



September 9, 2024 Cape Cod National Seashore Advisory Commission

Superintendent Presentation:
Wildland Fire



Superintendent Update

- New Economic Impact Numbers
- Science Symposium
- Wildland Fire
- 2025 Meeting Dates and Topics
 - End of Meeting Discussion as time allows



Economic Impact

- Cape Cod National Seashore contributes \$730 million to local economy.
- 3.8 million visits to CCNS in 2023 spent \$533 million in communities near the park. That spending supported 6,647 jobs in the local area and had a cumulative benefit to the local economy of \$730 million.



Science Symposium

- Thursday, September 19 at the Salt Pond Visitor Center in Eastham from 9:30 to 1:00.
- Seven speakers will present their work on a variety of topics ranging from toads, horseshoe crabs and coyotes to Herring River and archaeology.



Wildland Fire in the United States

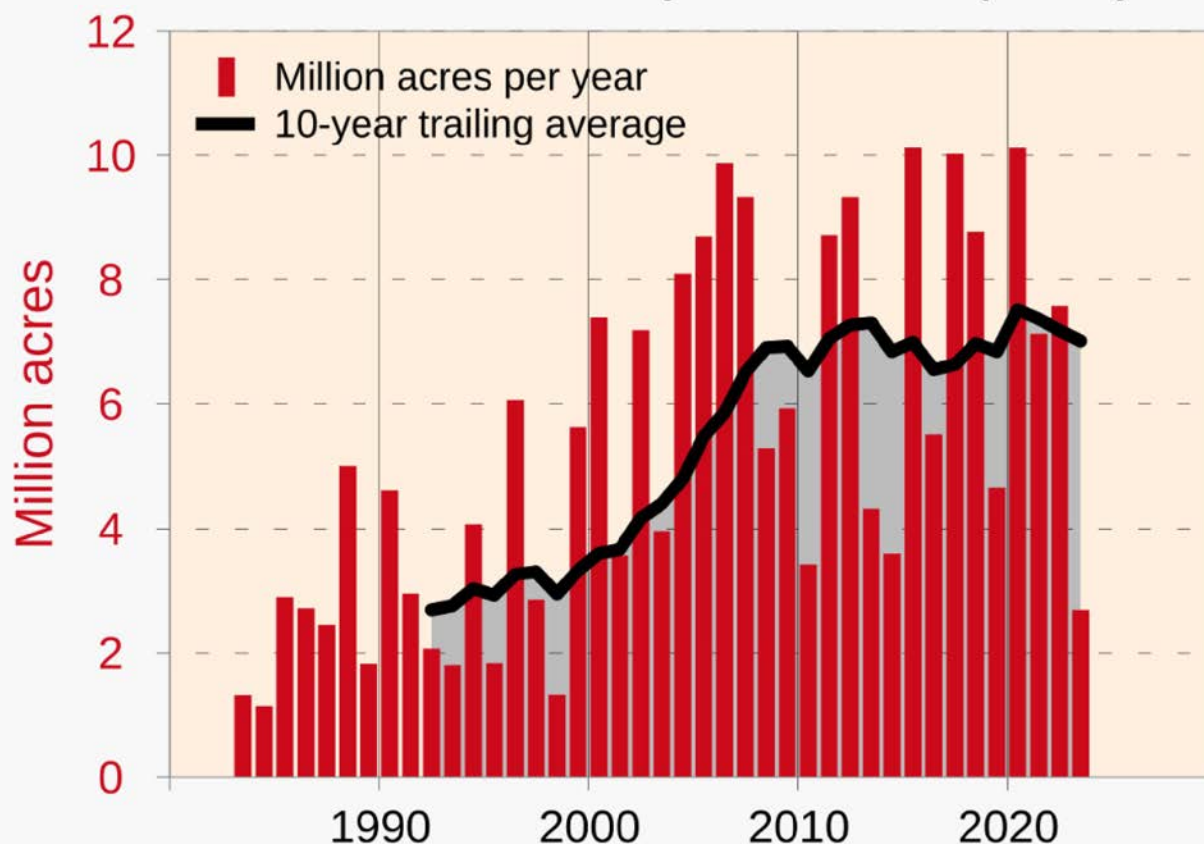
- **The Big Burn of 1910**
 - Birth of the US Forest Service full suppression policy
- **Science and experience has evolved to understand many fire adapted ecosystems need fire to thrive and actually need fire on the landscape to prevent large scale catastrophic fire**

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Area burned by wildfires (U.S.)



