

GEORGIA FORESTRY
COMMISSION



Community Wildfire Protection Plan

An Action Plan for Wildfire Mitigation and Conservation of Natural Resources

Long County, Georgia

A Program of the Georgia Forestry Commission
with support from the U.S. Forest Service



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Appended Documents:

Long County Southern Wildfire Risk Assessment Summary Report (SWRA)

Long County Wildfire Pre-suppression Plan

NFPA 1141 Standard for Fire Protection Infrastructure for Land Development in Suburban and Rural Areas.

Preface

The extreme weather conditions that are conducive to wildfire disasters (usually a combination of extended drought, low relative humidity and high winds) can occur in this area of Georgia as infrequently as every 10-15 years. This is not a regular event, but as the number of homes that have been built in or adjacent to forested or wildland areas increases, it can turn a wildfire under these weather conditions into a major disaster. Wildfires move fast and can quickly overwhelm the resources of even the best equipped fire department. Advance planning can save lives, homes and businesses.

This Community Wildfire Protection Plan (CWPP) includes a locally assessed evaluation of the wildland urban interface areas of the county, looking at the critical issues regarding access to these areas, risk to properties from general issues such as building characteristics and “fire wise” practices and response from local fire fighting resources. It further incorporates a locally devised action plan to mitigate these risks and hazards through planning, education and other avenues that may become available to address the increasing threat of wildland fire. The CWPP does not obligate the county financially in any way, but instead lays a foundation for improved emergency response if and when grant funding is available to the county.

The Plan is provided at no cost to the county and can be very important for county applications for hazard mitigation grant funds through the National Fire Plan, FEMA mitigation grants and Homeland Security. Under the Healthy Forest Restoration Act (HFRA) of 2003, communities (counties) that seek grants from the federal government for hazardous fuels reduction work are required to prepare a Community Wildfire Protection Plan.

This plan will:

- Enhance public safety
- Raise public awareness of wildfire hazards and risks
- Educate homeowners on how to reduce home ignitability
- Build and improve collaboration at multiple levels

The public does not have to fall victim to this type of disaster. Homes (and communities) can be designed, built and maintained to withstand a wildfire even in the absence of fire equipment and firefighters on the scene. It takes planning and commitment at the local level before the wildfire disaster occurs and that is what the Community Wildfire Protection Plan is all about.

I. OBJECTIVES

The mission of the following report is to set clear priorities for the implementation of wildfire mitigation in Long County. The plan includes prioritized recommendations for the appropriate types and methods of fuel reduction and structure ignitability reduction that will protect this community and its essential infrastructure. It also includes a plan for wildfire suppression. Specifically, the plan includes community-centered actions that will:

- Educate citizens on wildfire, its risks, and ways to protect lives and properties,
- Support fire rescue and suppression entities,
- Focus on collaborative decision-making and citizen participation,
- Develop and implement effective mitigation strategies, and
- Develop and implement effective community ordinances and codes.

II. COMMUNITY COLLABORATION

The core team convened on March 8th, 2013 to assess risks and develop the Community Wildfire Protection Plan. The group is comprised of representatives from local government, local fire authorities, and the state agency responsible for forest management. Below are the groups included in the task force:

Long County Government

Ludowici/Long County Fire Department

Emergency Management

Georgia Forestry Commission

It was decided to identify general risks to WUI exposed communities in the county. We discussed these risks and hazards for the purpose of completing the following:

Risk Assessment	Assessed wildfire hazard risks and prioritized mitigation actions.
Fuels Reduction	Identified strategies for coordinating fuels treatment projects.
Structure Ignitability	Identified strategies for reducing the ignitability of structures within the Wildland interface.
Emergency Management	Forged relationships among local government and fire districts and developed/refined a pre-suppression plan.
Education and Outreach	Developed strategies for increasing citizen awareness and action and to conduct homeowner and community leader workshops.

III. COMMUNITY & WILDFIRE HISTORY

Long County



On August 14, 1920, the state legislature proposed a constitutional amendment to create Long County from Liberty County, one of the original eight Georgia counties established in 1777 from the colonial parishes. On November 2, 1920, Georgia voters ratified the proposed amendment and Long County became Georgia's 159th county. Long County was named for Crawford Long, a doctor credited with introducing ether as an anesthesia during a surgical operation at Jefferson on March 30, 1842. Located in southeast Georgia, Long County occupies 400 square miles of the Atlantic Coast Flatwoods. The county is bordered by Liberty, McIntosh, Tattnall, and Wayne counties, and its entire southwestern boundary runs along the Altamaha River.

History

Originally the western portion of St. John's Parish, the land along the Altamaha River (earlier spelled "Alatamaha") was an important frontier boundary protecting the Georgia colony from the Spanish and Native Americans to the south and west. General James Oglethorpe established a series of forts, including Beards Bluff Fort and Fort Barrington, along the river for protection. Paths developed by Creek Indians became the first roads, including the Old Barrington Road, which was also known as the Old Post Road because it was part of the first postal route from Savannah into Florida. Inns, including Archibald Baggs's home, the Sandiford Inn, and Timothy Barnard's trading post at Beards Creek, accommodated travelers along these paths. The county seat of Ludowici began in the 1840s as a stop known as "Four and a Half" on the Atlantic and Gulf Railroad.

Around 1850, landowner Allen Johnston built his home near the railroad. A station was built across the tracks, and a small village developed known as Johnston Station. In 1903 William Ludowici established the "Dixie" plant of his Ludowici Celadon Company at Johnston Station, which he chose for the area's quality ceramic clays and transportation facilities. Ludowici donated money toward the construction of a new schoolhouse in 1905, and in his honor the citizens renamed the town Ludowici. It was incorporated that same year. Briefly during World War I (1917-18), the town was called Liberty City due to the prevailing anti-German sentiment of the time. The two-story, red-tiled school was eventually demolished for a modern school building where, today, Long County operates a public school for grades kindergarten through twelve.

Government and Economy



Long County is managed by a traditional commission government from Ludowici, which remains the only incorporated municipality in the county. The two-story brick courthouse was completed in 1926.

Designed by G. M. Harrington, the Neoclassical Revival building is listed on the National Register of Historic Places. The legal organ of the government is the Ludowici News. Long County, historically and currently, is a rural, agricultural area. The principal farm crop was once cotton, but by the 1970s it had

been replaced by tobacco, corn, soybeans, and cattle. The pine forests of the region have always played an important role in the economy. Frontiersmen settling along the Altamaha River fastened logs together to form rafts that were floated downstream to the port of Darien for export, a practice that continued through the nineteenth century. During the twentieth century, five large paper mills opened within a fifty-mile radius of Ludowici, and Long County's economy was dramatically improved by new employment opportunities and a new demand for timberlands. The northern tip of the county is occupied by Fort Stewart, the largest military installation east of the Mississippi River. Covering 280,000 acres (spread over several counties), the post, which includes forestlands and hunting preserves, provides many civil service jobs to local residents. Altamaha Technical College, which offers workforce training, operates a satellite campus in Ludowici.

Highlights

Annual events held in Long County include Old South Farm Days in March, the Catfish Festival in April, and the Long County Wildlife Festival in October. Points of interest include the Ludowici Well Pavilion (1907), an important social meeting place for the county and a National Register of Historic Places site, and Jones Creek Baptist Church (1856) and Walthourville Presbyterian Church (1884), both state historic sites.



The Altamaha River provides such recreational opportunities as fishing, boating, and water sports. A marble monument near the southern border of the county honors the lost *Franklinia alatamaha*, a flowering plant discovered by royal botanists John and William Bartram in 1765. The plant was last seen growing in the wild near the Altamaha River in 1803. According to the 2000 U.S. census, Long County's population was 10,304, a 66 percent increase over the 1990 population and more than twice the population of the county after its first decade of existence. In 2010 the population increased again to 14,464.

(Courtesy Luciana M Spracher, *New Georgia Encyclopedia*)

Wildfire History

Long County located in southeast Georgia is one of the most heavily forested counties in the state. Despite its largely rural character it has experienced a significant amount of population growth in recent years largely from people spilling over from adjacent areas such as Hinesville/Ft Stewart, nearby cities such as Savannah and retirees looking for a quiet place in the country. Growing from a population of 4,524 in 1980 to an estimated 16,408 in 2012, most of this growth has occurred outside of the traditional urban confines of the only city in the county, Ludowici (current pop 1703).

Perhaps with the exception of the large blocks of woodlands adjacent the Altamaha River and in the large industrial timberland holdings of eastern Long County, there are homes and small communities scattered throughout the county. The risks and hazards from the wildland urban interface are fairly general and substantial throughout the county even on the edges of Ludowici and adjacent Waltourville in Liberty County. Conventional wisdom would indicate that the threat to these homes would decrease with the counties rapid growth, however just the opposite is occurring. Homes are increasingly being built out in the wildland interface. Additionally many acres of previously cultivated land have reverted and still are to wildland, much of it through the replanting of pine plantations under a number of conservation programs. As these plantations come out from the program, a number are being converted to home sites exposed to potential high risk to wildfire.

Structural protection is provided in the county by the Ludowici/Long County Fire Department, with six well spaced volunteer stations. The Georgia Forestry Commission maintains a county protection unit located just north of Ludowici on Hwy 84 to respond to wildfires throughout the county. The city of Ludowici and some adjacent areas of the county are serviced by a pressurized water system with hydrants available.

Over the past fifty six years, Long County has averaged 73 reported wildland fires per year, burning an average of 513 acres per years. Using more recent figures over the past 10 years (2008-2017), this number has declined to an average of 36 fires per year. The average acres burned has increased to 850 acres annually. While there has been a decrease in the number of fires in recent years, there has been about a 40% increase in the average size as the wildland fuel loads have increased with the diminished use of prescribed burning. Over the past 10 years, the leading causes of these fires were debris burning causing 42% and incendiary (arson) 21% of the fires and 64% and 9% of the acres burned. Lightning also was a major cause accounting for 10% of these fires and 22% of the acreage burned during the 10 years.

Georgia Forestry Commission Wildfire Records show that in the past ten years, 20 homes have been damaged by wildfire in Long County resulting in estimated loss of \$409,440. Additionally 36 outbuildings were damaged for \$582,650 loss. According to reports during this period 390 homes have been directly or indirectly threatened by these fires. Additionally 17 vehicles valued at \$185,500 and 11 other pieces of mechanized equipment valued at \$189,300 were lost. There was also a total of \$253,100 in crop damage. This is a significant loss of non-timber property attributed to wildfires in Long County.

The table below is wildfire data from the most recent complete 2018 fiscal year, July 1, 2017 – June 30, 2018. This data includes the number of fires, acres burned, cause, and the 5 year averages.

County = Long	Cause	Fires	Acres	Fires 5 Yr Avg	Acres 5 Yr Avg
Campfire	Campfire	3	11.30	1.40	3.91
Children	Children	0	0.00	0.20	0.18
Debris: Ag Fields, Pastures, Orchards, Etc	Debris: Ag Fields, Pastures, Orchards, Etc	2	3.41	0.80	4.82
Debris: Construction Land Clearing	Debris: Construction Land Clearing	0	0.00	0.60	1.46
Debris: Escaped Prescribed Burn	Debris: Escaped Prescribed Burn	3	386.04	1.80	108.05
Debris: Household Garbage	Debris: Household Garbage	0	0.00	1.40	4.35
Debris: Residential, Leafpiles, Yard, Etc	Debris: Residential, Leafpiles, Yard, Etc	6	6.76	6.80	8.45
Debris: Site Prep - Forestry Related	Debris: Site Prep - Forestry Related	0	0.00	0.40	0.60
Incendiary	Incendiary	0	0.00	2.20	10.68
Lightning	Lightning	0	0.00	1.80	14.05
Machine Use	Machine Use	0	0.00	0.40	1.47
Miscellaneous: Firearms/Ammunition	Miscellaneous: Firearms/Ammunition	0	0.00	0.40	0.35
Miscellaneous: Fireworks/Explosives	Miscellaneous: Fireworks/Explosives	0	0.00	0.40	0.16
Miscellaneous: Other	Miscellaneous: Other	0	0.00	0.20	0.20
Miscellaneous: Power lines/Electric fences	Miscellaneous: Power lines/Electric fences	0	0.00	1.40	6.62
Miscellaneous: Structure/Vehicle Fires	Miscellaneous: Structure/Vehicle Fires	1	2.00	0.40	0.50
Undetermined	Undetermined	1	62.00	0.60	12.65
Totals for County: Long Year: 2018		16	471.51	21.20	178.49

On the following pages 10-13 is Long County wildfire data from the preceding 10 year period, July 1, 2008 - June 30, 2017.

