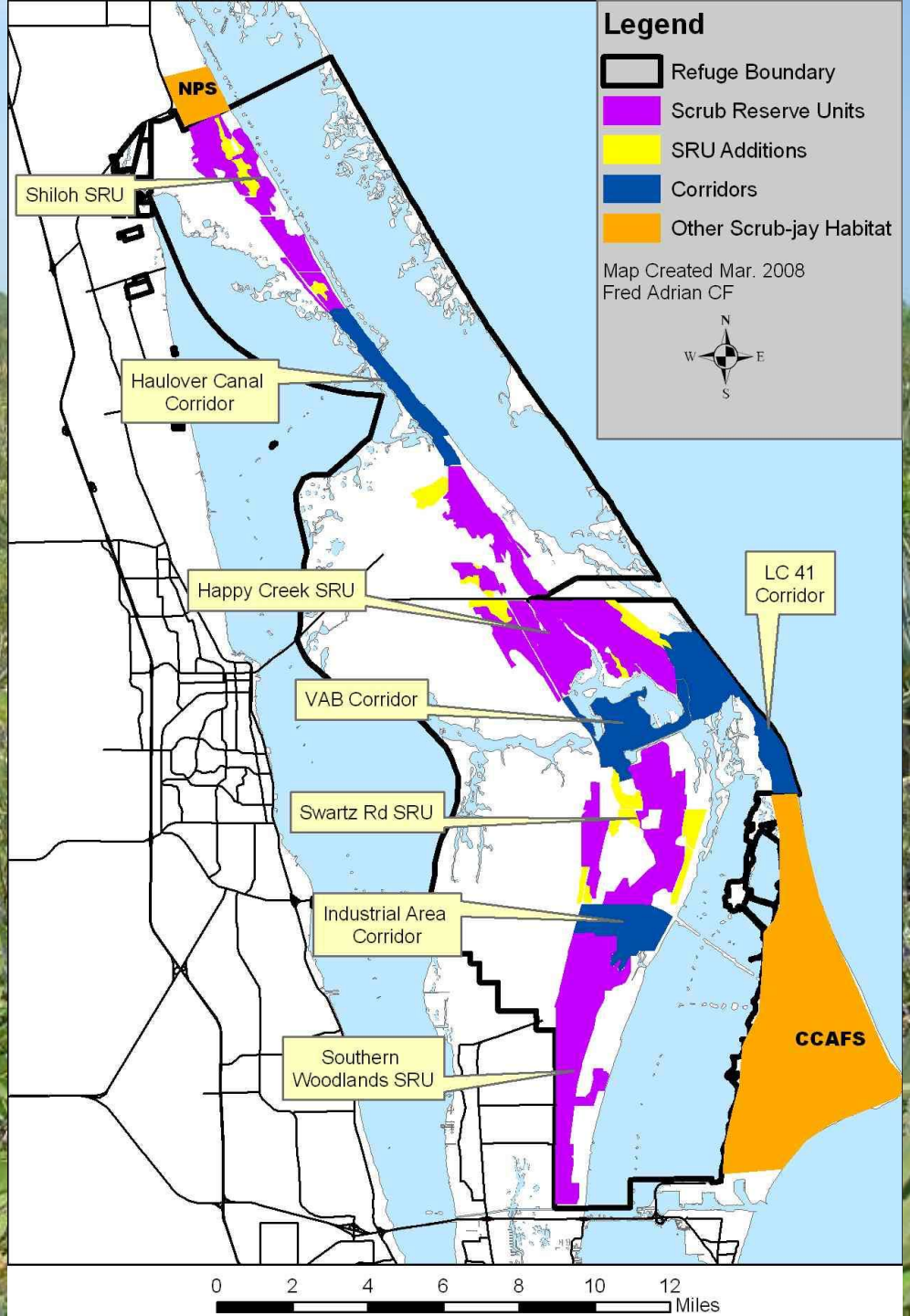
Conservation Delivery: Treatments

Conservation Delivery: Program Objectives

It's the Habitat!



