

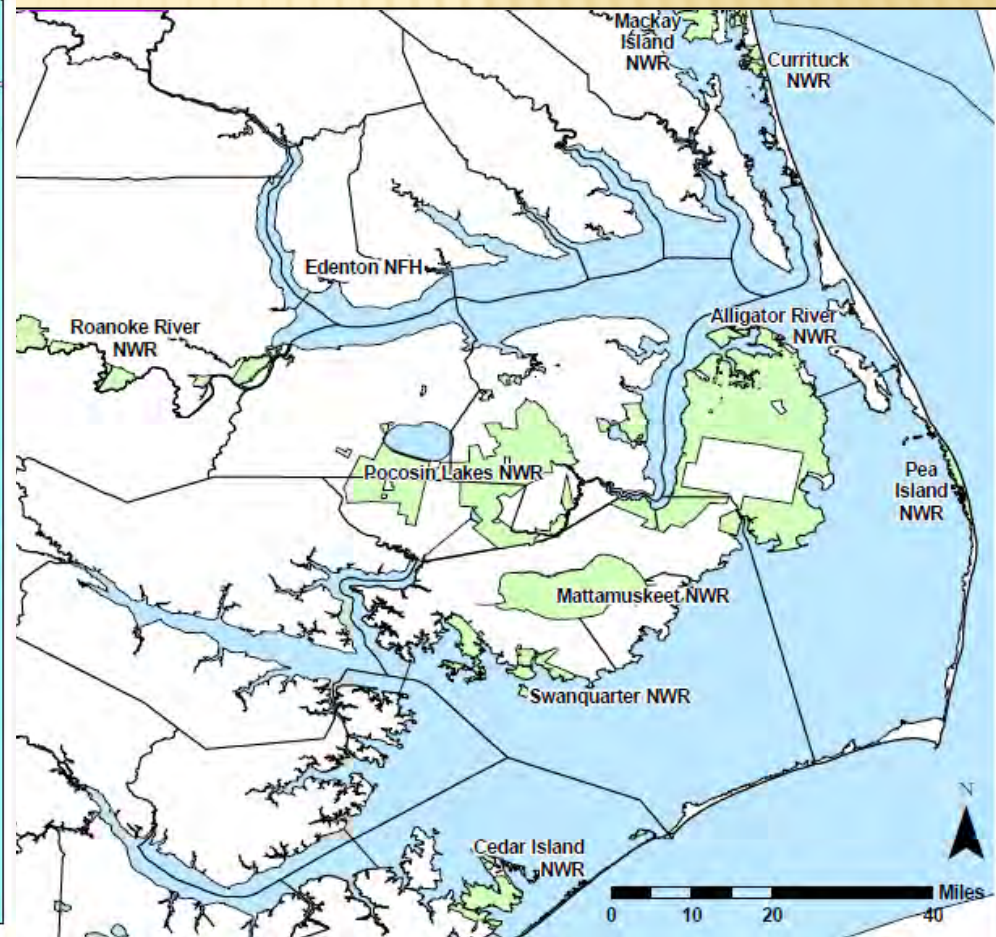
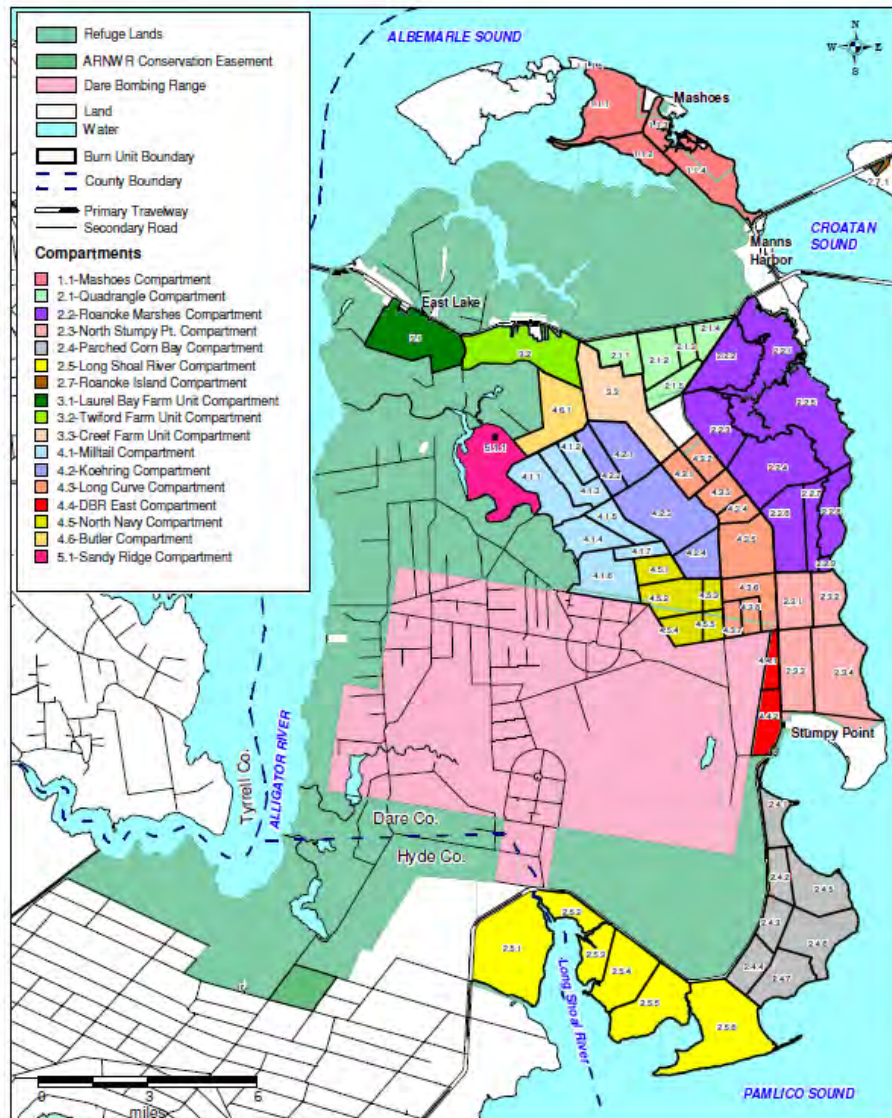


HISTORY OF PRESCRIBED FIRE ON THE ALLIGATOR RIVER NWR

Kelley Van Druten, Wildlife Refuge Specialist, Alligator River NWR
JFSP Managing Forested Wetlands with Fire in Face of a Changing Climate

USFWS SOUTHEAST REGION FIRE DISTRICT 1

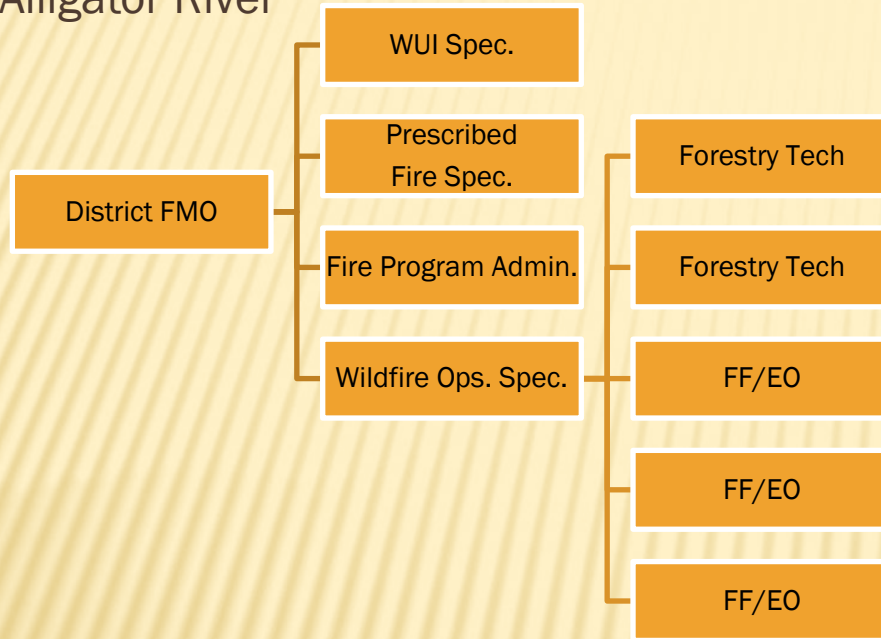
Alligator River National Wildlife Refuge - Prescribed Burn Units