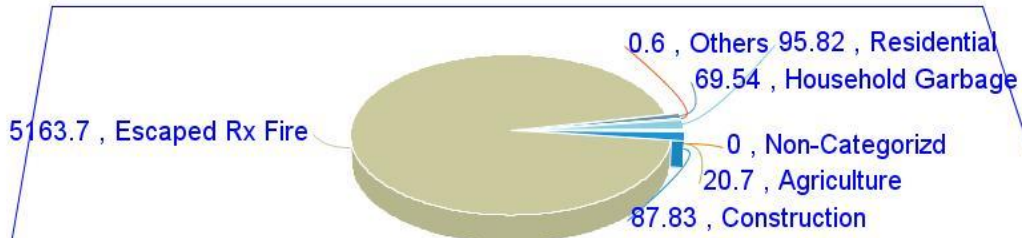
Acreage Burned /Number of Fires For Long County For FY 2008-2017				
Year	Acreage Burned	Number of Fires	Average Size	Statewide Average Size
2008	214.94	35	6.14	4.56
2009	182.88	40	4.57	3.90
2010	112.73	32	3.52	3.93
2011	7,215.65	115	62.74	17.56
2012	245.30	23	10.67	5.08
2013	104.96	25	4.20	4.53
2014	41.19	17	2.42	5.02
2015	37.00	25	1.48	4.42
2016	181.04	14	12.94	6.29
2017	161.73	34	4.76	11.60

Fire Cause	Acreage Burned	Number of Fires
Campfire	32.66	15
Children	7.38	12
Debris Burning	5,456.45	153
Incendiary	796.34	75
Lightning	1,876.35	37
MachineUse	220.04	24
Miscellaneous	80.35	36
Railroad	0.00	0
Smoking	25.50	3
Undetermined	1.25	2
Total	8,496.32	357

Acreage Burned by Cause of Fire For Long County For FY 2008-2017

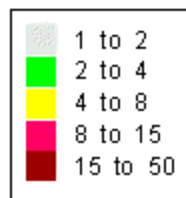
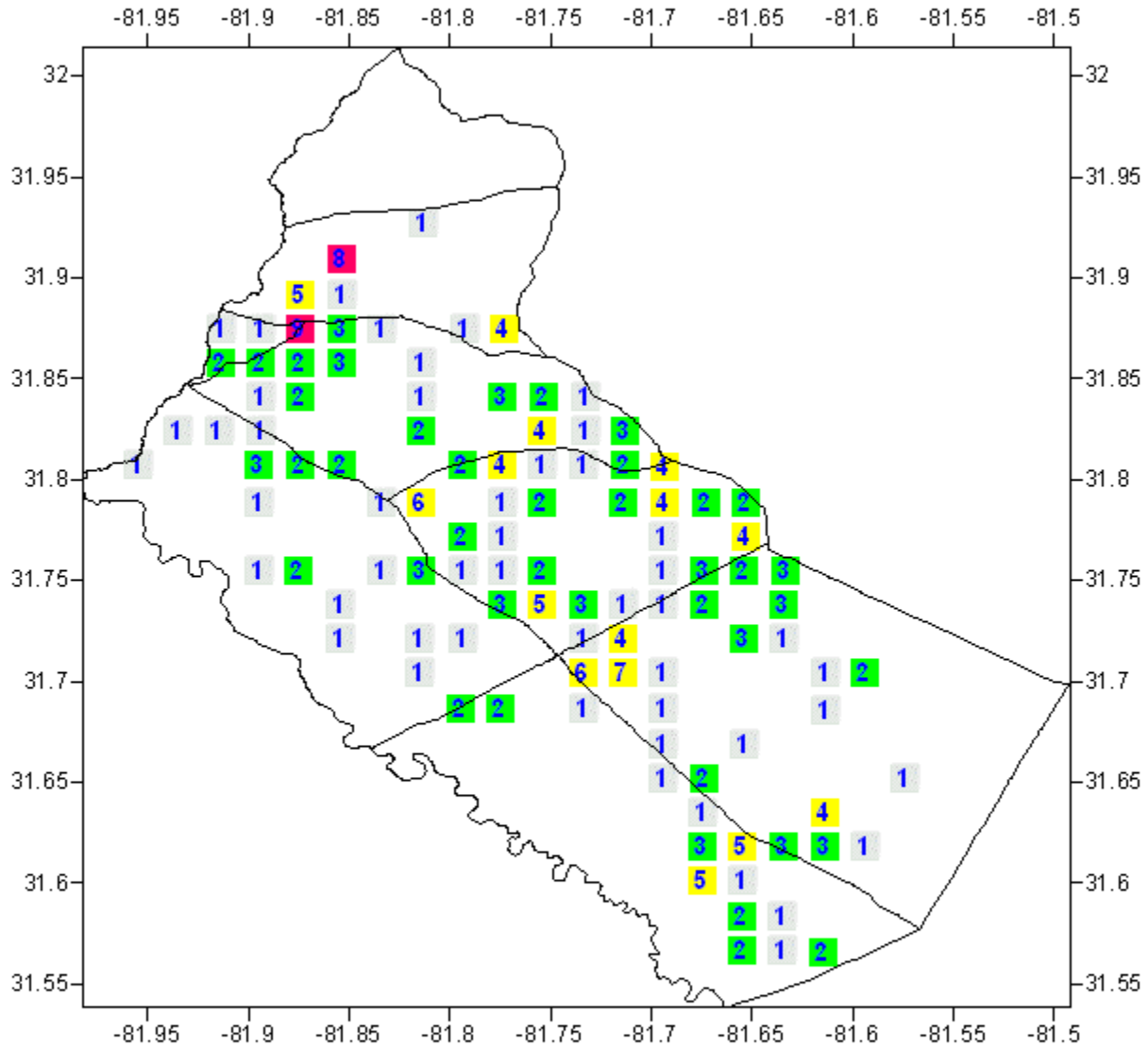


Acreage Burned By Debris Burning Sub Cause For Long County For FY 2008-2017

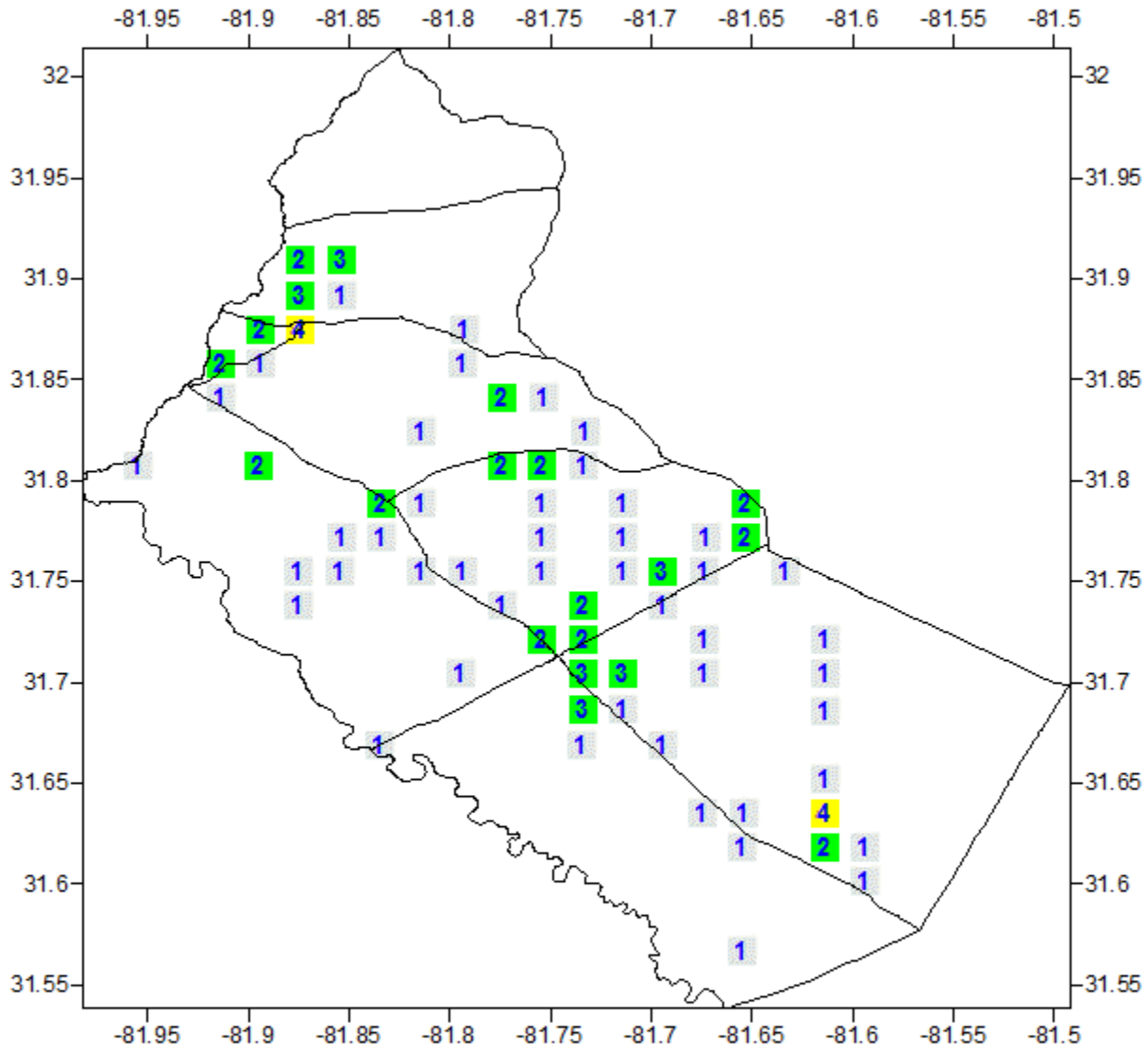


Fire Cause

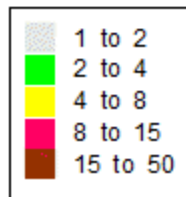
Fire Occurrence Map for Long County for Fiscal Year 2008-2012



