



Echo Canyon Ranch

Community Wildfire Protection Plan

October 2023

Approvals



Mercedes Siegle-Gaither, Supervisory Forester
Colorado State Forest Service

12/8/23
Date



Robert Bertram, Fire Chief
Pagosa Springs Fire Protection District

12/6/23
Date



Mike Le Roux, Sheriff
Archuleta County Sheriff's Office

12/5/23
Date



Evelyn Tennyson, ECRA President
Echo Canyon Ranch Association

12-4-23
Date



Josh Peck, Pagosa District Ranger
San Juan National Forest

12-4-2023
Date

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Echo Canyon Ranch Community Wildfire Protection Plan Update

Introduction

The Echo Canyon Ranch (ECR) subdivision lies in an incredibly beautiful part of Pagosa Springs, Colorado. The Board of Directors of the Echo Canyon Ranch Association (ECRA) (homeowners association) recognizes that the subdivision is at risk from wildfires moving into, or originating within, the subdivision. An effort to educate property owners about fire risk and to mitigate around structures wildfire adaptation efforts have been underway since 2012. As stewards of the land, residents are aware of the risk of wildfire and many have voluntarily carried out mitigation activities on their property. ECR has a total burn ban throughout the entire community. Echo Canyon Ranch's original Community Wildfire Protection Plan (CWPP) was completed in 2013.

Updating the Echo Canyon Ranch 2013 CWPP is an important link in providing comprehensive wildfire mitigation and preparedness across the local landscape. Completion and approval of this document is an important step in protecting forest and property values not only in ECR and adjacent subdivisions, but also across the broader landscape, including the forests of the public lands that are contiguous Echo Lake State Recreation Area and San Juan National Forest (Table 1, Figure 1).

Echo Canyon Ranch has 24 lots: 8 full-time residences, 13 part-time residences, and 3 vacant lots (Figure 1) with 14 fulltime residents and 23 part-times residents.

Table 1: Archuleta County Land Ownership	
Type of Ownership	Size (acres)
San Juan National Forest	418,565
Private	298,557
Southern Ute Indian Tribe	130,456
State of Colorado	7,714
Bureau of Land Management	5,837
Total	861,129

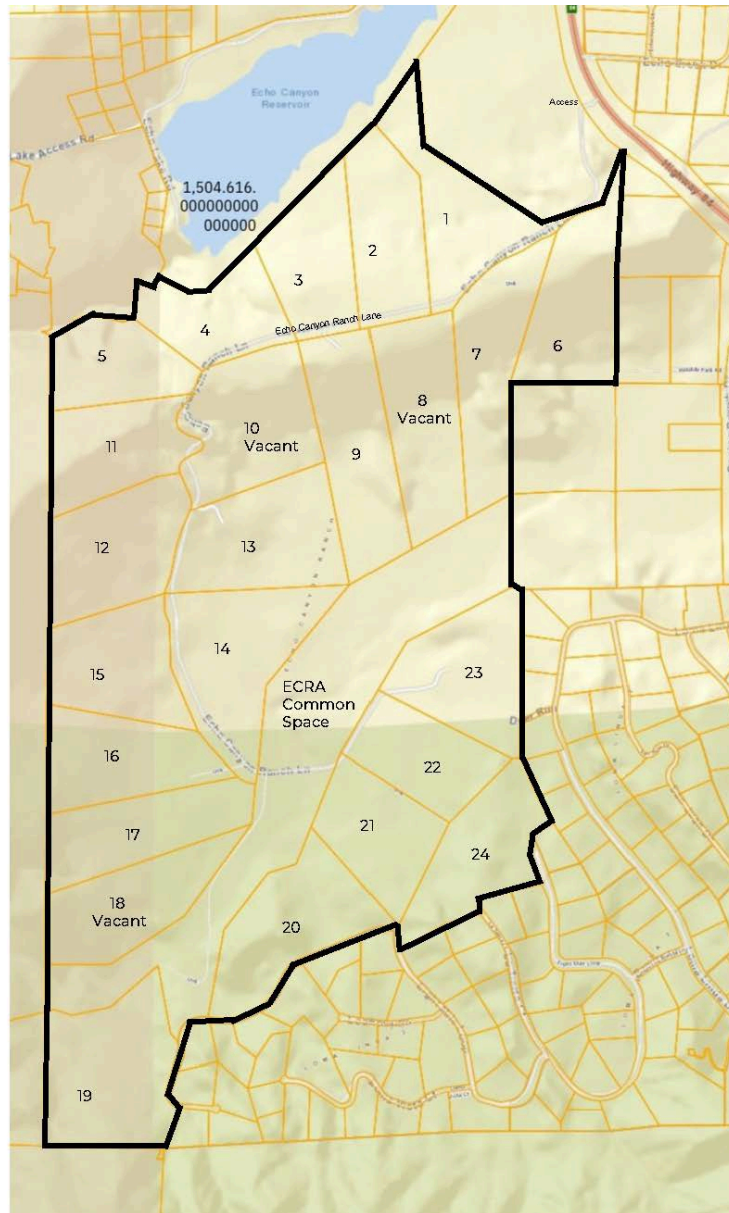


Figure 1: Echo Canyon Ranch boundaries, lot locations, and lot status

Location

Echo Canyon Ranch (ECR) is located in beautiful Archuleta County, five miles south of Pagosa Springs with access from US Highway 84 (Figure 2). The subdivision entrance is at 37° 12' 28" N, 106° 59' 03" W. ECR is located in portions of Sections 5, 6, 7, 8 and 18 of Township 34 N, Range 1 W; and Sections 12 and 13 of Township 34 N, Range 1½ W. The elevation within the community ranges from approximately 7,145 feet to 7,500 feet. The primary evacuation route is through the main entrance, with an alternative route through Parcel 23 and Loma Linda.

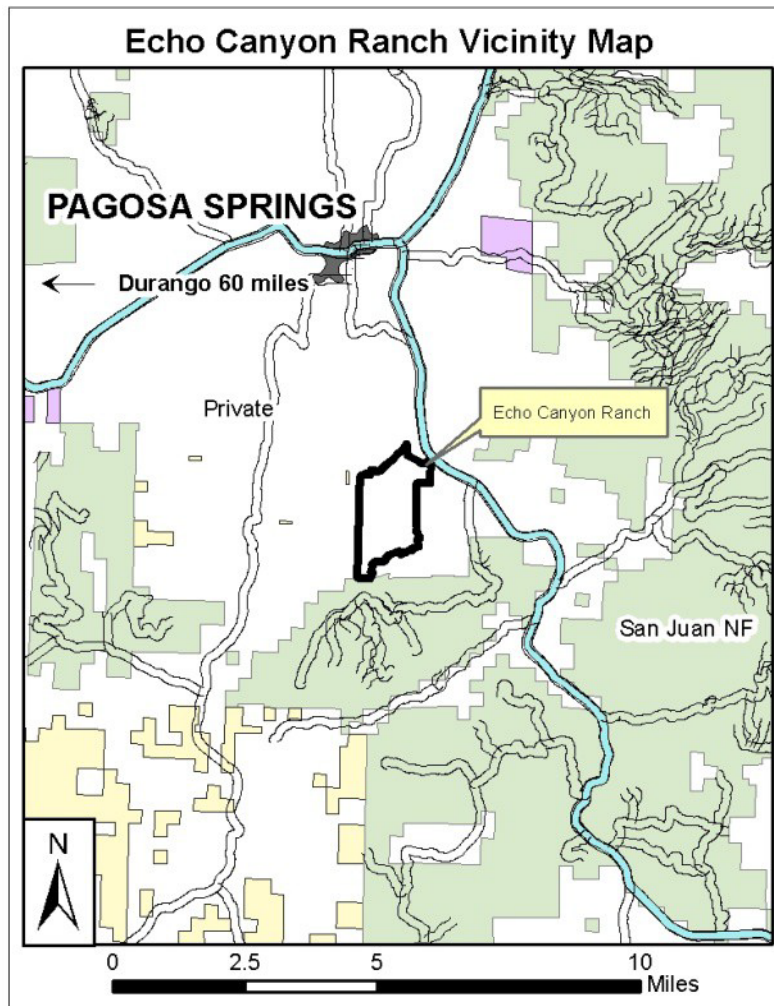


Figure 2: Location and Land Ownership Map

ECR is a 1,376-acre community consisting of 24 parcels ranging in size from 37.46 to 66.57 acres and 183.5 acres of open space held in common. Since the March 2013 Echo Canyon Ranch CWPP approval, an additional 3 parcels (21 of 24 total) have been developed and 3 parcels (8, 10 & 18) were individually purchased in 2021 and remain vacant (Figure 1). ECR has had 14 new parcel owners since our 2013 CWPP – 9 of these being from 2020 to present, which indicates a high turnover of homeowners in the past 3 years. The majority of owners are part-time or have not yet built (16/24 = 67%) with an aging population of full-time residents. These demographics, along with Covid restrictions, impact the ability of HOA work-days and meeting attendance. At the beginning of Covid-19, meetings were held via video and phone-in attendance only. Since April 2022, all meetings have been held in-person, with options of video and phone-in participation.

Echo Canyon Ranch is bounded by Echo Lake State Recreation Area to the northwest and shares a small border with San Juan National Forest on the southwest corner. To the east of ECR is Loma Linda, a Firewise USA® recognized community since 2017. As neighbors, ECR and Loma Linda share egress gate and road information.

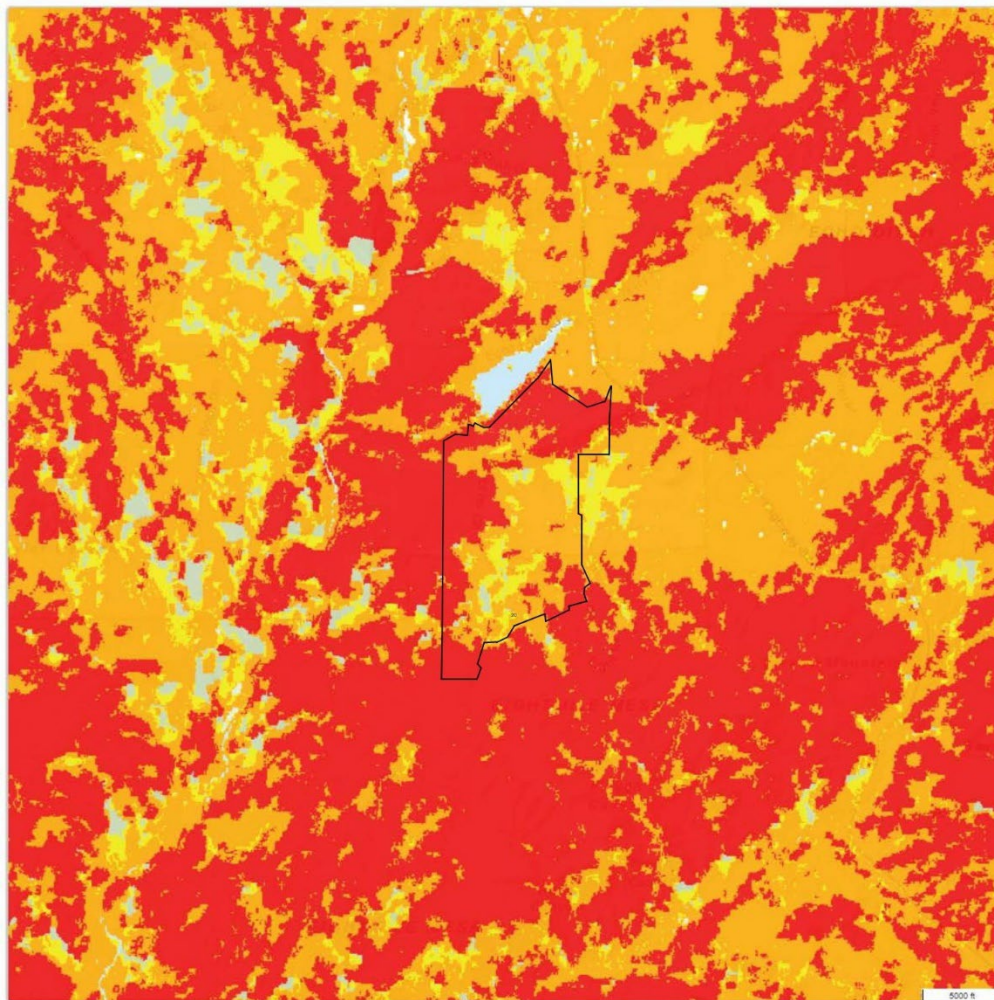
Fire History

Between 1970 and 2010, at least 1,256 fires have occurred in Archuleta County. More than half of these Fires, over 740, have occurred in the last 20 years. Although the majority of them were caused by lightning, it is important to note that over 40% of the fires on federally managed lands in Archuleta County were caused by humans. During that 20- year time frame, the number of fires per year ranged from a low of 8 in 1999 to a high of 81 in 2003. The largest fire in recent history occurred in 2013. The West Fork Fire, located 14 miles northeast of Pagosa Springs, was ignited by a lightning strike on June 5, 2013 and burned 58,600 acres. Another lightning strike ignited the Windy Pass Fire, and yet another lightning strike ignited the neighboring Papoose Fire, creating the West Fork Fire Complex. The high winds and inaccessible terrain made it extremely challenging for firefighters and the fires, totaling 109,049 acres, were not fully contained until July 15, 2013. Thankfully, the West Fork Fire Complex did not take any lives or damage structures, but it does show how easily embers in the wilderness and WUI can quickly move across regions (Figure 3).

Alpine Cascade Ranch, adjacent to ECR on the west side, has put out 30 lightning-caused wildfires on the east side of the San Juan River since 1991, according to Ranch Manager, J.R. Ford, indicating that this area is prone to lightning strikes. There is also evidence of fire scars on the north side of the ridge down to Echo Canyon Reservoir. Scott Wagner (USFS) estimates that a 10 acre + fire occurred in this area approximately 40-50 years ago.

Since the 2013 CWPP, Archuleta County has experienced six substantial fires totaling 61,832 acres burned, as well as numerous small fires mostly caused by lightning (Table 2). While none of these fires have occurred in ECR, the prevalence wildfire in the region makes updating the ECR CWPP and essential step in preparing for wildfire when it does strike.

Table 2: Significant Archuleta County Wildfires Over Twenty One-Year Period (2002-2023)		
Date	Fire Name	Size (acres)
2002	Missionary Ridge	73,000
2003	Bolt Fire	2,160
2003	Devil Creek Fire	234
2012	Little Sand Fire	24,500
2013	West Fork Fire (cross-county fire)	58,600
2017	Eight Four Two Fire	1,000
2018	Spruce Fire (close vicinity to ECR)	10
2018	Horse Fire	700
2022	Plumtaw Fire	735
2023	Chris Mountain Fire	511
2023	Coal Mine Fire	286
2023	Quartz Ridge Fire	2,850
2023	Bear Creek Fire	1,093



Legend

<https://co-pub.coloradoforestatlas.org>

Fire Intensity Scale

- Lowest Intensity
- Low Intensity
- Moderate Intensity
- High Intensity
- Highest Intensity

Figure 3: CSFS Fire Intensity

CWPP Authorization and Process

ECRA's current FireWise (FW) Committee is comprised of 3 Wildfire Adapted Partnership (WAP) - trained Ambassadors who assumed FW responsibilities in August 2018. Our contact information and purpose(s) are included in the ECR New Owner informational letter, and are included in email messages as well as written correspondence. The ECR Ambassadors regularly attend WAP meetings and share/receive information with owners including assessment and grant availability. They monitor and share current fire-related articles found in local/state/national publications. The FW Committee also receives NFPA information by email and research their site for pertinent materials and updates that are shared with all ECR owners.

ECRA FireWise Committee emails are routinely sent to all owners with education information, updates, grant opportunities, annual regulation reminders (i.e. ECR's burn ban), news articles and events. Written and/or verbal ECRA FireWise Committee reports/presentations are delivered at each Board of Director (4/year) and Annual meetings. When the current FW team took over, we developed an email address used exclusively for wildfire-related communication. ECRA includes a Road Committee, which maintains the quality of our asphalt road and the surrounding roadside. In July 2023, ECRA reached out to Wildfire Adapted Partnership with assistance in updating the previous CWPP.