Conservation Delivery: Program Objectives

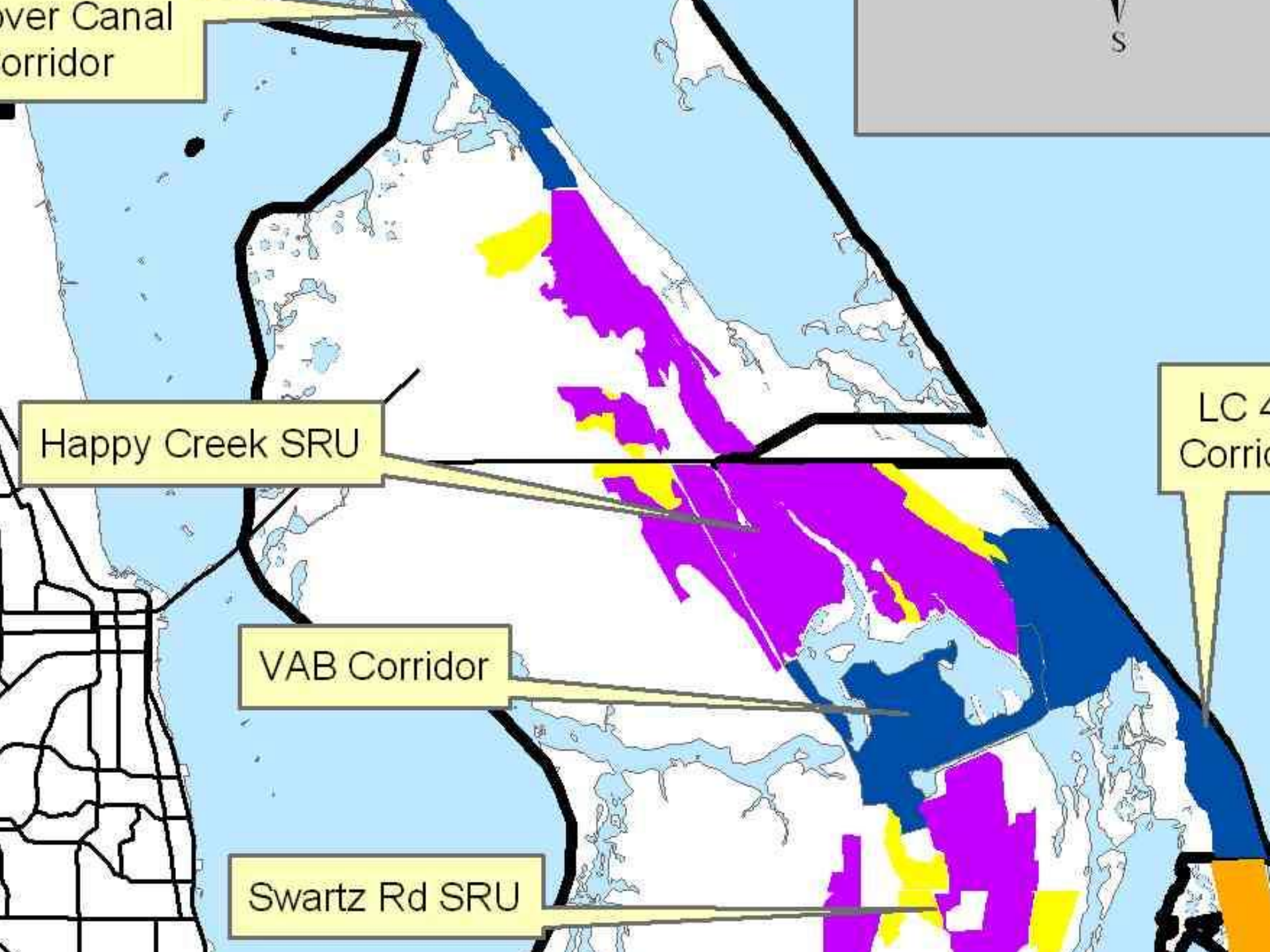
It's the Habitat?

What about those 300 families?

