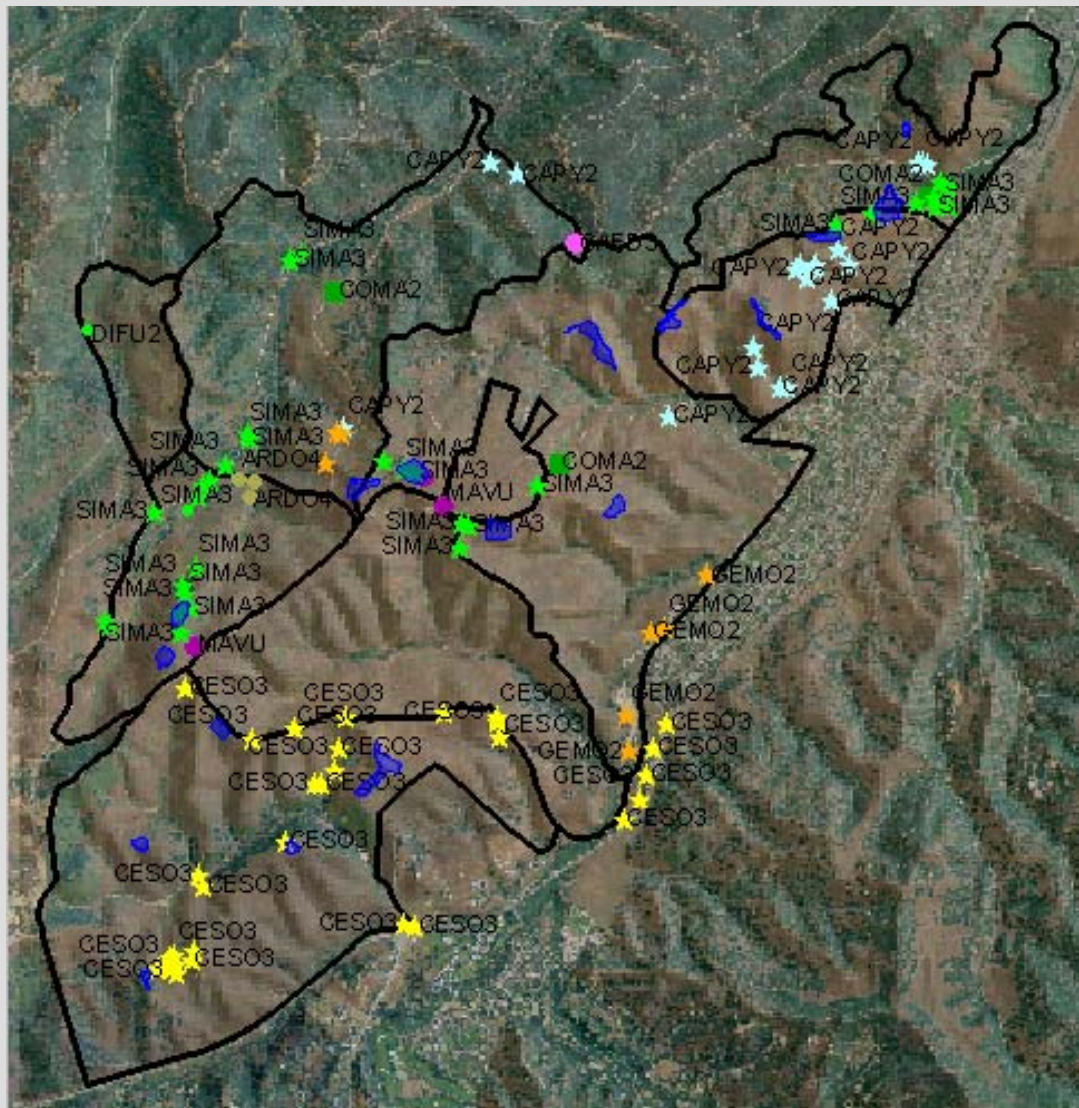
- Solely in grasslands of Ft. Ord
- 7575 meters from southern tip to northern tip.
- 3245 meters from western end to eastern end.

Sheep Bedding Sites



- What is a bedding site?
- Located on ridgelines and hilltops to allow sheep 360 degree view for predators.
- Where most intensive grazing takes place
- Helping or hurting the amount of invasive weeds present?

Invasive Weed Sites in Ft. Ord Grazing Area



- **Weeds Present:**
- Yellow Starthistle (CESO)
- Italian Thistle (CAPY)
- Milk Thistle (SIMA)
- French Broom (GEMO)
- Iceplant (CAED)
- Poison Hemlock (COMA)
- Tocalote (CEME)
- Arundo (ARDO)
- Horehound (MAVU)

The Invaders

Yellow Starthistle



French Broom



Italian Thistle



Tocalote



Horehound



Milk Thistle



What were the common geographic features of current bedding sites?



Methods

- Obtain GPS/GIS Data.
- Create GIS database.
- GIS analysis of slope and elevation.
- Determine common features.