Partners in this CWPP Update

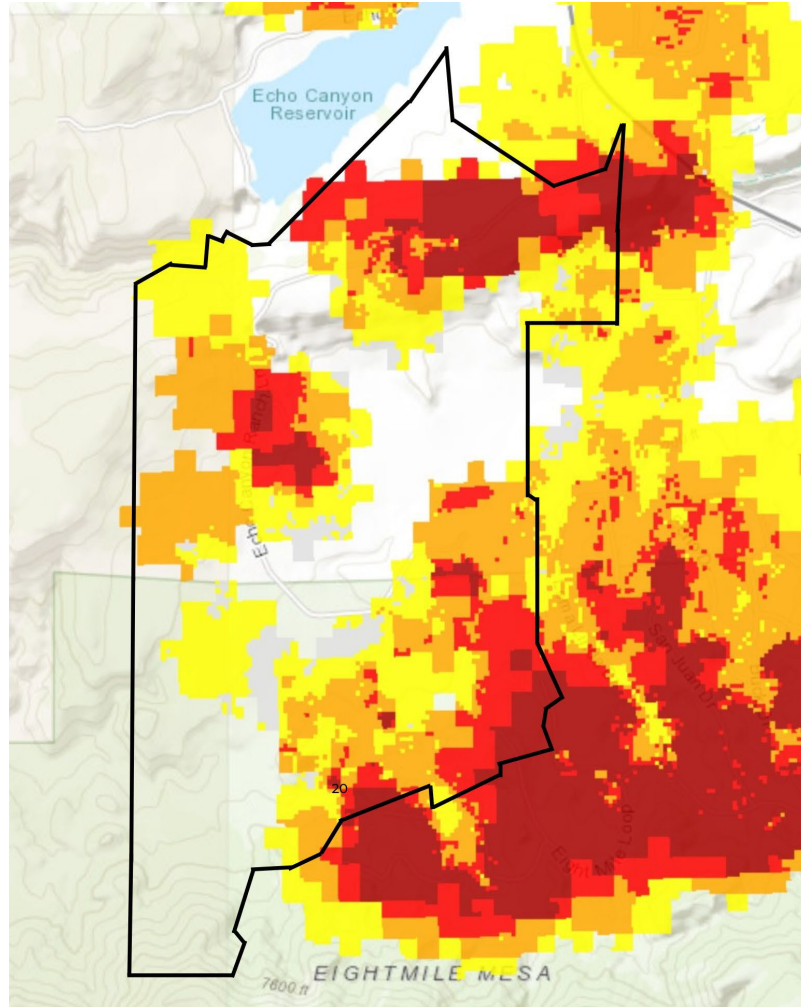
- Echo Canyon Ranch HOA
- Wildfire Adapted Partnership, formerly FireWise of Southwest Colorado (2003 – 2018)
- Pagosa Fire Protection District
- Colorado State Forest Service
- Archuleta County Sheriff's Office
- San Juan National Forest – Pagosa Ranger District

Wildland Urban Interface

The WUI area is based on the area centered on the subdivision likely to burn in high fire danger conditions during a single burning period if pushed by 20-mph winds. HFRA defines Wildland Urban Interface within the legislation:

...areas extending 1½ miles from the boundary of a community-at-risk defined by the USFS and BLM inventory and which lack emergency access routes; are in poor proximity to water sources; have areas with steep slopes; have high risk vegetation types; and/or that are in close proximity to fuels on public lands.

Based on the WUI definition, 22 of the 24 lots in ECR are considered in the WUI (Figure 4).



Legend

<https://co-pro.coloradoforestatlas.org>

Wildland Urban Interface Risk

- Lowest Risk
- Low Risk
- Moderate Risk
- High Risk
- Highest Risk

Figure 4: ECR Wildland Urban Interface Risk Area

Structural and wildland fire protection is provided by the Pagosa Fire Protection District, and both structural and wildland fire engines resources are available. The PFPD maintains 7 fire stations and all stations have equipped fire engines. Station 1, on North Pagosa Blvd. is the only manned station. All others are staging areas for volunteers. Station 3 is the nearest station for Echo Canyon Ranch. Echo Canyon Reservoir, which covers 211 acre feet has a with a depth of 50 feet, borders ECR to the north. In the event of a wildfire, helicopters and fire tenders would fill tanks with water from this nearby source, and would have the ability to extinguish flames directly, though approval from local government is required. ECR has 13 hydrants, the locations of which can be seen in Figure 5.

Echo Canyon Ranch Fire Hydrant Locations Update 2023 ECR CWPP

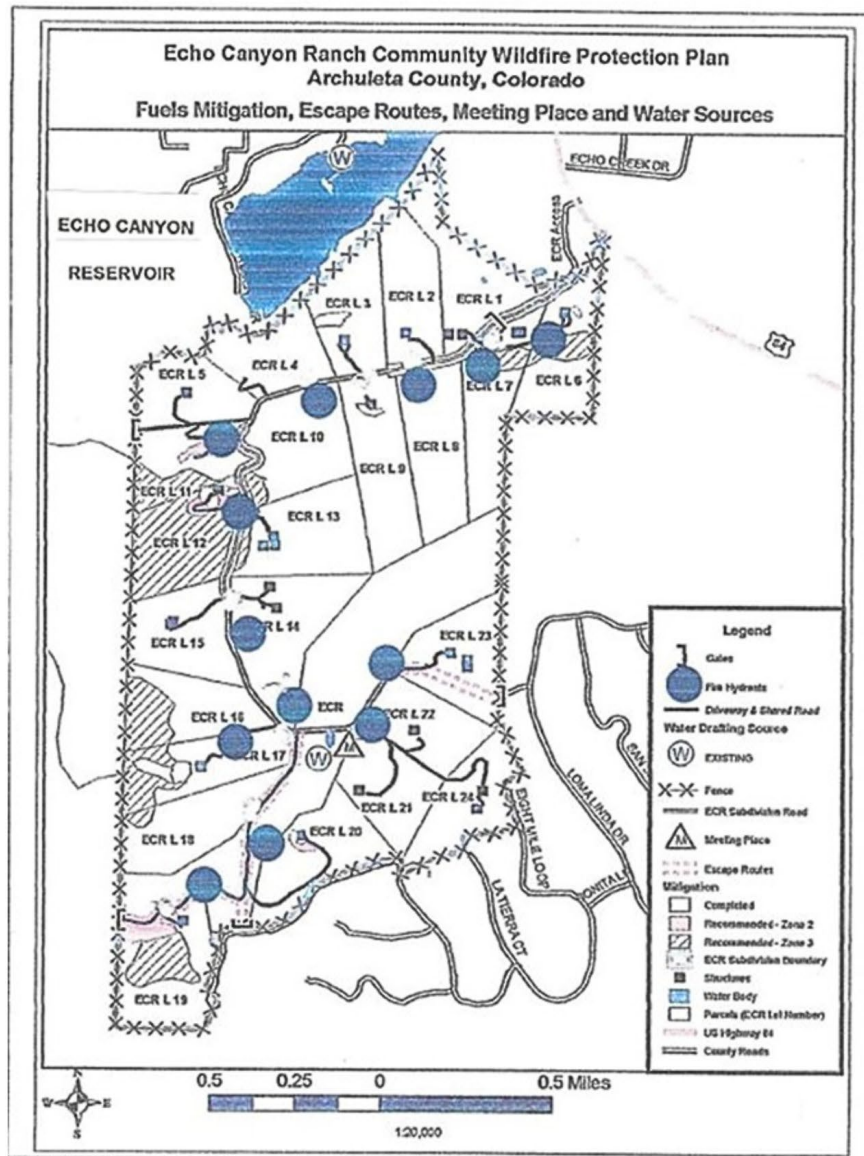


Figure 5: ECR Fire Hydrant Locations

Accomplishments since last CWPP

Table 3: Echo Canyon Ranch Accomplishments					
	GROUP	PRIORITY	ACTIVITY/PROJECT	EST COST	COMPLETED
1	HOA BOD	1	Community education at ECRA Board of Directors meetings (4/yr.)	\$0	<p>Since 2013, fire mitigation updates have been presented at each ECRA BOD meeting verbally and/or in writing, with all owners receiving information in the Meeting Minutes. In-person/video/phone capability available for all ECRA meetings since 2020.</p> <p>2022 - An in-depth verbal presentation regarding an Archuleta County hazard survey and grant availability for homeowner fire mitigation was given at a well-attended community gathering associated with the ECRA BOD.</p>
2	HOA	1	Community overview and fire preparation presentations at the ECRA Annual Meeting (1/yr.)	\$0	Presentations include online resources, visual models regarding defense zone protection and written documents prepared by Ambassadors or Firewise USA®.
3	HOA BOD	1	Include budget line item for Fire Mitigation Maintenance	Request \$1k minimum per year	<p>2019 - \$1K budgeted for Fire Mitigation Maintenance (FMM).</p> <p>2020 - \$2K budgeted FMM.</p> <p>2021-2023 \$1K budgeted FMM.</p> <p>Each year \$50 has been budgeted for ECRA FW expenses.</p>
4	HOA BOD	1	Include budget line item for support of WAP	\$0	2021-\$500 donated to WAP.
5	HOA	1	Assist homeowners with individual defensible space creation and fuel reduction	\$0	Ambassadors provide information and education programs on effective mitigation techniques throughout the year and assist owners by locating authorized personnel to complete the work and to apply for grants. We also request owners submit time/expense spent on fire mitigation activities throughout each year and maintain digital records of such submissions.

6	HOA	1	Community workdays	\$0	2015- Removal Oak Brush parcel 6 and at ECR Lane near the gate area. Another workday included clearing of tree debris at front gate area. 2016 - Work was performed across the road from parcel 19 on common property. Oak brush was cut and chipped. Approximately 2 acres were mitigated.
7	HOA	1	Post uniform blue reflective address signs per County Regulations	\$200	2016 - Added County blue address signs to each parcel entrance off ECR Lane. Existing green address signs left in place/updated at same time - blue signs difficult to see at night, and secondary green signs allowed address recognition from another angle of sight.
8	HOA	1	Community education and updates	\$0	Information such as grant opportunities, County Fire Awareness and evacuations, HOA burn ban and recommended mitigation activities are routinely sent to all owners via email.
9	HOA/WAP	1	Meeting Attendance	\$0	Since 2017, local WAP meetings have been attended in person/via zoom by at least 1 of 3 ECRA Ambassadors with information shared with homeowners via BOD meetings and email.
10	HOA/WAP	1	Community Mitigation	2018 - \$1K	2018-Tree removal along ECR entrance lane
				2020- \$650	2020-Oak brush removed/chipped along ECR Lane, and removal of large Ponderosa below "S-Curve" completed. Grant assistance project.
				2021 - \$5800	2021 Grant assistance work included trimming of ponderosa pines, removal of 5 pines along ECR entrance lane. Oak brush and juniper along s-curve completed. 7 acres were mitigated. 60/40 grant project.
11	HOA	1	Improve Pond Access	\$14,500	2020 - Access was improved and the pond dredged. Initial pond depth was 4' at deepest point and was improved to 12' depth, allowing for additional water storage in the event of a fire.
12	HOA	1	Promote a Community Emergency Notification System	\$0	2020 - ECR Owner's Information Letter was developed, which includes Nixle, Archuleta County's Citizens Alert. Current and new owners receive this information with updates.
13	HOA	1	Develop Community Emergency Preparedness Checklist	\$0	2022 - ECR Wildfire Emergency Evacuation Checklist was created and sent to all owners. New owners receive this information, which includes egress routes, preparation steps and procedures on checking in with ECRA Directors.

14	HOA	1	Community Fire Hydrant Inspections	\$0	2022 - All ECR fire hydrants were inspected and re-painted by PAWSD (Pagosa Area Water and Sanitation District) personnel and found to be fully functional. Previous inaccuracies in the map of fire hydrant locations were updated and sent to all owners.
15	HOA	1	Improve Emergency Responder Egress	\$5,000	2018 - Entrance gate security system/pedestal was replaced and updated to include "YELP" capability, allowing for rapid access by emergency responders.
16	HOA	1	Replace wood fence posts with metal T-posts	\$15,000	2019-ECR's entire perimeter fencing was inspected with metal T-posts replacing many wooden posts.
17	HOA	2	Track all mitigation efforts completed by parcel owners	\$0	In 2022, each parcel owner was personally contacted requesting updates regarding fire mitigation work completed since the original 2013 CWPP.

Past Adjacent Land Treatments

Alpine Cascade Ranch

Alpine Cascade Ranch completed extensive clearing on 1400 acres from ECR's joint fence line going west. From 2018 - 2020 they worked on 300 acres from ECR to the San Juan River.

Pagosa Ranger District

Adjacent to the southern edge of Echo Canyon Ranch is 8 Mile Mesa. The Pagosa Ranger District began implementing the 8 Mile Fuels Reduction project on October 5, 2022. This project involved mastication of 938 acres of understory shrubs and trees on the mesa top producing 45 acres for public fuelwood.

The photos below are taken at community work days in 2021 described in Table 3:10.



Revised Goals, Strategies, and Partner Responsibilities

Table 4: Echo Canyon Ranch Action Plan 2023				
FREQUENCY	GROUP	PRIORITY	ACTIVITY/PROJECT	EST. COST
Daily/as needed	HOA/WAP	1	Alert owners of fire activities in area, direct them to sources such as CSFS, Inciweb, and Pagosa Springs Sheriff's Department Facebook	\$0
Weekly	HOA/WAP	2	ECRA Ambassadors will continue to review media sources (newspaper, emails, online articles) and share fire mitigation information with ECR owners and other communities at WAP meetings and by email	\$0
Monthly	HOA/WAP	1	At least 1 ECRA Ambassador attend local WAP/fire-related meetings and forward information to other Ambassadors and owners	\$0
Quarterly	HOA	1	Provide mitigation updates to owners via quarterly BOD meetings and emails	\$0
Quarterly	HOA	2	Request parcel owners submit their mitigation hours and document time/costs digitally as information is provided for WAP and Firewise USA® requirements	\$0
Annually	HOA/WAP	2	Encourage all owners to obtain a home ignition and defensible space assessment within their five-acre building envelopes, as well as assessments of their entire parcels. Promote WAP grant opportunities for completing defensible space projects (funding through 2028).	\$0
Annually	HOA	2	Provide outreach events such as videos/films such as the Plumtaw Fire film to owners via in-person/zoom	TBD
Annually	HOA	2	Email copies of FireWise Committee brochures to owners, encouraging zone defense and mitigation activities	\$0
Annually	HOA/WAP	2	Inform owners of grant offerings, assist them in contacting appropriate representatives to obtain a site assessment, and advise them on follow-through of the grant process	\$0
Annually	HOA	2	Email reminders to owners about evacuation procedures and provide updates to ECR's Wildfire Emergency Evacuation Checklist	\$0

Annually	HOA	1	Continue to provide ECRA Firewise Committee/emergency information in New Owner email packets	\$0
Annually	HOA	2	Ongoing review of community-wide mitigation needs, including ECR roadways. Review grant opportunities and site assessment options	TBD
Annually	HOA BoD	1	Budget for ongoing maintenance along the right-of-way bordering ECR Lane	TBD
Annually	HOA BoD	1	Budget for ongoing mitigation along the right-of-way bordering ECR Lane	TBD
Annually	HOA	2	Work with Homeowners/DRC to encourage a site review and plan that includes fire mitigation in the development of a new home builds	\$0
Annually	HOA/WAP	3	Promote use of WAP's Chipper Rental Rebate and Defensible Space incentive programs	\$0
Annually	HOA	2	ECRA Ambassadors will continue to seek ways to engage homeowners and promote the benefits of a community-wide fire-mitigation action plan that results in behaviors and actions beneficial to ECR and surrounding communities	\$0
Annually	HOA	2	Review/update Community Risk Assessment	\$0
Annually	HOA	3	Review/update Community CWPP	\$0
Annually	HOA	2	Promote use of Archuleta County Citizens Alert/Nixle for emergency response preparedness	\$0

Planned Adjacent Land Treatments

Alpine Cascade Ranch

Alpine Cascade Ranch plans to masticate Oak Brush along the shared fence with ECR in summer 2023.