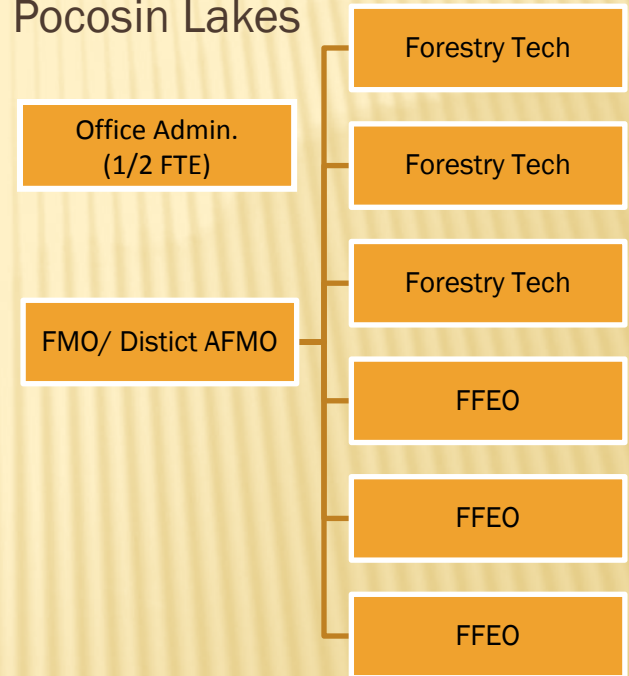


DISTRICT 1 ORGANIZATION

Alligator River



Pocosin Lakes



Mackay Island



Mattamuskeet

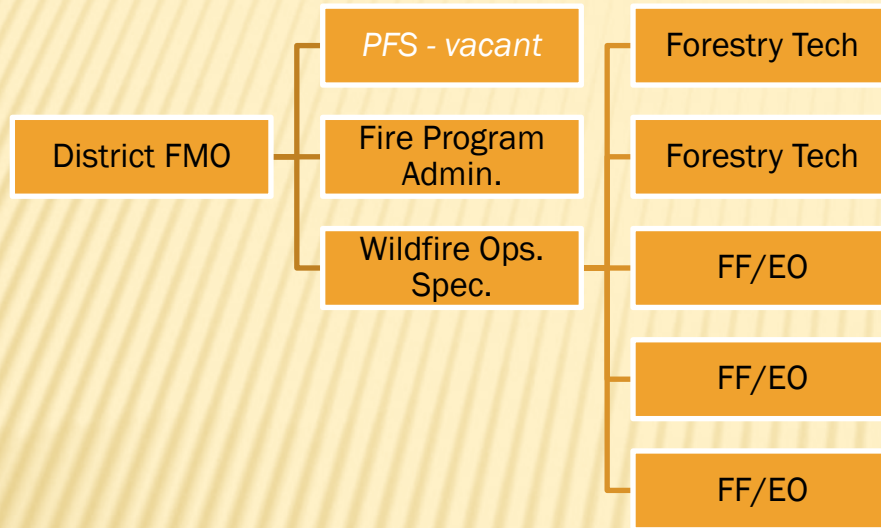


Total Permanent FTEs = 19.5

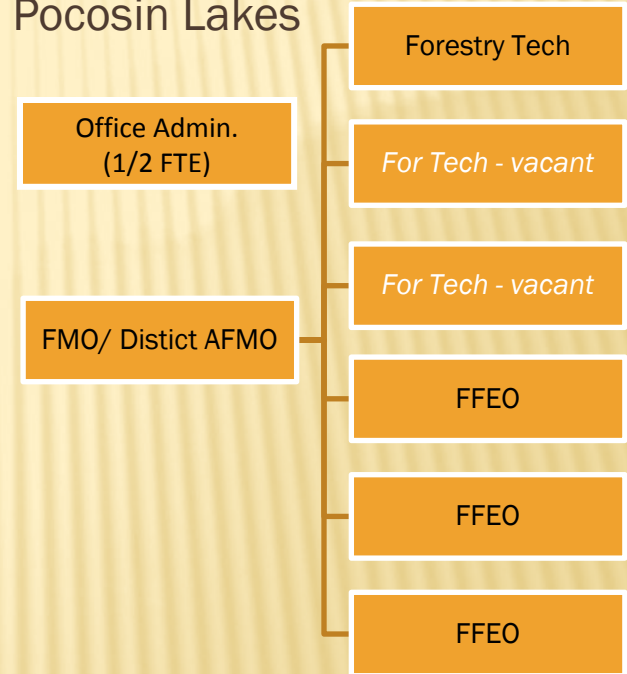


DISTRICT 1 ORGANIZATION

Alligator River



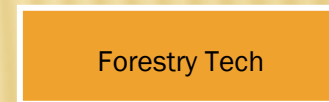
Pocosin Lakes



Mackay Island



Mattamuskeet



Total Permanent FTEs = 14.5

EQUIPMENT





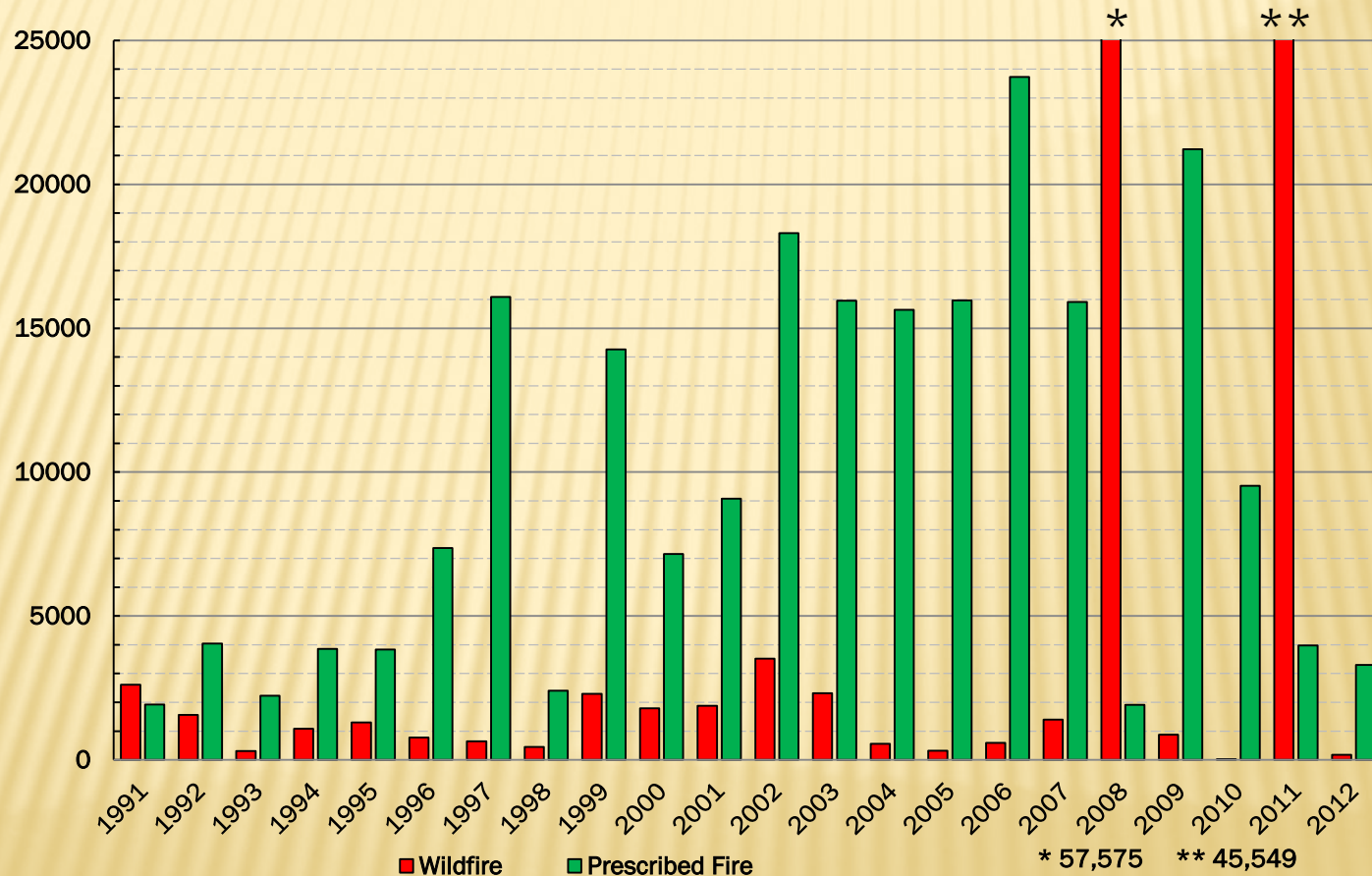
EQUIPMENT





ACCOMPLISHMENTS – DISTRICT 1

District 1 Wildland Fires - Acres Burned
CY 1991-2012



PRESCRIBED FIRE CHALLENGES