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2024 (1/1/24-9/06/24)	Fires: 34,867	Acres: 6,684,645
2023 (1/1/23-9/06/23)	Fires: 40,565	Acres: 2,089,083
2022 (1/1/22-9/06/22)	Fires: 49,193	Acres: 6,311,144
2021 (1/1/21-9/06/21)	Fires: 43,457	Acres: 5,073,241
2020 (1/1/20-9/06/20)	Fires: 40,883	Acres: 4,645,048
2019 (1/1/19-9/06/19)	Fires: 35,162	Acres: 4,185,527
2018 (1/1/18-9/06/18)	Fires: 46,228	Acres: 6,990,889
2017 (1/1/17-9/06/17)	Fires: 47,473	Acres: 7,995,650
2016 (1/1/16-9/06/16)	Fires: 41,689	Acres: 4,698,891
2015 (1/1/15-9/06/15)	Fires: 44,353	Acres: 8,440,225
2014 (1/1/14-9/06/14)	Fires: 38,532	Acres: 2,778,252

2014-2023

Fires: 42,611

Acres: 5,293,901

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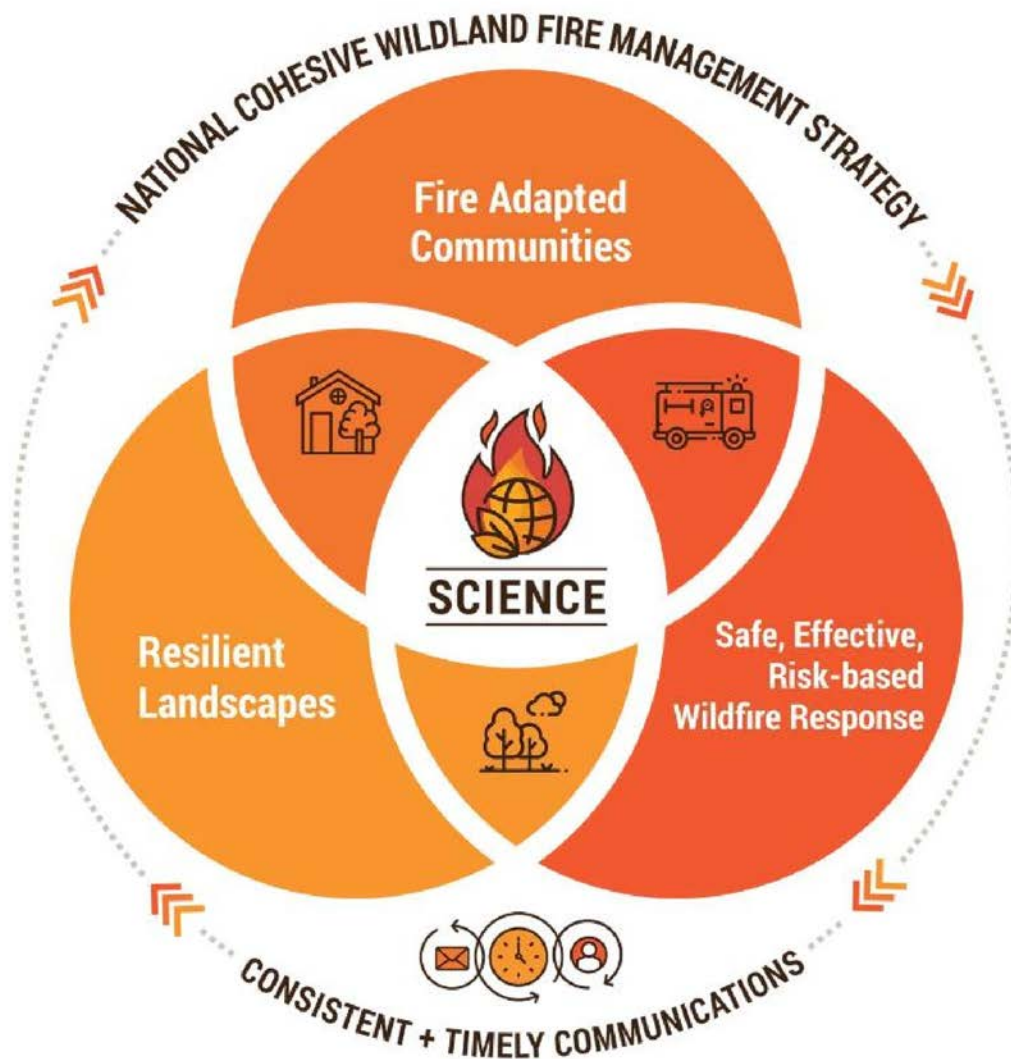
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- 2009 Federal Land Assistance, Management and Enhancement (FLAME) Act: directed the development of the National Cohesive Wildland Fire Management Strategy by the Federal Government. Updated in 2023.
- “To safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and collectively, learn to live with wildland fire.”