Pagosa Ranger District

Adjacent to the southern edge of Echo Canyon Ranch is 8 Mile Mesa. The Pagosa Ranger District is planning a 1,150-acre prescribed burn in Fall 2023. For information about the 8 Mile Fuels Reduction project visit <https://www.fs.usda.gov/detail/sanjuan/news-events/?cid=FSEPRD1065228>



PLANNED MITIGATION PROJECTS

Legend

- Planned Mitigation Site ■
- Pond Mitigation Site ■

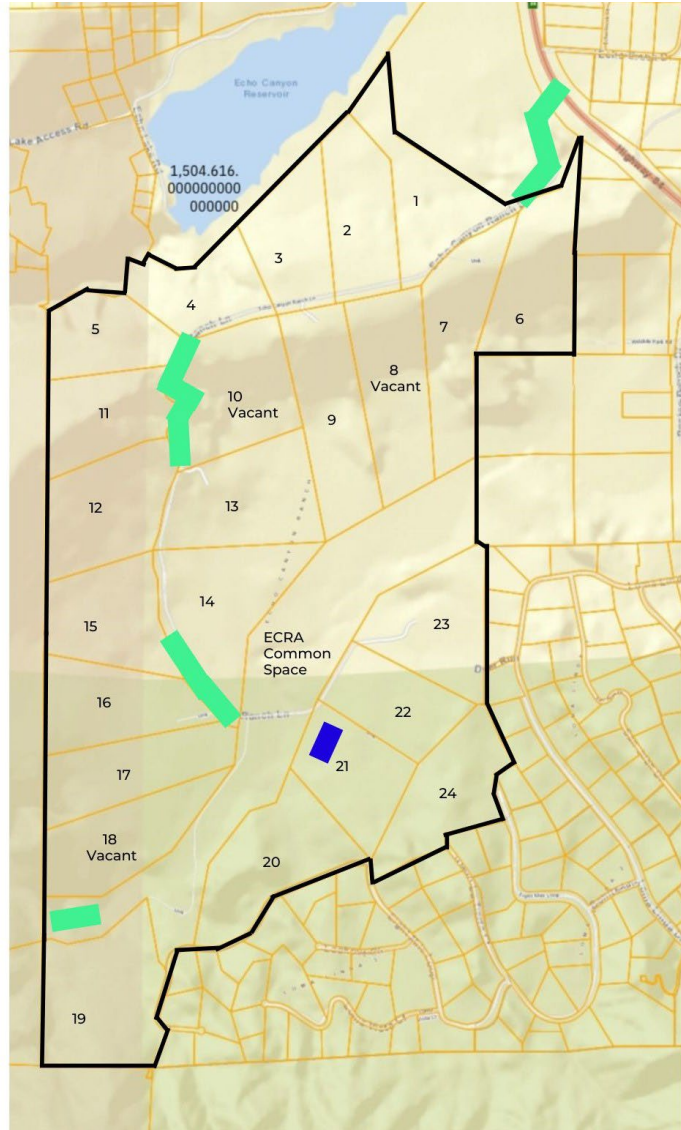


Figure 7: Map of planned mitigation project sites

Updating CWPP

The Echo Canyon Ranch CWPP will be reviewed each year to update with accomplishments or to address new priorities/areas of concern. Review of the CWPP will be the responsibility of the Echo Canyon Ranch HOA and the ECR Firewise Committee. Annual accomplishments will be summarized during the annual meeting and will be incorporated into the CWPP.

Every five years the key stakeholders will take on the responsibilities lead by the ECR HOA of a more detailed review of the CWPP and list of accomplishments. At the five-year period, ECR HOA will take a closer look at priority areas/area of concerns and update the CWPP that reflect any changes.

Summary

This CWPP complements and builds upon the Echo Canyon Ranch CWPP 2013. It incorporates key principles and guidelines arising from the HFRA. The plan lays out an ambitious program for:

- Reducing wildland fire risk in the wildland-urban interface (WUI)
- Accomplishing important fuel treatments on private lands
- Reducing structural ignitability
- Improving post fire benefits and protecting wildlife
- Increasing community safety
- Continuing successful education and community mobilization endeavors
- Continuing to enhance partnerships between federal, state and local agencies and among community organizations and local residents.
- Promoting forest and watershed health

Appendix

Appendix 1: Echo Canyon Ranch Association 2013 CWPP



Echo Canyon Ranch

Community Wildfire Protection Plan

Pagosa Springs, Colorado, March 2013

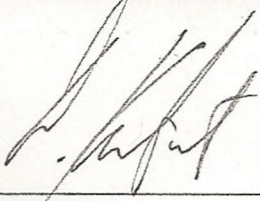


Prepared by: Ranch Manager, Lynn Constan; Geraldine Macomber and the Echo Canyon Ranch FireWise Committee; with help from our Partners at CSFS, USFS, Pagosa FPD and the FireWise Council of Southwest Colorado.



Approvals

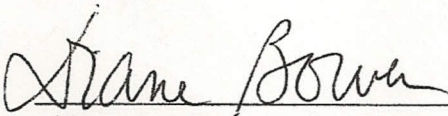
The Durango District of the Colorado State Forest Service has reviewed this Community Wildfire Protection Plan and approves its content and certifies that it meets or exceeds CSFS Community Wildfire Protection Plan minimum standards.



Kent Grant, Durango District Forester, Colorado State Forest Service

3/22/13

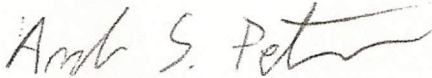
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Diane Bower, Pagosa Springs Fire Protection District

3/25/13

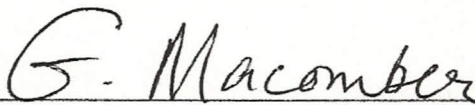
Date



Drew Petersen, Archuleta County Office of Emergency Management

3/25/13

Date



Geraldine Macomber, ECRA Board & FireWise Committee Member

3/17/13

Date

The following entities have received a copy of this Community Wildfire Protection Plan and agree with and support its content and recommendations.



Kevin Khung, Pagosa District Ranger, San Juan National Forest

3/27/2013

Date

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Echo Canyon Ranch

Community Wildfire Protection Plan

Background and History

Echo Canyon Ranch (ECR) is located in Archuleta County, five miles south of Pagosa Springs with access from US Highway 84, shown on Figure 1 (below). It is located in portions of Sections 5, 6, 7, 8 and 18 of Township 34 N, Range 1 W; and Sections 12 and 13 of Township 34 N, Range 1½ W. The elevation within the community ranges from approximately 7,145 feet to 7,500 feet.

Between 1970 and 2010, 1,256 fires have occurred in Archuleta County. More than half of these fires, over 740, have occurred in the last 20 years. Although the majority of them were caused by lightning, it is important to note that over 40% of the fires on federally managed lands in Archuleta County were caused by humans. During that 20-year time frame, the number of fires per year ranged from a low of 8 in 1999 to a high of 81 in 2003. The largest fire in recent history occurred in 2012. The Little Sand Fire, located 13 miles northwest of Pagosa Springs in the San Juan National Forest, was ignited by a lightning strike on May 13, 2012. It was a difficult fire for firefighters to attack directly because of steep terrain and beetle-killed trees. Since it was generally a low intensity fire that burned up dead and down materials on the ground, it was managed within determined parameters. Fortunately there was no loss of life and no structures destroyed, but the fire burned nearly 25,000 acres before it was contained in late summer.

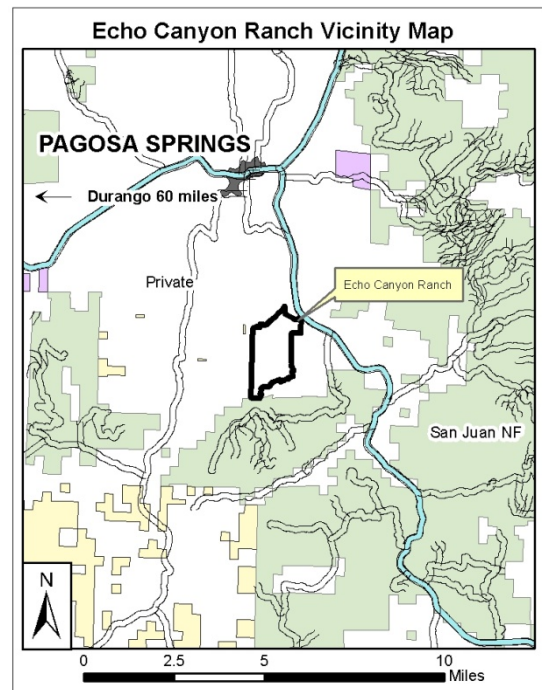


Figure 1: Echo Canyon Ranch Vicinity Map

The Bass Ranch, adjacent to ECR on the west side, has put out 30 lightning-caused wildfires on the east side of the San Juan River since 1991, according to Ranch Manager, J.R. Ford, indicating that this area is prone to lightning strikes. There is also evidence of fire scars on the north side of the ridge down to Echo Canyon Reservoir. Scott Wagner (USFS) estimates that a 10 acre + fire occurred in this area approximately 40-50 years ago.

Fire mitigation has been an ongoing concern for some property owners at Echo Canyon Ranch. Tree thinning and limbing projects have been undertaken on six of the parcels over the past few years. The extent of the work ranges from mitigation of the complete parcel to creating

defensible space around the structures. As a result of education and outreach programs by ECR's recently appointed FireWise Committee, additional mitigation work was conducted in 2012 or more is planned for 2013 on 11 of the 24 parcels. In addition, in 2012, the homeowners' association, Echo Canyon Ranch Association, applied for and received grant monies for fire mitigation along Echo Canyon Ranch Lane.



The CWPP Area

This Community Wildfire Protection Plan (CWPP) covers Echo Canyon Ranch subdivision. The 1,376-acre community consists of 24 parcels ranging in size from 37.46 to 66.57 acres and 183.5 acres of open space held in common. Eighteen of the 24 parcels have been developed as of 2013. It is bounded by Echo Lake State Recreation Area to the northwest and shares a small border with San Juan National Forest on the southwest corner. The remaining surrounding property consists of private parcels of varying sizes, including two large private ranches, the Russell Ranch to the north and Alpine Cascade Ranch to the west.

The Wildland-Urban Interface (WUI) defined by the FireWise Committee, with assistance from Archuleta County and Federal fire officials, is shown on Figure 2 (below). The ECR WUI, shared with neighboring Loma Linda subdivision, is bounded by Trujillo Road to the west, Reservoir Hill and US Highway 160 to the north, US Highway 84 to the east, and the Rio Blanco community to the south. The boundaries of the WUI were determined based on existing wildland fuels; presence of natural barriers to fire spread and expected fire behavior (rate of spread and intensity) during peak fire season in a dry summer. The ECR WUI encompasses 21,103 acres. Table 1 shows the amount of acres in the WUI by land ownership.

Table 1: Land Ownership in the Echo Canyon Ranch WUI

Ownership	Acres	Percent of Total
Private	13,787	65%
San Juan National Forest	6,720	32%
Southern Ute Tribe	350	1.6%
Colorado Parks and Wildlife	209	0.9%
Town of Pagosa Springs	37	0.2%
TOTAL ACRES	21,103	

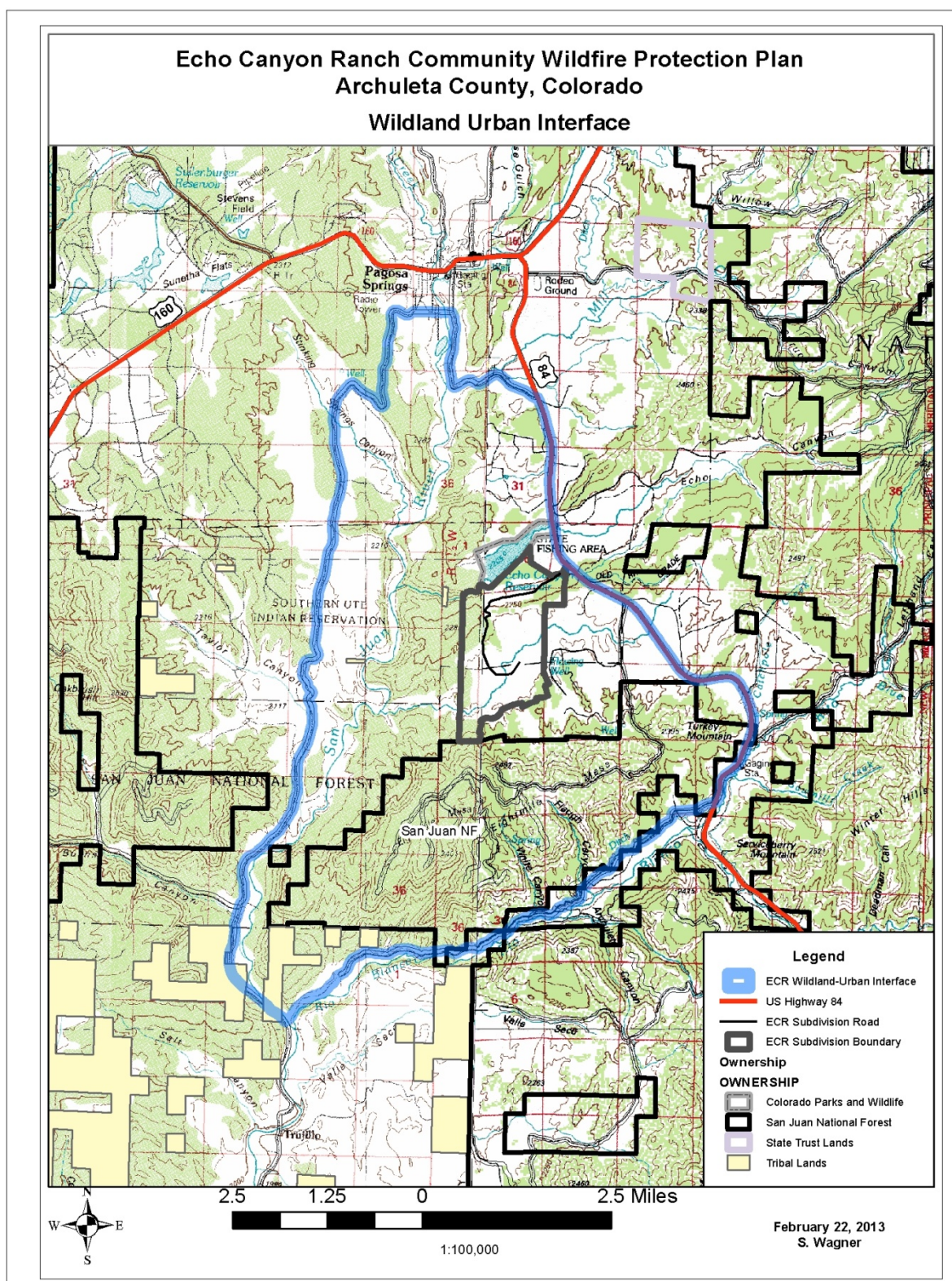


Figure 2: ECR Wildland Urban Interface and Planning Area Map

Fire protection is provided by the Pagosa Springs Fire Protection District (FPD). Mutual-aid agreements are in place between Archuleta County, Pagosa FPD and the San Juan National Forest for times when more assistance is needed. The Archuleta County Sheriff's Office also maintains a seasonal fire crew, engines and tenders. Two engines are provided to the Archuleta County Sheriff's Office and three slip-on units are provided to the Pagosa FPD under equipment agreements with the Colorado Division of Fire Prevention and Control.

Fire Policies and Programs

The Echo Canyon Ranch CWPP has been developed in response to the Healthy Forests Restoration Act of 2003 (HFRA). This legislation established unprecedented incentives for communities to develop comprehensive wildfire protection plans in a collaborative, inclusive process. Furthermore, this legislation directs the Departments of Interior and Agriculture to address local community priorities in fuel reduction treatments, on both federal and non-federal lands.

The HFRA emphasizes the need for federal agencies to collaborate with communities in developing hazardous fuel reduction projects and places priority on treatment areas identified by communities themselves through development of a CWPP. Priority areas include the Wildland-Urban Interface (WUI), municipal watersheds, areas impacted by wind-throw or insect or disease epidemics, and critical wildlife habitat that would be negatively impacted by a catastrophic wildfire. In compliance with Title 1 of the HFRA, the CWPP requires agreement among local government, local fire departments, and the state agency responsible for forest management (in Colorado, the Colorado State Forest Service.) The CWPP must also be developed in consultation with interested parties and the applicable federal agency managing the land surrounding the at-risk communities.

Archuleta County, Colorado Division of Fire Prevention and Control (DFPC), and Federal land management agencies, all approve and operate under the guidelines set forth in an Annual Fire Operating Plan (AOP) for wildfire. The plan is acknowledged by Pagosa Fire Protection District and Los Pinos Fire Protection District, the two FPDs with jurisdiction in Archuleta County. The AOP addresses how the participating parties will work together in regard to wildfire prevention, preparedness, response, and payment. Included in the plan are provisions for mutual aid between agencies, significantly enhancing initial and extended attack capabilities through rapid cohesion of fire suppression resources for managing a wildfire.

The Archuleta County AOP is tiered to the 1989 "Agreement for Cooperative Wildfire Protection in Archuleta County" between Archuleta County and the Colorado State Forest Service (CSFS). This in turn is tiered to the 2011 "Colorado Statewide Cooperative Wildland Fire Management and Stafford Act Response Agreement" between the Federal resource management agencies and CSFS. On July 1, 2012, state responsibility for wildfire management

and control was transferred from CSFS to the Division of Fire Prevention and Control in the Colorado Department of Public Safety. As a result, DFPC has replaced CSFS in the above-mentioned agreements.

Archuleta County is a voluntary member of the Colorado Emergency Fire Fund (EFF), which helps the County manage and pay for wildfires that exceed its ability to control. The fund is comprised of annual fees assessed to each member county. The County must request EFF designation for an incident that meets EFF criteria, and then the Director of DFPC, or his designee, must approve it.

