RIVA CHASE

Community Wildfire Mitigation Plan

Prepared By

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Riva Chase Community Goals

- Decrease the Risk of a Wildfire
- Decrease Human Risk During a Wildfire
- Promote Healthy Forest conditions
- Maintain and Enhance the Natural Beauty and Aesthetics of Riva Chase

Reducing the Risk of Wildfires in Riva Chase

- **Reduce Fuels That Feed a Fire**
  - Ladder fuels – small and dense saplings
    - Send fires up into crowns of big trees (fire ladders)
  - Duff – grass, pine cones, etc. on ground
    - Brush fires that carry fire between separated trees
  - Eliminate high intensity fuels
- **Reduce Stand Density**
  - Distance between crowns 10 to 20 feet
    - Distance depends on the steepness of the topography
  - Remove dead and dying trees
- **Community Approach**
  - Single home mitigation can be overwhelmed by a “wall of fire”
- **Create Fire Breaks**
  - Well spaced larger trees

Reduce Riva Chase's Human Risk During a Wildfire
- Critical Locations for Mitigation -

1. **Evacuation Routes and Entry Roads for Firefighters**
2. **Water Supplies for Fighting Fires**
3. **Near High Risk Homes**
   - North side of Chippewa and Anasazi
   - Valley near sharp curves on Eastwood (a fire chimney)
4. **Create Access Paths in Forests for Firefighters**
   - Build wildfire access road on north edge of District
5. **Protect Infrastructure for Rapid Recovery**
   - Roads, gas, electrical, cable & phone

Wildfire Risk Topics

Topics

- Wildfire Causes
- Wildfire Risk Factors
- Conditions in Riva Chase

Elements Required for a Wildfire

Remedies:

1. **Fuel** to Burn → Reduce Risk by Fuel Mitigation
2. **Wind** to Fan and Spread Fire → Not Controllable
   - Fires create their own weather
3. **Spark** → Mostly Not Manageable
   - Lightening
   - Sparking power lines
     - 2011's Grapevine Road Wildfire
   - Careless people

Primary Focus Needs To Be on Responsibly Reducing Fuels

Why a Fuel Problem in the Foothills

Same Location And Perspective

Our Forests Have Become Overgrown in the Last 100 Years

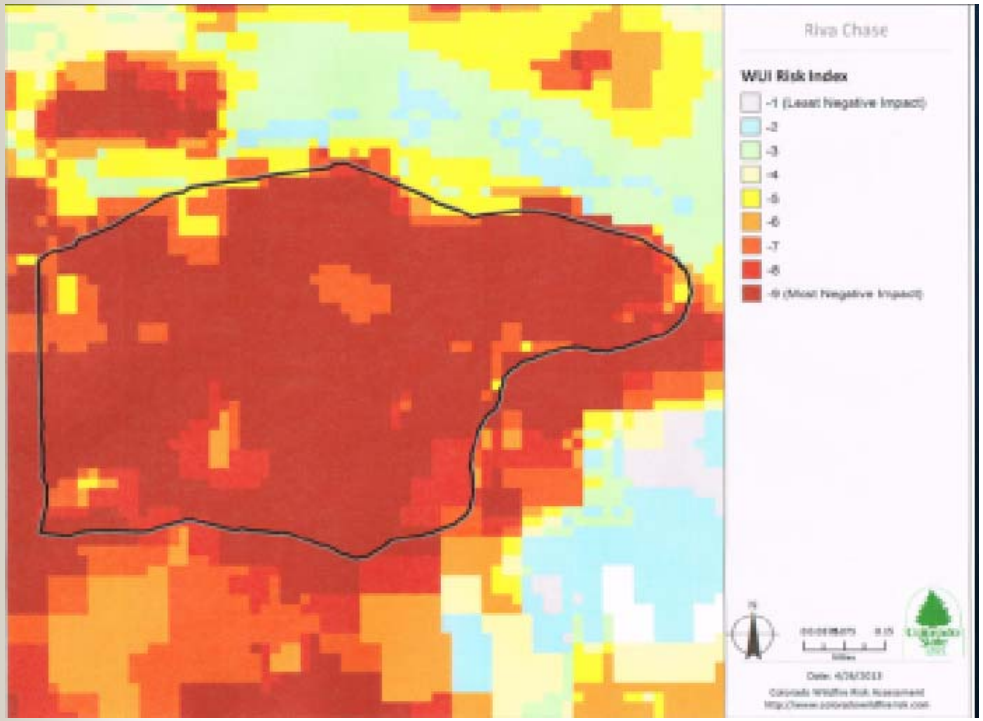
Wildfire Risk Factors in Riva Chase

Risk Factors		Situation in Riva Chase
■ Fuel Supply	→	Significant Fuel Sources
▪ Density of trees		Generally dense
▪ Slash		Generally minimal
▪ Ladder fuels		Frequently present
▪ Dryness		Varies year to year
■ Topography	→	Serious
▪ Steep slope – greater risk		Some places extremely steep
▪ Valleys create fire chimneys		Near Eastwood's sharp curves
■ Protection Around Homes	→	Varies but often minimal
▪ Trees close to homes, etc.		Commonplace