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The Strategy serves as the key framework for addressing wildland fire challenges across the Nation.

5 key implementation challenges were identified by the 2023 addendum:

1. The existing wildland fire management system has not kept pace with demands. The lack of wildland management can and will encroach on communities adjacent to or intermixed with the wildland or forested areas.
2. There is still a need for the significant increase in the proactive use of fire (prescribed and managed wildfire for resource objectives) across the country.
3. Science, data and technology has not kept pace with the extent of wildland fire and post-fire impacts, or been fully integrated into decision-making for fire, land and community managers. The same statement applies to communities and built environment adjacent to or intermixed with the wildland and forested areas.
4. Markets, infrastructure and skilled human resource capacity are inadequate to utilize biomass and other wood products from ecosystem management or hazardous fuel treatments.
5. Education, communications and marketing are insufficient to inform stakeholders and decision-makers about Cohesive Strategy implementation.



The Wildland Fire Mitigation & Management Commission

- Created by President Biden's Bipartisan Infrastructure Law in 2021
- Charged with recommending improvements to Congress on how federal agencies manage wildfire across the landscape
- 50 commission members were selected from more than 500 applicants, representing federal agencies, state, local, and Tribal governments, as well as the private sector.

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Commission Findings: 7 Key Themes

- **Urgent New Approaches** to address the wildfire crisis
- **Supporting Collaboration** to improve partner involvement at every scale
- **Shifting from Reactive to Proactive** in planning for, mitigating and recovering from fire
- **Enabling Beneficial Fire** to reduce the risk of catastrophic wildfire
- **Supporting and Expanding the Workforce** to hire and retain the wildland firefighting staff needed to address the crisis
- **Modernizing Tools for Informed Decision-making** to better leverage available technology and information
- **Investing in Resilience** through increased spending now to reduce costs in the long run



Community Work Group

- Home ignitions are primarily determined by conditions on private property
- Primary Responsibility for decreasing risk is on the property owner
- Actions at the neighborhood or community scale bring broader benefit
- Ignitions on private land are the cause of most wildfires that burn across multiple jurisdictions



Recommendations: Community Planning

- to help communities adapt for resilience, individual states and communities must adopt, enforce, and maintain codes regulating construction materials, design, and landscaping for structures and properties located in wildfire-prone areas, for both new construction and significant remodels, rebuilds, and retrofits.

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- The Wildland-Urban Interface Code
- Established by International Code Council
- Adopted as Policy by NPS in 2023
- Establishes minimum special regulations for safeguarding life and property from the intrusion of wildfire

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- WUI Code
- Regulates ignition-resistant construction techniques and defensible space as well as fire department access and available water supplies for fire suppression.
- Focuses on preventing ignition of buildings and vegetative fuels from direct exposure to wildfire and fire exposure from adjacent structures.
- Helps prevent structure fires in the WUI from spreading to wildland fuels, even in the absence of fire department intervention.

