

**2016
SHASTA COUNTY
COMMUNITY WILDFIRE PROTECTION PLAN**

**KESWICK BASIN
PLANNING AREA**



Covering the communities of:

- Keswick
- Northwest Redding
- Western City of Shasta Lake
- Buckeye

KESWICK BASIN PLANNING AREA (2016)

I. PROPOSED PROJECTS

A. THE PLANNING AREA

Wildfire plays a natural part in the evolution of vegetation in the 30,814-acre Keswick Basin planning area, located northwest of Redding, California. The topography of the Keswick Basin planning area varies from steep to valley floor, with elevations from 3,913 feet at Sugar Loaf Mountain to 600 feet at the Sacramento River. The land ownership in the area is intermingled public lands (BLM, BOR, NPS and USFS) and private lands. Ownership is roughly 54% private and 46% public. The area west of the Sacramento River is largely undeveloped. During the late 1800's and early 1900's, mining dominated the activity in the area; however, there are no active mines today. The area contains a large relic of the mining era as a Superfund site, Iron Mountain Mine. Natural and man-made features have been used to define the planning area boundary on the map (e.g. highways, streets, ridgelines, rivers, etc.)

When reviewed together, the Keswick Basin has an area that has an extremely high potential for catastrophic wildfire. In 2008, a massive lightning storm started the Motion Fire (26,824 acres), which began within the planning area near Shasta Dam, the Moon Fire (29,031 acres), and the Deer Lick Fire (12,701 acres). These fires burned for weeks and consumed a total of 68,556 acres in Western Shasta County. These fires were part of the larger Shasta-Trinity Lightning Complex of 158 fires which burned a total of 86,500 acres.

West of the Sacramento River, the population is concentrated in the community of Keswick with an estimated population of 327 residents. The remainder of the area is sparsely populated with 9 residents. Higher population densities exist east of the Sacramento River within the planning area. Population densities vary from scattered in rural areas to high in neighborhoods within the cities of Redding and Shasta Lake and intermingled areas of Shasta County. Population for the eastside of the planning area is estimated to be 1,730 residents.

Northern California has a Mediterranean climate characterized by long, dry, hot summers and wet winters. Mean annual precipitation ranges from 25 inches in the valley to 40 inches in the higher elevations, some of this coming as snow. The mean annual air temperature ranges from 57 to 65 degrees Fahrenheit.

B. PROJECT PRIORITIES

KESWICK BASIN PLANNING AREA FUEL REDUCTION PROJECTS				
PROPOSED PROJECT	MAP NUMBER¹	TYPE	AREA (acres)	ESTIMATED COST²
Iron Mountain Rd (Central)	1	Fuelbreak	27	\$139,200
Keswick Dam Road	2	Fuelbreak	41	\$215,127
Magees Acres	3	Fuelbreak	15	\$75,927
Lake Blvd.	4	Fuelbreak	184	\$961,745
Quartz Hill Road North	5	Fuelbreak	34	\$177,164
Keswick Community East	6	Fuelbreak	27	\$139,200
Walker Mine Road	7	Fuelbreak	33	\$170,836
Flanagan Road	8	Fuelbreak	13	\$69,600
Macs Road	9	Fuelbreak	10	\$50,618
Bailey Road	10	Fuelbreak	7	\$37,964
Upper Buenaventura Blvd	11	Fuelbreak	17	\$88,582
Iron Mountain Rd North	12	Fuelbreak	73	\$379,636
Shasta Dam Blvd (HWY 151)	13	Fuelbreak	90	\$468,218

The identified fuel reduction projects fall into two categories:

1. defensible space for homes and structures, and
2. roadside and ridgeline shaded fuelbreaks intended to create safe ingress and egress for fire personnel and escape routes for residents.

Projects were prioritized based on need and factors such as the following:

- Protection of private residences and properties;
- Access or escape route for the public and fire suppression forces;
- Identification of staging areas in conjunction with the fuelbreak development to provide fire suppression forces strategic locations for planning fire management and suppression actions.
- Connections to other fuelbreaks or areas of lower risk.

Landowners and residents are strongly encouraged to develop defensible space or maintain the fuels reduction projects on their properties to keep the integrity of the work done and to show project sustainability which could lead to additional future projects.

¹ Proposed projects are numbered on the map according to priority.

² Estimated costs of the projects are for planning only. More accurate costs will be determined for the preparation of project proposals.