This Echo Canyon Ranch Community Wildfire Protection Plan tiers off of the Archuleta County CWPP revised in 2008. The ECR plan is consistent with the goals and strategies described within the Archuleta County CWPP and provides further strategic and tactical direction specific to wildfire protection and mitigation for the Echo Canyon Ranch community.

Description of Partners and Committees

Echo Canyon Ranch Association has an active five-member Board of Directors, which meets four or five times a year. In 2013, the board members are: Jack Rosenbaum, President; Paul Clark, Vice-president; Ron Halvorson, Secretary/Treasurer; Geraldine Macomber, Member-at-large; Jim Harrison, Member-at-large.

The board authorized the establishment of a FireWise Committee in October 2011. Residents Geraldine Macomber, Mary Rothchild, and Ron Halvorson currently serve on the committee. The Ranch Manager, Lynn Constan, also served as a member of the committee through the end of November 2012. Geraldine Macomber is the committee chair and she and Mary Rothchild are currently FireWise Ambassadors for Echo Canyon Ranch and have attended Archuleta County FireWise meetings. The committee has received significant support from other residents who have participated in workdays, loaned equipment, assisted in risk assessments and provided valuable input. Residents who have provided support include: Paul Clark, Bob & Jan Clinkenbeard, Jim Harrison, Michael McCrudden, Jack Rosenbaum and Alan Suslow.

The Echo Canyon Ranch FireWise Committee has been fortunate to receive information and assistance in the development of this CWPP from the individuals listed below along with their agency.

Craig Goodell, Wildfire Mitigation & Education, USFS/BLM (Mr. Goodell has since transferred to USFS Regional Office/BLM State Office, Portland, OR.)

Kent Grant, Durango District Forester, CSFS

Pam Wilson, Program Director, FireWise Council of Southwest Colorado

Scott Wagner, Forester (Fuels and Prescribed Fire), Pagosa District, San Juan National Forest

Tim Batchelor, Wildland Fire Coordinator for Archuleta County (Mr. Batchelor has since transferred to Los Pinos Fire Protection District.)
Christina Marquart, Fire Program Coordinator, Archuleta County Department of Emergency Management
David Hartman, Wildland Fire Coordinator, Pagosa Fire Protection District
Marvin Johnson, FireWise Ambassador and firefighter, trained in Home Ignition Zone
Bill Trimarco, Ambassador Coordinator, Archuleta FireWise
Bob Frye, retired from San Juan National Forest
Jenny Russell, Russell & Pieterse, legal counsel

The Planning Process

Interest in fire mitigation at Echo Canyon Ranch began before the formation of a formal FireWise Committee. In May 2011, Tim Batchelor, Archuleta County Department of Emergency Management toured the community and provided the Ranch Manager with a preliminary assessment of the Common Area and specific parcels that could benefit from fire mitigation. A letter was sent to all owners with general information on the assessment, urging them to have a more thorough inspection of their parcels. Owners of parcels where specific concerns were identified received a customized letter listing those concerns. A copy of the letter is contained in Appendix A. Additional information was communicated to all owners in August and September 2011.

Throughout 2012, the FireWise Committee maintained regular communication with the owners, primarily by email, in April, May (three times), June (twice) and July (twice). Copies of selected communications are also contained in Appendix A. A comprehensive information package was sent to all owners by regular mail in May. More information on this information package can be found in the section on Education and Community Outreach. The FireWise Committee met on September 6, to review assigned sections of the CWPP framework. On October 15, Lynn Constan sent the first draft of the CWPP to our Partners for their comments. A FireWise report was presented at Echo Canyon Ranch Association's annual meeting on November 9, 2012 (also included in Appendix A), and an update given at the board meeting on January 17, 2013.

Meetings with Partners

The Echo Canyon Ranch Board of Directors began to explore the idea of appointing a formal FireWise Committee in 2011. In June of that year, six owners attended a Partners' education meeting held at a private residence in Loma Linda, the subdivision bordering Echo Canyon Ranch to the south. Later in August of that year, Ron Halvorson organized a neighborhood meeting exclusively for Echo Canyon Ranch property owners. David Hartman and Tammy Tyner were invited to discuss the process and benefits of developing a CWPP for the community. A FireWise Committee was appointed at the October 2011 board meeting. At the committee's request, the board then invited Ms. Tyner to present a proposal at the annual meeting on

November 8, 2011, to prepare a CWPP for Echo Canyon Ranch. Although she made a compelling argument, the board rejected her proposal for budgetary reasons.

Although the decision was made not to employ a consultant to prepare a CWPP, the FireWise Committee continued its work with the support of the board. The committee toured the ranch with David Hartman and Bill Trimarco early in February 2012 to identify possible mitigation projects. Geraldine Macomber met again with Bill Trimarco later in February and committee members attended ongoing FireWise Ambassador meetings throughout 2012.

Bill Trimarco made a presentation at the ECRA board meeting on March 15, 2012, on the history of wildfires, the need for mitigation and the benefits of getting homeowners behind a CWPP, to reduce the risk of a catastrophic wildfire. Following his presentation, the board authorized the committee to begin preparation of a CWPP and approved additional funding for the Ranch Manager to assist in the development of the document.

On April 5, 2012, a joint meeting was held with FireWise committee members from Echo Canyon Ranch (Geraldine Macomber and Ron Halvorson) and representatives from the Loma Linda FireWise Committee (Peggy Beach and Carolyn Schwulst.) Partners Kent Grant, Craig Goodell, David Hartman, Christina Marquart, and Bill Trimarco were also in attendance and aided the group in defining the WUI that includes both subdivisions. Following the meeting, an assessment of Echo Canyon Ranch Lane was conducted by Craig Goodell, Kent Grant, David Hartman and Bill Trimarco, with Geraldine Macomber, Ron Halvorson and board member Jack Rosenbaum, also in attendance. A copy of the assessment is contained in Appendix B.



David Hartman, Geraldine Macomber, and Echo Canyon Ranch resident Michael McCrudden did an inspection tour on April 20, 2012, to evaluate egress options, the location of a meeting place, and a possible location for a community slash pile for burning in winter.

Kent Grant, Scott Wagner and Ron Halvorson toured the ranch on December 4, 2012, to review driveway access, emergency egress gates, the Common Area corral as a meeting place, water sources, mitigation already completed and fuel treatments to be prioritized in this CWPP. Then on December 10, Geraldine Macomber and Bill Trimarco met with Kent Grant in Durango, to review the second draft of ECR's CWPP, including Partners' comments, and to come up with an action plan to complete the document, and prepare the maps.

On February 4, 2013, Geraldine Macomber and Ron Halvorson met with Kent Grant, Scott Wagner, Pam Wilson, David Hartman and Bill Trimarco in Pagosa Springs, to further review and edit the CWPP and make a list of the outstanding items needed to finalize it.

Goals

An important outcome of the FireWise Committee meetings held throughout 2012 in February, March, April, June, July, and September, as well as input from FireWise Ambassador meetings, was the development of a set of six goals.

1. **Education** To continue to educate the board and all property owners through presentations, board and FireWise Committee meetings, FireWise Ambassador and Partner meetings.
2. **Communication** To provide owners with ongoing, relevant information and guidance, primarily via email, but also to include hard copy information when appropriate, as well as posting fire restrictions at the front gate.
3. **Assessments** To encourage all owners to obtain home ignition and defensible space assessments within their five-acre building envelopes, as well as assessments of their entire parcels, and to provide owners with information on qualified individuals to perform these assessments.
4. **Fire Mitigation** To promote fire mitigation on private parcels and to budget for ongoing mitigation and maintenance along the right-of-way bordering Echo Canyon Ranch Lane, ultimately to reduce the number of trees to at least 70 stems per acre. Also, to further review the Design Guidelines to ensure the use of FireWise materials in future construction.
5. **Grant Money** To prepare grant applications for work to be funded by the association and to assist individual owners in obtaining funding by submitting grant applications on behalf of the owners.
6. **Emergency Preparedness and Evacuation** To provide owners with updated information needed to prepare individual evacuation plans, to provide more specific information on emergency ingress/egress points and the option of using the Common Area as a meeting place, to improve signage, and to implement a backup neighborhood emergency call system.

Description of the Community

The community is located west of US HWY 84, north of Eight-Mile Mesa and directly south of Echo Canyon State Wildlife Area, a state recreation area, see Figure 3 (below). The terrain consists of mesas and meadow. Eleven of the parcels are located on the mesa in the north section of Echo Canyon Ranch, with the remaining 13 parcels surrounding the 183.5 acre Common Area in the meadow in the south section. The Declaration for the Echo Canyon Ranch limits development to single-family residential use, although accessory buildings such as guesthouses,

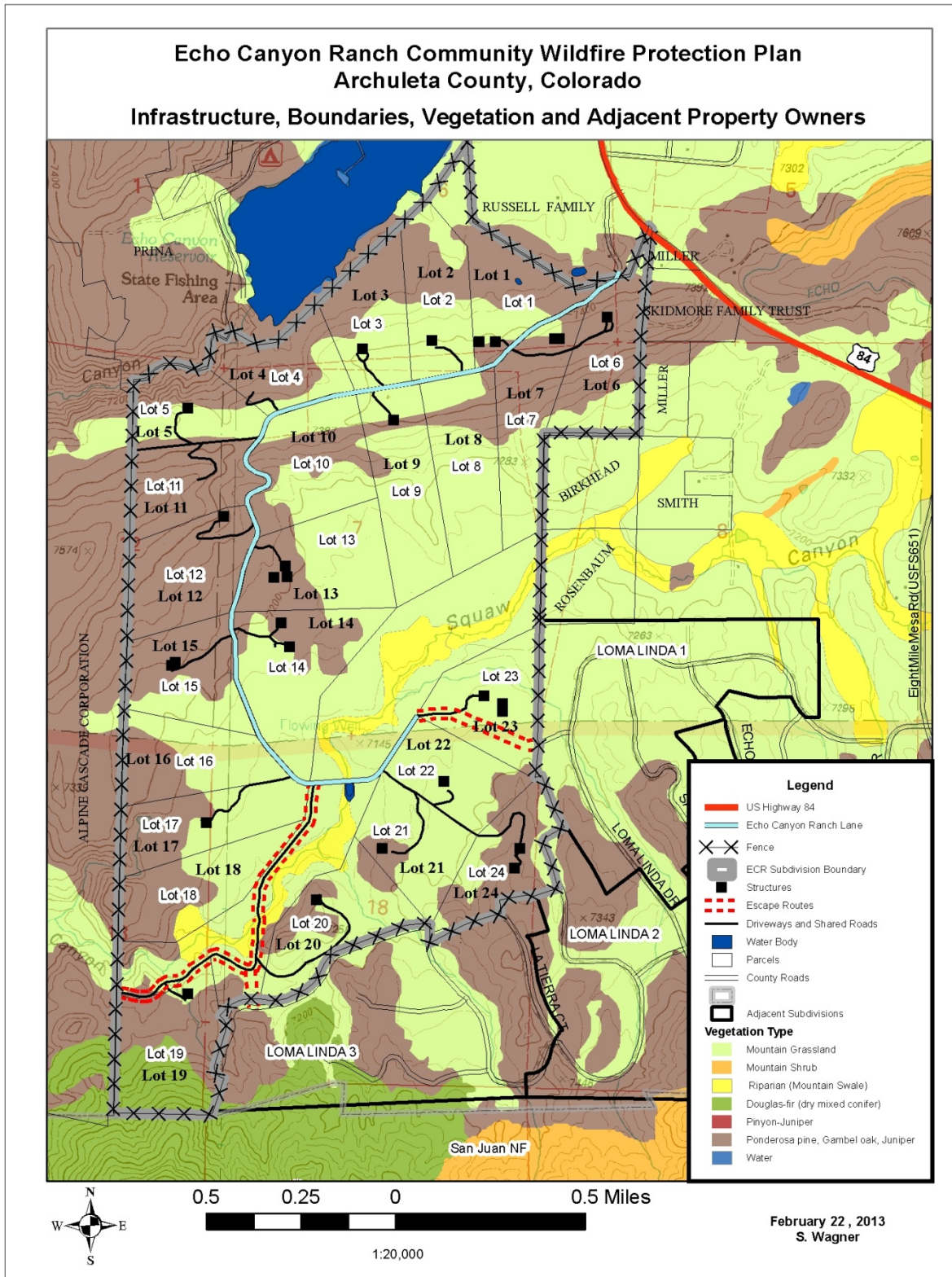


Figure 3: ECR infrastructure, parcels, vegetation and adjacent property owner's map.

garages and barns are permitted. Access to the community from US 84 is via Echo Canyon Ranch Lane, a private road.

As of 2013, houses and other structures have been constructed on 18 of the 24 parcels. All parcels have designated five-acre building envelopes. All utilities are located underground. Electrical service is provided by La Plata Electric Association and water is provided by Pagosa Area Water and Sanitation. Sewage disposal is private. There is no natural gas service, but some houses are served by individual, underground propane tanks.

The 2013 population of the community is 39 adults. Of this number only 16 are full-time residents. The remaining 23 are part-time residents whose property use varies from two visits a year to owners who are in residence for extended periods throughout the year. There are only six vacant lots, so growth potential is limited. Some of both the developed and vacant lots are currently for sale so the distribution between full-time and part-time residents could change.

The association is managed by a five-member Board of Directors elected for three-year staggered terms, in addition to a Ranch Manager, working approximately 20 hours per month. The Declaration provides for a Design Review/Environmental Control Committee of three to five persons. The board has established other committees as needed, including a Road Committee, Grazing Committee, Ranch Environment Committee, FireWise Committee and a 5-Year Strategic Planning Committee.

Vegetation consists of a mix of open meadows and forested areas, with the primary tree species being ponderosa pine, Douglas-fir, and Rocky Mountain juniper. The primary shrub species is Gambel oak. Since the inception of the community in 1994, the association has maintained an active cattle-grazing lease. The current lease, which runs through 2014, provides for between 43 and 50 cow/calf pairs to be grazed from mid-May to mid-October. The cattle have access to the private lots, with the exception of small fenced areas around the building sites, as well as the Common Area. Owners may opt out of the common grazing lease, but in 2012, 23 of the 24 parcels participated in the lease. Because of the cattle grazing, the Association has not found it necessary to have a regular mowing program in the Common Area.

The elk herd is now only 50% of what it was prior to the development of ECR. There may be up to 300 elk for very brief periods, perhaps 100 for a couple of weeks during the migration, but not during the growing season when the cattle are on the ranch. About 50-60 elk remain on the Bass Ranch year round.

Wildfire Risk Assessment

Fire Hazard

Resource inventories of Echo Canyon Ranch were conducted by the Natural Resources Conservation Service in 2006 and 2011, and updated in 2012. The Vegetation Types in Echo

Canyon Ranch were identified as Douglas-fir and Gambel oak in the north, and ponderosa pine, Gambel oak and Rocky Mountain juniper in the central part. The Common Area is defined as Mountain Swale-Mountain Meadow and contains native grasses as well as those planted by ranchers in the past prior to the development of the community. The southern portion of the area contains Douglas-fir and Gambel oak. Squaw Creek runs through the Common Area at the center of Echo Canyon Ranch, and a natural hot spring also feeds into the creek. Vegetation types and approximate acreage are shown in Table 2 and located in Figure 3.

Table 2: Vegetation Types at Echo Canyon Ranch

Vegetation Type	Acreage
Mountain Grassland	738
Ponderosa pine, Gambel oak, Rocky Mountain juniper	556
Mountain Swale-Mountain Meadow	59
Douglas-fir/mixed conifer	26

Dr. Hal Anderson developed a set of 13 fuel models for wildland fire behavior. These were updated and more fuel models were added by Joe H. Scott and Robert E. Burgen in 2005. Fuel models are a simplified version of wildland fuels represented with mathematical equations. These fuel models aid firefighters in predicting the type of fire behavior that can be expected under various fuel moisture and weather conditions. The following Table 3 lists the Scott & Burgen Fuel Models for the vegetation types on Echo Canyon Ranch:

Table 3: Scott & Burgen Fuel Models by Vegetation Type

Vegetation Type	Fuel Model
Douglas-fir/mixed conifer	TL4 – Short-Needle Litter with Small Downed Logs
Ponderosa pine/Gambel oak	TL8 - Long-needle Litter Timber Understory
Mountain meadow (irrigated)	GR2 - Low Load, Dry Climate Grass (When grass is dry and not-irrigated)
Dry Grassland (non-irrigated)	GR1 - Short, Sparse Dry Climate Grass
Ponderosa pine with Rocky Mountain juniper	TU5- Very High Load, Dry Climate timber-Shrub

TL4-Short-Needle Conifer with Small Downed Logs: The primary carrier of fire is a moderate load of fine litter and small diameter downed logs. Surface fire spread rate is low and flame lengths are low. Transition to crown fire can occur at relatively low flame lengths due to low crown base heights. Crown fire spread can be rapid and intense.