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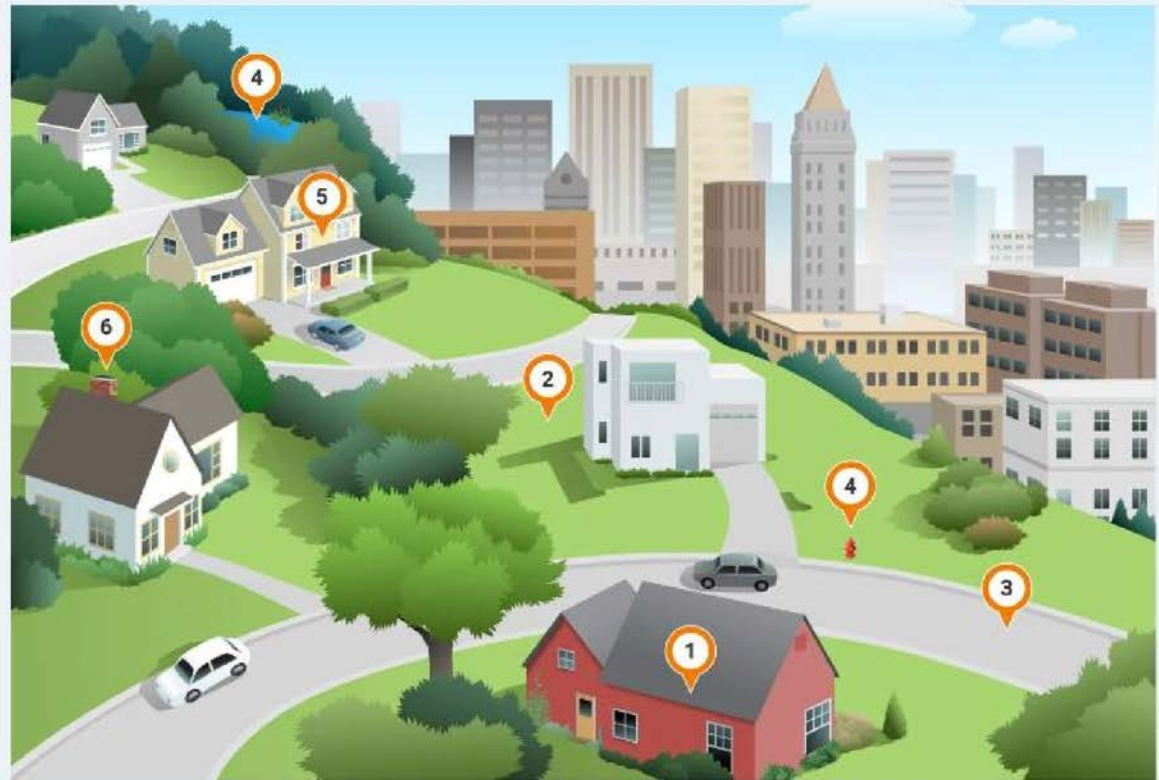
Understanding the International Wildland-Urban Interface Code

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The IWUIC establishes requirements for land use and the built environment within designated wildland-urban interface areas using prescriptive and performance provisions. The code is intended to work as a system of its requirements, providing a comprehensive and holistic approach to enhancing building resilience from wildfires.

The key components of the IWUIC include:

1. Ignition-Resistant Construction
2. Defensible Space
3. Emergency Vehicle Access
4. Water Supply
5. Fire Sprinklers
6. Chimneys with Spark Arrestors



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0-5' – Zone 0: Ember Resistant

5-30' – Zone 1: Lean, Clean and Green

30-100' – Zone 2: Reduce Potential Fuel

* Calfire Image

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Wildfire is not exclusively a Western Issue.

- Miramichi Fire in Maine/Canada 1825
- Chimney Tops 2 Fire TN 2016
- Lahaina Maui Hawaii
- Smoke impacts on East Coast 2022, 2024



Why should we care about this on Cape Cod?