Fire Occurrence Map for Long County for Fiscal Year 2012-2016



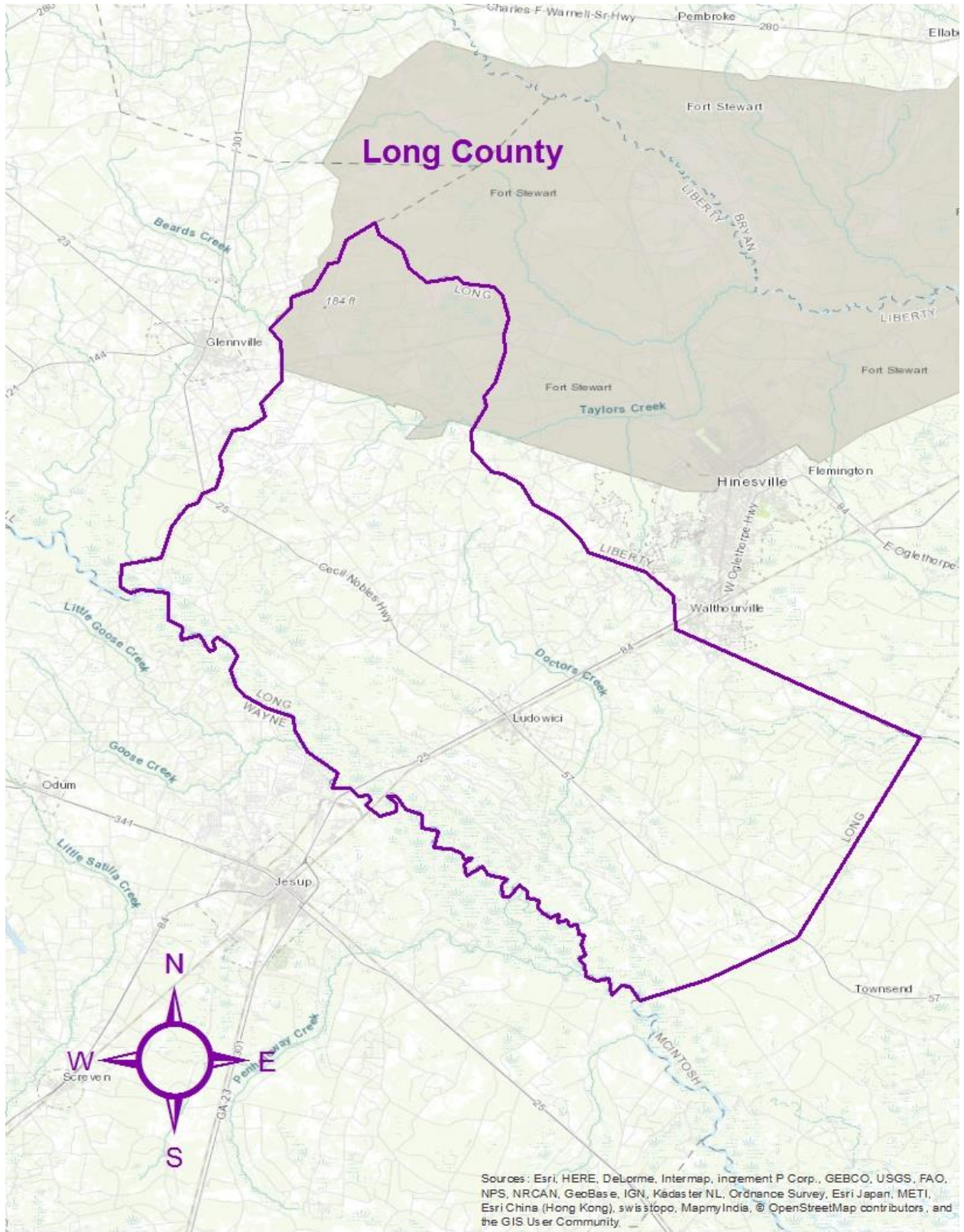
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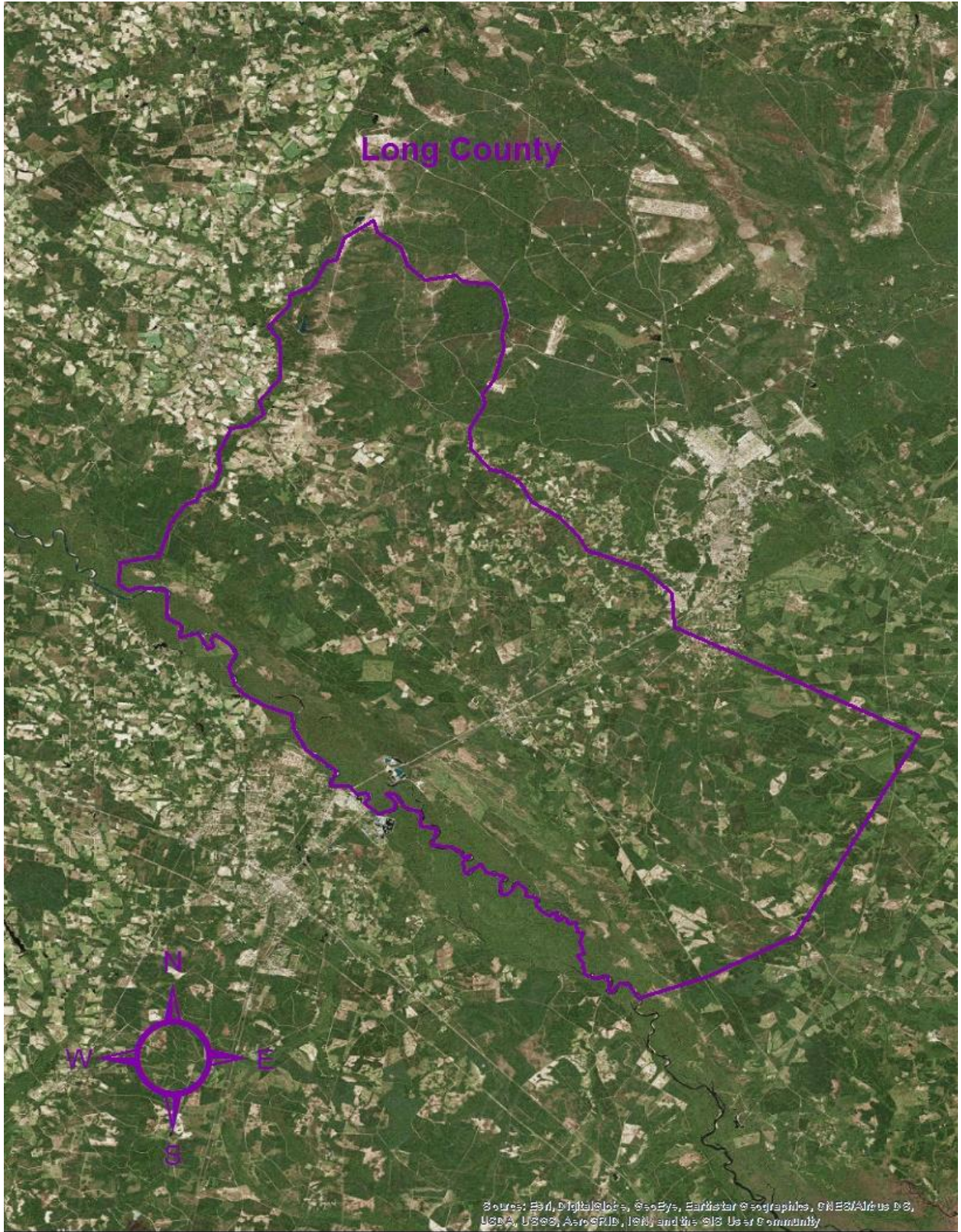


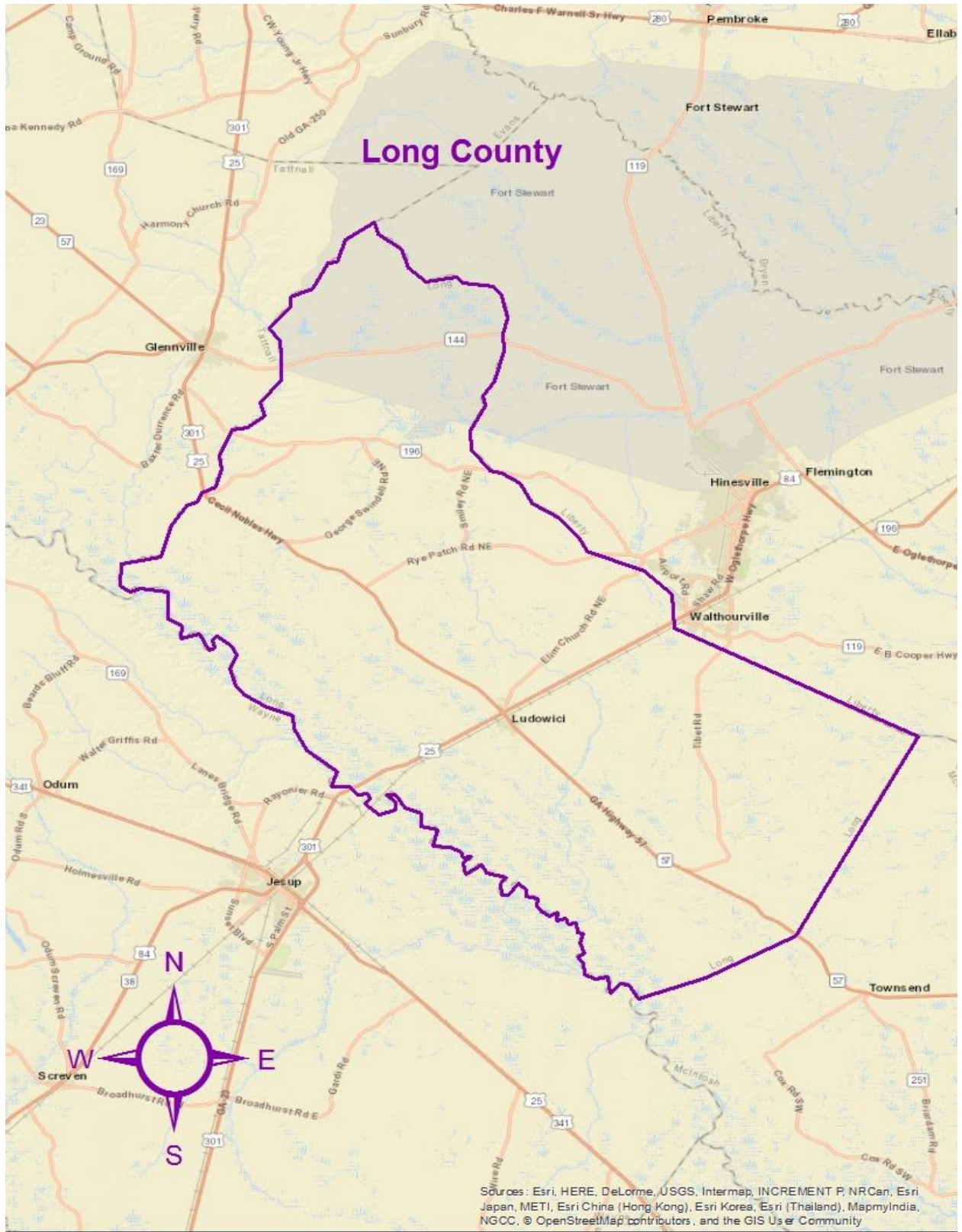
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IV. COMMUNITY BASE MAPS







V. COMMUNITY WILDFIRE RISK ASSESSMENT

The Wildland-Urban Interface

There are many definitions of the Wildland-Urban Interface (WUI), however from a fire management perspective it is commonly defined as an area where structures and other human development meet or intermingles with undeveloped wildland or vegetative fuels. As fire is dependent on a certain set of conditions, the National Wildfire Coordinating Group has defined the wildland-urban interface as a set of conditions that exists in or near areas of wildland fuels, regardless of ownership. This set of conditions includes type of vegetation, building construction, accessibility, lot size, topography and other factors such as weather and humidity. When these conditions are present in certain combinations, they make some communities more vulnerable to wildfire damage than others. This “set of conditions” method is perhaps the best way to define wildland-urban interface areas when planning for wildfire prevention, mitigation, and protection activities.

There are three major categories of wildland-urban interface. Depending on the set of conditions present, any of these areas may be at risk from wildfire. A wildfire risk assessment can determine the level of risk.