✘ Environmental parameters

- + Weather
- + Organic soil – moisture, equipment access

✘ Number of people

- + timing, funding



PRESCRIBED FIRE CHALLENGES

- ✗ Wildland-Urban Interface
- ✗ Firebreak Maintenance
 - + soil, time & funding



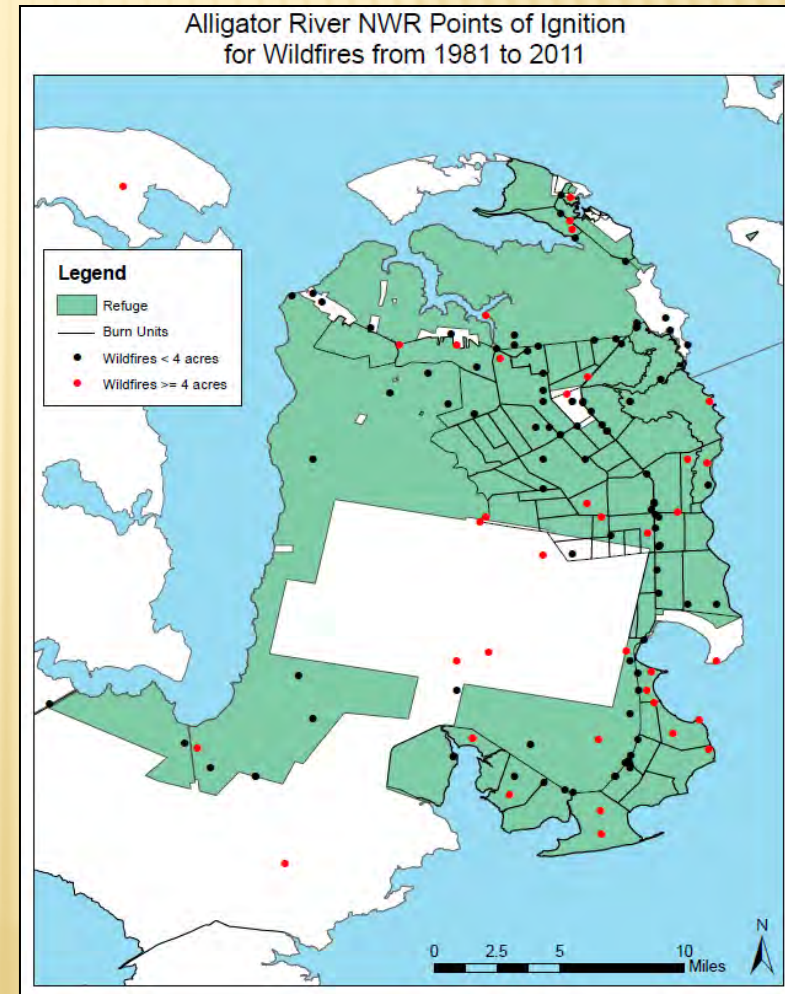
PRESCRIBED FIRE CHALLENGES

- ✗ Fuel types
- ✗ Large Burn Units
 - + smoke, access, helicopter

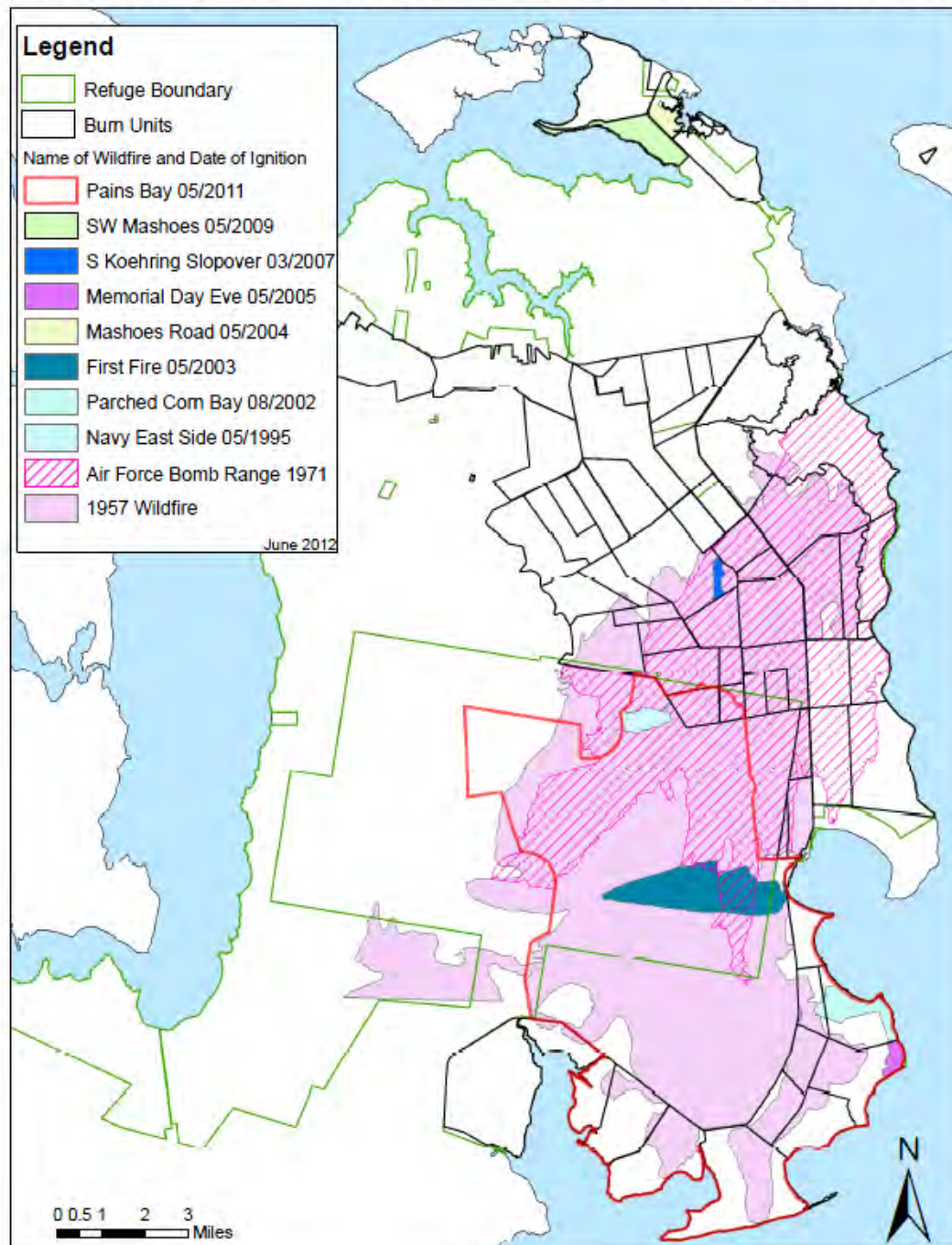


REASONS TO BURN

- ✗ Hazardous fuels reduction
- ✗ Example objective
 - + Top-kill 40-60% of the shrubs in the pond pine pocosin and 70-90% of the shrubs in the marsh.