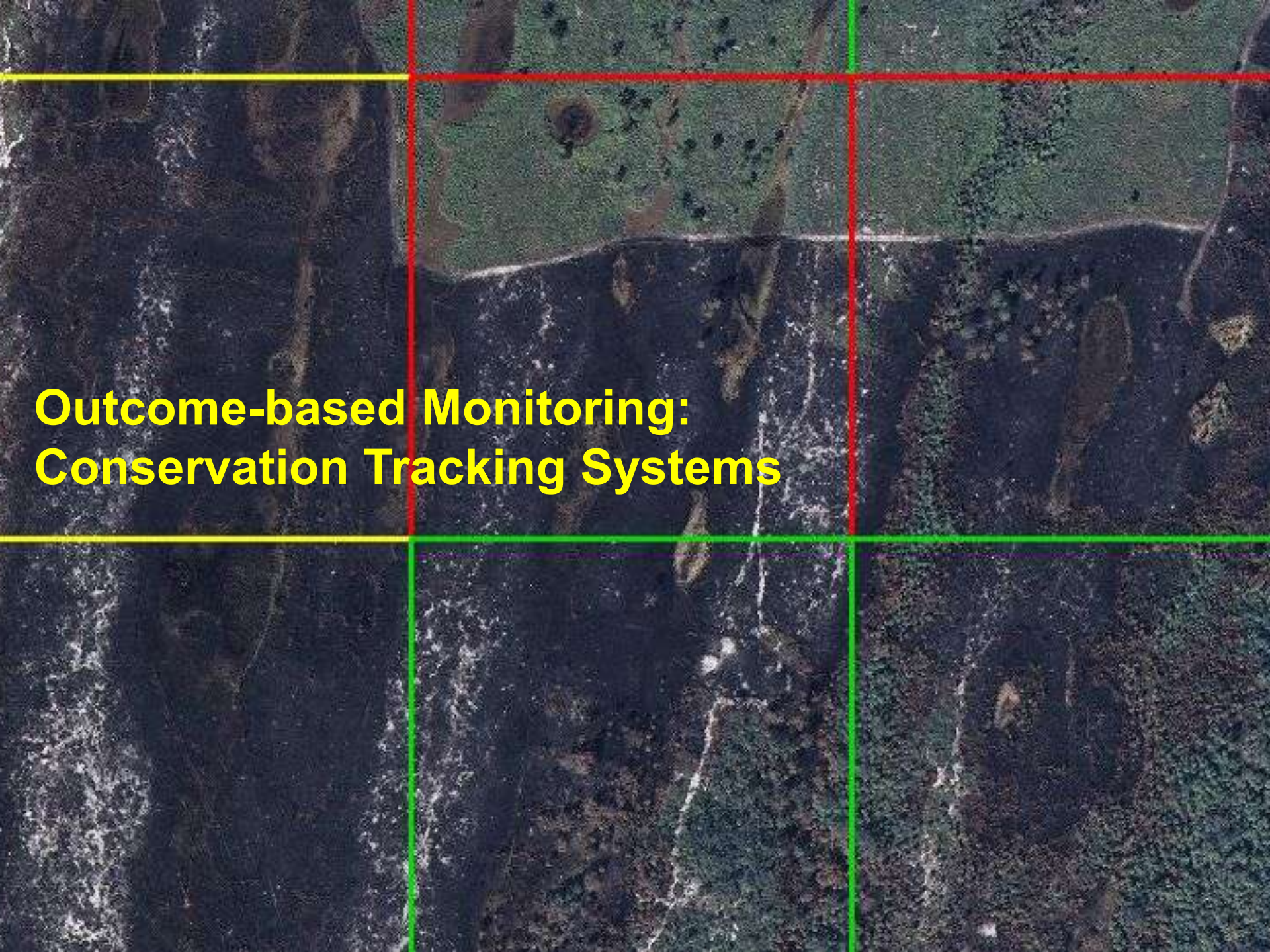
2007 Happy Creek Territories

Optimal Habitat (recruitment > mortality)

- Shrub lands with scrub oak patches.
- Palmetto & marsh matrix recently burned.
- Sparse trees, few or no forests, little or no tall scrub .
- Medium-height oaks & many open sandy areas.


over Canal
orrido
S
Happy Creek SRU
LC 4
Corrid
VAB Corridor
Swartz Rd SRU

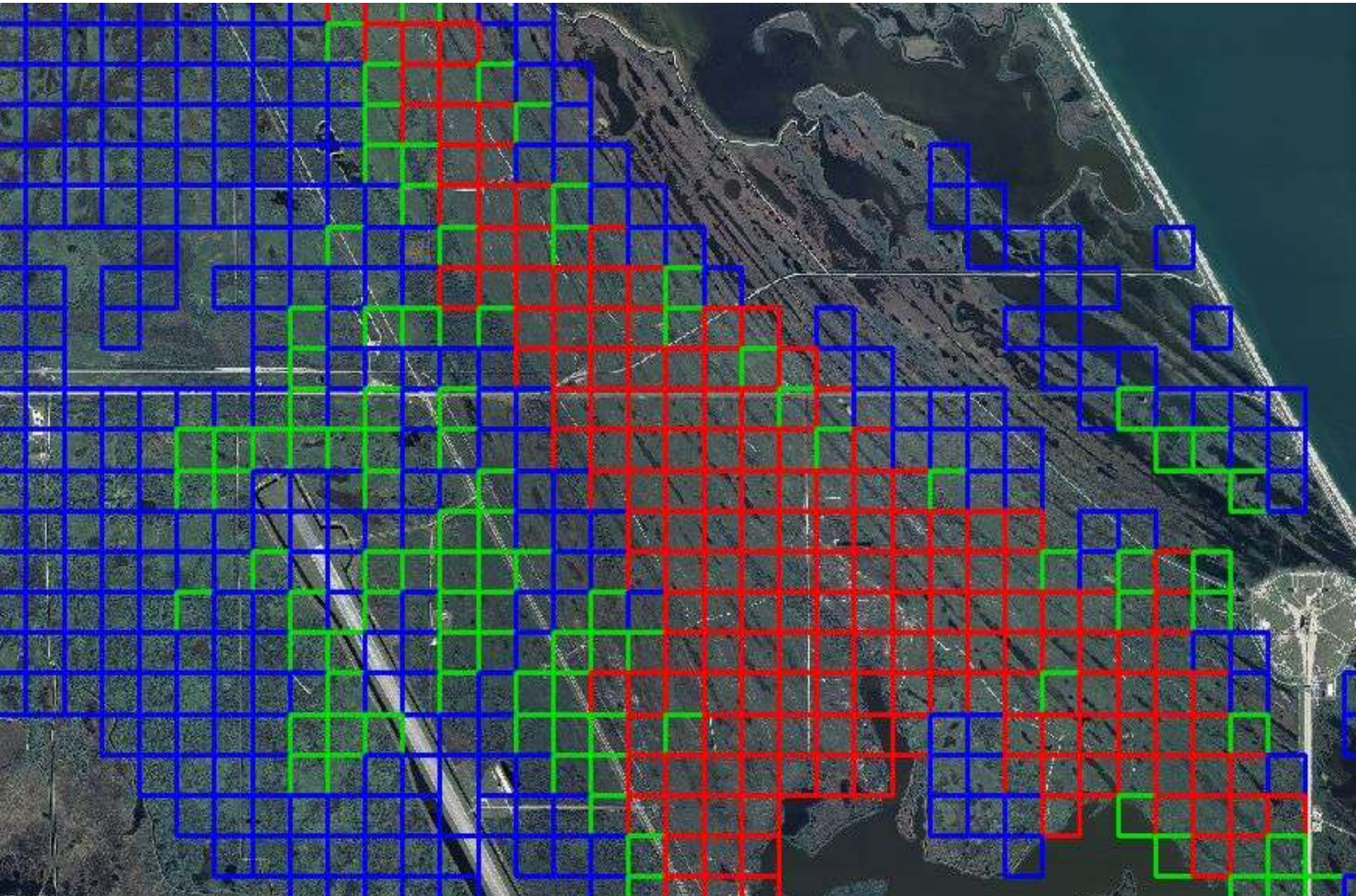
Program Objectives:
Habitat – Happy Creek SRU
Provide optimal habitat for 100 families (2500 ha)