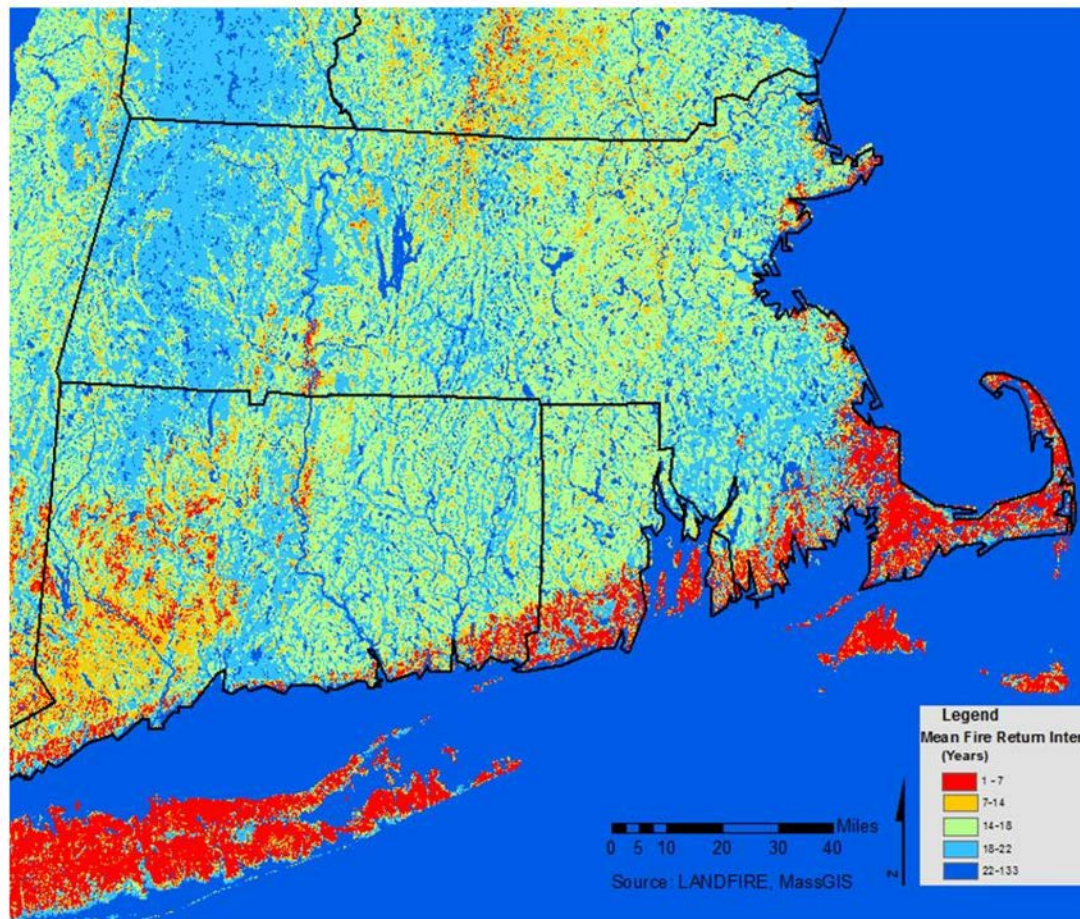
- We live in a fire dependent ecosystem
- We have wildland-urban interface zones
- We have a changing climate
- We have an opportunity to act

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Historic Role of Fire in Coastal Pine Barrens