Perimeters for Historic Albemarle Peninsula Wildfires >100 acres

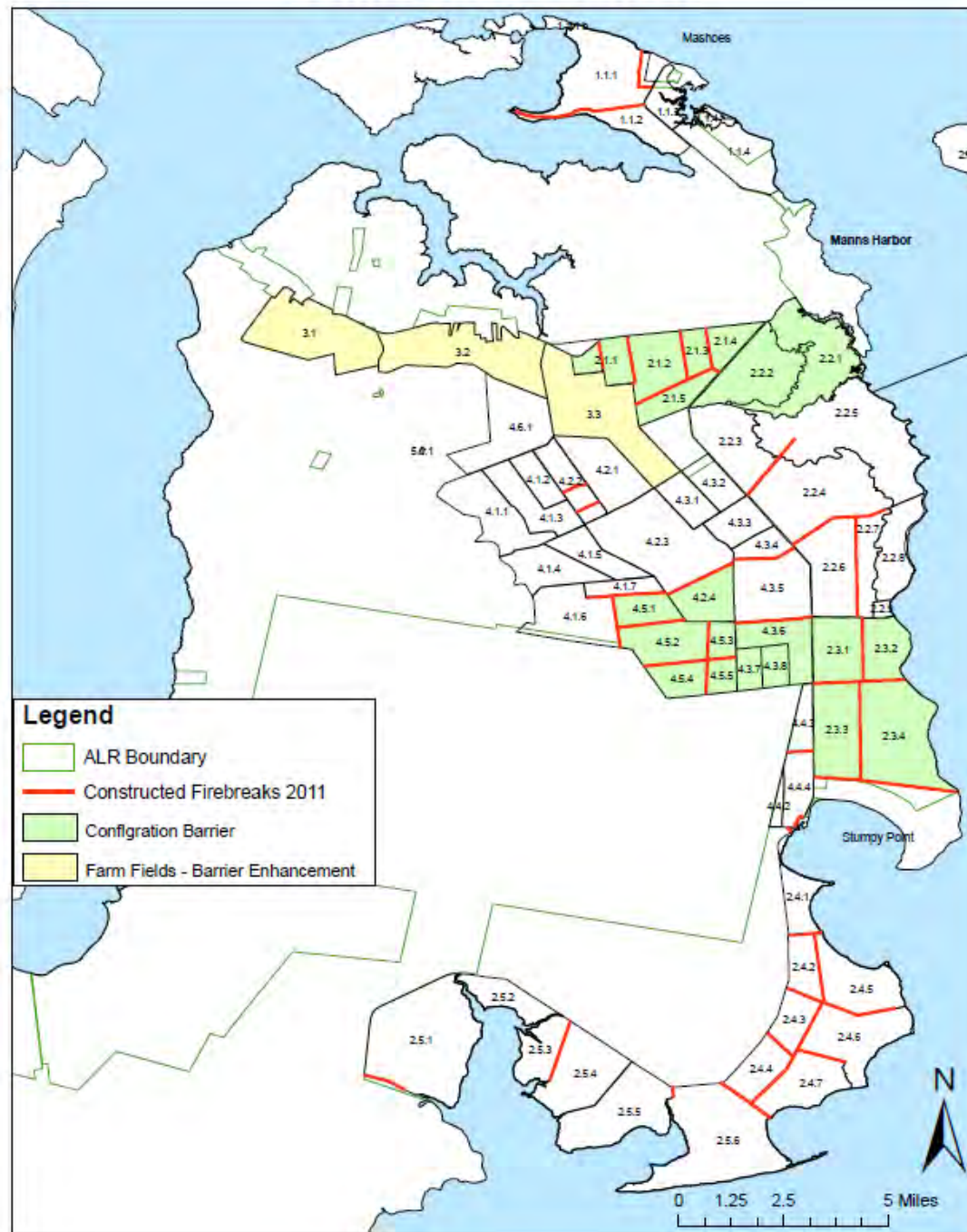


REASONS TO BURN

- ✖ Large project fires
 - + High pocosin shrub fuel loads
 - + Large blocks with difficult access
 - + Resistance to control because of fuels and organic soils



Conflagration Barriers



REASONS TO BURN

✖ Success with fuel treatments

- + Nov. 5, 1999 prescribed fire (1,200 ac) slowed fire behavior in May 5, 2000 Roanoke Marshes Fire (1,552 ac).
- + Dec. 1, 2003 prescribed fire (649 ac) significantly reduced fire behavior in Jun. 21, 2004 Old 64 Fire (0.4 ac).