TL8-Long-Needle Litter Timber Understory: The primary carrier of fire is moderate load long-needle pine litter and small amount of herbaceous plants. Spread rate is moderate and flame length is low. Transition to crown fire requires longer flames lengths than in TL4 and is directly dependent of crown base heights.

GR1-Short, Sparse Dry Climate Grass: The primary carrier of fire is sparse grass, though small amounts of fine dead fuel may be present. The grass in GR1 is generally short, either naturally or by grazing, and may be sparse or discontinuous. Rate of spread is low and flame length is low.

GR2-Low Load, Dry Climate Grass: The primary carrier of fire is grass, though small amounts of fine dead fuel may be present. Load is greater than GR1, and fuelbed may be more continuous. Scattered shrubs may be present but do not affect fire behavior. Rate of spread and flame lengths are much higher than GR1.

TU5-Very High Load, Dry Climate Timber-Shrub: The primary carrier of fire in TU5 is heavy forest litter with a shrub or small tree understory. Spread rate is moderate and flame length is moderate. Transition to crown fire can occur at relatively low wind speeds and due to vertical connectivity of fuels.

Table 4: Comparable Rates of Spread and Flame Lengths for Each Fuel Model (Surface fire Spread) under dry fuel conditions with a 10 mph mid-flame level wind.

Fuel Model	Rate of Spread (ft/min)	Flame Length (ft.)
TL4	9	2.6
TL8	22	6.3
GR1	30	2.6
GR2	193	9.9
TU5	32	13.4

The grass fuel models display the highest rates of spread but generally are easy to contain because the small diameter fuels can easily be extinguished with water. The timber fuel models have slower rates of spread but can be much more difficult to contain because of the higher fuel loads with larger diameter fuels. Fires in the TU5 fuel type can be very difficult to contain and control.

This region has a well-defined fire season. According to the February 2012 draft Archuleta County Multi-Hazard Mitigation Plan, over 93% of wildfires in Archuleta County occur between May and September. The fire season is even more concentrated during the summer months, with 76% of all wildland fires occurring in June, July and August.

Only 35% of the 861,129 acres comprising Archuleta County are privately owned, accounting for a total of 298,557 acres. The San Juan National Forest accounts for almost half of the county (418,565 acres). Other landowners include Southern Ute Tribe (103,456 acres), Bureau of Land Management (5,837 acres) and the State of Colorado (7,714 acres)¹.

¹ Archuleta County Community Wildfire Protection Plan, June 2008.

From 1970 to 2010, there were 1,076 recorded wildfires on the San Juan National Forest in Archuleta County (average of 26 fires per year). From 2001 through 2012, the Pagosa Fire Protection District reported 352 wildland fires, for an average of about 29 per year. In 2012, Archuleta County reported a total of 29 wildland fires on private land that burned a total of 271 acres². In the last ten years, the number of wildfires reported each year has been steadily increasing. Table 5 shows the largest wildfires in Archuleta County since agencies started keeping records in 1970. Note that most of these large fires have occurred in the last 10 years. From 2001-2012, Pagosa Springs Fire Protection District responded to a total of 3,663 calls, 691 of which were fire calls, including 352 (51%) wildland-related calls, averaging 29.3 wildland fires per year.

Table 5: Largest Fires in Archuleta County (1970 – 2010)

Fire Name	Year	Size
Little Sand	2012	24,900
Bolt	2003	2,130
Rio Blanco WFU	2005	1,182
Snow Springs #2	1996	406
Turkey Creek WFU	1998	344
Cabazon South	2000	330
Devil Creek	2003	235
Second Box WFU	2001	120
Trail Creek	2003	89
Devil Mountain	2004	60
Quartz Meadows	2000	30
Snag WFU	2008	23
Sand Creek	2010	20

WFU = Wildland Fire Use. Fires managed for resource benefit

The potential for human-caused fires within Echo Canyon Ranch is considered to be low. As a gated community, access is restricted to residents and guests, essentially eliminating the possibility of unauthorized entrance. Camping and campfires are prohibited in the Common Area. The board has acted to ban open burning by homeowners, except when there is adequate snow on the ground. However, because of ongoing construction, cigarette butts from sub-contractors remain a hazard. There is some risk of fire moving into Echo Canyon Ranch from outside the subdivision, especially on the southwest corner that abuts the National Forest. The potential for human-caused fires on lands adjacent to Echo Canyon Ranch is moderate. To the north and south of ECR are higher density subdivisions with more residents and fewer restrictions on open burning. Land to the west of ECR consists of a large ranch with restricted access and thus the risk of human-caused fires to the west is low. The risk of lightning-caused fires is high within and adjacent to Echo Canyon Ranch.

² 2012 Durango Interagency Dispatch Center Annual Report.

Fuels and Potential Fire Behavior

The risk of a fire starting in or adjacent to Echo Canyon Ranch and burning onto the property is moderate to high. The potential fire intensity within these vegetation types is determined by the amount of available fuel at the time of the fire (fuel loading), the dryness of the fuels (fuel moisture) and weather. Fire regime is a description of the frequency and types of wildfire that have historically occurred in a particular vegetation type and area. Within Echo Canyon Ranch, the historical fire regime was characterized by frequent, low intensity surface fires. Numerous fire history studies conducted by the US Forest Service and by research scientists have determined that prior to 1880, fires within the ponderosa pine/Gambel oak vegetation type occurred on average of every 10 to 15 years. Because of the frequency of these fires, the fuels did not accumulate to a level that would allow for high intensity, crown fires. The fires killed small trees, especially those growing under the crowns of larger trees, and the heat from the flames scorched and killed the lower branches of the trees, thus helping to raise the canopy base heights.

The result of this frequent, low intensity fire regime was to maintain conditions in the ponderosa pine forests of open forests with high crown base heights that were very well adapted to these types of fires. The Gambel oak understory likely occurred in widely disbursed clumps. A few ponderosa pine trees would have survived in the openings to allow for natural regeneration. Rocky Mountain juniper has highly flammable needles on branches that go all the way to the ground and thus is highly susceptible to the frequent fires. Historically, it is highly unlikely that juniper grew within ponderosa pine stands. The junipers were restricted to drier and rockier sites with sparse surface fuels that in normal years did not carry the fires.

Young Douglas-fir trees are also very susceptible to frequent fires. Historically, Douglas-fir would have been restricted to the north aspects where the fires did not burn as frequently. Though younger Douglas-fir trees are not very fire-adapted, the older trees have thick bark and may survive some low intensity fires. Though fires did not burn as frequently in the Douglas-fir types, due to the cooler and wetter conditions where it grows, during extremely dry years these forests would have burned with higher intensity. These fires were a mix of low intensity surface fires with patches of crown fire – what is called a mixed-severity fire regime.

The grass meadows would have also experienced frequent fires. Generally grass will not burn in the Pagosa area until it has cured in late June and early July. Typically, the annual monsoon rains start about the first or second week in July, often stopping all grass fires (though fires in forested areas will continue, but at a slower rate of spread). It is likely that grass fires started by Native Americans were common in the fall when the grass is dormant.

Historically, fires in the ponderosa pine were carried by grass, pine needles and Gambel oak. European settlement started in southwest Colorado in the early 1870s. The first settlers were miners heading for Silverton and other mining camps. Then sheep and cattle ranchers arrived with thousands of head of livestock. Initially, there was an increase in wildfire activity, as the

miners, coal trains and possibly the Native Americans, started many fires. Soon, however, the millions of livestock consumed much of the grass and stopped the spread of many of the low-elevation wildfires. Early settlers also extinguished fires whenever they could and they were likely to be most effective at controlling fires in the ponderosa pine zone. Later, the Forest Service was established and one of its missions was to “extinguish all fires.” County governments were established and in Colorado, the Sheriff was responsible for putting out fires.

The result of suppressing nearly all wildfires was a gradual accumulation of fuels in the lower elevation forests. Many of the largest fire-adapted trees were logged. Young forests regenerated following the logging but without the natural thinning and pruning of wildfires, these forests became very dense and branches remained low on the trees. Gambel oak spread and grew tall while Rocky Mountain juniper became established in the understory. Dead plant material on the ground (needles, branches, logs and bark) decomposes very slowly due to the dryness of the climate. The result of over 100 years of fire exclusion is very high surface fuel loads, numerous ladder fuels and dense interconnected crowns, which make these forests highly prone to high intensity crown fires. These uncharacteristic fires in the ponderosa pine not only threaten the recovery of the forest, but threaten human life, structures and utility infrastructure where humans have built in or adjacent to these fire-prone forests.



The forest vegetation types within Echo Canyon Ranch are typical of the current condition of ponderosa pine and are at high risk of uncharacteristically severe wildfire.

Structural Vulnerability

Of the 18 residences in Echo Canyon Ranch, nine have stucco or stucco/stone mix exteriors. Two have concrete board siding and seven are wood sided. Eight homes have metal roofs and ten have asphalt shingle roofs. Driveway access is generally good with most homes having relatively flat driveways with limited vegetation and driveway widths ranging from 10 to 16 feet. Two homes have steep driveways. One of these owners reports that tractor-trailer trucks have accessed their residence without any problem. An extensive clearing program is currently being implemented for the second steep driveway. Some fire mitigation work has been completed or is underway in the building envelopes at 94% of the homes.



Enclosing the area below the deck with corrugated metal, propanel, or other screening will reduce a structure's vulnerability to flying embers, the most common home ignition problem.

Some of the houses have landscaping with bedding plants and perennials within five feet of the house. On six of the parcels, pine trees are located within 10-20 feet. Nine of the owners have had home ignition assessments or other structural vulnerability assessments conducted by either

David Hartman or Marvin Johnson from the Pagosa FPD, insurance company representatives or wildland firefighters.

Infrastructure and Emergency Access

There is only one road in the subdivision, Echo Canyon Ranch Lane, which is maintained by the association. It is a 2.7 mile cul-de-sac with an electric gate located 0.5 miles from the entrance on US Highway 84. Unique gate codes have been issued to both the Pagosa FPD and the Archuleta County Sheriff's Office. Phone calls were made in August 2012 to verify that both agencies had up-to-date information. In case of a power failure, the gates open automatically.

The first 2.0 miles are chip sealed, with the remaining 0.7 miles asphalt. There is a turn-around area provided at the end of the cul-de-sac with a radius of 20 feet. A loop turn capable of accommodating large vehicles is located 2.5 miles from the intersection with US Highway 84. Regular maintenance includes annual pothole repair, sealing of the asphalt section as required, and snow removal. The association is considering upgrading the chip seal portion to asphalt within the next ten years. Private driveways are the responsibility of individual parcel owners.

Roadways within the subdivision allow for two-way traffic, and all driveway widths meet or exceed the 10-foot minimum requirement by the Pagosa FPD. The grade of the driveway on Lot 12 is less than 10% except at the sharp curve where the grade is 12%. The steepest short, straight section of the driveway on Lot 20 has a grade of 12%. Due to the large size of the parcels and the distance of most of the houses from the road, tank trucks (i.e. water tenders) will be needed to fight any structure fire in Echo Canyon Ranch.

There are currently two unmarked access points for emergency vehicles in the 3-strand barb wire fence which marks the south side of the development. Each access point is equipped with a locked gate and the approaches to the gates are ungraded. One gate is located on a private parcel and provides access to Loma Linda Drive, a maintained road in the Loma Linda subdivision. The current owners of Lot 23 have given the association written permission for ECR residents to use this gate as an egress in the case of an emergency and are planning to mark the exit route. The second gate can be accessed from the Common Area and connects with an unmaintained dirt road in Loma Linda. This gate would most likely serve as an egress for Loma Linda residents, should they find themselves unable to access Loma Linda Drive. Although the gates are locked, in an emergency, the fence could be cut. See Figure 4, page 23.

Echo Canyon Ranch is served by Pagosa Area Water and Sanitation District (PAWS). The water is gravity fed from a 200,000 gallon tank in Loma Linda that has sufficient capacity for 3-4 days of normal usage, should the electricity and back-up generator fail at the pump station just north of Echo Canyon State Wildlife Area. ECR has 13 fire hydrants with flows ranging from 450 to 1,075 gallons per minute. The fire hydrants are maintained by PAWS and inspected by Pagosa FPD on an annual basis. Data from the 2011 inspection is shown in Appendix C. Residents are advised to keep fire hydrants clear of snow. Squaw Creek Collection Pond is located adjacent to

ECR Lane at mile marker 2.5 and would benefit from the installation of a short access road for a water tender, to keep ECR Lane open for traffic in case of a catastrophic wildfire. If Echo Reservoir water were used, it could be accessed by water tenders via Hwy 84 or by helicopters.

The association does not own any firefighting equipment. None of the ECR residents are volunteer firefighters. Given the current small number of year-round residents and the physical requirements, it is not likely that any of the current residents will sign up for volunteer training.

Fire Risk

The Archuleta County CWPP identified communities of concern within the county and assessed the fire risk for each subdivision in the county. Echo Canyon Ranch has been rated as medium. Of note, however, the fire risk in subdivisions in close proximity to Echo Canyon Ranch ranged from low to high as shown in Table 6.

Table 6: Assessed Fire Risk in the Immediate Area

Subdivision	Fire Risk	Location
Echo Lake Estates	Low	1.2 miles north
Holiday Acres 1	Medium	1.4 miles north
Holiday Acres 2	Medium	1.9 miles north
Holiday Acres 3	High	2.2 miles north
Loma Linda 1	Low	Immediately east
Loma Linda 2	Medium	Immediately south
Loma Linda 3	High	Immediately south
Loma Linda 4	Low	1.0 mile east
Loma Linda 5	High	1.0 mile east

Values at Risk

The population of Echo Canyon Ranch is comprised of a mix of full-time and part-time residents. The number of lives at risk thus varies greatly depending on the time of the year. The population is highest in the summer when the part-time residents are more likely to be visiting. Thus the population can range from a low of 16, the number of full-time residents, to a high of 39. However, Pagosa Springs is a popular vacation destination and residents typically have family and friends visiting throughout the year.

In addition to the human population, there are 21 pets and 17 horses at Echo Canyon Ranch. ECRA maintains an active grazing lease from May through October. In 2012, there were 45 cow/calf pairs and two bulls. The number of animals may vary from year to year depending on the quality of the grass.

Echo Canyon Ranch is a low density development of high-value properties. There are only 24 parcels in the 1,376-acre development ranging in size from 37 to 66 acres. Half of the 18 developed parcels have only one structure. Six of the parcels have two structures. The remaining three parcels have three, four, and five structures. On the parcels with multiple structures, the

distance between buildings ranges from 25 to 250 feet. In 2012, four of the developed parcels are listed for sale with asking prices ranging between \$1 and \$3 million.

All utilities are underground and thus have limited vulnerability to wildfire.

Other important resources at Echo Canyon Ranch are Echo Canyon Ranch Lane and the 183-acre Common Area that provide an important recreational resource for the owners. The loss of aesthetic value and associated property value as a result of wildfire is of significant concern.

Emergency Management

Protection Capabilities

Fire protection for the area is provided by the Pagosa Fire Protection District. PFPD is comprised of seven stations, all of which store vehicles and equipment. The closest fire station to Echo Canyon Ranch is Station 3, located on US Highway 84, two miles from Echo Canyon Ranch. District-wide the firefighting equipment includes seven engines, five tankers, one aerial truck with a 75-foot ladder, four brush trucks, a mobile command post, a maintenance truck and other smaller vehicles. A 1,000 gallon type 1 engine, a 1,800 gallon type 3 support tender, and a type 6 engine are housed at Station 3.

As of July 2012, the PFPD staff consisted of eight paid firefighters and 43 volunteers. Only Station 1, 10 miles from Echo Canyon Ranch on North Pagosa Blvd, is staffed full time. Response time is 13 minutes.

The Archuleta County Emergency Management Office maintains a Citizen Alert system that can send out a warning to the public on a conventional phone, cell phone, text device, or voice-over IP. Alerts can also be delivered by email. Local landline numbers that appear in the phone book are in the system. The procedure to register out-of-area landline numbers, cell phones, and email addresses can be found at www.acemergency.org. All owners have been provided information on how to register and encouraged to sign up for the Citizen Alert system. In addition, the association is in the process of establishing a backup Call Multiplier neighborhood emergency call system.

In 2012, ECRA purchased and installed new uniform house number signs for all parcels. The signs meet the guidelines of Pagosa FPD and have a blue reflective background with white 3-inch high numbers. The number signs have been installed on wooden posts of varying heights, depending on the number of signs per post, at every driveway entrance. Additional number signs have been provided to those residents with shared driveways, to install themselves. There is currently no signage for the Echo Canyon Ranch Lane or for the subdivision at the intersection with US Highway 84. A wood sign with the subdivision name is located on Echo Canyon Ranch Lane approximately 0.2 miles from US 84, but it is not visible from the highway. This plan

recommends that a reflective road name sign constructed of non-combustible material be installed at the intersection with US 84.