Outcome-based Monitoring: Conservation Tracking Systems

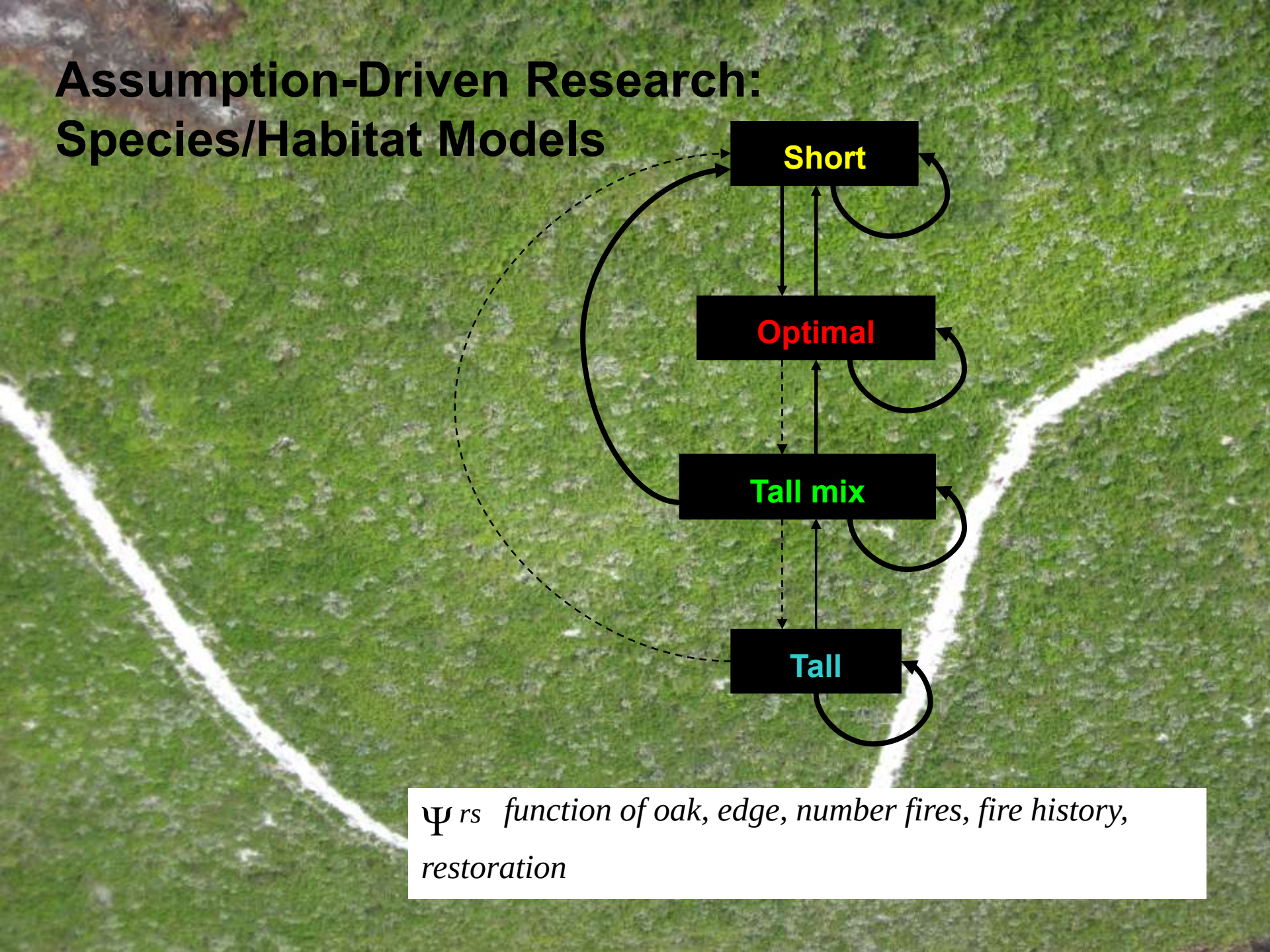
Outcome-based Monitoring: Habitat Inventory