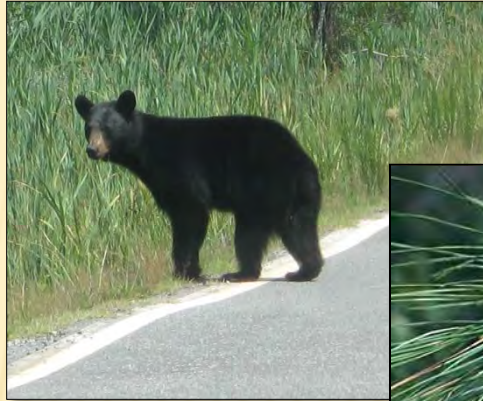
REASONS TO BURN



REASONS TO BURN

✖ Habitat benefits

- + Succession
- + Nutrients
- + Germination



PRE-BURN MONITORING

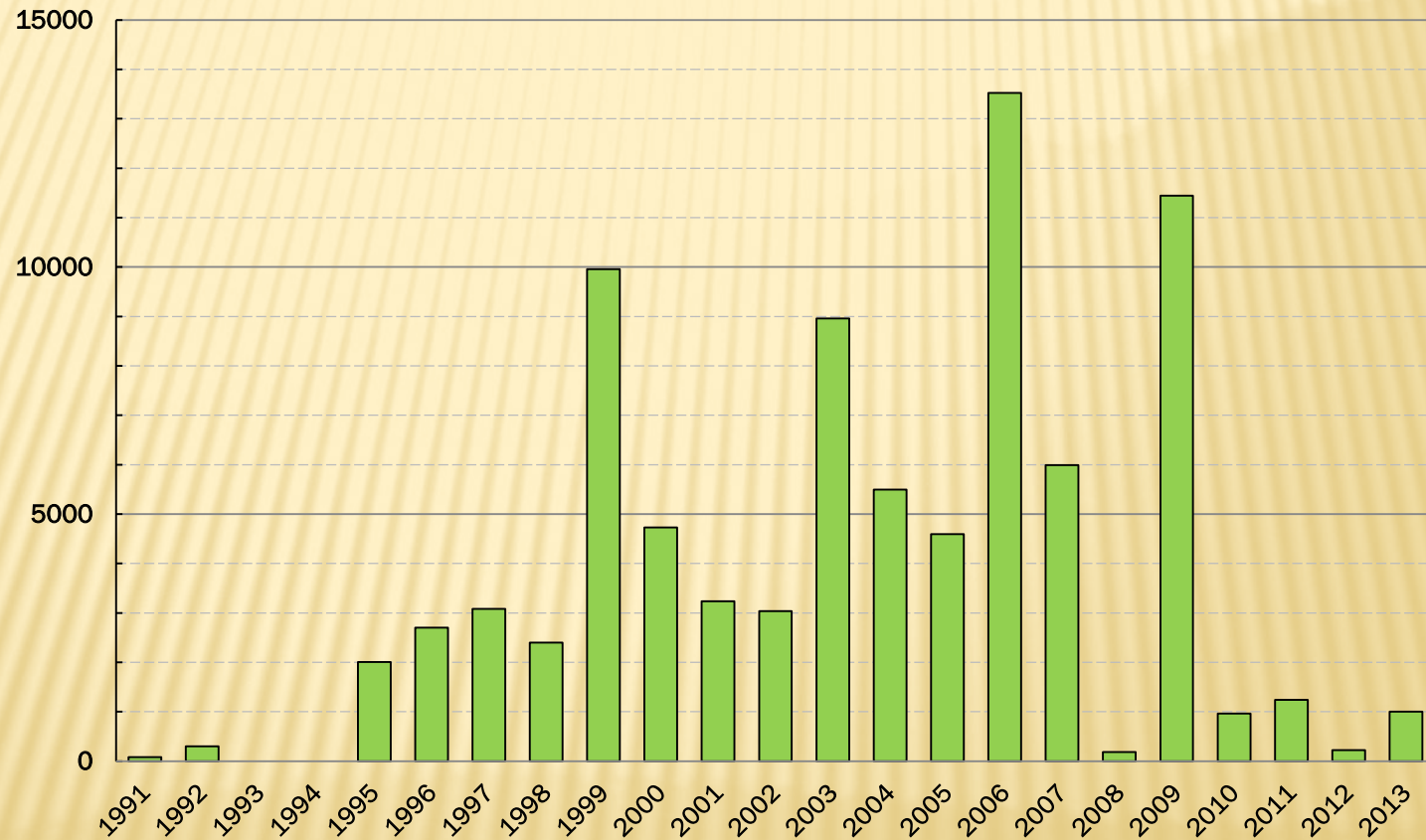
- ✖ Fuel sticks
- ✖ Duff moisture





ACCOMPLISHMENTS – ALLIGATOR RIVER

Alligator River NWR Prescribed Fires Acres Burned CY 1991-2013

