The mission of the CSFS is to achieve stewardship of Colorado’s diverse forest environments for the benefit of present and future generations.

- Housed in the Warner College of Natural Resources at Colorado State University

- 19 districts and field offices across the state

- Assist private landowners by providing forest management and fuels mitigation education and technical assistance

- The big picture: managing our forests for the long-term
Fire Adapted Communities is an umbrella concept

There are a variety of programs and resources for homeowners and communities

Becoming fire-adapted is a shared responsibility

Protecting a home and community from wildfire is not a one-time effort; it is a process and requires ongoing participation and maintenance
Education is Key

- The big picture
- Fire ecology and forest management
- Defensible space
- Structure ignitability
- Landscape-scale treatments
Fire Behavior

- Oxygen
- Heat
- Fuel

Weather

Fuel

Topography
How Does Wildfire Spread?

• Three ways:
  • Direct flame contact
  • Radiated heat
  • Flying firebrands
    • Fire can create its own weather conditions, winds carry embers
How Does Wildfire Spread?

• **Vertical/Ladder Fuels**
  – Shrubs and low branches that allow fire to climb to the tree canopy

• **Surface Fuels**
  – Logs, branches, slash, wood chips, pine needles, grasses

• **Crown Fuels**
  – Tree canopies burn quickly and intensely
The Plains

- Surface fuels
- Fine, fast-burning fuels
The Goal

• Remove continuous and ladder fuels!
Remove Fuels From:

- Around the home
- Parks, open spaces
- Drainage ditches
- Roadsides
- Any place where people and values are at risk
• Any area where structures and other human developments meet or intermingle with wildland vegetative fuels

• The WUI in Colorado is expected to increase by 300% to almost 2.2M acres by 2030

• Parcels owned are becoming smaller and smaller

• Fire suppression for the past 100 years has created very dense lands
7 Steps to Reduce Risk

- Defensible space
- Firewise construction
- Trees and shrubs
- Access
- Water supply
- Interior safety
- What to do when
Defensible Space

- Helps slow the spread of wildfire to a house
- Could prevent a house fire from spreading to the plains
- Gives home a fighting chance during wildfire
- Increases firefighter safety
- Access to property

Before

![Before Image](image1)

After

![After Image](image2)
Defensible Space

- Defensible space is the natural and landscaped area around the home or structure that has been modified to reduce wildfire hazard.
Zone 1

- Extend out to 15-30 feet
- Remove as much vegetation as possible
- Install nonflammable ground cover within the first 5 feet of home
- Widely spaced, low-growing shrubs are okay
- Don’t plant under windows! Don’t plant junipers
- Prune and maintain shrubs
- Irrigate grasses and vegetation
- Mow grasses to 6 inches or less in height
- Ideally, no trees in zone 1
- Remove debris from gutters/roof
Zone 2

- Designed to lessen fire intensity approaching your home
- Extend to at least 100 feet
- Work with adjacent property owners in necessary
- Firewood piles/propane tanks located here
- Use roads or other barriers as fuelbreaks
- 10 feet between trees and other vegetation
- Prune trees and vegetation
- Mow grasses to 6 inches in height or less
- Decorative landscaping (rocks, stones, etc.)
Firewise Construction

• Reduce the ignitability of home

• Many homes are lost because of embers

• Roofs- Largest surface area on the house
  – NO wood shake shingle roofs
  – Asphalt shingles, metal sheets and shingles, clay tile, concrete and slate shingles are acceptable
Firewise Construction

- Decks- highly combustible
  - The shape traps hot gasses, don’t store firewood under decks, screen in decks

- Exterior walls- radiant heat will affect walls first

- Windows- one of the weakest parts of a house

- Soffits, eaves and vents can trap embers!
  - Think about creating a “waterproof house”
Trees and Shrubs

- Short agricultural and improved pasture grasses burn fast and move quickly.
- Taller, unmanaged grass prairies have a heavier build of fuels and can produce embers.
- Riparian fuels burn for short durations and low intensities, unless there is a build up dry, dead fuels.
- Sagebrush fuels burn at a high intensity and have long flame lengths; fire can move quickly and produce embers.
- Trees can be ladder fuels.
Access

• Street Signs and Addresses
  • Printed at least 4 inches tall
  • Contrasted color background (black and white)
  • Visible from all directions 150 feet
  • Fire resistant material
  • If house is set back from street-address much be posted on street
Access