Potential Territories
Primary, Secondary, Tertiary

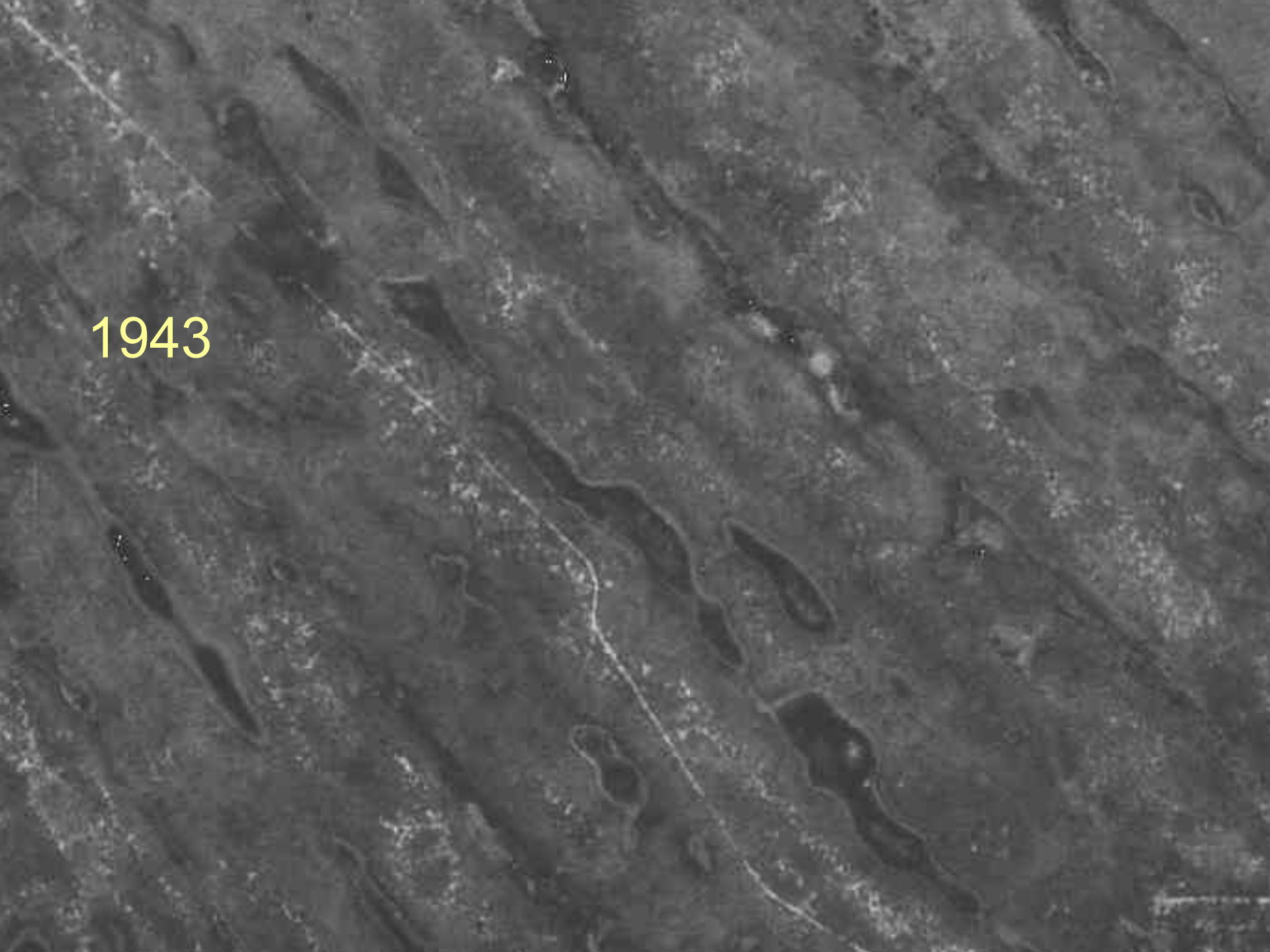


Outcome-based Monitoring: Population Monitoring Program

Assumption-Driven Research: Species/Habitat Models