KESWICK BASIN PLANNING AREA BASIC ASSUMPTIONS³	
Estimated cost of fuelbreak (roadside)	\$5,220 per acre
Estimated cost of fuelbreak (ridgetop or off-road)	\$7,310 per acre
Estimated cost of defensible space (hand labor)	\$600 per dwelling (<1 acre)
Standard fuelbreak width	200 feet
Population	2.6 per dwelling
Property Value (~ \$201,250 - \$475,000 per dwelling)	\$260,000
Schools	\$145,000,000
Commercial Structures Value ⁴	\$415,500 – \$23,900,000
Power lines	\$250,000/mile

Overall Concern – Lack of Defensible Space in Keswick Basin community.
Proposed Solution: Encourage the development of a defensible space/Firewise Program for the community of Keswick



Residence in Keswick lacking defensible space.

³ Estimated costs of the projects are for planning only. More accurate costs will be determined for the preparation of project proposals.

⁴ County assessed values, 2010

#1 – Iron Mountain Road (central)

- Provides important access for fire suppression forces in this portion of the watershed;
- Connects the community of Keswick to CA-299, which is the primary road for residents and emergency crews.

Proposed Solution:

Construct shaded fuelbreaks along Iron Mountain Road from Keswick Dam Road to South Spring Creek.

1.1 miles long x 200 feet on each side = 27 acres.



A fire along Iron Mountain Road. Most of the vegetation in the area, such as manzanita and toyon, is highly flammable.

#2 – Keswick Dam Road

- Provides important emergency ingress and egress; and
- Protects the community of Keswick from southern fires.

Proposed Solution:

Construct shaded fuelbreaks near Keswick Dam Road, east from Iron Mountain Road.

1.7 miles long x 200 feet = 41 acres.



*Keswick Dam Road
Note tree overstory to edge of road*

#3 – Magees Acres

- Provides important access for fire suppression forces; and
- Protects the rural community and high-voltage powerlines between the Sacramento River and Quartz Hill Road.

Proposed Solution:

Construct shaded fuelbreak near Magees Acres Way, west of Quartz Hill Road.
0.6 miles long x 200 feet = 15 acres.



Magees Acres Way. Note the trees and brush up to edge of pavement

#4 – Lake Blvd

- Provides important access for fire suppression forces; and
- Protects residential properties and high-voltage powerlines between the Sacramento River and Lake Blvd.

Proposed Solution:

Construct shaded fuelbreaks behind properties on the west side of Lake Blvd.
7.6 miles long x 200 feet = 184 acres.

*Lake Boulevard north of
Highway 151
Note dense brush and trees
up to edge of pavement.*



*Lake Boulevard.
Note dense brush and
trees up to pavement
edge*



#5 – Quartz Hill Road North

- Provides important access for fire suppression forces;
- Connects residents to Lake Blvd; and
- Protects residential properties and high-voltage powerlines between the Sacramento River and Lake Blvd.

Proposed Solution:

Construct shaded fuelbreaks near Quartz Hill Road, connecting to the high-voltage powerlines.

1.4 miles long x 200 feet = 34 acres.



Quartz Hill Road. Note tree overstory over pavement

#6 – Keswick Community East

- Provides important access for fire suppression forces; and
- Protects the community of Keswick.

Proposed Solution:

Construct shaded fuelbreaks near around the eastern edge of Keswick.
1.1 miles long x 200 feet = 27 acres.

*East of Keswick.
Note dense brush up
to road edge*



*East Keswick
Note home barely
visible in left center*



#7 – Walker Mine Road

- Provides important access for fire suppression forces; and
- Protects the rural properties west of Lake Blvd.

Proposed Solution:

Construct shaded fuelbreaks to the right-of-way along Walker Mine Road.
2.7 miles long x 100 feet or to the right-of-way = 33 acres.



Walker Mine Road. Note dense brush and trees up to road edge.

#8 – Flanagan Road

- Provides important access for fire suppression forces; and
- Protects the rural properties west of Lake Blvd.

Proposed Solution:

Construct shaded fuelbreaks to the right-of-way along Flanagan Road.
1.1 miles long x 100 feet or to the right-of-way = 13 acres.



*Flanagan Road. Note the dense brush and trees up to edge of pavement.
This is similar to Walker Mine Road, Macs Road, and Bailey Road.*

#9 – Macs Road

- Provides important access for fire suppression forces; and
- Protects the rural properties west of Lake Blvd.

Proposed Solution:

Construct shaded fuelbreaks to the right-of-way along Macs Road.
0.8 miles long x 100 feet or to the right-of-way = 10 acres.

Macs Road
Note dense brush and trees up to single lane road edge



#10 – Bailey Road

- Provides important access for fire suppression forces; and
- Protects the rural properties west of Lake Blvd.

Proposed Solution:

Construct shaded fuelbreaks to the right-of-way along Bailey Road.
0.6 miles long x 100 feet or to the right-of-way = 7 acres.



Bailey Road. Note dense brush and trees to pavement edge.