1. **“Boundary” wildland-urban interface** is characterized by areas of development where homes, especially new subdivisions, press against public and private wildlands, such as private or commercial forest land or public forests or parks. This is the classic type of wildland-urban interface, with a clearly defined boundary between the suburban fringe and the rural countryside.
2. **“Intermix” wildland-urban interface** areas are places where improved property and/or structures are scattered and interspersed in wildland areas. These may be isolated rural homes or an area that is just beginning to go through the transition from rural to urban land use.
3. **“Island” wildland-urban interface**, also called occluded interface, are areas of wildland within predominately urban or suburban areas. As cities or subdivisions grow, islands of undeveloped land may remain, creating remnant forests. Sometimes these remnants exist as parks, or as land that cannot be developed due to site limitations, such as wetlands.

Wildland Urban Interface Hazards

Firefighters in the wildland urban interface may encounter hazards other than the fire itself, such as hazardous materials, utility lines and poor access.

Hazardous Materials

- Common chemicals used around the home may be a direct hazard to firefighters from a flammability, explosion potential and/or vapors or off gassing. Such chemicals include paint, varnish and other flammable liquids, fertilizer, pesticides, cleansers, aerosol cans, fireworks, batteries and ammunition. In addition, some common household products such as plastics may give off very toxic fumes when they burn. Stay out of smoke from burning structures and any unknown sources such as trash piles.

Illicit Activities

- Marijuana plantations or drug production labs may be found in the wildland urban interface areas. Extremely hazardous materials such as propane tanks and flammable/toxic chemicals may be encountered.

Propane Tanks

- Both large (household size) and small (gas grill size) liquefied propane gas (LPG) tanks can present hazards to firefighters, including explosion. See the “LPG Tank Hazards” discussion for details

Utility Lines

- Utility Lines may be located above and below ground and may be cut or damaged by tools or equipment. Don't spray water on utility lines or boxes.

Septic Tanks and Fields

- Below ground structures may not be readily apparent and may not support the weight of engines or other equipment.

New Construction Materials

- Many new construction materials have comparatively low melting points and may “off-gas” extremely hazardous vapors. Plastic decking materials that resemble wood are becoming more common and may begin softening and losing structural strength at 180 degrees F, though they normally do not sustain combustion once direct flame is removed. However if they continue to burn they exhibit the characteristics of flammable liquids.

Pets and Livestock

- Pets and livestock may be left when residents evacuate and will likely be highly stressed making them more inclined to bite and kick. Firefighters should not put themselves at risk to rescue pets or livestock.

Evacuation Occurring

- Firefighters may be taking structural protect actions while evacuations of residents are occurring. Be very cautious of people driving erratically. Distraught residents may refuse to leave their property and firefighters may need to disengage from fighting fire to contact law enforcement officers for assistance. In most jurisdictions firefighters do not have the authority to force evacuations. Firefighters should not put themselves at risk trying to protect someone who will not evacuate!

Limited Access

- Narrow one-lane roads with no turn around room, inadequate or poorly maintained bridges and culverts are frequently found in wildland urban interface areas. Access should be sized up and an evacuation plan for all emergency personnel should be developed.



Wildland Urban Interface (WUI) is described as the area where structures and other human improvements meet and intermingle with undeveloped wildland or vegetative fuels.

The wildland fire risk assessment discussions with the Ludowici/Long County Fire Department used the Hazard and Wildfire Risk Assessment Checklist as a guide. This protocol was developed looking at six areas of concern;

- (1) Community Access looks at the number of entrances to the community, road width and condition, dead end roads, turn around areas along with road signs and address visibility.
- (2) Surrounding Vegetation looks at the wildland fuels adjacent to and its closeness to structures.
- (3) Building Construction looks at the flammability of roofing and siding materials and skirting or underpinning of structures.
- (4) Fire Protection looks at the distance from staffed departments and the availability of supplemental water sources from pressurized hydrants, dry hydrants and drafting places.
- (5) Utilities look at hazards to fire suppression equipment, both engines and forestry plow units from electrical service lines, propane tanks and unmarked septic tanks.
- (6) Additional Factors consider large adjacent areas of wildlands, canal or ditch presence, closeness of structures, presence of undeveloped unmaintained lots, wildfire history in the area and the availability of homeowner associations to remediate issues.

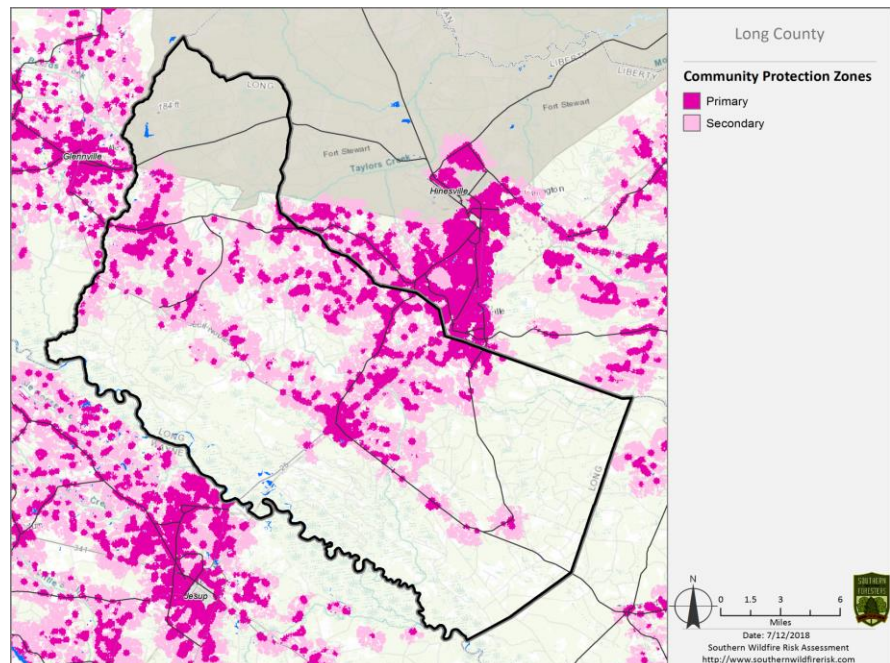
The following factors were identified as issues for Long County:

- Narrow roads without drivable shoulders
- Inadequate driveway access
- Minimal defensible space around structures
- Homes with wooden siding
- Unmarked septic tanks in yards
- Lack of pressurized or non-pressurized water systems available
- Large, adjacent areas of forest or wildlands
- Heavy fuel buildup in adjacent wildlands
- Lack of prescribed burning in many areas of the county
- Undeveloped wildland areas mixed with widely scattered homes in many rural communities.
- High occurrence of wildfires in the several locations
- Lack of homeowner or community organizations

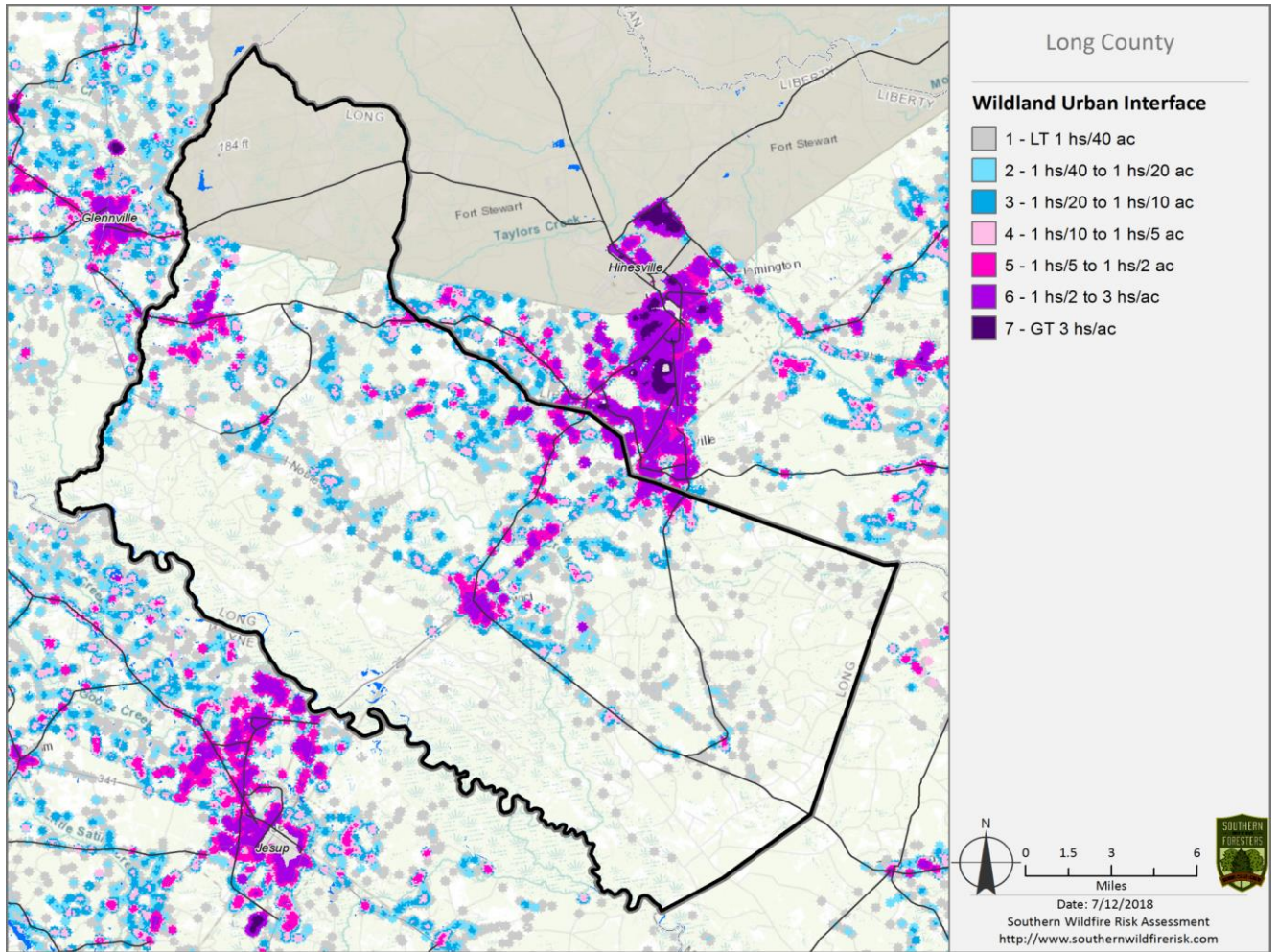
VI. Southern Wildfire Risk Assessment & Risk Hazard Maps

The Southern Wildfire Risk Assessment tool, developed by the Southern Group of State Foresters, was released to the public in July 2014. This tool allows users of the Professional Viewer application of the Southern Wildfire Risk Assessment (SWRA) web Portal (SouthWRAP) to define a specific project area and summarize wildfire related information for this area. A detailed risk summary report is generated using a set of predefined map products developed by the Southern Wildfire Risk Assessment project which have been summarized explicitly for the user defined project area. A risk assessment summary was generated for Long County. The SouthWRAP (SWRA) products included in this report are designed to provide the information needed to support the following key priorities:

- Identify areas that are most prone to wildfire.
- Identify areas that may require additional tactical planning, specifically related to mitigation projects and Community Wildfire Protection Planning.
- Provide the information necessary to justify resource, budget and funding requests.
- Allow agencies to work together to better define priorities and improve emergency response, particularly across jurisdictional boundaries.
- Define wildland communities and identify the risk to those communities.
- Increase communication and outreach with local residents and the public to create awareness and address community priorities and needs.
- Plan for response and suppression resource needs.
- Plan and prioritize hazardous fuel treatment.