Data to BLM

- Table showing common characteristics of bedding sites
- Table showing which sites have invasive weeds to denote highest priority.
- Maps of Proposed Bedding Sites.

Common Characteristics of Bedding Sites

Original Bedding Sites	Minimum	Maximum	Mean	St. Deviation
Slope (Percent)	4.5	50	26	10
Elevation (m)	155	170	164	4

Bedding Sites	Total Area (acres)	# Of sites
Current	37	17
Proposed	37	17

BLM Data Table

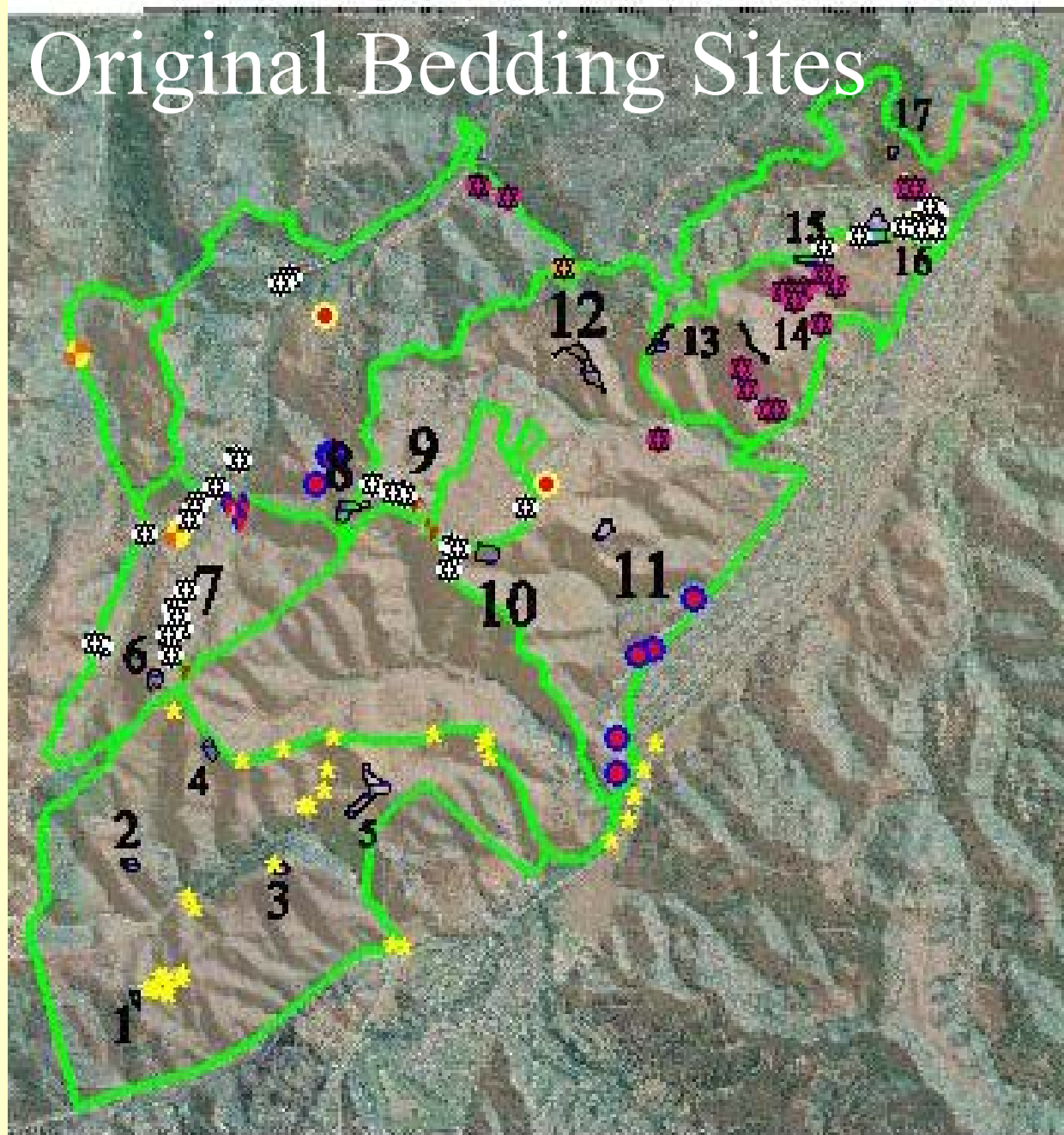
Plant Codes:

ARDO-arundo donax
CESO-yellow starthistle
SIMA- milk thistle
PHAQ- Harding grass
MAVU-horehound
GEMO-French broom