Thin Forests, Remove Ladder Fuels & Create Defensible Spaces* Around Homes

* See: CSU – Protecting Your Home from Wildfire

Riva Chase Wild Fire Risk Modeling



Riva Chase Wildfire Risk Assessment Modeling

Risk Model Elements

- **Estimated Speed Fire Across Terrain**
  In most of Riva Chase fire will spread at up to ½ Mile per hour (depending on wind)

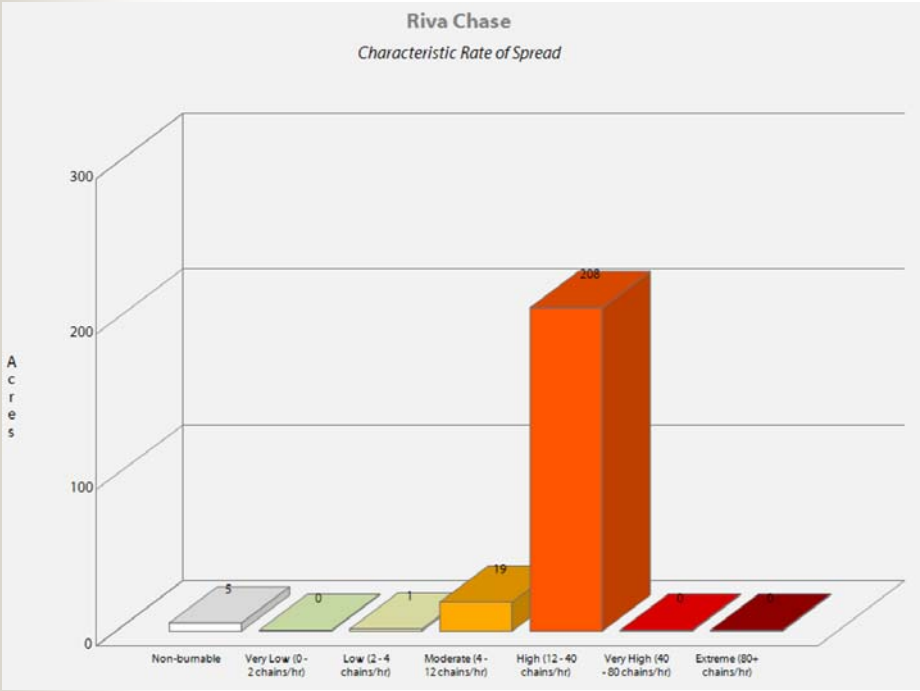
- **Estimated Flame Length**
  Most of Riva Chase 8 to 25 ft long

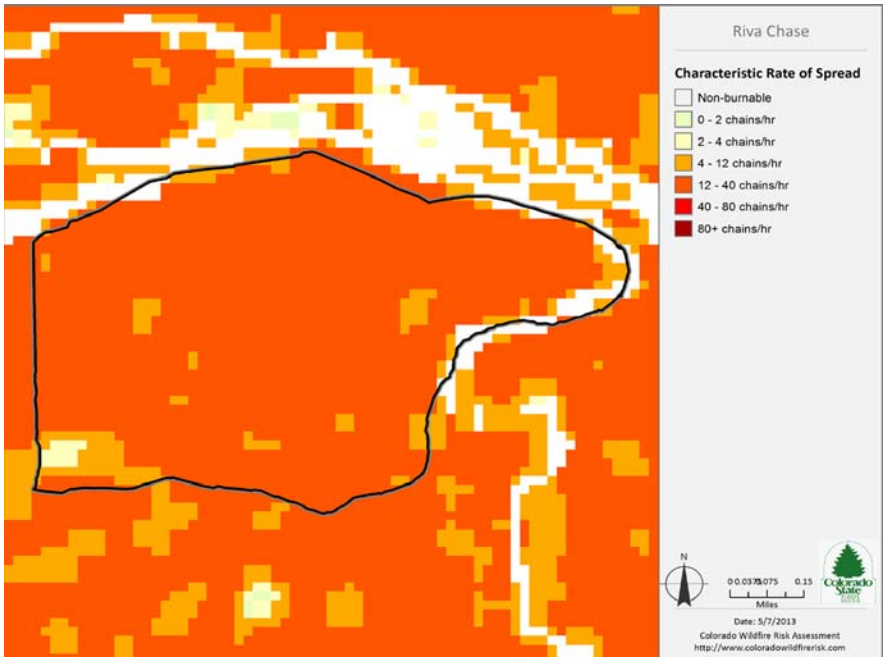
- **Factors Affecting Both Risk Elements:**
  - **Fuels** (only controllable element)
  - Topography
  - Weather (wind speed)