Mitigation and Implementation Plan

Education and Community Outreach

Echo Canyon Ranch began participation in the FireWise Council of Southwest Colorado (FireWise) in 2011 with the appointment of its first Neighborhood Ambassador. ECR currently has two Neighborhood Ambassadors, one of whom was also the President of the Echo Canyon Ranch Association board in 2012. The purpose of this participation is to support the FireWise mission to protect lives, homes, and properties from being damaged by wildfire. FireWise offers education, planning and mitigation support to encourage wildfire preparedness in area residents.

The Neighborhood Ambassadors, the FireWise Committee (including the Ranch Manager), the ECR Board of Directors, and ECR residents have been actively involved in working towards the reduction of wildfire risk throughout ECR through participation ongoing education and mitigation projects. The FireWise Ambassadors will continue to provide timely educational materials to residents all year long, especially during Wildfire Prevention and Education Month every May. In July 2012, the FireWise Committee prepared and sent a questionnaire (Appendix D) to all owners to increase their level of awareness of fire risk and to encourage them to focus on the need to mitigate their own properties.

During 2012, the ECR FireWise Committee repeatedly informed the property owners of the importance of a CWPP, the need to have a personal wildfire preparedness plan in place, and how the community as a whole can benefit from mitigation on individual properties, in addition to the Common Area. Education activities have brought to light various government agencies offering complementary assessments and opportunities for grants or matching funds to encourage mitigation.

On August 4, 2011, Ron Halvorson conducted the first ECR FireWise meeting and arranged an ECR tour lead by David Hartman, Pagosa Springs FPD Wildland Fire Coordinator. Six owners, Jim Harrison, Mary Rothchild, Bob and Jan Clinkenbeard, and Ron Halvorson participated in the tour. The purpose was to identify and review high-risk properties in need of significant mitigation work. Mr. Hartman's observations were centered on the defensible zones of each property, parcels 5, 12, 15, and 16.

Mr. Hartman acknowledged the extensive mitigation work done on Lot 15 as a model for other residents to follow. Conversely, Lot 12's steep driveway with a tight turn at top was a concern regarding fire truck access. The residence is at the peak of a hill covered with Gambel oak, juniper and close-growing ponderosa. Defensible zones were impacted by the steep grade of the hill and the dense plant growth. However, the owners have since undertaken an extensive thinning program. Minimal mitigation work was identified for Lot 16. Recommendations for Lot

5 include mitigating the north side where the land drops off into a steep ravine that has a heavy growth of Gambel oak and juniper.

Following the tour, Bob Clinkenbeard created an announcement outlining the motivation for adopting a CWPP that was emailed to all property owners. See Appendix A for the text of the announcement.

In April 2012, the FireWise Committee organized a day for home ignition assessments to be conducted by David Hartman and Marvin Johnson from Pagosa FPD. Lots 3, 5, 9, 13, and 21 participated in the assessments.

In May 2012, the FireWise Committee developed an information package that was mailed to all owners. The package included: Colorado State Forest Service Series no. 6.302 on Creating Wildfire-Defensible Zones, FireWise Home Fire Protection in the Wildland-Urban Interface, FireWise SW Colorado Wildfire Awareness Parts 1-5, door hanger *Be FireWise Around Your Home*, a map of Archuleta County Wildland Fire Risk Zones showing ECR, the Wildfire Mitigation Professionals Association (WMPA) list of contractors, a photo sheet on Echo Canyon Ranch Lane Mitigation Priorities (see Appendix B) and satellite images of individual properties indicating the density of trees. Also included in the information package was a customized brochure - ECR Be FireWise 'Ready, Set, Go' prepared by Ron Halvorson (see Appendix E.)

The ECRA board authorized the purchase of new, blue reflective house number signs for all 24 parcels at Echo Canyon Ranch. A workday was scheduled in May 2012 and three homeowners installed the signs at the driveway entrances to the parcels. The association had purchased some new posts and these were also installed, as needed. Homeowners with shared driveways were given a second house number sign to mark the location where their personal drive intersects the shared driveway.

Emergency evacuation routes are considered a top priority and the board established two alternative ingress/egress gates for ECR and Loma Linda residents and the Fire Department, as well as proposing the use of the Common Area as a possible meeting place.

The Design Guidelines were changed in August 2012 to urge homeowners to reduce ladder fuels, limb up and thin ponderosa pine on an ongoing basis (see Appendix G). Bob Frye's recommendations are being used to promote several stages of mitigation work, beginning with defensible space. Chipping and spreading the slash is encouraged, since the board has placed a ban on open burning in Echo Canyon Ranch during the fire season.

Archuleta County Fire Restriction announcements are regularly posted at the front gate.

This plan recommends the following Education and Community Outreach activities:

1. **Continued Education and Information** It is recommended that at least one ECR resident continue to be a Neighborhood Ambassador to support the FireWise mission, disseminate wildfire preparedness information to ECR residents and encourage ongoing mitigation and maintenance. The board has agreed to invite Truett Forest of State Farm Insurance Company to speak at the 2013 annual meeting. In April, the FireWise Committee plans to send a copy of the recently updated CSFS Quick Guide Series *Protecting Your Home from Wildfire* to all residents. They will also provide homeowners with information on current state tax deductions for fire mitigation work. All residents will be encouraged to contact their insurance agents and let them know that the CWPP has been completed and give them an update on mitigation efforts that have taken place, both along Echo Canyon Ranch Lane as well as on their private property.
2. **Community Workdays** ECR held several community workdays during 2012. These days involved residents working together to assist with property assessments, installation of new signage, and monitoring of fire mitigation work. Owners have also loaned equipment such as tractors and wood chippers to their neighbors to facilitate work by individuals. It is recommended that these workdays continue and that, upon completion of each work day, an evaluation be made of the current conditions and that goals be set for the next work day or the upcoming year.
3. **Adherence to Noncombustible Building Material Requirements** ECR has in place a Design Review/Environmental Control Committee that reviews and approves all building plans for the subdivision per the association's Declaration and Design Guidelines. All finished roof surface materials are to be a minimum Class B fire rating. Natural wood shakes or shingles, treated or untreated, are prohibited as a finished roof surface material. In 2013 the board will be directing the Design Review/Environmental Committee to update the Design Guidelines to ensure the use of FireWise construction materials.
4. **Shaded Fuel Break and Defensible Space Maintenance** Without the occurrence of natural fires, the vegetation in Echo Canyon Ranch will continue to re-sprout and grow. Therefore, it is imperative that the shaded fuel breaks created by the association in the Common Area and along Echo Canyon Lane right-of-way, as well as defensible space created by individual property owners, all be maintained.
5. **Funds for the Plan** The association has budgeted for ongoing maintenance and mitigation in the Common Area of the ranch, including a separate line item in the 2013 budget to control re-growth in the right-of-way along Echo Canyon Ranch Lane. The association will also continue to encourage the expenditure of funds by individual property owners for ongoing mitigation on the private parcels. The board has already applied for a CSFS 2013 WUI Grant for \$75,000. If awarded, 11 homeowners have

committed to mitigate approximately 150 acres and will be reimbursed for 50% of their costs. The Ranch Manager will serve as the contact point between the individual owners and CSFS and be responsible for coordinating the submittal of all reimbursement requests and disbursement of funds to the owners. The association will continue to seek funds through agencies such as FireWise and CSFS to implement projects recommended in this CWPP.

Fuels Reduction

The desired future condition of Echo Canyon Ranch is a safer subdivision, with a less risk of a catastrophic wildfire moving through the subdivision and destroying lives and community values. Through the education and outreach process, owners have been made aware of this vision in which:

1. Fuels within at least 100 feet of residences, including pine needles, are maintained at levels that support only low intensity surface fires, while fuels in the remainder of the subdivision support low to moderate intensity wildfire.
2. Ponderosa pine stands are limbed up and maintained at a density that reduces the risk of sustained crown fire and bark beetle attacks. Space between the crowns should be at a minimum of 10 feet within Zones 1 and 2, stems thinned to 70 stems per acres in Zone 3.
3. Ladder fuels such as Gambel oak and juniper are kept from beneath tree crowns.
4. Gambel oak is left in scattered clumps, retaining the best stands, especially those with a tree-like growth form, at an appropriate distance from one another, and limbed up.
5. Openings between clumps are brush hogged, masticated, and/or treated with herbicide, as part of an ongoing maintenance program, to prevent oak from filling back in between clumps.
6. Grass within or adjacent to the five-acre building envelopes is mowed, especially grass closest to structures, and especially after it cures in late summer.

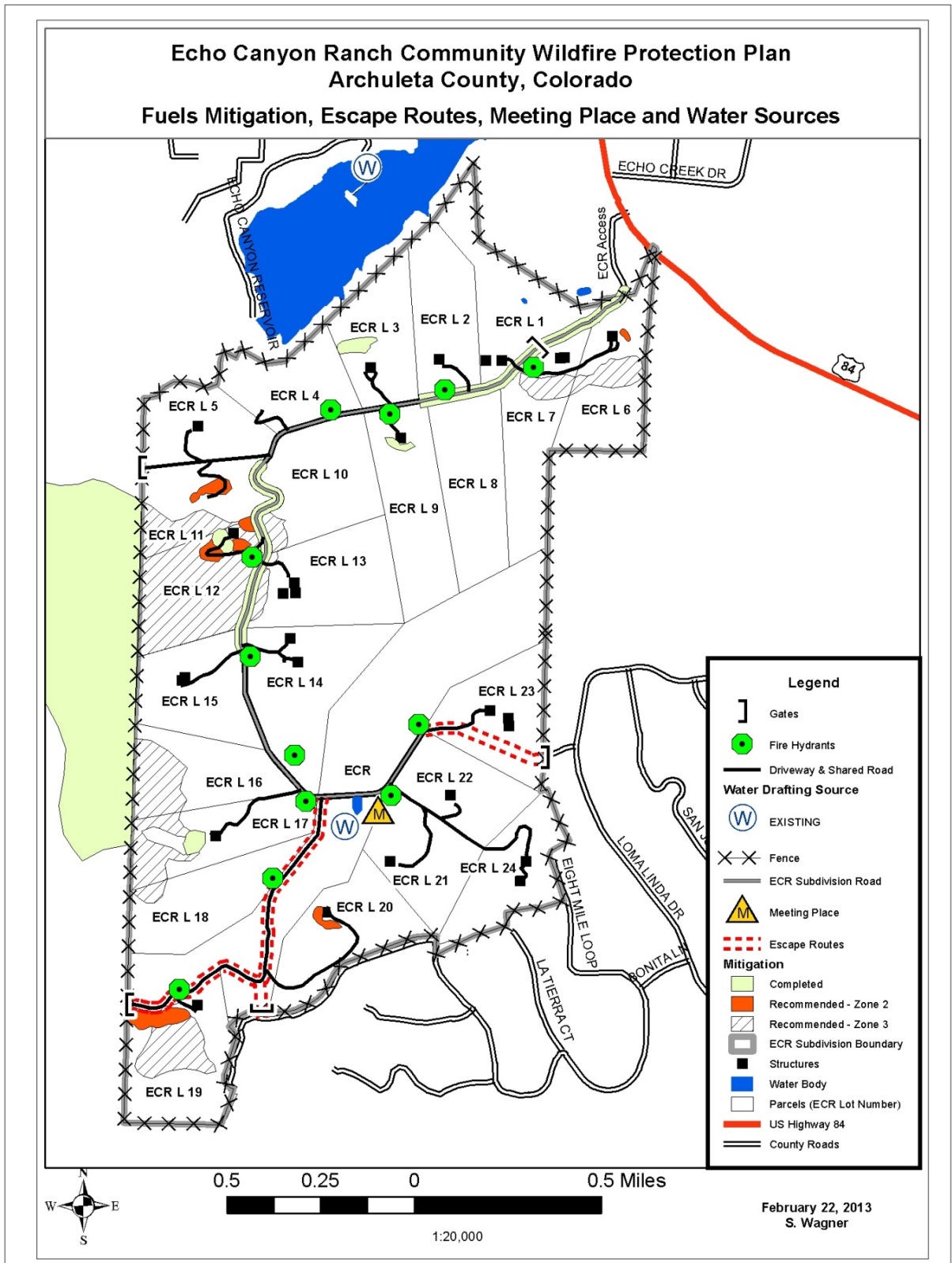


Figure 4: Mitigation and Emergency Map

A number of activities have already been implemented. All homeowners have been made aware of the local resources available to conduct property assessments and home ignition assessments. Five owners had home ignition assessments from the Pagosa FPD in 2012 and at least half a dozen others had their parcels assessed by various professionals, wildland firefighters, or insurance company representatives.

Echo Canyon Ranch also benefits greatly from the fact that the Bass Ranch has thinned 1,400 acres on the east side of the San Juan River and all the land directly west of ECR, except for a small, steep, rocky section west of Lot 17. They have removed 80-90% of Rocky Mountain juniper and thinned the forest to less than 100 trees per acre.

Extensive thinning has been done over the years on parcels 1, 14, and 15. Some level of fire mitigation work has been completed or is underway on the majority of the 18 developed parcels. Seven ECR homeowners began work for the first time as a result of the information supplied by the FireWise Committee and others were motivated to extend mitigation done previously. A variety of wildfire mitigation and fuels reduction treatments, including mowing, thinning, and pruning of lower branches, were conducted throughout the subdivision during the summer of 2012. Extensive work was done on parcels 3, 5, 9, 12, and 17. Such treatments included defensible space creation within the building envelope and beyond on many of the parcels containing occupied structures, rights-of-way clearing along driveways and roadways, and fuels reduction in sections of the Common Area.



To demonstrate the desired future conditions, in 2012 the association applied for and was awarded \$6,110 through the Colorado State Forest Service Emergency Supplemental Funds (ESF) program for fire mitigation on 65 feet on either side of a 0.08 mile section of Echo Canyon Ranch Lane to provide a safer ingress/egress. An initial assessment was made by the Partners in April 2012 (see Meetings with Partners, as well as Appendix B.) This project necessitated getting

legal counsel on the rights and responsibilities of ECRA regarding road and recreation easements, as well as working with the contractor, Dan McVeigh of Fire Ready, and homeowners whose properties were impacted, particularly those who were concerned about their privacy. A number of residents were involved in monitoring this project, which provided a good example of how an attractive, well-done mitigation project can look and has helped allay concerns that several property owners had expressed on the appearance of a mitigated area (see Appendix F for before and after photographs of this project.) Work was completed and approved in September 2012 by Kent Grant of CSFS, with the understanding that this was necessarily a conservative approach the first time around and that more needs to be done in the future. The

grant funds provided reimbursement of up to \$470 per acre, resulting in the association contributing approximately \$5,900 towards the project.

Current estimated costs for mitigation are \$1,000 per acre for hand thinning, and between \$750 and \$1,000 per acre for mastication chipping, etc., depending upon the density of trees and ladder fuels, as well as the slope and rocky terrain.

Recommended Future Projects

General Guidelines: The first priority for property owners is to create good defensible space within the home ignition zone. Juniper shrubs planted as part of the landscaping within 10 feet of any structure should be replaced with more fire-resistant species. Wood chip mulches directly adjacent to structures should be replaced with rock. Trees within the home ignition zone should be removed or pruned so that no limbs come in contact with the structure. Thinning ponderosa pine to an average of 70 trees per acre should be expanded and/or continued on the parcels containing large patches of forest, in particular on parcels 5, 6, 7, 9, 10, 11, 12, 13, 16, 17, 18, 19, and 20. In addition to specific comments below, parcels 2, 3, and 21 have committed to mitigate a certain number of acres under the 2012 WUI Grant Application. Lot 24 has not been evaluated and is therefore not included in these Partner recommendations.

HOA projects:

- (1) Lot 19 (2625 ECR Lane): Though there is good defensible space around the house, it is recommend that additional thinning be conducted within 200 feet from the south side of the road west of house. This would create a shaded fuel break so that the road could be used to stop a large wild fire threatening Echo Canyon Ranch from the south or southwest. This might be a project for the HOA, using grant funds, subject to approval by the owners.
- (2) It is recommended that a small access road be constructed from ECR Lane to Squaw Creek Pond to enable a water tender to fill up from the pond without blocking the road. This is another project for which the HOA could apply for grant money.
- (3) Install metallic, reflective signage at the entrance to ECR from US Highway 84, as well as on ECR Lane to indicate the emergency egress.
- (4) When sections of perimeter fence need replacing, recommend using metal posts, especially where there are dense fuels.
- (5) Establish an emergency backup Call Multiplier account, in April 2012, at a cost of \$25 per year.

