Mapping Vegetation using UAV Aerial Imagery

Case Study: Perennial Veldt Grass (Ehrharta calycina)

Corey Hamza
Elkhorn Slough Symposium
January 24, 2017
Perennial Veldt Grass
*(Ehrharta calycina)*

Cal-IPC Inventory Rating: **HIGH**
UAV

DJI Phantom 3 Advanced

Advantages

• High Resolution Imagery

• Fly when conditions are ideal

• Fly many times over season or year

• Affordable: Current retail = $800
Drone2Map
Creates Orthomosaic

UAV Orthomosaic
5cm Resolution
~500 photos

USDA NAIP Image
1 m Resolution
Drone2Map
Creates Orthomosaic

UAV Orthomosaic
5cm Resolution
~500 photos

USDA NAIP Image
1 m Resolution
UAV Imagery

5 cm Resolution
Orthomosaic
ArcMap

Spatial Analyst Tools Used

- Maximum likelihood Classification
- Majority Filter
- Boundary Clean
- Region Group
- Set Null
- Nibble
Training (Supervised Classification)
Classification
Classification
Results

Veldt Grass Area = 12.8 Acres
Total Site Area = 95.4 Acres
Special Thanks to:

Charlie Endris
John Haskins