Source: Colorado Wildfire Risk Assessment Portal

Riva Chase Speed of Wildfire Movement Detail

Most of Riva Chase at ½ Mile per Hour





Faster with Strong Wind Conditions

1 chain = 66 feet

Fire Mitigation Priorities (in Priority Order)

1. **Secure Evacuation Routes**
   - Dense trees along road edges can block evacuation
     - Eastwood and the north end of Forest Hills
   - Fire chimney risk at Eastwood's sharp curve
     - Generate intense heat and block road
2. **Secure Water Supply for Fire Fighting**
   - Thicket of saplings by water tank a problem
3. **Thin Steep Slope on North Side of Anasazi / Chippewa**
   - Homes at top could have only minutes to evacuate.
   - Fire there could quickly spread to the rest of Riva Chase (block Forest Hills Drive Evacuation).
4. **Educate Community on Dangers and Counter-Measures**
   - Know evacuation routes – priority is to head north towards I-70 and then East
     - Shingle Creek / Grapevine exit riskier – could be blocked by poor mitigation on the other side
   - Mitigation must be a community effort
     - Once a fire gets going it can overwhelm neighboring well mitigated properties [the Wall of Fire]

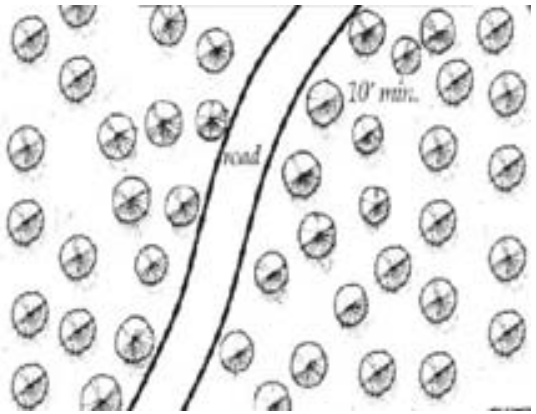
Fire Mitigation – Steps to Address

1. Evacuation Routes
   - Volunteers thinning trees along Eastwood
     - About 1/3rd done – Need to continue with FHMD and HOA support and encouragement
     - Need to extend volunteer thinning to north end of Forest Hills
2. Secure Water Supply for Fire Fighting
   - Volunteers have thinned around the tank – about ½ completed.
3. Steep Slope on North Side of Anasazi / Chippewa Needs Thinning
   - Too steep for volunteers – need professional help.
     - Very expensive but hopefully there will be state aid
     - Need skid trail along bottom slope – for thinning and fire fighter access.
4. Educate Community on Dangers and Counter-Measures
   - Jeffco Sheriff's evacuation drill a good start.
   - Jeffco or State need to encourage mitigation other side of Shingle Creek / Grapevine
     - Electric / automatic gates on Shingle Creek back gates could speed evacuation
   - Need to involve community and encourage reasonable mitigation on private property
     - Community meetings?

Responsible Mitigation

Create "*Shaded* Fire Breaks" NOT Clear Cutting

- **"Shaded" means Crowns Separated by 10 to 20 Feet**
  - Distance depends on slope
- **Save "Dominant" and "Co-Dominant trees**
  - Remove the surrounding saplings
  - Limb the remaining trees to 8 - 10 feet off ground
  - Remove slash and Duff
  - Have professional forester advise on proper thinning
- **Encourages Healthy Forests Like 100 Years Ago**
- **Maintains Riva's Beauty and Mountain Ambiance**
- **Responsible Mitigation Helps Prevent Erosion**
  - Tree roots hold the soil



Shaded Fire Break

Conclusions

- **Riva Chase Located in the Wildland – Urban Interface**
  - Beautiful and natural but also real fire risks
  - Well planned community makes risks manageable
    - Good roads, close to I-70 and extensive network of fire hydrants
    - Value of private homes per Jeffco Assessor exceeds $100 million
- **Riva Chase's Needs to Take Action**
  - Sensibly reduce fuels on both public and private land
    - Community effort needed as individual mitigation insufficient
    - Prioritize the high danger areas
      - Evacuation routes and north edge of the community
  - Plan evacuation routes and procedures
  - Work together as a Community.