Specific Comments on Individual Parcels:

Lot 5 (1385 ECR Lane): Defensible space looks good. Consider thinning and/or mastication on north half of property behind house, if not too steep.

Lot 6 (650 ECR Lane): Thin and prune trees NE of house. Thin top third of ridge (south aspect, south of driveway.) Remove dwarf mistletoe-infected branches on trees near the gate.

Lot 7: (700 ECR Lane): Thin pine trees, remove juniper and dwarf mistletoe-infected trees, especially south hillside near top of slope, plus mastication of understory shrubs.

Lot 9 (1000 ECR Lane): Thin small clump of trees on SW corner of building envelope.

Lot 10 (1200 ECR Lane): Thin clump of trees in SW corner of parcel.

Lot 11 (1515 ECR Lane): Before anyone builds, create good defensible space, because of steep slopes.

Lot 12 (1701 ECR Lane): Owner has already done a lot of work. Continue to thin and remove ladder fuels (Douglas-fir and juniper trees) in small swale on NE corner of property, east of house. Driveway could be compromised as an escape route by the dense forest below and west of the sharp curve. Recommend this area be thinned and about ½ the trees be removed. Thin juniper trees to a 35-50 foot spacing on steep slope, SE of house. Driveway is narrow for Type 1 engine. A smaller engine might have the capability to pump water up from the fire hydrant.

Lot 13 (1706 ECR Lane): Post address at the entrance to the driveway. Remove most juniper trees from pine stands. Thin northwest corner of parcel and the narrow patch of trees between the house and the right-of-way thinning along road.

Lot 16 (2615 ECR Lane): Thin west third of property.

Lot 18 (2815 ECR Lane): Thin pine trees, remove juniper and ladder fuels.

Lot 20 (2635 ECR Lane): Thin large juniper close to the driveway and enlarge defensible space.

Mitigation on Undeveloped Parcels:

Creating defensible space will become a priority before a structure is built on any undeveloped parcel. Some of these parcels have steep slopes and dense tree cover and would benefit from tree thinning projects. The FireWise Committee and the board will continue to promote fuel reduction on these parcels.

Mitigation on Adjacent Properties

Significant thinning, forest restoration and fuels reduction treatments have been completed in the last seven years on adjacent properties including on the Bass Ranch to the west and Forest Service land on top of Eightmile Mesa. The mastication that occurred on Eightmile Mesa took place in 2006. The ECR FireWise Committee will work with the Forest Service in support of maintenance and thinning treatments, including prescribed fire, on Eightmile Mesa within the next 10 years. These treatments will help to protect both Loma Linda and ECR. The Loma Linda subdivision is in the process of developing a CWPP and any treatments that they undertake will also benefit Echo Canyon Ranch.

Policies and Covenants

Echo Canyon Ranch is located within Archuleta County and is subject to all county development regulations and fire restrictions that may be imposed by the Board of County Commissioners, the County Sheriff, or the Pagosa FPD. In addition to county regulations, the Board of Directors has significant power to regulate both development and land use within the community through the power granted to it by the Declaration and the adoption of Design Guidelines and Ranch Rules. The board appoints a Design Review/Environmental Committee (DR/EC) that is charged with review and approval of all building plans for the subdivision in accordance with the Design Guidelines.

In 2012, the Echo Canyon Ranch Association Board of Directors adopted a revision to the Design Guidelines that streamlined the process for approval of tree thinning associated with fire mitigation projects including eliminating the application fee. A copy of the relevant sections is contained in Appendix G.

The board plans to continue review of the Design Guidelines in 2013 to identify additional opportunities to incorporate FireWise considerations. In particular, the sections dealing with building materials will be evaluated and revisions proposed to ensure the use of FireWise construction materials and building practices.

The Ranch Rules on open burning were revised in 2012. This ban has been lifted temporarily to allow burning during the winter months while there is sufficient snowpack on the ground, provided owners follow the County guidelines. The board is considering establishing several locations for communal slash piles, since the Fire Department has agreed to supervise the burning of such piles at their convenience during the winter months.

Monitoring and Evaluation

It is imperative for the improved safety and wildfire preparedness of Echo Canyon Ranch that the actions listed in the plan are implemented, and individual property owners are encouraged to implement their own FireWise mitigation. This is a “living” document that requires periodic monitoring, evaluation, and revision. Monitoring and evaluation will be accomplished through the following tasks. The CWPP is for recommended voluntary action and places no requirements upon its parties. Its effectiveness will be contingent upon actual implementation of the plan and the projects identified herein.

1. **Annual Report.** The FireWise Committee will document subdivision accomplishments prior to the association’s annual meeting (see Appendix A.) An annual report will be submitted by the FireWise Committee to the board, members of the community, the FireWise Council of Southwest Colorado and CSFS. The report will include project-specific information and “Lessons Learned” from fuels mitigation projects and activities over the preceding year.

2. **Monitor Mitigation.** The CSFS will monitor all wildfire mitigation projects that are covered by related grants, as required. Individual ECR properties will also be monitored by the DR/EC or Firewise Committee members on the basis of assessments and recommendations by Partners and other professionals.
3. **Track Volunteer Hours.** The FireWise Committee will track volunteer hours on community workdays, which can be used as an in-kind match on grant requests.
4. **Review CWPP.** The FireWise Committee will conduct an annual review of the CWPP, measure progress by degree of accomplishment of mitigation benchmarks, and make adjustments to the plan in the form of revisions. Any revisions will be forwarded to the board, ECR owners and FireWise Partners.
5. **Update CWPP.** The FireWise Committee will prepare a formal update of the ECR CWPP within five years of its being approved.

Monitoring and evaluation of outreach, education and mitigation efforts within Echo Canyon Ranch and its WUI are an important part of the CWPP. The monitoring and evaluation actions, responsible parties, and frequency, are shown below.

Table 7: Monitoring and Evaluation Matrix

Party	Action	Frequency
ECR Board and ECR FireWise Committee	Annual Report to the Community, FireWise Council of SW Colorado, Colorado State Forest Service	Annually
CSFS	Monitoring of mitigation status for projects covered by grants	As required
ECR FireWise Committee	Track volunteer hours on community workdays	Ongoing
ECR FireWise Committee and Partners	Inspection of and recommendations for ECR subdivision, including roadways, driveways, and defensible spaces	Bi-annually

Appendices

- Appendix A. Selected FireWise Communications with Property Owners
- Appendix B. April 5, 2012, Assessment of Echo Canyon Ranch Lane
- Appendix C. Hydrant Data
- Appendix D. FireWise CWPP Questionnaire, July 2012
- Appendix E. Echo Canyon Ranch Be FireWise: READY, SET, GO!
- Appendix F. 2012 EFS Fire Mitigation Project Photographs
- Appendix G. Excerpts from Design Guidelines
- Appendix H. CSFS QUICK GUIDE SERIES, FIRE 2012-1 - [*Protecting Your Home From Wildfire: Creating Wildfire-Defensible Space Zones*](#)
- Appendix I. CSFS - [*Fuelbreak Guidelines for Forested Subdivisions and Communities*](#)
- Appendix J. CSFS - [*Firewise Construction Design and Materials*](#)
- Appendix K. CSFS #6.305 – [*Fire Wise Plant Materials*](#)
- Appendix L. University of Nevada Cooperative Extension – [*Be Ember Aware!*](#)

Additional Digital References, all of which can be accessed on the CSFS website:
<http://csfs.colostate.edu/>

- CSFS QUICK GUIDE SERIES, FM 2011-1 - [*Piñon –Juniper Management*](#)
- CSFS #6.311 – [*Gambel Oak Management*](#)
- CSFS #6.310 – [*Cheatgrass and Wildfire*](#)
- CSFS - [*Preparing a Community Wildfire Protection Plan - Handbook*](#)
- CSFS - [*Leaders Guide for Developing a CWPP*](#)
- CSFS - [*Community Wildfire Protection Plan Evaluation Guide*](#)
- CSFS - [*Community Guide to Preparing & Implementing a CWPP - 2008*](#)
- CSFS - [*CWPP Minimum Standards - REVISED 2009*](#)

Appendix A. Selected FireWise Communications with Property Owners

May 2011

Dear Echo Canyon Ranch Owners,

On Wednesday May 18, 2011, I met with Tim Batchelor , Fire Program Supervisor, Department of Emergency Management, Archuleta County Sheriff's Office and Christina Schmidt, Archuleta County Coordinator, Neighborhood Ambassador Program, FireWise Council of Southwest Colorado. Together we made a survey of the common area and those portions of private lots visible from the road. No fire mitigation measures were deemed necessary in the common area.

Tim cited the following common sense measures which all property owners should consider.

1. Thinning of oak brush particularly when present under stands of ponderosa pines. Oak is very volatile and can provide a route for fire to travel to the tops of the taller trees.
2. Limbing up of large junipers and removal of smaller junipers. Juniper is also very volatile.
3. These measures are particularly important on slopes since fire travels rapidly uphill.

Lots 7, 14 and a portion of Lot 12 were commended as two parcels with evidence of previous thinning and limbing and examples of lots which are well protected from fire.

Although no areas of concern were identified on the portion of your parcel visible from the road, the Board urges you to contact Tim for a complete survey of and specific recommendations for your property. His services are provided at no charge. You can contact Tim at 970-731-4799.

OR

The following areas of concern were noted on your parcel:

The Board urges you to contact Tim for a complete survey of and specific recommendations for your property. His services are provided at no charge. You can contact Tim at 970-731-4799.

Sincerely,

Lynn Constan,

Ranch Manager

Prepared by Bob Clinkenbeard, ECR resident and distributed August 2011 to all owners by email.

Motivation For Adopting An Echo Canyon Ranch COMMUNITY WILDFIRE PROTECTION PLAN (CWPP)

- Adopting a CWPP affords property owners the opportunity to help protect their investment in their home and property from loss due to wildfire. For many households, the value of their home represents one of their largest assets.
- Adopting a CWPP may help to access resources to create defensible space around participant's homes. A defensible space is important to not only homeowners but to firefighters who must make the decision on what properties is defensible in the case of wildfire.
- Adopting a CWPP may demonstrate to insurance underwriters a proactive approach a community is taking to help mitigate the risk of wildfire losses. Insurance underwriters are increasingly monitoring and evaluating the wildfire risk in rural subdivisions.
- Adopting a CWPP may assist property owners in securing grant monies to partially defray the costs of mitigating wildfire risks. Competition for available grant monies is intense and communities with a CWPP enjoy a distinct advantage in the competition.

Adopting a CWPP fosters community awareness and cooperation to manage a common risk that might otherwise remain unaddressed.

Future ECR educational outreach methods will also include:

- Educational information dissemination at annual ECR POA meetings.
- Educational information, including the national FireWise Newsletter, via mail.
- Identified, individualized mitigation needs mailed to all lot owners with methods to cost-effectively accomplish those actions (including cost-sharing and grants).
- Semi-Annual progress updates to audience members.

April 2012

Dear Echo Canyon Ranch Homeowners,

Recently, three people died, and several dozen homes were damaged or destroyed as the result of a 50 acre controlled burn that mushroomed into the Lower North Fork 4,000 acre wildfire near Conifer, CO. This should be a wakeup call for all of us. For the past 75 years local fire departments have usually succeeded in extinguishing wildfires that burned regularly in this area for thousands of years. As a result, they are now faced with an overload of fuel and an unhealthy forest. It's not a question of 'if' but 'when' a major fire will break out in our area. (See Echo Reservoir on the attached map of risk zones in Archuleta County.) Prescribed burns carry high risk, along with lightning strikes, drought and high winds. The focus is now on fire mitigation, as a way to save lives and homes and reduce the exorbitant costs of firefighting and insurance claims. Our long-term goal in Echo Canyon should be to reduce the number of trees from 200 to 80 trees per acre.

Your ECRA Board has approved a new FireWise Committee to begin work on a Community Wildfire Protection Plan, with help from professionals from the Forest Service, BLM and the Pagosa Fire Dept. The goal of a CWPP is a five-year risk management plan for ECR, including information, education and grant money for fire mitigation.

However, we should not wait to complete this CWPP to begin mitigating our own properties. **The FireWise Committee is planning a ranch workday on Saturday, May 12th.** Plans are for homeowners to work on their homes and defensible space, with their own helpers. We also need assistance with setting posts and new reflective house number signs for emergency vehicles. A potluck supper at the Macomers will conclude the day. **We do hope you will join in this community effort.** Please let Lynn Constan know if you plan to participate, and keep records of expenses for tax or grant purposes. If enough people are interested, we could share in the cost of renting a chipper. We will explain what can be done with the slash or wood chips. If you don't need extra firewood, you can advertise your felled tree trunks locally. People are often willing to come, cut up and haul logs for free – but chainsaws need supervision!

Five homeowners have already signed up for home ignition zone assessments within their building envelopes. This is a free service offered by David Hartman, Wildland Coordinator for the Pagosa Fire District, and Marvin Johnson, a local firefighter specially trained in home ignition assessments. We encourage all homeowners to contact Lynn Constan so she can coordinate more assessments, preferably several homes on one visit. If this is not possible for a fast home self-assessment go to:
<http://www.southwestcoloradofires.org/prevention/assess1.htm>.

Raking up pine needles is essential, and installing 1/8" screening on eve vents and below your deck will, for example, help prevent flying embers from destroying your home. David and Marvin know the most important things you can do to make your home more resistant to fire.

Attached is a revision to the Design Guidelines to encourage, rather than discourage, thinning and fire mitigation work. Note that DR/EC approval is still required to remove tree trunks above 8" in diameter, as a way to preserve the characteristics of Echo Canyon Ranch. Please follow the new procedures, which

do not require an application fee. Also attached is a list of professionals who will do free assessments on your property, as well as contractors who are qualified to do fire mitigation work.

The FireWise Committee will be mailing an information package to you, on mitigation, preparedness and evacuation instructions, along with a questionnaire. We plan to set up a community emergency text messaging/cell phone system as a backup for the Reverse 911. If you haven't already done so, please go to www.acemergency.org, click on Citizen Alert (left margin) and include your landline and any special needs, but especially your cell phone number and text messaging option.

A top priority for the ECRA Board is to reduce the chance that a potential ground or crown fire could cross over the road and block ingress/access to the ranch. We are also working with the fire department on a viable egress and/or a safety zone. Ongoing mitigation along ECR Lane is paramount. Craig Goodell (USFS/BLM), Kent Grant (CSFS) and David Hartman have already assessed the road up from Hwy 84 to the gate, and also on the S-Curve. Prior to starting any work, the Board will need permission from homeowners to mitigate these areas within the recreational easements. The Board will also need to approve an allotment of money from the budget. Hopefully we can get grant money to cover a portion of it. Please see the attached photos.

The ECR CWPP is likely to take at least 18 months and a lot of effort by committee members and the Ranch Manager to complete. However, we will have an excellent plan, and local firefighters will be familiar with the ranch. Properties that have been mitigated will most likely be considered as 'savable', when firefighting resources are deployed. Of course, there are no guarantees.

Over time, a collaborative effort on our CWPP will increase the value of all our properties and make Echo Canyon a much safer place, without in any way destroying the beauty of the ranch we all love. Please contact Lynn if you are willing to serve on the FireWise Committee, in order to complete a small section of the CWPP. We need all the help we can get!

And don't forget to put Saturday, May 12th, on your calendar.

Respectfully,

The FireWise Committee

Email sent to all homeowners on July 13, 2012

FIRE MITIGATION GRANT OPPORTUNITY FOR 2013

APPLICATION DEADLINE JULY 20

- **\$100,000 in grant money is likely to be available for ECR in 2013, which translates into 200+ acres mitigated at half price.**
- Lot owners must pay all costs up front (estimated at \$800 - \$1000 per acre), submit receipts to HOA to coordinate and in turn submit to Colorado State Forest Service; the CSFS will then reimburse for 50% of the cost within 2 months. The HOA will distribute the reimbursement back to individual lot owners.
- Projects need to be prioritized and identified in the CWPP (Community Wildfire Protection Program), currently being completed by FireWise Committee.
- Mitigation consists of removing ladder fuels and deadfall, especially from under Ponderosa, thinning out and limbing up Ponderosa, Juniper and Oak Brush stands.
- Mitigation is an ongoing process, with the bulk of the work best spread over a few years: Phase I = Defensible Space, Phase II extends 100-200' beyond building envelope, Phase III beyond that. Goal for a healthy forest = 70 Ponderosa per acre.
- Mitigation can be done by different contractors, no bids required at this time.
- Satellite images included in recent FireWise package prioritize ECR lots most in need of mitigation.
- Similar satellite images are currently being used by insurance companies, in deciding whether or not to continue coverage.
- Mitigation will affect resale value of both developed and undeveloped lots.
- Mitigated lots tend to sell faster and for a higher price.
- Regardless, insurance premiums may go up 25% after this season.
- In addition, tax deductions may be available for primary homeowners through Archuleta County CWPP.