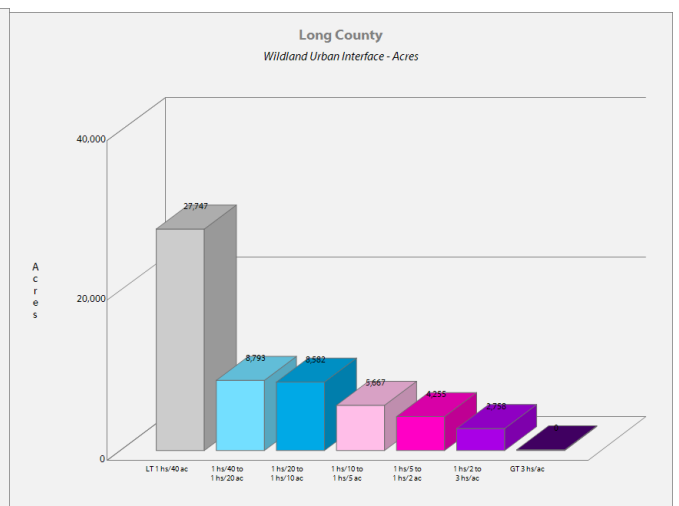
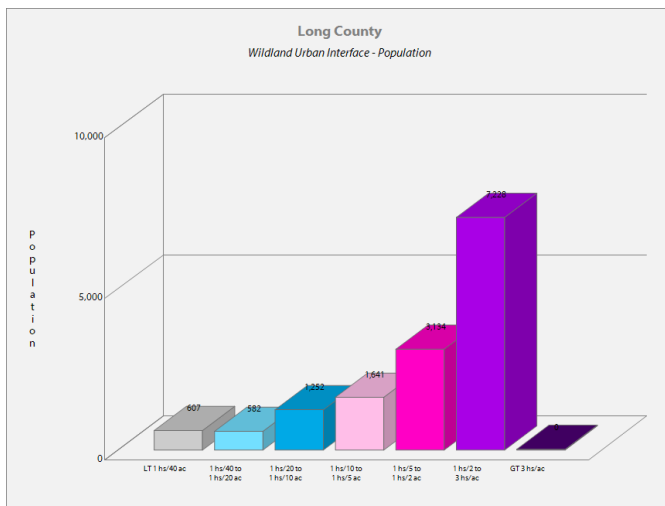


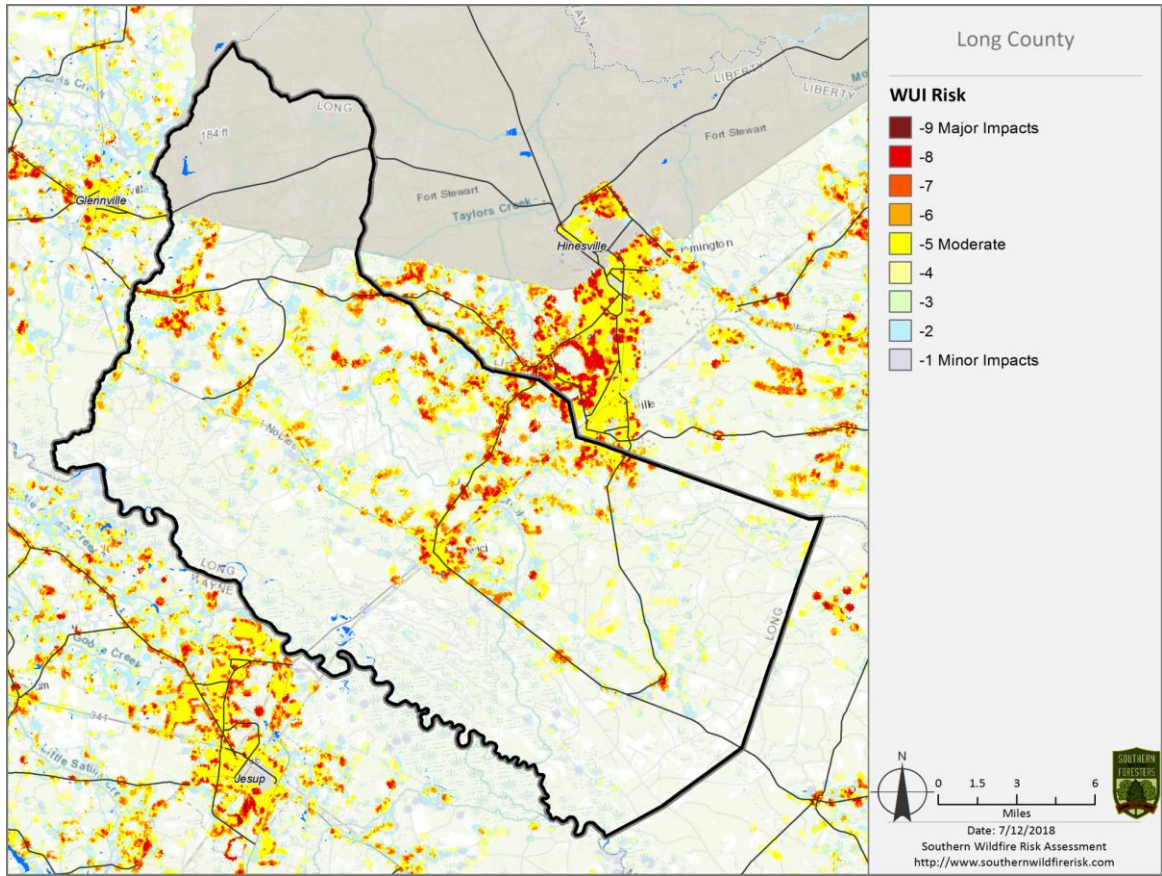
Community Protection Zones map from the Long County SWRA



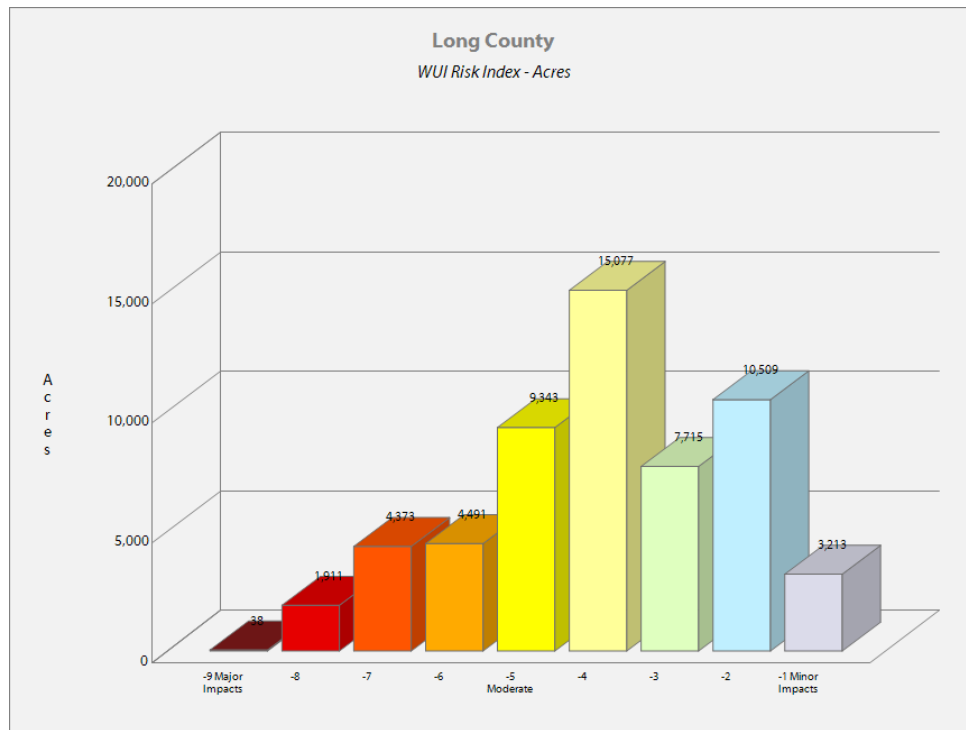
Above: Wildland Urban Interface (WUI) map

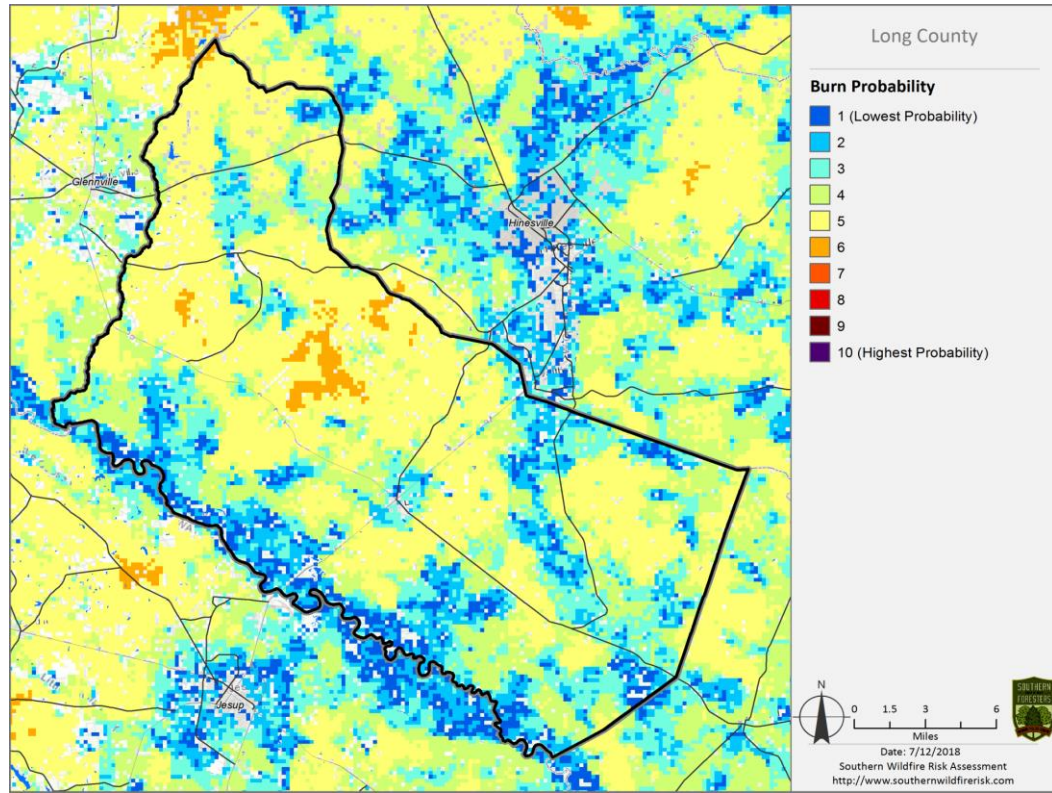
Below: WUI Population (left) WUI Acres (right)