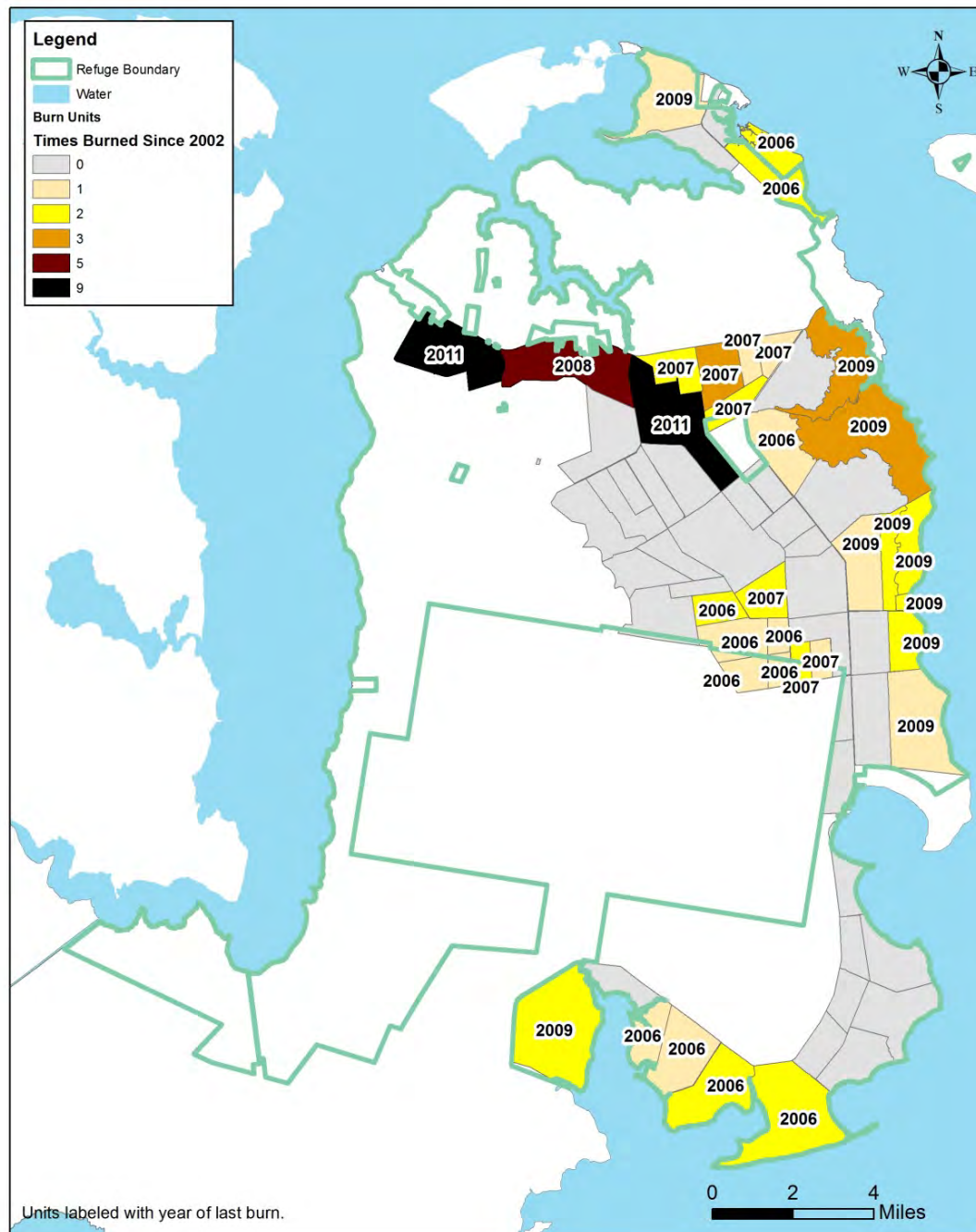


ACCOMPLISHMENTS – ALLIGATOR RIVER

- ✖ 60% marsh and farm fields
- ✖ 40% forested wetlands



Alligator River National Wildlife Refuge - Prescribed Burn History Since 2002



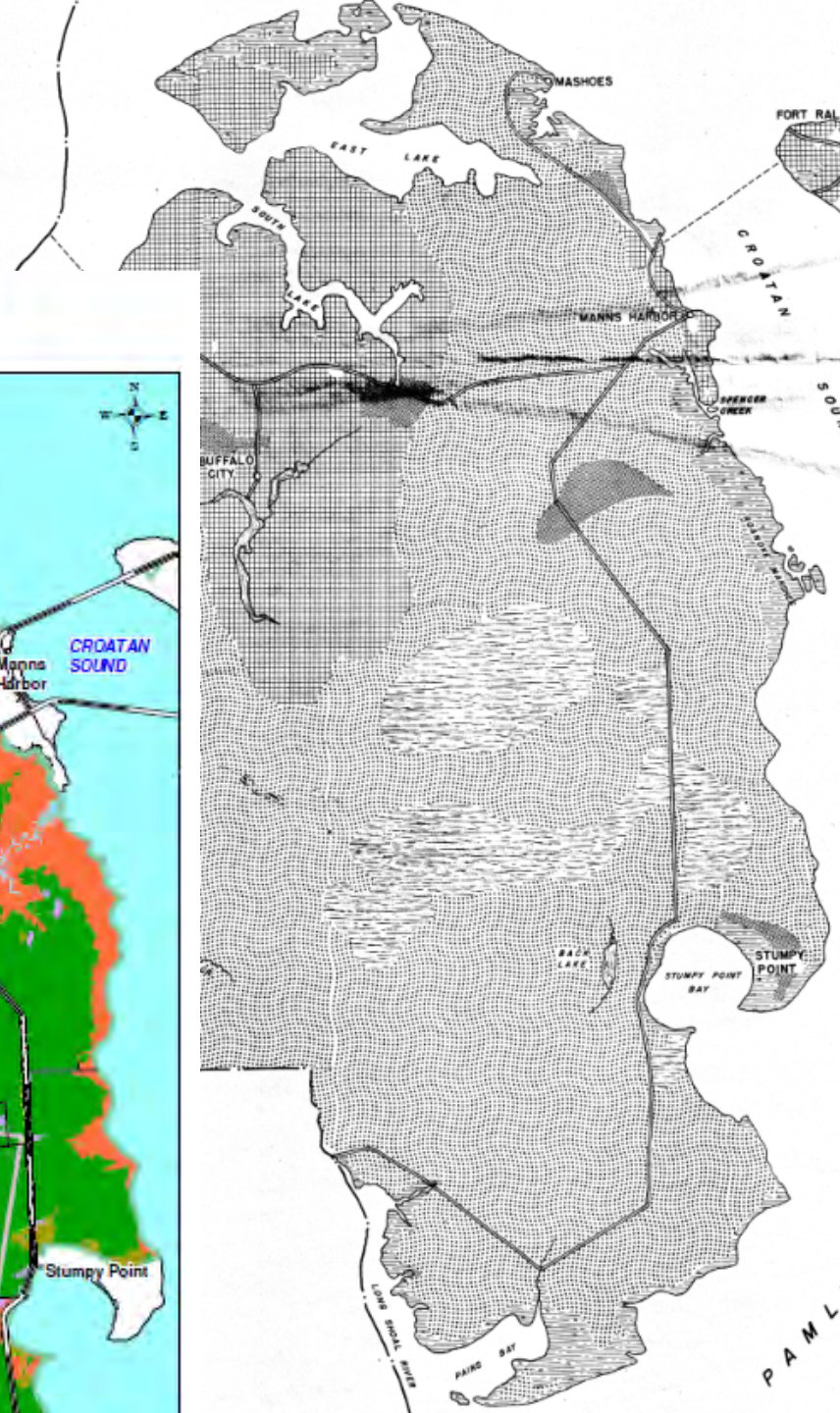
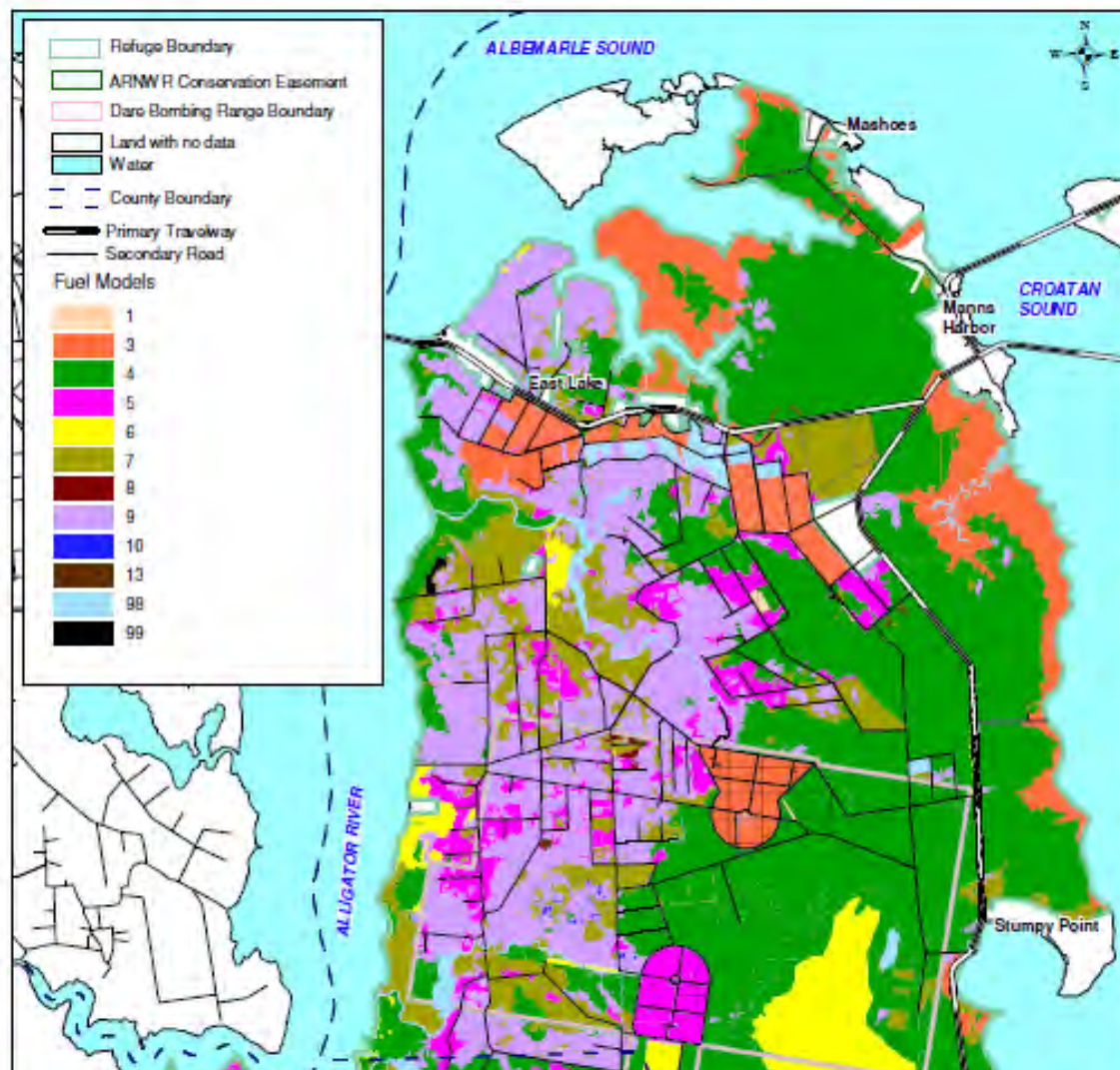
CURRENT PROGRAM