Ψ_{rs} *function of oak, edge, number fires, fire history, restoration*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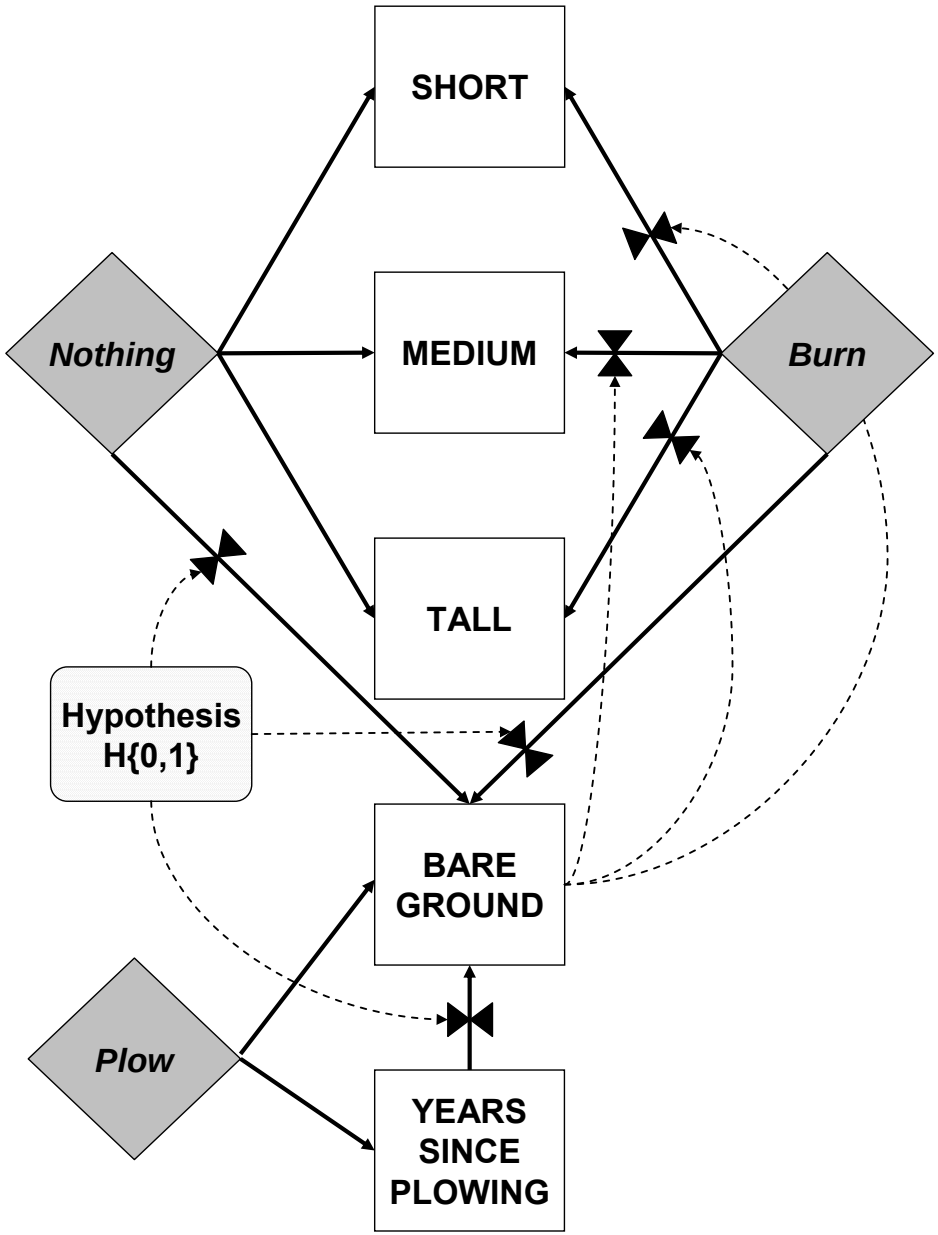
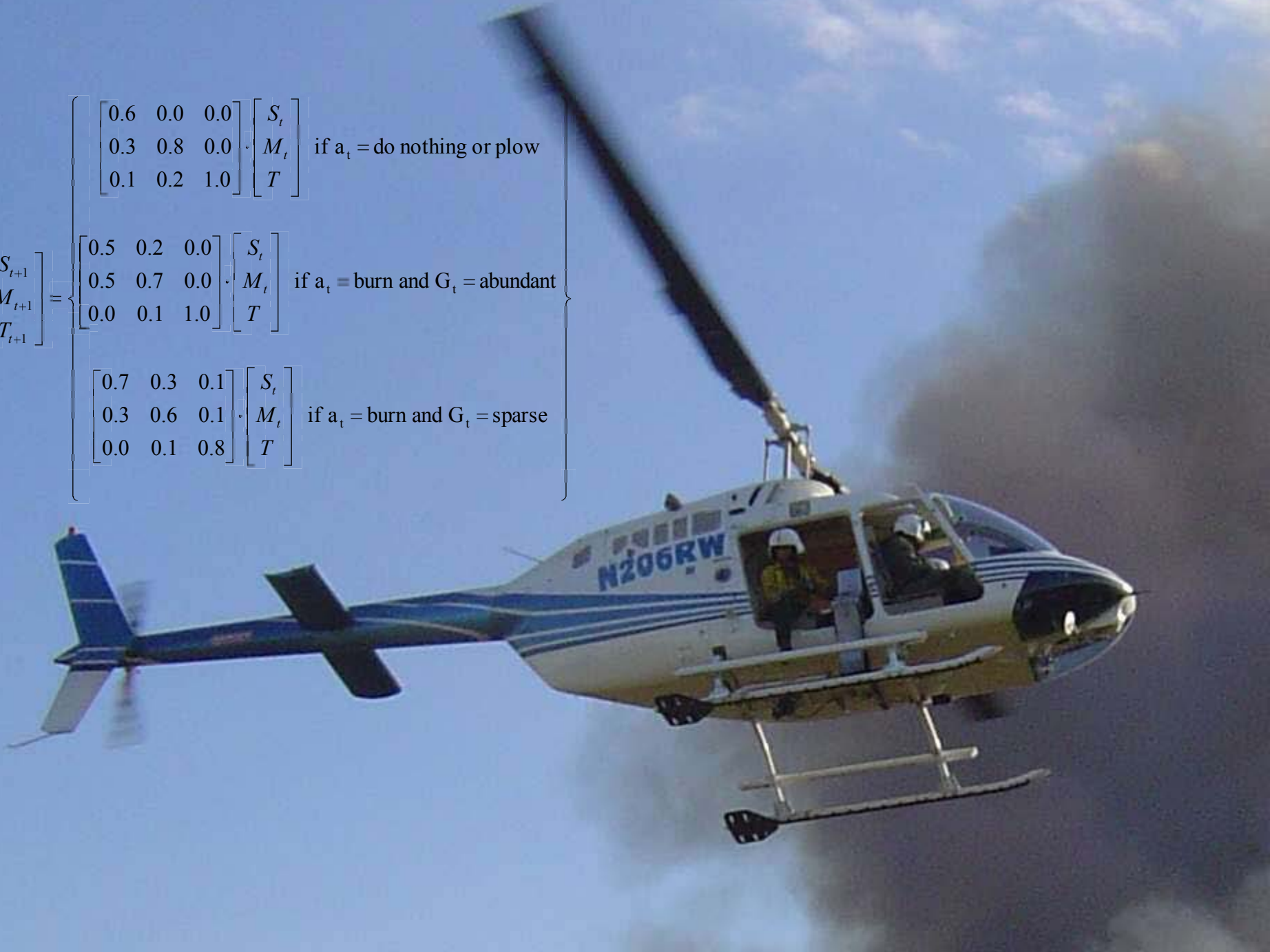
Assumption-Driven Research: Species/Habitat Models