• Every minute counts!
• Street signs clearly labeled
• Single lane roads need frequent turnouts for cars and fire trucks to pass
• At least 2 primary roads in and out
• 2 lane traffic ideal- each lane 10 feet wide
• Curves wide enough for fire engines to turn
• Driveways- turn around areas or T-shaped
Water Supply

- Community water system
- Your emergency supply - a minimum 2,500 gallons
- Fire department access to water supply
  - Clearly labeled
  - Dry hydrants
  - Pools, hot tubs, ponds
Water Supply

Dry Hydrants
• Pump operated
• Non-pressurized
• Inexpensive
• Consistent water source
• Minimal maintenance
Interior Safety

- Residential sprinkler systems
- Smoke detectors
- Portable fire extinguishers
- Plan for escape- Stop, drop and roll
- Fire prevention checklist
- Post emergency numbers
- Keep doors, hallways clear of obstructions
- Don’t overload electrical outlets
- No exposed wires
- Be careful with portable heaters
- Clean chimneys yearly
- Don’t leave unattended food on stove
What to do When

• Emergency Wildfire Survival Checklist
•Preparing to evacuate
  • Activities outside your home
    • Cover windows attic openings, etc.
    • Fill trashcans, buckets with water for firefighters
  • Precautions inside your home
    • If time, place valuables inside car
    • Close all doors and windows
    • Remove curtains/drapes
  • Prepare a pack list
  • Have a plan if you have 1 day, 1 hour, or 15 minutes
Spread the Word

- Share this information with your neighbors, friends, new residents
- Everyone living in the WUI needs to know!
- Work together
- Risk is a reduced on a large scale
CSFS Resources

- Technical assistance and education to landowners and communities
- CWPP development and implementation assistance
- Firewise Communities/USA assistance
- Publications for homeowners
- Colorado Wildfire Risk Assessment Portal (CO-WRAP)
- Natural Resource Grants Database
Do You Have a CWPP?

The CSFS website has all 211 CWPPs ready to download!

• http://csfs.colostate.edu/pages/CommunityWildfireProtectionPlans.html
Healthy Forest Restoration Act (HFRA) 2003

- Authorized and defined in Title I of the HFRA
- Renewed emphasis on community planning
- Opportunity for communities to work with federal agencies and other stakeholders to identify fuels reduction projects
- Requires the CSFS to provide minimum standards
SB09-001 – Community Wildfire Protection Plans

• Requires counties to identify wildfire hazard areas in unincorporated (non-municipality) areas by January 1, 2011
• Within 180 days of identification, counties must develop a CWPP
• To date, there are 45 county-wide CWPPs
CWPP Development

Required Participants

• At a minimum, the CSFS, the local government and fire authority

• Other stakeholders in the area

• Community involvement should occur at the beginning and be documented in the plan
CWPP Development

Plan Components

• The wildland-urban interface boundary defined on a map

• Narrative that identifies the community values and fuel hazards

• The communities plan for when a wildfire occurs

• An implementation plan that identifies high priority fuels treatments
Firewise Communities/USA

• National recognition program
• A tool to educate your neighbors about Firewise practices
• Provides the community with metal Firewise signs, and other resources
• Benefits including grant eligibility, community-building, long-term planning, publicity, etc.
• www.firewise.org
Firewise Communities/USA

• **Four requirements to become recognized:**
  – Start at Firewise Board
  – Spend $2 per capita on Firewise
  – Hold a Firewise event once per year
  – Complete a wildfire risk assessment and action plan
  – Fill out an application at www.firewise.org
CSFS Publications

- All CSFS publications are available to download on website
- Print copies are available
- Examples include:
  - Defensible Space Quick Guide
  - Firewise Construction
  - CWPP Guidelines
  - Fuelbreak Guidelines
• Colorado Wildfire Risk Assessment Portal
• www.coloradowildfirerisk.com
• Planning tool for communities
Funding Opportunities

CSFS Natural Resources Grants and Assistance Database

http://nrdb.csfs.colostate.edu/
Other Resources

Wildfire Mitigation Measures Subtraction

• Renewed until 2024
• Homeowners can subtract mitigation costs up to $2,500
• Required to provide supporting documentation (receipts, CWPP, proof of ownership)
• Required to be under a CWPP
Thank you!