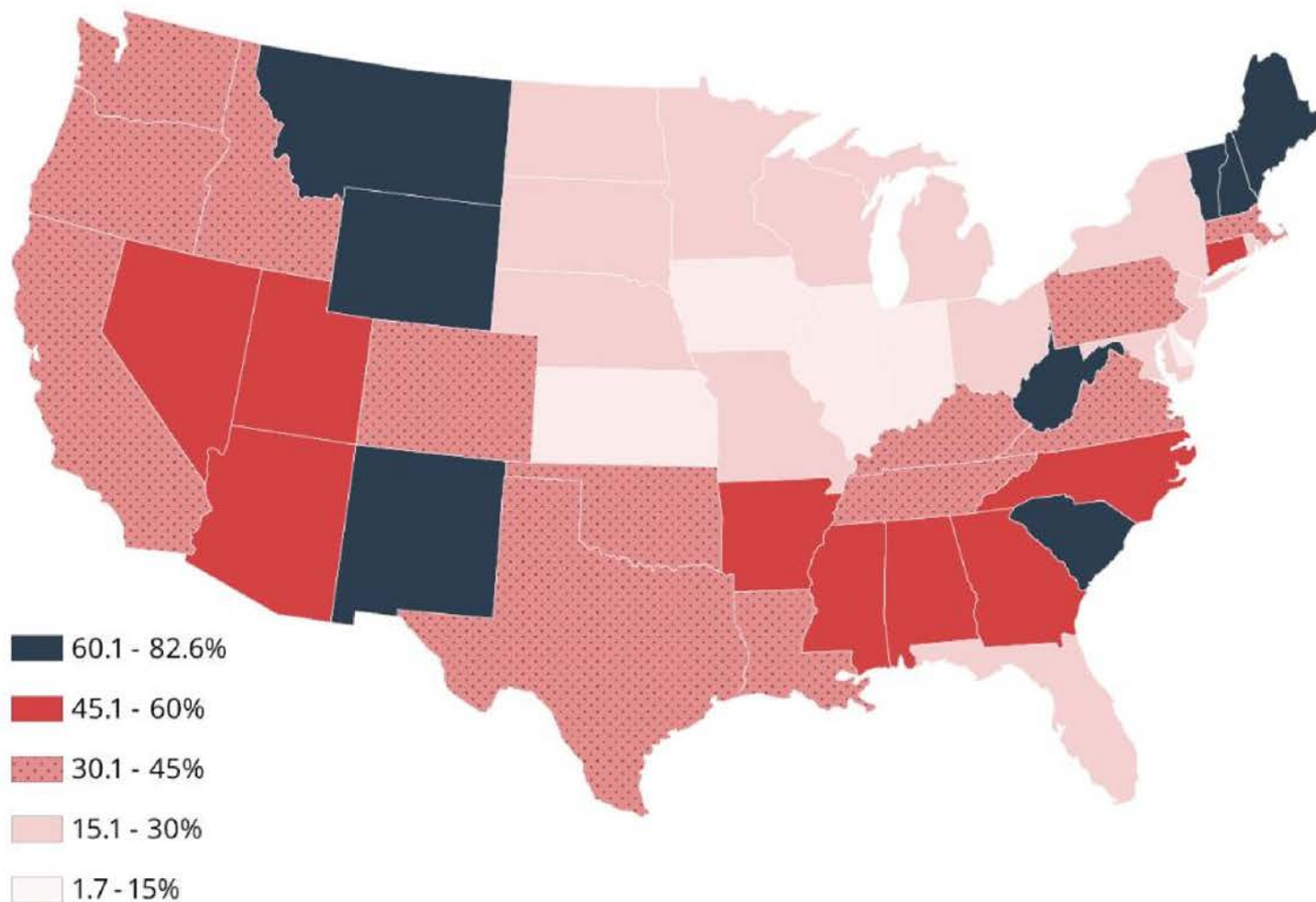
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Number of houses in the WUI relative to the total houses in the state* (%)



*For states in the conterminous United States.