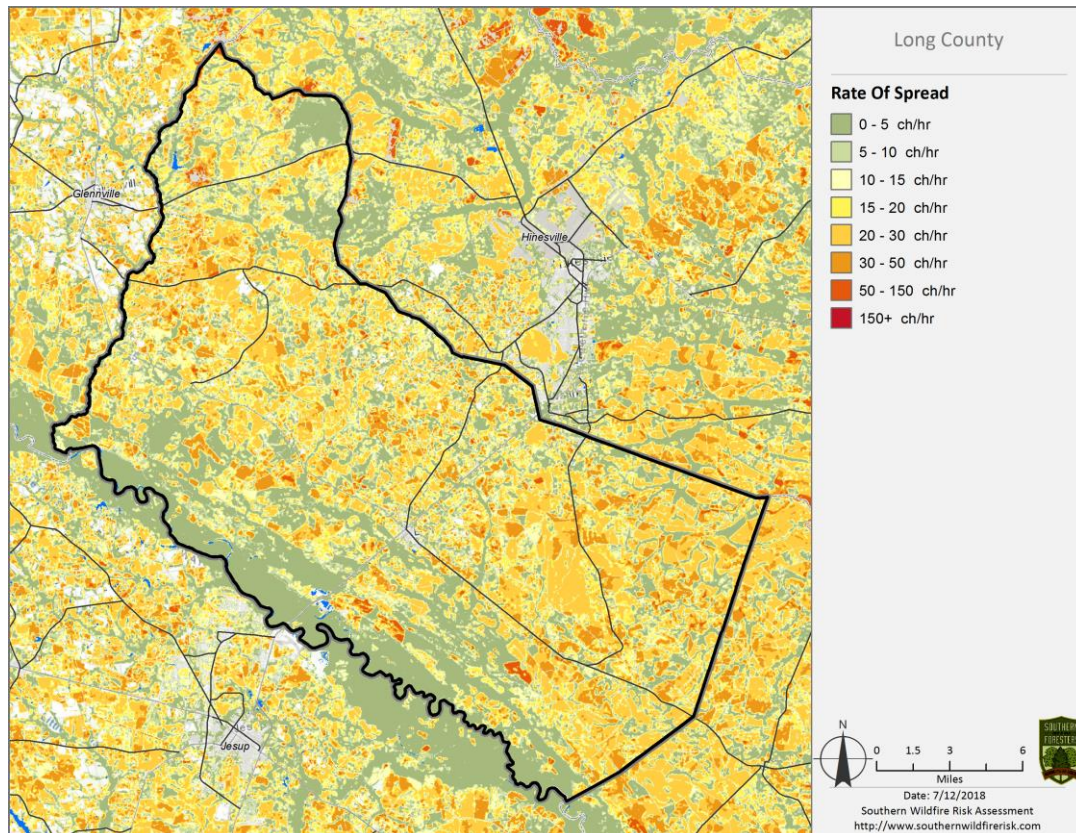


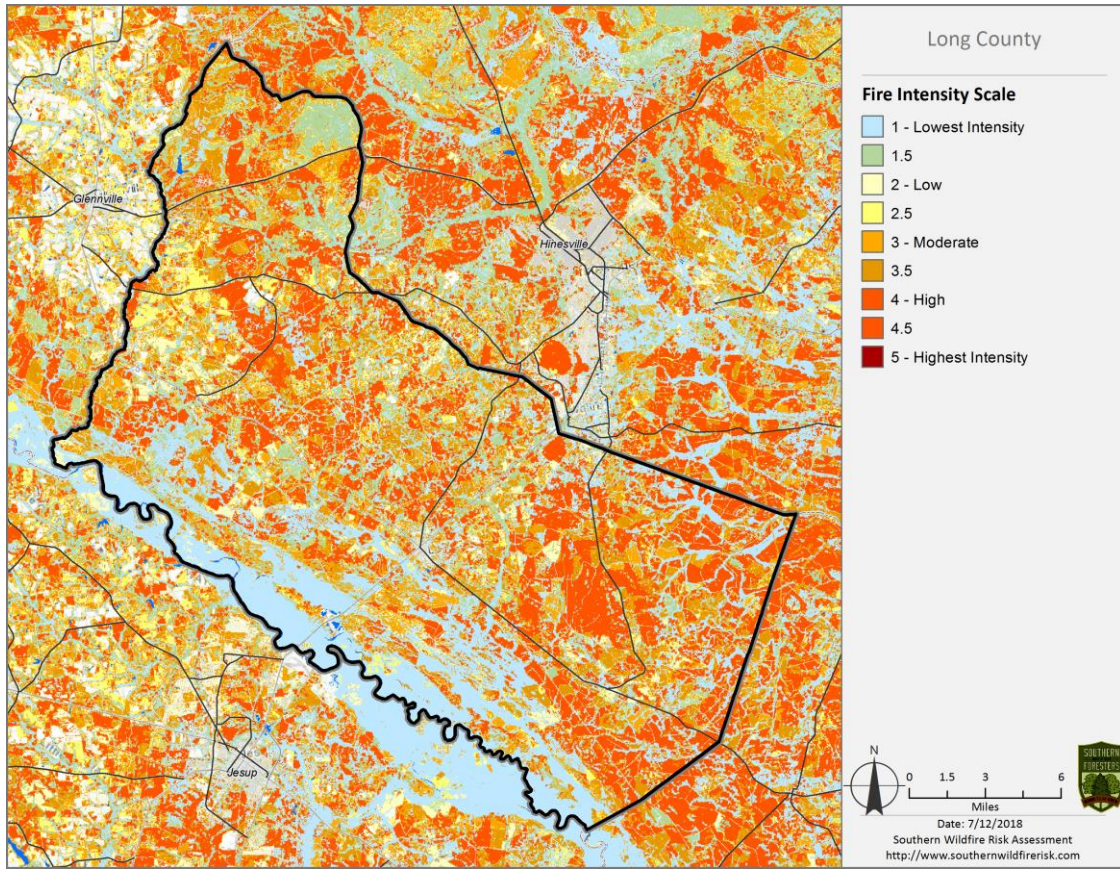
Above: Wildland Urban Interface (WUI) Risk map Below: WUI Risk Index - Acres



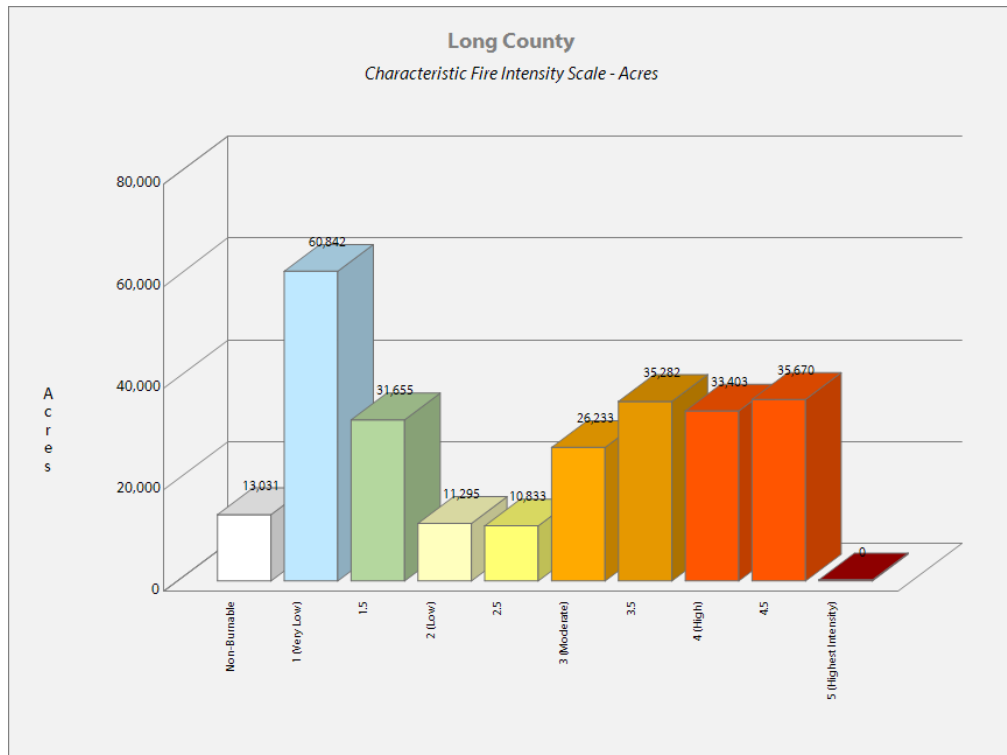


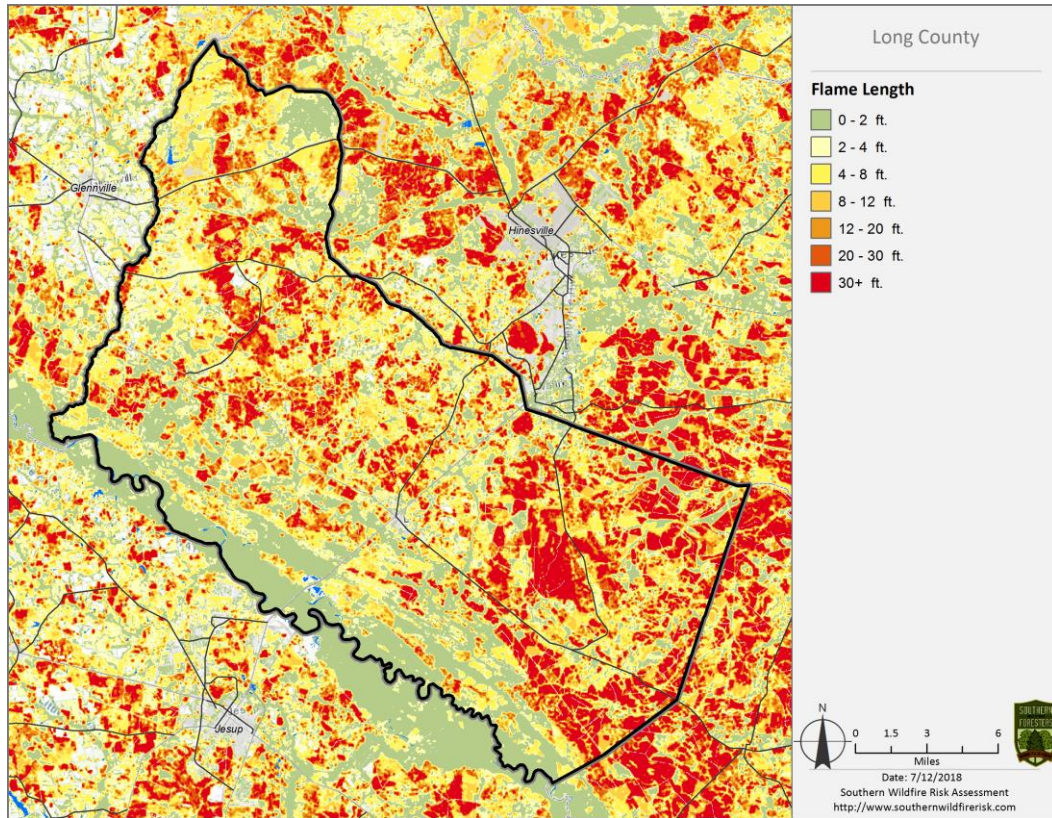
Above: Burn Probability map Below: Rate of Spread map