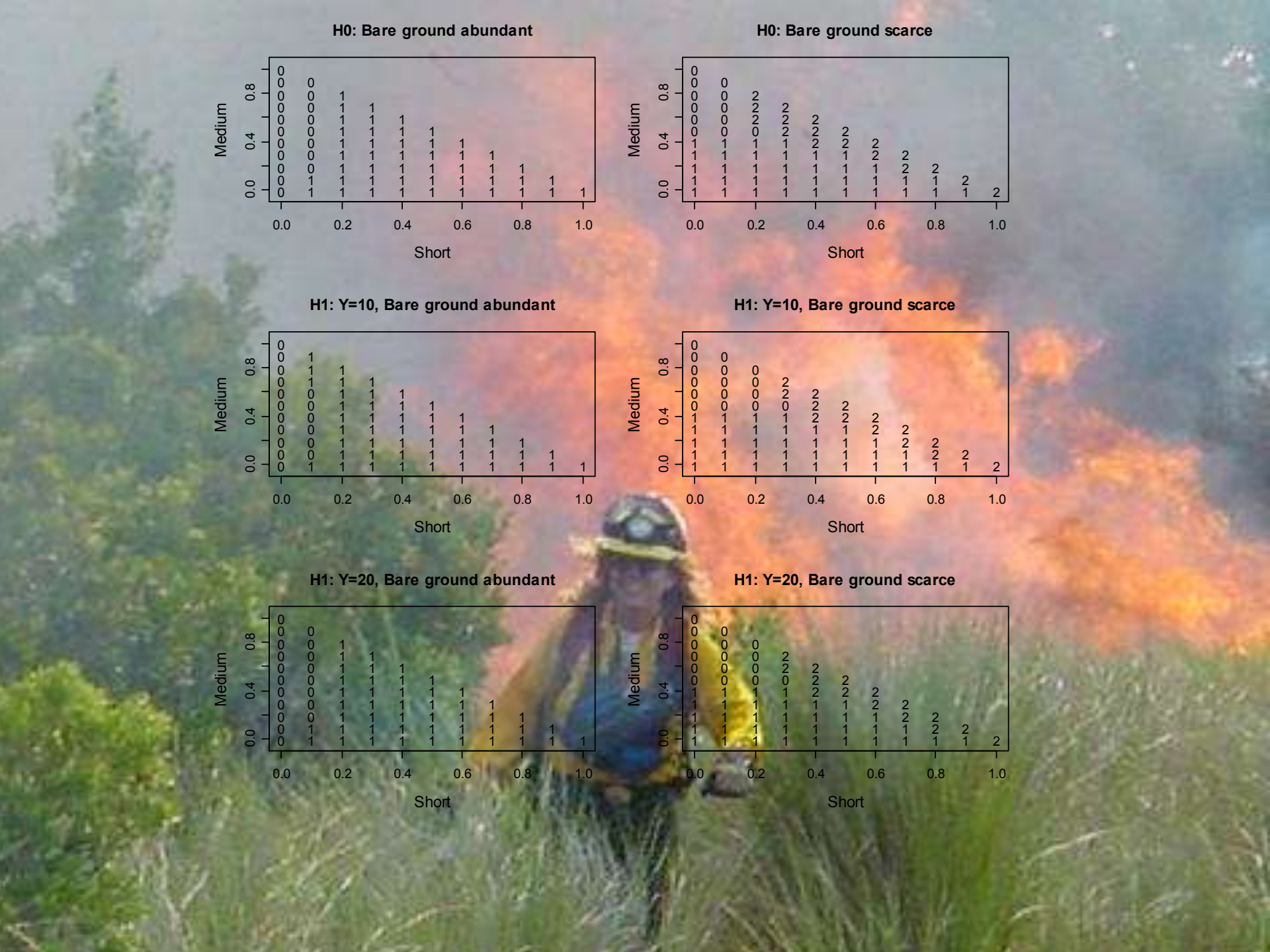
MINWR/NASA/USGS –ARM

Mike's version of the ARM process / outcome


SHORT
MEDIUM
TALL
Nothing
Burn
Hypothesis
H{0,1}
BARE
GROUND
Plow
YEARS
SINCE
PLOWING