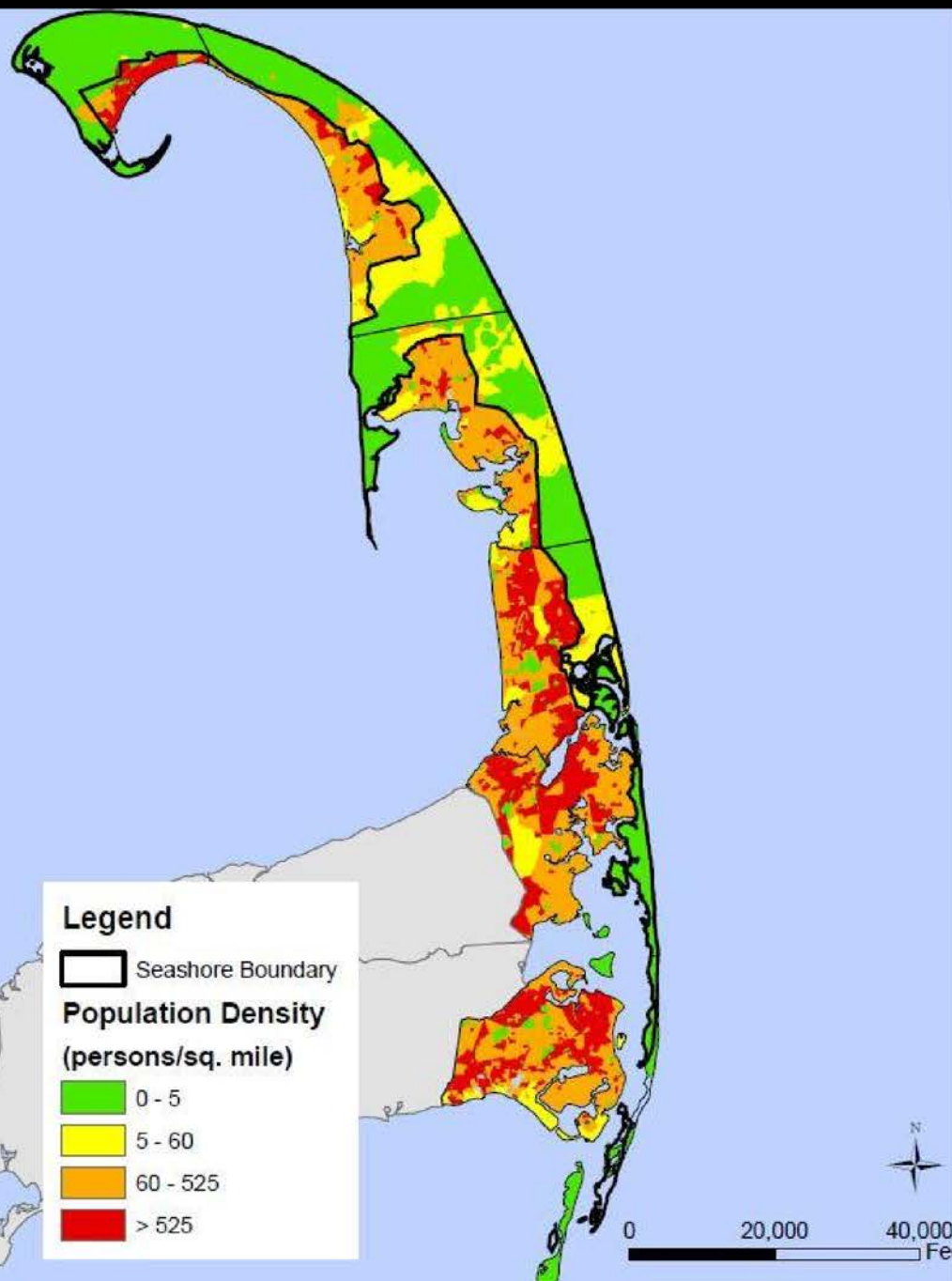
Source: U.S. Forest Service



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Present Risk:

- WUI – fuels intermixed with community
- Population Density- Areas of Continues fuels adjacent to high population centers
- Structures – 100s within Boundary, NPS and Private Ownership





Climate Change Predictions

- Significant Warming
- Models unclear “Warm Dry” or “Hot Wet”
- Periods of Extended Drought
- Increases fire risk and plant stress
- Increased invasive species and pests



CAPE COD NS WILDLAND FIRE PROGRAM

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Department of the Interior & National Park Service Fire Program

- Different Appropriation Pathway
- NPS part of the Interagency Fire Center
- Work within DOI and NPS Policy
- Currently getting attention and funding from Congress and the Administration

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Cape Cod National Seashore Fire Program