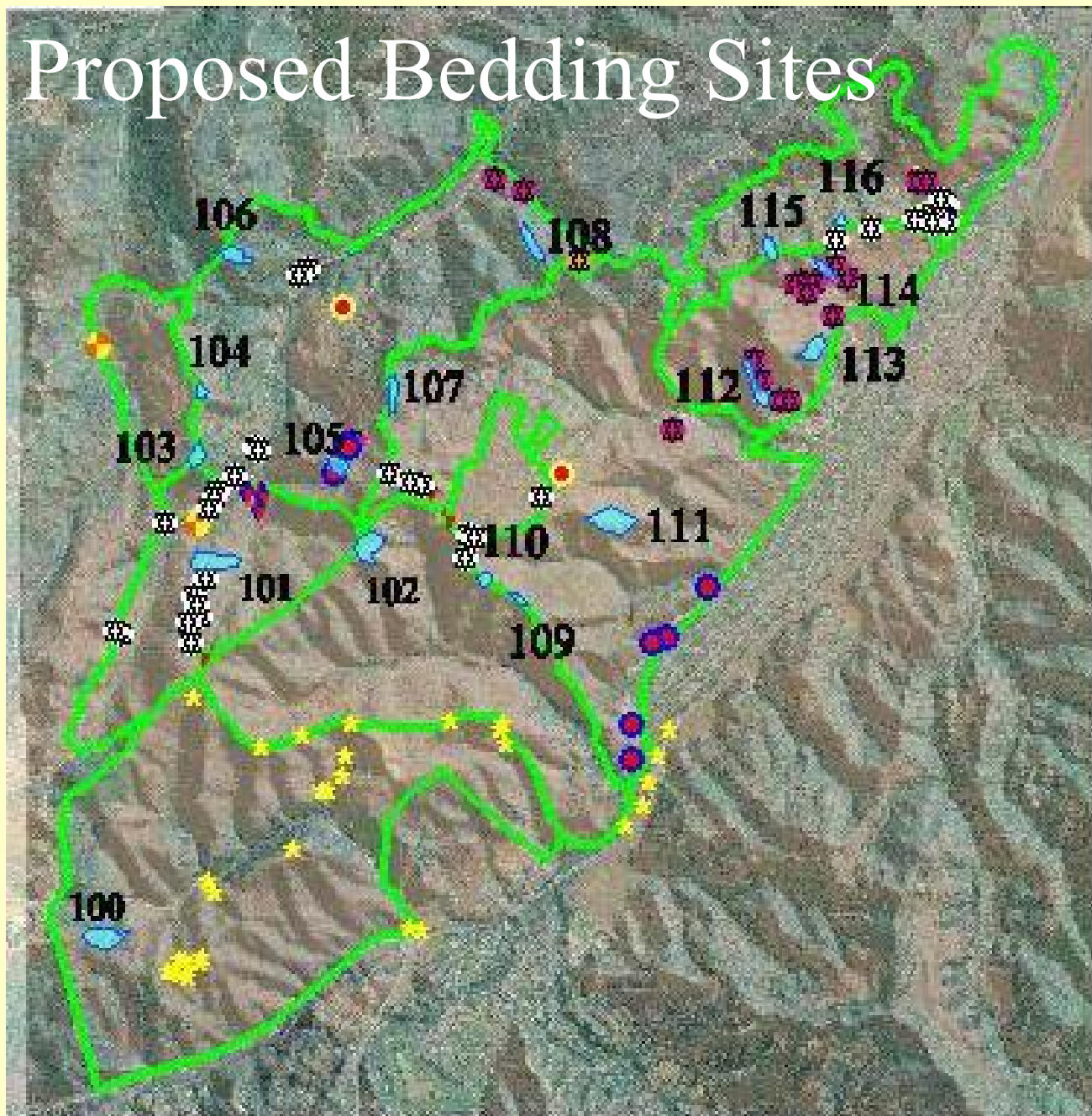
CAED-ice plant
COMA-poison hemlock
CAPY- Italian thistle

Proposed Bedding Site #	Invasive Weeds known at proposed bed site #.	Invasive Weeds known within a 1/4 mile of proposed bed site.	Current bed sites within a 1/4-mile of proposed bed site.
100	none	CESO	1,2
101	SIMA	PHAQ, ARDO, SIMA	7,8
102	none	SIMA, MAVU, ARDO	9, 10
103	SIMA	ARDO, PHAQ, GEMO	none
104	none	SIMA	none
105	ARDO, GEMO	SIMA, ARDO, GEMO	9,10
106	none	SIMA	none
107	CAPY	SIMA, COMA, MAVU	9,10
108	none	CAED, CAPY	none
109	none	SIMA	11
110	SIMA	MAVU, COMA	11
111	none	GEMO, COMA, SIMA	12
112	CAPY	CAPY	13,14,15
113	CAPY	CAPY	15
114	CAPY	CAPY, SIMA	16,17
115	CAPY, SIMA	CAPY, SIMA	16,18
116	CAPY, SIMA	CAPY, SIMA	16,17,18

Original Bedding Sites



Proposed Bedding Sites



What's Next

- Rotation of Bedding Sites
- Timed grazing
- Combinations of different management techniques.
(prescribed burns, herbicides, etc.)
- More complex use of GIS