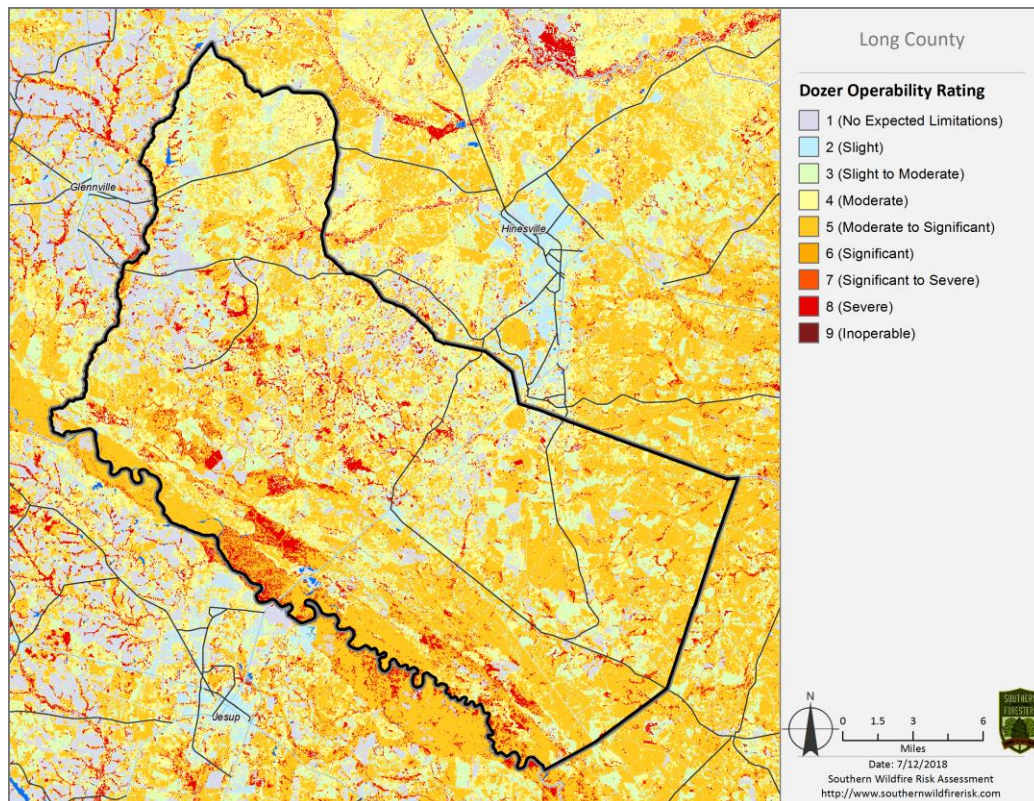


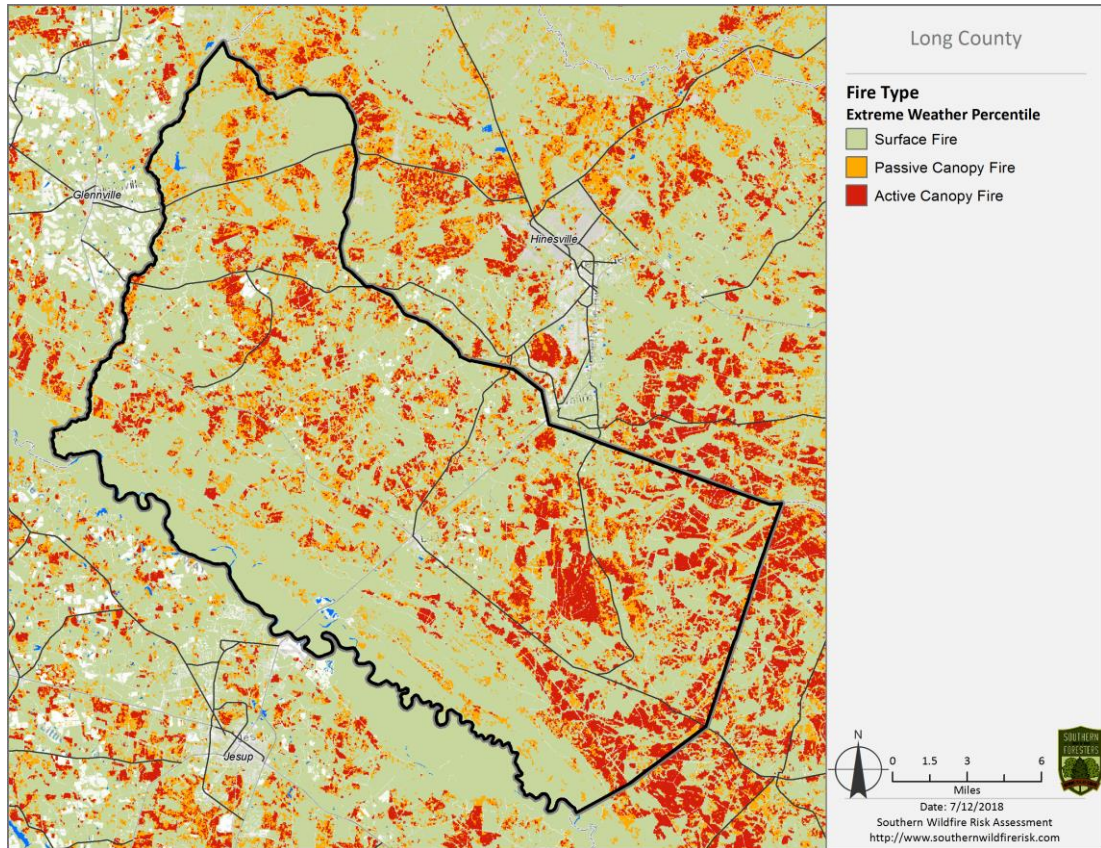
Above: Fire Intensity Scale map Below: Fire Intensity Scale - Acres





Above: Flame Length map Below: Dozer Operability Rating map





Above: Fire Type map

Surface Fire

A fire that spreads through surface fuel without consuming any overlying canopy fuel. Surface fuels include grass, timber litter, shrub/brush, slash and other dead or live vegetation within about 6 feet of the ground.



Passive Canopy Fire

A type of crown fire in which the crowns of individual trees or small groups of trees burn, but solid flaming in the canopy cannot be maintained except for short periods (Scott & Reinhardt, 2001).



Active Canopy Fire

A crown fire in which the entire fuel complex (canopy) is involved in flame, but the crowning phase remains dependent on heat released from surface fuel for continued spread (Scott & Reinhardt, 2001).



VII. PRIORITIZED MITIGATION RECOMMENDATIONS

Executive Summary

As Southeast Georgia continues to see increased growth from other areas seeking less crowded and warmer climates, new development will occur more frequently on forest and wildland areas. Long County will have an opportunity to significantly influence the wildland fire safety of new developments. It is important that new development be planned and constructed to provide for public safety in the event of a wildland fire emergency.

Over the past 20 years, much has been learned about how and why homes burn during wildland fire emergencies. Perhaps most importantly, case histories and research have shown that even in the most severe circumstances, wildland fire disasters can be avoided. Homes can be designed, built and maintained to withstand a wildfire even in the absence of fire services on the scene. The National Firewise Communities program is a national awareness initiative to help people understand that they don't have to be victims in a wildfire emergency. The National Fire Protection Association has produced two standards for reference: NFPA 1144 Standard for Reducing Structure Ignition Hazards from Wildland Fire, 2008 Edition and NFPA 1141 Standard for Fire Protection Infrastructure for Land Development in Suburban and Rural Areas.

In 2012 the International Code Council developed the International Wildland Urban Interface Code (IWUIC). This code was adopted by the Georgia Legislature in 2014 for counties to use when developing building and zoning codes in the Wildland Urban Interface (WUI) to help reduce risk and minimize structure loss.

When new developments are built in the Wildland/Urban Interface, a number of public safety challenges may be created for the local fire services: (1) the water supply in the immediate areas may be inadequate for fire suppression; (2) if the Development is in an outlying area, there may be a longer response time for emergency services; (3) in a wildfire emergency, the access road(s) may need to simultaneously support evacuation of residents and the arrival of emergency vehicles; and (4) when wildland fire disasters strike, many structures may be involved simultaneously, quickly exceeding the capability of even the best equipped fire departments.

The following recommendations were developed by the Long County CWPP Core team as a result of surveying and assessing fuels and structures and by conducting meetings and interviews with county and city officials. A priority order was determined based on which mitigation projects would best reduce the hazard of wildfire in the assessment area.

Proposed Community Hazard and Structural Ignitability Reduction Priorities

Primary Protection for Community and Its Essential Infrastructure		
Treatment Area	Treatment Types	Treatment Method(s)
1. All Structures	Create minimum of 30-foot of defensible space**	Trim shrubs and vines to 30 feet from structures, trim overhanging limbs, replace flammable plants near homes with less flammable varieties, remove vegetation around chimneys.
2. Applicable Structures	Reduce structural ignitability**	Clean flammable vegetative material from roofs and gutters, store firewood appropriately, install skirting around raised structures, store water hoses for ready access, and replace pine straw and mulch around plantings with less flammable landscaping materials.
3. Community Clean-up Day National Wildfire Preparedness Day	Cutting, mowing, pruning**	Cut, prune, and mow vegetation in shared community spaces.
4. Driveway Access	Right of Way Clearance	Maintain vertical and horizontal clearance for emergency equipment. See that adequate lengths of culverts are installed to allow emergency vehicle access.
5. Road Access	Identify needed road improvements	As roads are upgraded, widen to minimum standards with at least 50 foot diameter cul de sacs or turn arounds.
6. Codes and Ordinances	Examine existing codes and ordinances. International Wildland Urban Interface Code IWUIC	Amend and enforce existing building codes as they relate to skirting, propane tank locations, public nuisances (trash/debris on property), Property address marking standards and other relevant concerns Review Subdivision and development ordinances for public safety concerns. Enforce uniform addressing ordinance.
7. Burn Permits	Education and Enforcement	Greater Burn Permit enforcement and education from the Georgia Forestry Commission.

Proposed Community Wildland Fuel Reduction Priorities		
Treatment Area	Treatment Types	Treatment Method(s)
1. Adjacent WUI Lands	Reduce hazardous fuels	Encourage prescribed burning for private landowners and industrial timberlands particularly adjacent to residential areas. Seek grant for prescribed burning in WUI areas. Seek grant for WUI mitigation team.
2. Railroad Corridors	Reduce hazardous fuels	Encourage railroads to better maintain their ROW eliminating brush and grass through herbicide and mowing. Maintain firebreaks along ROW adjacent to residential areas.
3. Existing Fire Lines	Reduce hazardous fuels	Clean and re-harrow existing lines.
Proposed Improved Community Wildland Fire Response Priorities		
1. Water Sources	Dry Hydrants	Inspect, maintain and improve access to existing dry hydrants. Add signage along road to mark the hydrants. Locate additional dry hydrants as needed. Locate and pre-clear helicopter dip sites.
2. Fire Stations	Equipment	Wildland hand tools. Lightweight Wildland PPE Gear.
3. Mapping	GIS	Up to date mapping of roads and water sources.
4. Road Names	Road Signage	Improved Road Signage at Crossroads. "Dead End" or "No Outlet" Tags on Road Signs.
5. Personnel	Training	Obtain Wildland Fire Suppression training for Fire Personnel. Ready Set Go Training.
**Actions to be taken by homeowners and community stakeholders		

Proposed Education and Outreach Priorities

<p>1. Conduct “How to Have a Firewise Home” Workshop for Long County Residents</p>
<p>Set up and conduct a workshop for homeowners that teach the principles of making homes and properties safe from wildfire. Topics for discussion include defensible space, landscaping, building construction, etc. Workshop will be scheduled for evenings or weekends when most homeowners are available and advertised through local media outlets. Target local schools, community groups and local senior centers.</p> <p>Distribute materials promoting firewise practices and planning through local community and governmental meetings.</p>
<p>2. Conduct “Firewise” Workshop for Community Leaders</p>
<p>Arrange for GFC Firewise program to work with local community leaders and governmental officials on the importance of “Firewise Planning” in developing ordinances and codes as the county as the need arises. Identify “Communities at Risk” within the county for possible firewise community recognition.</p>
<p>3. Spring Clean-up Event (National Wildfire Preparedness Day annually the 1st Saturday in May)</p>
<p>Consider conducting an annual clean-up event in a selected high risk community involving the Georgia Forestry Commission, Ludowici/Long County Fire Department and community residents. Set up information table with educational materials and refreshments. Initiate the event with a morning briefing by GFC Firewise coordinator and local fire officials detailing plans for the day and safety precautions. Activities to include the following:</p> <ul style="list-style-type: none"> • Clean flammable vegetative material from roofs and gutters • Trim shrubs and vines to 30 feet away from structures • Trim overhanging limbs • Clean hazardous or flammable debris from adjacent properties <p>Celebrate the work with a community cookout, with Community officials, GFC and Ludowici/Long County Fire Department discussing and commending the work accomplished.</p>
<p>4. Informational Packets</p>
<p>Develop and distribute informational packets to be distributed by realtors and insurance agents. Included in the packets are the following:</p> <ul style="list-style-type: none"> • Be Firewise Around Your Home • Firewise Guide to Landscape and Construction • Firewise Communities USA brochures • Ready Set Go materials • Fire Adapted Community information

5. Wildfire Protection Display

Create and exhibit a display for the general public at local events. Display can be independent or combined with the Georgia Forestry Commission display.