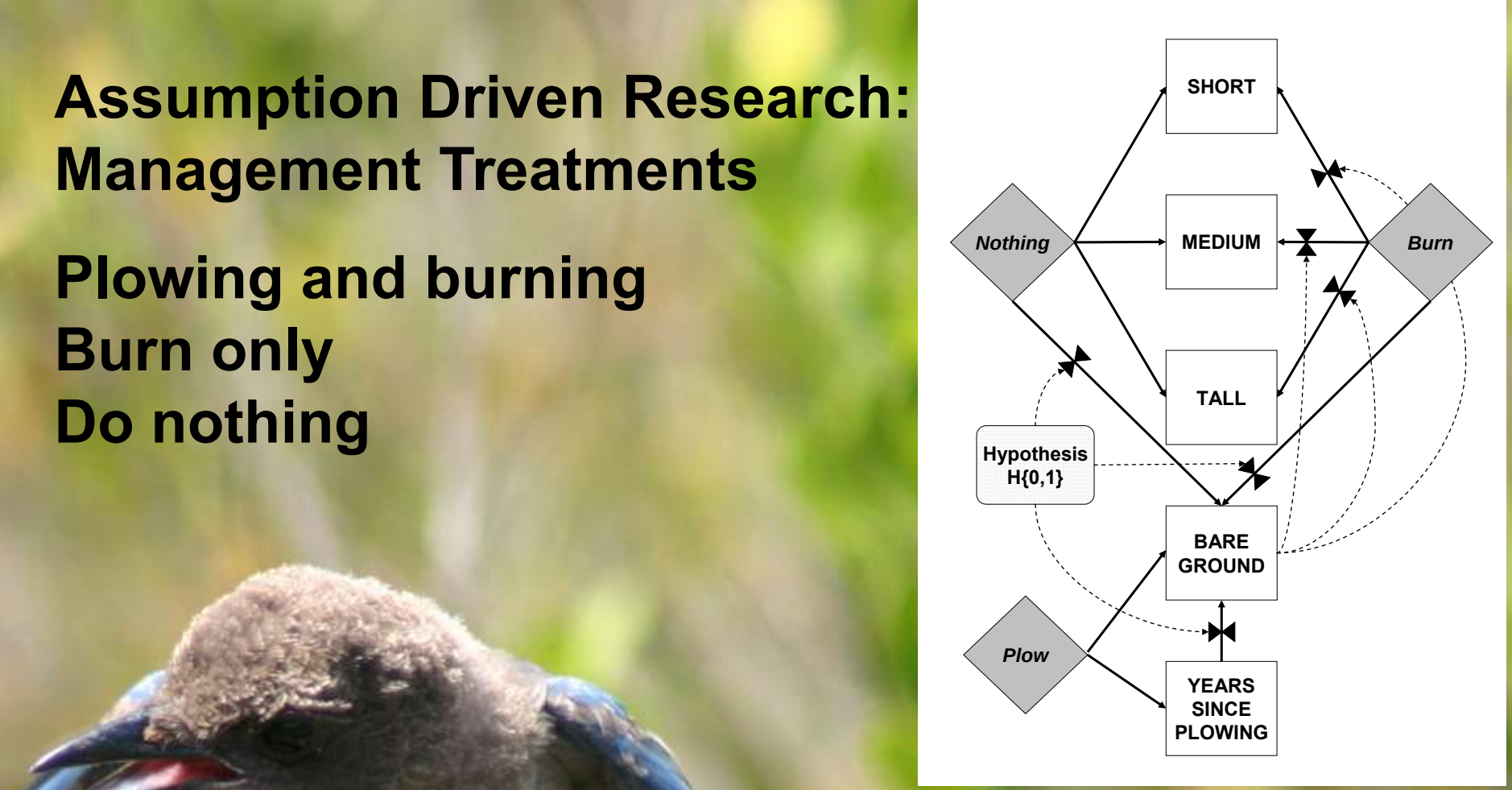
$$
\begin{bmatrix} S_{t+1} \\ M_{t+1} \\ T_{t+1} \end{bmatrix} = \begin{cases} \begin{bmatrix} 0.6 & 0.0 & 0.0 \\ 0.3 & 0.8 & 0.0 \\ 0.1 & 0.2 & 1.0 \end{bmatrix} \cdot \begin{bmatrix} S_t \\ M_t \\ T \end{bmatrix} & \text{if } a_t = \text{do nothing or plow} \\ \begin{bmatrix} 0.5 & 0.2 & 0.0 \\ 0.5 & 0.7 & 0.0 \\ 0.0 & 0.1 & 1.0 \end{bmatrix} \cdot \begin{bmatrix} S_t \\ M_t \\ T \end{bmatrix} & \text{if } a_t = \text{burn and } G_t = \text{abundant} \\ \begin{bmatrix} 0.7 & 0.3 & 0.1 \\ 0.3 & 0.6 & 0.1 \\ 0.0 & 0.1 & 0.8 \end{bmatrix} \cdot \begin{bmatrix} S_t \\ M_t \\ T \end{bmatrix} & \text{if } a_t = \text{burn and } G_t = \text{sparse} \end{cases}
$$




H0: Bare ground abundant
H0: Bare ground scarce
H1: Y=10, Bare ground abundant
H1: Y=10, Bare ground scarce
H1: Y=20, Bare ground abundant
H1: Y=20, Bare ground scarce
Medium
Short
0.0
0.4
0.8
0.2
0.6
1.0

Assumption Driven Research: Management Treatments

Plowing and burning
Burn only
Do nothing



Questions?