- Fire Program was established in early 1990s
- In a period of rebuilding our fire dedicated staff.
- CACO is part of the “New England Fire Management Zone”, created in 2022. Fire crews are duty stationed at Acadia National Park and Cape Cod NS
 - The geographic footprint of the zone covers Vermont, New Hampshire, Connecticut, Rhode Island, and Massachusetts
 - Fire staff at each location are supervised by their respective parks management team
 - Fire staff work collaboratively with each other to provide subject matter expertise to approximately 22 National Park Service units within the zone.
 - Fire staff can be deployed on fire incidents throughout the United States



CACO Fire Management Plan

- Firefighter and Public Safety #1 Priority for all fire management activities
- Full-suppression strategy for all wildland fires
 - Due to Resources at Risk
 - Potential Consequences of Uncontrolled Wildland Fires
- All fires managed for resource goals will be prescribed fires



Fire Management Plan Goals

- To protect life, structures, natural resources, and cultural resources from harmful effects of wildland fire.
- To restore fire as an ecological process on the landscape, returning the Seashore to a diverse, mosaic of fire-influenced natural communities through the use of prescribed burning.
- To restore, maintain, or protect rare, threatened, and endangered species and significant natural communities.
- To investigate the effects of fire on natural resources of the Seashore.
- To reduce the accumulation of hazardous wildland fuels using prescribed burning and mechanical treatments.
- To comply with the National Park Service Director's Order #18: Wildland Fire Management, which requires that all areas of NPS units containing vegetation capable of sustaining fire develop a FMP.



Fuels and Vegetation Management: Priorities

- Fort Hill Historic Landscape
- WUI Code Compliance: Defensible Space
- Pile Burning / Fuels Reduction
- Marconi Area Heathland Habitat Restoration
- Wood Road Maintenance (~ 66 miles)



Fort Hill Historic Landscape Prescribed Burning

- Combination of Treatments
 - Mowing and Prescribed Burning
- Fires intentionally set to achieve identified objectives when predetermined prescription (weather and fuel conditions) are met
- Planned for this fall (October/November 2024)



What can Communities Do?

- Education
 - Wildfire is not part of the culture in the Eastern United States
- Be Firewise
 - Provides structure for communities to prepare for wildfire in their areas
 - Tool kit and topical handouts
 - Some insurance companies give discounts to certified communities



“HOME ZONE”

The home itself and everything within 5 feet of the foundation

Includes: Fences, decks, porches, and other attachments.

Recommended construction materials: Non-flammable or low flammable for new homes and retrofits – especially with roofs, siding and windows.

Preventative measures: Remove flammables (debris, mulch, plantings) from roofs, eave lines, gutters, deck/porch surfaces, and within 5 feet of the home and any attachments.

“5-20 FEET”

Includes: Decks and fences, provides space for emergency fire suppression equipment.

Preventative measures: Keep lawns mowed and well-maintained; well-spaced plantings of low flammability species; swap mulch for rocks, gravel or stone; remove large fuel packages like firewood piles from this area.

“30-100 FEET”

Preventative measures: Keep irrigated with low-growing and low-flammable plants; create separation between grasses, shrubs, and trees to avoid fire spreading into taller vegetation in a “fuel ladder” effect; space trees to prevent crowns from touching.

“100+ FEET”

Research shows that keeping high intensity fire 100 feet from a home will prevent the fire from igniting the home directly.

Preventative measures: Place low-growing plants and well-spaced trees; keep volume of vegetation (fuel) low.

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- Embrace Defensible Space
- Consider codifying best practices as bylaws
- Develop a tolerance for planned smoke
- Consider impacts of development to:
 - Evacuation corridors
 - Access for emergency equipment
 - Defensibility from unplanned fire

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2025 Meeting Schedule and Focus

- Proposed Dates:
 - January 13
 - April 7
 - September 8
- Items Superintendent is seeking advice on:
 - Massachusetts Affordable Homes Act
 - 36 CFR Part 27: Propose updates and additions
 - Termination of Suspension of Certificates of Condemnation