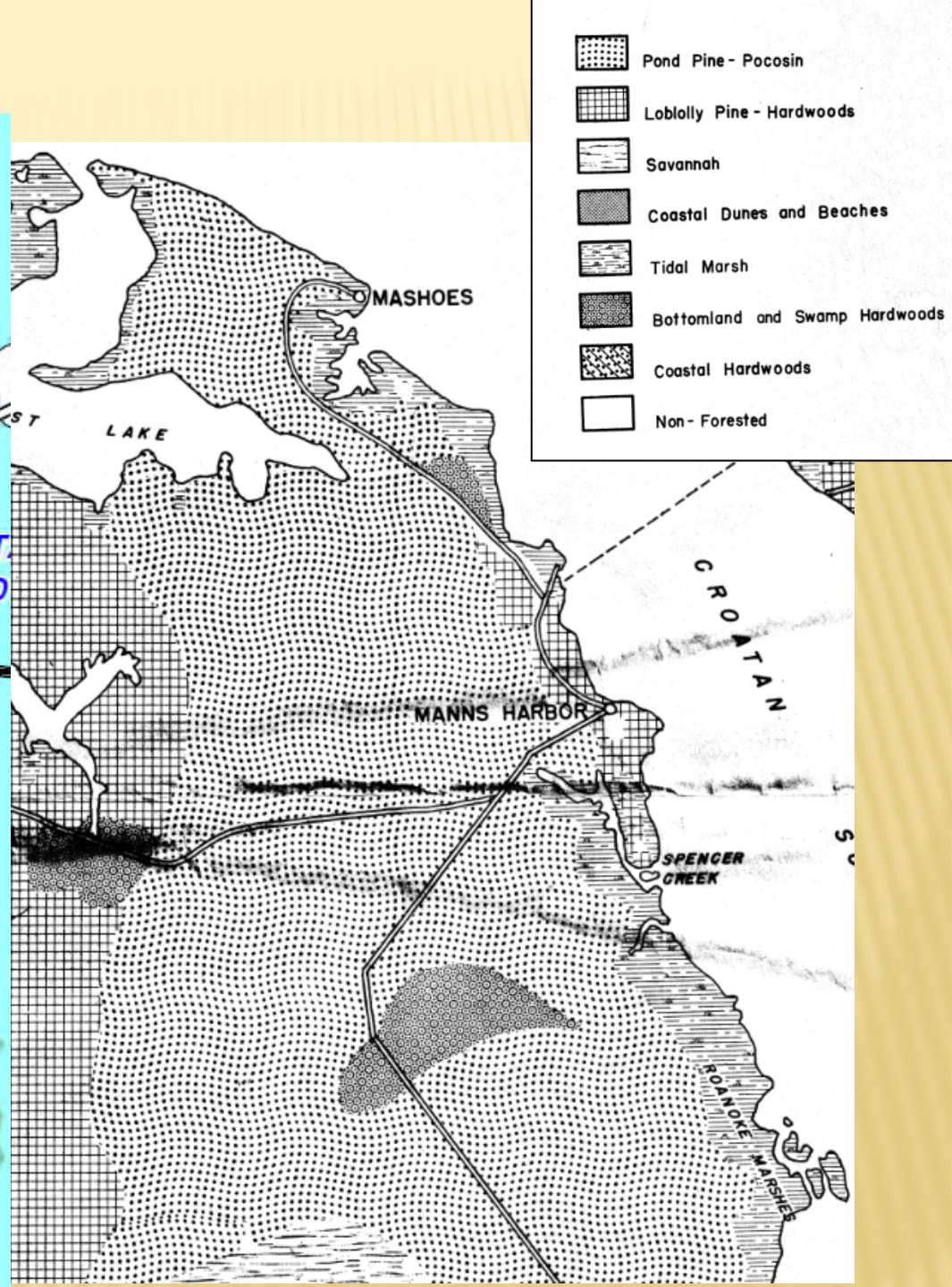
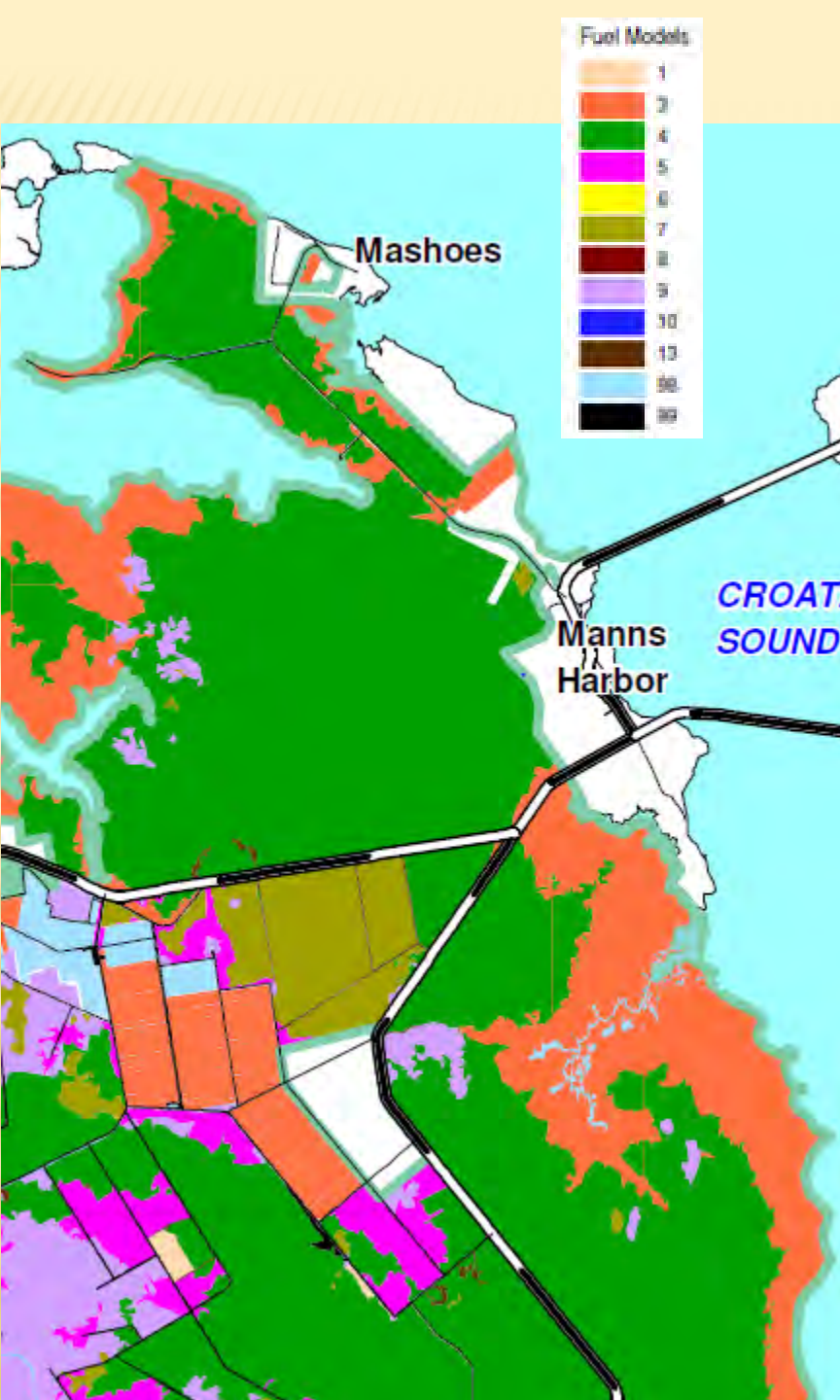
- ✖ Climate Change Project
- ✖ Fire Review 10/2010



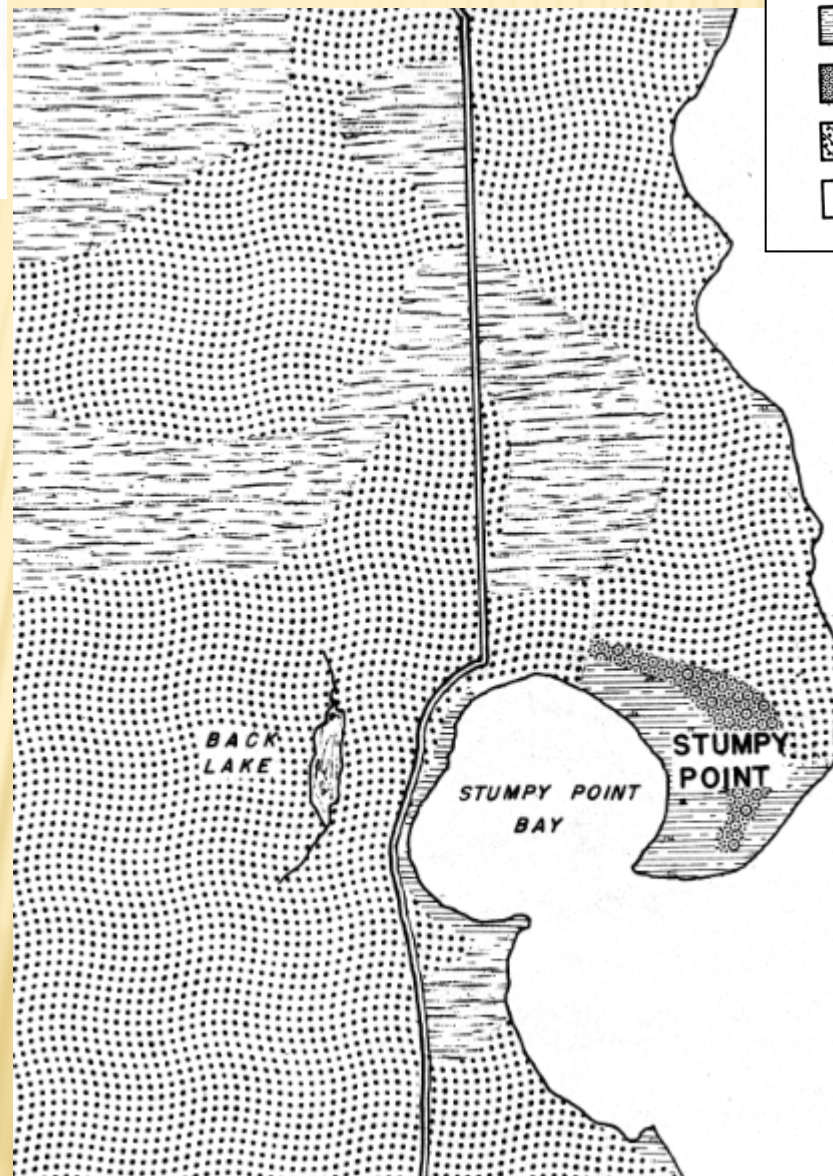
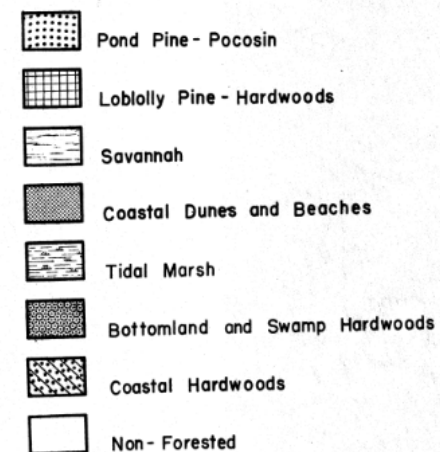
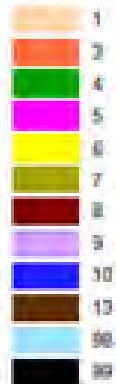
1938 VEG MAP