The Board hopes most of you will seriously consider fire mitigation on your property in 2013, in which case, please email geraldinemacomber@gmail.com, **no later than Tuesday, July 17th**. Apologies that

this grant opportunity came to us at very short notice. We need **commitments in writing**, obviously subject to being awarded this grant money, although there may be room for some adjustment down the road. Please indicate your lot # and the approximate number of acres you plan to mitigate - anywhere between 2 and 50! The more you can afford, the better! Remember, you would get a 50% reimbursement. **We need responses totaling a minimum of 50 acres in ECR, to make it worthwhile submitting this application. 200+ acres would be fantastic!** Questions? Call Geraldine Macomber at [505 670 5513](tel:5056705513), or Ron Halvorson at [970 946 1802](tel:9709461802). We hope you will participate in this neighborhood effort, since we are all in this together.

Note that the Board hopes shortly to receive grant money to undertake 65' of conservative mitigation on both sides of ECR Lane this coming September, to reduce the chance of a crown fire threatening our ingress/egress.

Thank you.

Geraldine Macomber, FireWise Committee Chair and Board President

From the Minutes of ECRA's Annual Meeting, November 9, 2012

FireWise Committee (Geraldine Macomber, Mary Rothchild [FireWise Ambassadors] and Ron Halvorson)

This has been the success story of the year.

- ❖ The board agreed to set aside \$1,000 for Lynn Constan to help us prepare a CWPP. Ron contributed greatly, but Lynn did an incredible job and is to be congratulated. The draft has been submitted and we are awaiting final comments. But with the help of the Archuleta County FireWise Ambassador, Bill Trimarco, the possibility remains that Kent Grant of the CSFS may sign off on our CWPP before the end of the year.
- ❖ The road mitigation done by Fire Ready has been a great start. The fact that we have been working diligently on our CWPP enabled us to receive a grant of \$5,925 to offset the total cost of \$11,800. In addition, twelve home/lot owners have committed to mitigate a total of 150 acres if we can get a CSFS WUI grant in 2013. We will likely be the first community in Archuleta County to get a CWPP and should get some good press coverage. This benefits all of us, including those who have their properties listed for sale. However, Geraldine wants to remind you that a CWPP is a living document and mitigation is ongoing. We need to have a 5-year plan, and possibly create a firebreak in the west. This has to be a collaborative effort and you will be hearing more from the FireWise Committee in the spring.
- ❖ The board has decided to temporarily lift the open burning ban once there is sufficient snow pack on the ground. This will be subject to compliance with Pagosa Fire Protection District permits, fees and open burn restrictions - http://www.pagosafire.com/fire_permits.htm

There was much discussion about open burning and how to deal with the slash from fire mitigation.

Appendix B. April 5, 2012, Assessment of Echo Canyon Ranch Lane

ECR Road Mitigation Priorities



There are fire scars on trees throughout the ranch, clear evidence of past fires.



Leave oak brush and junipers in small groupings that are isolated and are not potential ladder fuel.



S-Curve: Cut the oak brush to the ground, not destroying the roots. This will improve visibility without affecting erosion.



Appendix C. Hydrant Data

Fire Hydrant Test Data June 2011

Hydrant #	Location	Flowing Pressure	Pitot Pressure	GPM Pitot	Static Pressure
0871	700 Echo Canyon Ranch Lane	2	6	450	40
0871A	1000 Echo Canyon Ranch Lane	6	14	680	46
0872	0.3 mi Echo Canyon Ranch Lane	10	12	650	70
0873	0.5 mi Echo Canyon Ranch Lane	20	12	650	66
0874	0.8 mi Echo Canyon Ranch Lane	14	14	680	72
0875	Across from 1706 Echo Canyon Ranch Lane	42	34	1075	128
0875A	2 mi Echo Canyon Ranch Lane	56	32	1050	162
0876	2415 Echo Canyon Ranch Lane, W side of road	44	28	970	92
0877	2384 Echo Canyon Ranch Lane	60	28	970	100
0878	2715 Echo Canyon Ranch Lane, S side of road	44	28	970	106
0879	2855 Echo Canyon Ranch Lane	30	28	970	106
0879A	2615 Echo Canyon Ranch Lane	38	22	900	126
0879B	2625 Echo Canyon Ranch Lane	24	20	840	132

Data provided by Pagosa Fire Protection District

Appendix D. FireWise CWPP Questionnaire, July 2012

Hello from your FireWise Committee! In an effort to be as proactive as possible during what is already an active wildfire season, we have created a questionnaire to help us and the fire department should our neighborhood be at risk during a fire. As well, we are hoping to get you thinking about the potential for a wildfire and if you are ready. The wildfires currently burning here in Pagosa Springs, near Colorado Springs and Fort Collins, and near Mancos are a clear indicator of how devastating a fire can be. Fires will happen....are we ready?

The information you provide in this questionnaire will be used by the FireWise Committee in the preparation of a Community Wildfire Protection Plan (CWPP). The plan is a mechanism to identify the areas within Echo Canyon Ranch that are at risk and to formulate a plan to address these issues. The final document will be reviewed and approved by a number of agencies including the local fire department, the Colorado State Forest Service and the US Forest Service. In the event of a fire in or near Echo Canyon Ranch, the plan will allow these agencies to be better prepared to effectively fight the fire.

Please email your completed questionnaire or any questions you might have to: Lynn Constan, Ranch Manager echocanyonmanager@gmail.com. Thanks so much!

A) Demographics

- a. Parcel number
- b. Number of structures on property
- c. Proximity of structures to each other
- d. Number of residents, number of pets, number of horses. Please list number and type of any other livestock.
- e. Are you a full-time or part-time resident? If part-time, please describe. For example: occasional weekends throughout the year or resident during the months of June, July and August.
- f. Do any residents need special help should an evacuation become necessary?

B) Structures and environment

- a. What type of siding or exterior does the main house have?
- b. What type of siding or exterior do the additional structures have?
- c. What is the roof material of all structures?
- d. What is the proximity of flammable vegetation to the main house?
- e. What is the main type of tree on the property?
- f. Has any fire mitigation work been performed on the property either by the owner or by a professional? If so, please elaborate.
- g. Describe the driveway access to your parcel noting the driveway width, any overhanging or encroaching vegetation, or any other characteristics which could make access difficult for firefighting equipment.

C) Contact information—The committee is investigating an emergency notification system.

- a. Please provide two phone numbers to be used to contact you in case of a fire. If possible, one number should be a landline, the other a cell phone number.
 - b. If you are away, is there another person who should be contacted regarding your property? If so, please provide a phone number for this person.
- D) Do you have an evacuation plan?
- E) In an earlier mailing you received a pamphlet “Be FireWise: Ready, Set Go” to help you become as prepared as possible before a fire happens. If you need additional copies, please contact Lynn Constan.
- F) Should you want more detailed information regarding preparations for and prevention of a wild fire, please go to the following link:
<http://www.FireWise.org/Information/Who-is-this-for/Homeowners.a>

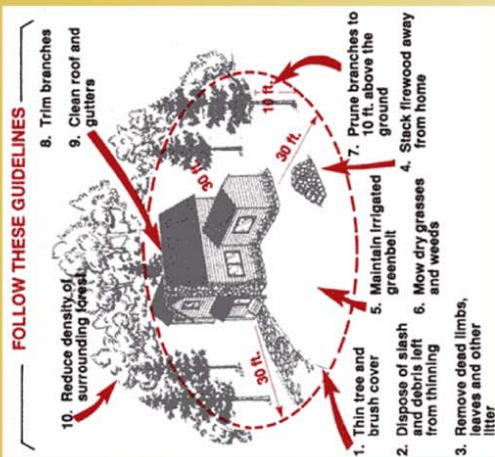
Appendix E. Echo Canyon Ranch Be FireWise Ready, Set, Go!

Echo Canyon Ranch BE FIREWISE READY, SET, GO!

Residential Safety Checklist
Tips To Improve Family and Property
Survival During A Wildfire

IF A WILDFIRE THREATENS

Wildfires can spread quickly, igniting brush, trees and homes. The ECR Firewise Committee has important steps residents can follow to lessen the threat of a wildfire. If a wildfire is burning near Echo Canyon Ranch, back your car into the garage or park it in an open space facing the direction of escape, packed with emergency supplies. Confine your pets to one room in preparation for a quick exit. Listen to local radio, keep in touch with the ECR text alert for updated information, and be ready to leave at a moment's notice.



10 Steps to Defensible Space

1. Thin trees and brush cover.
2. Dispose of slash and debris left from thinning.
3. Remove dead limbs, leaves and other litter.
4. Stack firewood away from home.
5. Maintain irrigated green belt around home.
6. Mow dry grasses and weeds.
7. Prune branches to 10 feet above the ground.
8. Trim branches.
9. Clean roof and gutters.
10. Reduce density of surrounding forest.

Echo Canyon Ranch Association
Lynn Constan, Ranch Manager
PO Box 2031
Pagosa Springs, CO 81147
970-946-8480
970-264-5451

Personal FireWise Action Plan

During High Fire Danger days in your area, monitor your local media for information on brush fires and be ready to implement your plan. Hot, dry and windy conditions are the perfect environment for a wildfire.

Important Phone Numbers:

Out-of-State Contact Phone:

Work Phone:

School Phone:

Other Phone:

Evacuation Routes:

ECR has one primary ingress/egress road. Plans for an emergency egress out of ECR and through Loma Linda is in progress. The greenbelt has been recommended as a possible gathering area.

Where To Go:

There is currently no evacuation center set up by the Archuleta County Emergency Management Center. When the conditions of the emergency can be assessed more information will be forth coming.

Location of Emergency Supply Kit:

Register your home phone and cell phone with the reverse 911 system in Pagosa Springs.

www.acemergency.org

Advise authorities of the following:

1. Pets/livestock on property
2. Individual medical needs; oxygen, wheel chairs for handicapped.

READY

EMERGENCY SUPPLIES

The American Red Cross recommends every family have an emergency supply kit assembled long before a wildfire or other emergency occurs. Use the checklist below to help assemble yours. For more information on emergency supplies, visit the American Red Cross Web site at www.redcross.org.

1. Three-day supply of water (one gallon per person per day).
2. Non-perishable food for all family members and pets (three-day supply).
3. First aid kit.
4. Flashlight, battery-powered radio, and extra batteries.
5. An extra set of car keys, credit cards, cash or traveler's checks.
6. Sanitation supplies.
7. Extra eyeglasses or contact lenses.
8. Important family documents and contact numbers. Scan documents to a thumb/flash drive.
9. Map marked with evacuation routes.
10. Prescriptions or special medications.
11. Family photos and other irreplaceable items.
12. Easily carried valuables.
13. Personal computers (information on hard drives and disks).
14. Chargers for cell phones, laptops, etc.

SET

INSIDE CHECKLIST

1. Shut all windows and doors, leaving them unlocked, for firefighters to gain quick access.
2. Remove flammable window shades, curtains, close metal shutters.
3. Move flammable furniture to the center of the room, away from windows and doors.
4. Shut off gas at the meter, turn off pilot lights, move gas cans and propane bottles outside.
5. Leave lights on firefighters can see your house under smoky conditions. Electricity may be shut off to prevent electrical fires.
6. Shut off the air conditioning.
7. Disconnect automatic garage door openers, to be opened manually.

OUTSIDE CHECKLIST

1. Gather up flammable items from the exterior of the house and bring them inside (e.g., patio furniture, door mats, etc.).
2. Don't leave sprinklers on or water running - they can waste critical water pressure.
3. Leave exterior lights on, solar lights can be backup to power outage.
4. Place a ladder against the house, opposite the approaching fire.
5. Patrol your property and extinguish all small fires until you leave.
6. Seal attic and ground vents with pre-cut plywood or commercial seals if time permits.

IF YOU ARE TRAPPED: SURVIVAL TIPS

1. Shelter away from outside walls and stay hydrated.
2. Bring garden hoses inside, protect them from embers.
3. Patrol inside your home for spot fires and extinguish them.
4. Wear long sleeves and long pants made of natural fibers such as cotton.
6. Ensure you can exit the home if it catches fire (remember if it's hot inside the house, it is four to five times hotter outside).
7. Fill sinks and tubs for an emergency water supply.
8. Place wet towels under doors to keep smoke and embers out.

GO

WHEN TO LEAVE

Leave early enough to avoid being caught in fire, smoke or road congestion. Don't wait to be told by authorities to leave. In an intense wildfire, they may not have time to knock on every door. If you are advised to leave, don't hesitate!

WHERE TO GO

Leave to a predetermined location (it should be a low-risk area, such as a well-prepared neighbor or relative's house, a Red Cross shelter or evacuation center, motel, etc.)

HOW TO GET THERE

Have several travel routes in case one route is blocked by the fire or by emergency vehicles and equipment. Choose an escape route away from the fire.

WHAT TO TAKE

Take your emergency supply kit containing your family and pet's necessary items.

Appendix F. 2012 EFS Fire Mitigation Project Photographs

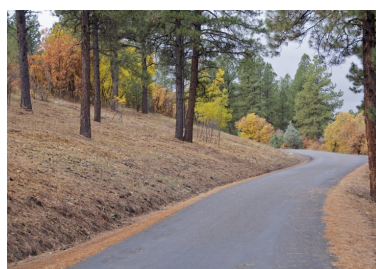
Outside Front Gate Neighborhood Participation



Before



After



S-Curve
Neighborhood Participation



Before



After



Appendix G. Excerpts from Design Guidelines

MAINTENANCE OF THE PARCEL

(Section revised July 19, 2012)

Requirements for maintaining the Undisturbed Area, as well as the Building Envelope, will vary depending upon the unique characteristics of each lot. For fire mitigation purposes, maintenance of the parcel should include the removal of deadfall, diseased trees, and “ladder fuels”; the trimming/limbing up to 12’ and thinning of trees; the planting of indigenous fire-resistant landscape material; and the control/eradication of noxious weeds. Activities requiring approval by the FireWise Committee or the DR/EC on the parcel include the removal of Ponderosa with trunks more than 8” in diameter, the introduction of manicured lawns, and the mowing of native grasses beyond a 15’ buffer zone outside the building envelope or perimeter fence.

For their own safety and out of consideration to their neighbors, owners are urged to perform the following fire mitigation, maintenance activities and weed control on their parcels without the need for any written approval:

- Removal of deadfall and diseased trees
- Trimming/Limbing up of Ponderosa to 12’
- Removal of “ladder fuels”, oak brush, juniper and other vegetation that permit a ground fire to progress to a tree crown fire
- Removal of slash and pine needles from around base of Ponderosa
- Removal of competing pines with less than 8” diameter trunks
- Control/eradication of noxious weeds

To thin trees with larger than 8” diameter trunks, owners should request an aerial map from the Ranch Manager, mark on the map the main areas for tree thinning, list the approximate total number of trees they propose to remove, taking aesthetics and privacy into consideration, and submit this information to the FireWise Committee. No fee will be required for fire mitigation work. The FireWise Committee will consider the scope of the proposed project, the characteristics of the parcel, the impacts on adjoining parcels and Echo Canyon Ranch when determining the appropriate review requirements for any proposed tree thinning plan.

WILDFIRE

(Section revised July 19, 2012)

It is important that Echo Canyon Ranch owners be aware of the real possibility of wildfire. However, the threat of wildfire can be greatly reduced with fire-resistant landscaping and ongoing fire mitigation.

The goal of fire-resistant landscaping is to reduce the amount of potential fuel immediately surrounding a home. This need not result in a barren or unattractive landscape.

Defensible Space or a 30’ Safety Zone 1 in all directions around a home is essential:

- Remove “ladder fuels”, oak brush, juniper, dead limbs, leaves, pine needles, bark chips and other flammable materials, starting with those next to the house or around the base of Ponderosa

- Trim/limb up Ponderosa to 12' and limb up clusters of oak worth keeping
- Thin competing pines with less than 8" diameter trunks
- Dispose of slash and debris
- Stack firewood away from the home, preferably on the NE side
- Submit a plan to remove larger Ponderosa, eventually reducing stems to 70 per acre.
- Mow dry grasses and vegetation within the building envelope.

Once Defensible Space/Home Ignition Zone has been mitigated, work should extend to 100-200 feet and fire mitigation undertaken on the entire parcel (see under **IV. SITE PLANNING DESIGN**

GUIDELINES/MAINTENANCE OF THE PARCEL).

These suggestions are intended only as guidelines. Consult the Pagosa Fire Department, Colorado State Forest Service Durango, WMPA Durango, and the FireWise Committee for specific information on making your home more fire-resistant, getting assessments and names of contractors.