Hold Open House at individual Fire Stations to promote Community Firewise Safety and develop community support and understanding of local fire departments and current issues.

6. Media

Invite the local news media to community “Firewise” functions for news coverage and regularly submit press releases documenting wildfire risk improvements in Long County. Utilize TV, radio, cable, social media to reach new audiences.



The Georgia Forestry Commission can assist with developing a prescribed burning plan, installation of firebreaks, and can provide equipment standby and burning assistance when personnel are available. Private forestry contractors can also provide this service.



Forestry mowers and mastication equipment, such as pictured above, can be effective in reducing the understory fuel load in areas where prescribed fire may not be practical. This practice is very effective where homes back up to forested areas. Private contractors can provide this service.

VIII. ACTION PLAN

Roles and Responsibilities

The following roles and responsibilities have been developed to implement the action plan:

Role	Responsibility
Hazardous Fuels and Structural Ignitability Reduction	
Long County WUI Fire Council	Create this informal team or council comprised of residents, GFC officials, Ludowici/Long County Fire Department officials, a representative from the city and county governments along with the EMA Director for Long County. Meet periodically to review progress towards mitigation goals, appoint and delegate special activities, work with state, and local officials to assess progress and develop future goals and action plans. Work with residents to implement projects and firewise activities.
Key Messages to focus on	<ol style="list-style-type: none"> 1 Defensible Space and Firewise Landscaping 2 Debris Burning Safety 3 Firewise information for homeowners 4 Prescribed burning benefits
Communications objectives	<ol style="list-style-type: none"> 1 Create public awareness for fire danger and defensible space issues 2 Identify most significant human cause fire issues 3 Enlist public support to help prevent these causes 4 Encourage people to employ fire prevention and defensible spaces in their communities.
Target Audiences	<ol style="list-style-type: none"> 1 Homeowners 2 Forest Landowners and users 3 Civic Groups 4 School Groups 5. County and City officials
Methods	<ol style="list-style-type: none"> 1 News Releases 2 Radio and TV PSA's for area stations and cable access channels 3 Personal Contacts & Social Media 4 Key messages and prevention tips 5 Visuals such as signs, brochures and posters

Spring Clean-up Day (National Wildfire Preparedness Day – 1 st Saturday in May annually)	
Event Coordinator	Coordinate day’s events and schedule, catering for cookout, guest attendance, and moderate activities the day of the day of the event.
Event Treasurer	Collect funds from residents to cover food, equipment rentals, and supplies.
Publicity Coordinator	Advertise event through neighborhood newsletter, letters to officials, and public service announcements (PSAs) for local media outlets. Publicize post-event through local paper and radio PSAs.
Work Supervisor	Develop volunteer labor force of community residents; develop labor/advisory force from Georgia Forestry Commission, Ludowici/Long County Fire Department and Emergency Management Agency. Procure needed equipment and supplies. In cooperation with local city and county officials, develop safety protocol. Supervise work and monitor activities for safety the day of the event.

Funding Needs

The following funding is needed to implement the action plan:

Project	Estimated Cost	Potential Funding Source(s)
1. Create a minimum of 30 feet of defensible space around structures	Varies	Residents will supply labor and fund required work on their own properties.
2. Reduce structural ignitability by cleaning flammable vegetation from roofs and gutters; appropriately storing firewood, installing skirting around raised structures, storing water hoses for ready access, replacing pine needles and mulch around plantings with less flammable material.	Varies	Residents will supply labor and fund required work on their own properties.
3. Amend codes and ordinances to provide better driveway access, increased visibility of house numbers, properly stored firewood, minimum defensible space brush clearance, required Class A roofing materials and skirting around raised structures, planned maintenance of community lots.	No Cost	To be adopted by city and county governments.
4. Spring Cleanup Day	Varies	Community Business Donations.
5. Fuel Reduction Activities	\$35/acre	FEMA & USFS Grants

Assessment Strategy

To accurately assess progress and effectiveness for the action plan, the Long County WUI Fire Council will implement the following:

- Annual wildfire risk assessment will be conducted to re-assess wildfire hazards and prioritize needed actions.
- Mitigation efforts that are recurring (such as mowing, burning, and clearing of defensible space) will be incorporated into an annual renewal of the original action plan.
- Mitigation efforts that could not be funded in the requested year will be incorporated into the annual renewal of the original action plan.
- Continuing educational and outreach programs will be conducted and assessed for effectiveness. Workshops will be evaluated based on attendance and post surveys that are distributed by mail 1 month and 6 months following workshop date.
- The Long County WUI Council will publish an annual report detailing mitigation projects initiated and completed, progress for ongoing actions, funds received, funds spent, and in-kind services utilized. The report will include a “state of the community” section that critically evaluates mitigation progress and identifies areas for improvement. Recommendations will be incorporated into the annual renewal of the action plan.
- An annual survey will be distributed to residents soliciting information on individual mitigation efforts on their own property (e.g., defensible space). Responses will be tallied and reviewed at the next Long County WUI Council meeting. Needed actions will be discussed and delegated.

This plan should become a working document that is shared by local, state, and federal agencies that will use it to accomplish common goals. An agreed-upon schedule for meeting to review accomplishments, solve problems, and plan for the future should extend beyond the scope of this plan. Without this follow up this plan will have limited value

IX. MITIGATION ASSISTANCE & GRANT FUNDING

Community Protection Grant: US Forest Service sponsored prescribed fire program. Communities with “at-risk” properties that lie within ten miles of a National Forest, National Park Service or Bureau of Land Management tracts may apply with the Georgia Forestry Commission to have their land prescribe burned free-of-charge. Forest mastication, where it is practical with Georgia Forestry Commission equipment, is also available under this grant program.

FEMA Mitigation Policy MRR-2-08-01: through GEMA – Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation Program (PDM).

1. To provide technical and financial assistance to local governments to assist in the implementation of long term, cost effective hazard mitigation accomplishments.
2. This policy addresses wildfire mitigation for the purpose of reducing the threat to all-risk structures through creating defensible space, structural protection through the application of ignition resistant construction and limited hazardous fuel reduction to protect life and property.
3. With a completed registered plan (addendum to the State Plan) counties can apply for pre-mitigation funding. They will also be eligible for HMGP funding if the county is declared under a wildfire disaster.

Georgia Forestry Commission: Plowing and prescribed burning assistance, as well as forest mastication, can be obtained from the GFC as a low-cost option for mitigation efforts.

The Georgia Forestry Commission Firewise Community Mitigation Assistance Grants – Nationally recognized Firewise Communities can receive up to \$5000 grants to help address potential wildfire risk reduction projects. Grant submission can be made through local Georgia Forestry Commission offices or your Regional Wildfire Prevention Specialist.

The International Association of Fire Chiefs (IAFC) and American International Group, Inc. (AIG) offer grants to assist local fire departments in establishing or enhancing their community fuels mitigation programs while educating members of the community about community wildfire readiness and encouraging personal action.

X. GLOSSARY

Community-At-Risk – A group of two or more structures whose proximity to forested or wildland areas places homes and residents at some degree of risk.

Critical Facilities – Buildings, structures or other parts of the community infrastructure that require special protection from an approaching wildfire.

CWPP – The Community Wildfire Protection Plan.

Defensible Space – The immediate landscaped area around a structure (usually a minimum of 30 ft.) kept “lean, clean and green” to prevent an approaching wildfire from igniting the structure.

Dry Hydrant - A non-pressurized pipe system permanently installed in existing lakes, ponds and streams that provides a suction supply of water to a fire department tank truck.

FEMA – The Federal Emergency Management Agency whose mission is to support our citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards.

Fire Adapted Community – A community fully prepared for its wildfire risk by taking actions to address safety, homes, neighborhoods, businesses and infrastructure, forest, parks, open spaces, and other community assets.

Firewise Program – A national initiative with a purpose to reduce structural losses from wildland fires.

Firewise Community/USA – A national recognition program for communities that take action to protect themselves from wildland fire. To qualify a community must have a wildfire risk assessment by the Georgia Forestry Commission, develop a mitigation action plan, have an annual firewise mitigation/education event, have dedicated firewise leadership, and complete the certification application.

Fuels – All combustible materials within the wildland/urban interface or intermix including, but not limited to, vegetation and structures.

Fuel Modification – Any manipulation or removal of fuels to reduce the likelihood of ignition or the resistance to fire control.

Hazard & Wildfire Risk Assessment – An evaluation to determine an area’s (community’s) potential to be impacted by an approaching wildland fire.

Healthy Forests Initiative - Launched in August 2002 by President Bush (following passage of the Healthy Forests Restoration Act by Congress) with the intent to reduce the risks severe wildfires pose to people, communities, and the environment.

Home Ignition Zone (Structure Ignition Zone) - *Treatment area for wildfire protection. The “zone” includes the structure(s) and their immediate surroundings from 0-200 ft.*

Mitigation – *An action that moderates the severity of a fire hazard or risk.*

National Fire Plan – *National initiative, passed by Congress in the year 2000, following a landmark wildland fire season, with the intent of actively responding to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future.*

National Fire Protection Association (NFPA) - *An international nonprofit organization established in 1896, whose mission is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education.*

National Wildfire Preparedness Day – *Started in 2014 by the National Fire Protection Association as a day for communities to work together to prepare for the approaching wildfire season. It is held annually on the first Saturday in May.*

Prescribed Burning (prescribed fire) –*The use of planned fire that is deliberately set under specific fuel and weather condition to accomplish a variety of management objectives and is under control until it burns out or is extinguished.*

Ready, Set, Go - *A program fire services use to help homeowners understand wildfire preparedness, awareness, and planning procedures for evacuation.*

Southern Group of State Foresters – *Organization whose members are the agency heads of the forestry agencies of the 13 southern states, Puerto Rico and the Virgin Islands.*

Stakeholders– *Individuals, groups, organizations, businesses or others who have an interest in wildland fire protection and may wish to review and/or contribute to the CWPP content.*

Wildfire or Wildland Fire – *An unplanned and uncontrolled fire spreading through vegetative fuels.*

Wildland/Urban Interface - *The presence of structures in locations in which the authority having jurisdiction (AHJ) determines that topographical features, vegetation, fuel types, local weather conditions and prevailing winds result in the potential for ignition of the structures within the area from flames and firebrands from a wildland fire (NFPA 1144, 2008).*

XI. SOURCES OF INFORMATION

Publications/Brochures/Websites:

- FIREWISE materials can be ordered at www.firewise.org
- Georgia Forestry Commission www.georgiafirewise.org
- Examples of successful wildfire mitigation programs can be viewed at the website for National Database of State and Local wildfire Hazard Mitigation Programs sponsored by the U.S. Forest Service and the Southern Group of State Foresters www.wildfireprograms.com
- Information about a variety of interface issues (including wildfire) can be found at the USFS website for Interface South: www.interfacesouth.org
- Information on codes and standards for emergency services including wildfire can be found at www.nfpa.org
- Information on FEMA Assistance to Firefighters Grants (AFG) can be found at www.firegrantsupport.com
- Information on National Fire Plan grants can be found at <http://www.federalgrantswire.com/national-fire-plan--rural-fire-assistance.html>
- Southern Wildfire Risk Assessment website SouthWRAP www.SouthernWildfireRisk.com
- Fire Adapted Communities www.fireadapted.org
- Ready, Set, Go www.wildlandfirersg.org
- National Wildfire Preparedness Day www.wildfireprepreday.org

Appended Documents:

Long County Southern Wildfire Risk Assessment Summary Report (SWRA)

Long County Wildfire assessment scoresheets

All files that make up this plan are available in an electronic format from the Georgia Forestry Commission.



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