Alligator River National Wildlife Refuge - Fuel Models












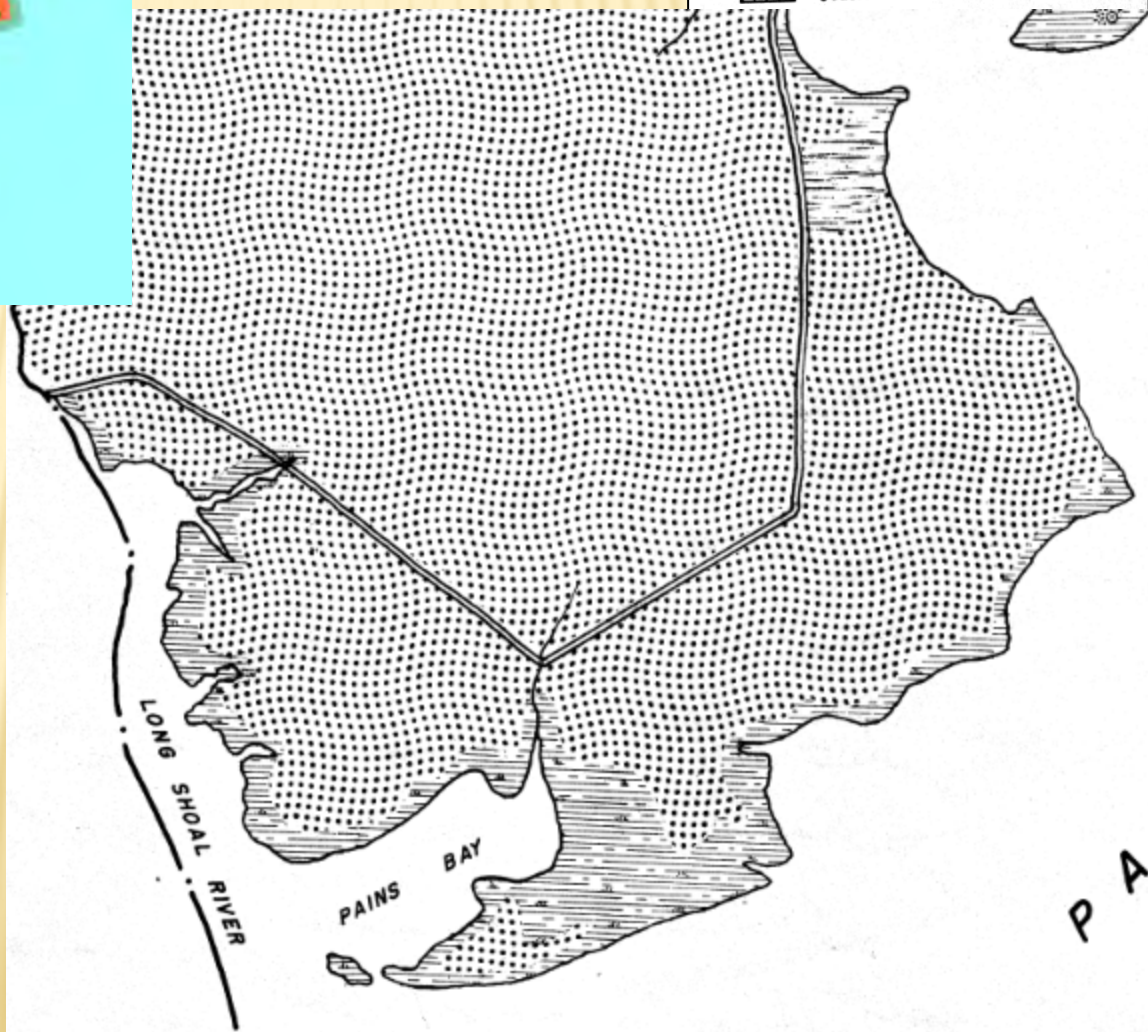
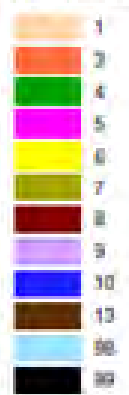
Fuel Models





- Scale
-  Pond Pine - Pocosin
 -  Loblolly Pine - Hardwoods
 -  Savannah
 -  Coastal Dunes and Beaches
 -  Tidal Marsh
 -  Bottomland and Swamp Hardwoods
 -  Coastal Hardwoods

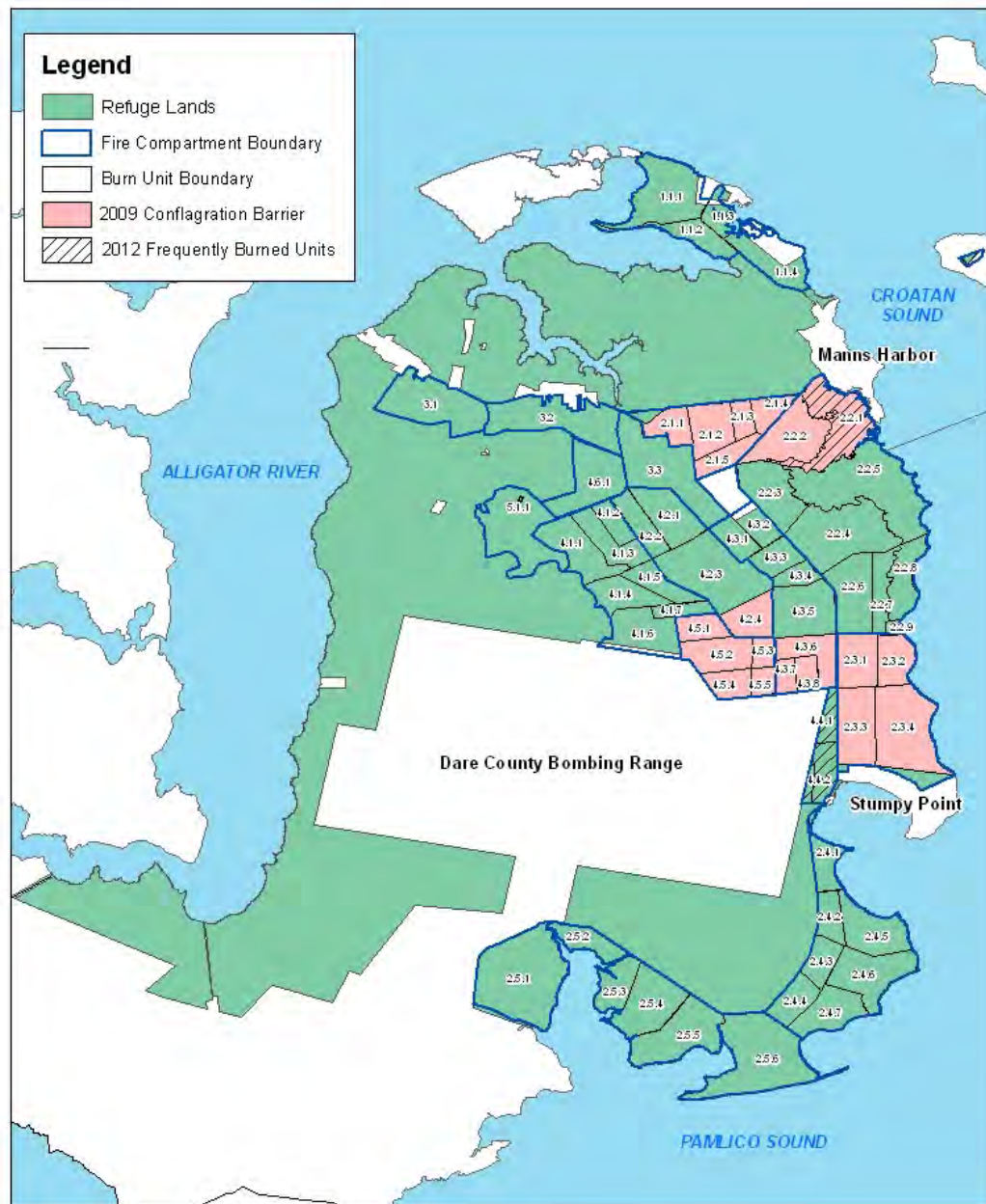
Fuel Models



CURRENT PROGRAM

- ✖ Climate Change Project
- ✖ Fire Review 10/2010
- ✖ Pains Bay Fire 5/2011
- ✖ Hurricane Irene 8/2011
- ✖ 2012 Internal Review







QUESTIONS?



Wildfest 2011