#11 – Upper Buenaventura

- Provides important access for fire suppression forces; and
- Connects the Land Park and Stanford Hills subdivisions to a main transportation route.

Proposed Solution:

Construct shaded fuelbreaks near Buenaventura Blvd and Keswick Dam Blvd.
0.7 miles long x 200 feet = 17 acres.



*Buenaventura Boulevard (south of Keswick Dam).
Note dense brush and trees up to road edge on left side*

#12 – Iron Mountain Road North

- Provides important access for fire suppression forces; and
- Protects the community of Keswick.

Proposed Solution:

Construct shaded fuelbreaks near Iron Mountain Road.
3.0 miles long x 200 feet = 73 acres.



*Iron Mountain Road.
Note the dense brush
and trees up to road
edge.*

#13 – HWY-151 (Shasta Dam Blvd)

- Allows ingress/egress between Shasta Dam and Interstate-5;
- Provides important access for fire suppression forces; and
- Protects the community of the City of Shasta Lake.

Proposed Solution:

Construct shaded fuelbreaks along HWY-151.
3.7 miles long x 100 feet to the right-of-way = 45 acres.



HWY-151. Note dense vegetation



Demonstration shaded fuel break at Toyon in City of Shasta Lake

II. COMMUNITY PRIORITIES

A. OVERALL COMMUNITY WILDFIRE RISK ASSESSMENT

KESWICK BASIN PLANNING AREA OVERALL COMMUNITY WILDFIRE RISK ASSESSMENT									
Community, structure or area at risk	Map Number	Fuel Hazard	Wildfire Occurrence Risk	Structural Ignitability	Preparedness Capability	Overall Risk	Fire Hazard Severity Zone Rating	WUI	
Iron Mountain Road (central)	1	High	High	High	Low	High	Very High	Yes	
Keswick Dam Road	2	High	High	High	Low	High	Very High	Yes	
Magees Acres	3	High	High	High	Low	High	Very High	Yes	
Lake Blvd	4	High	High	High	Low	High	Very High	Yes	
Quartz Hill Rd (north)	5	High	High	High	Low	High	Very High	Yes	
Keswick Community East	6	High	High	High	Low	High	Very High	Yes	
Walker Mine Road	7	High	High	High	Low	High	Very High	Yes	
Flanagan Road	8	High	High	High	Low	High	Very High	Yes	
Macs Road	9	High	High	High	Low	High	Very High	Yes	
Bailey Road	10	High	High	High	Low	High	Very High	Yes	
Upper Buenaventura	11	High	High	High	Low	High	Very High	Yes	
Iron Mountain Rd (north)	12	High	High	High	Low	High	Very High	Yes	
HWY-151 (Shasta Dam Blvd)	13	High	High	High	Low	High	Very High	Yes	

B. OVERALL COMMUNITY HAZARD REDUCTION ASSESSMENT

KESWICK BASIN PLANNING AREA OVERALL COMMUNITY HAZARD REDUCTION ASSESSMENT						
Community, structure or area at risk	Map Number	Overall Risk	Cultural Value	Treatment Type	Treatment Method	
Iron Mountain Road (central)	1	High	Low	Fuelbreak	Brush and tree removal, pruning	
Keswick Dam Road	2	High	Low	Fuelbreak	Brush and tree removal, pruning	
Magees Acres	3	High	Low	Fuelbreak	Brush and tree removal, pruning	
Lake Blvd	4	High	Low	Fuelbreak	Brush and tree removal, pruning	
Quartz Hill Rd (north)	5	High	Low	Fuelbreak	Brush and tree removal, pruning	
Keswick Community East	6	High	Low	Fuelbreak	Brush and tree removal, pruning	
Walker Mine Road	7	High	Low	Right-Of-Way	Brush and tree removal, pruning	
Flanagan Road	8	High	Low	Right-Of-Way	Brush and tree removal, pruning	
Macs Road	9	High	Low	Right-Of-Way	Brush and tree removal, pruning	
Bailey Road	10	High	Low	Right-Of-Way	Brush and tree removal, pruning	
Upper Buenaventura	11	High	Low	Fuelbreak	Brush and tree removal, pruning	
Iron Mountain Rd (north)	12	High	Low	Fuelbreak	Brush and tree removal, pruning	
HWY-151 (Shasta Dam Blvd)	13	High	Low	Fuelbreak	Brush and tree removal, pruning	

III. COMMUNITY VALUES

RESIDENCES AND MAJOR STRUCTURES

About 954 homes are found within the Keswick Basin planning area. Major structures include stores, schools, powerlines, substations, and fire stations. Areas of community importance include: Whiskeytown National Recreation Area, Old Shasta State Park, Keswick Volunteer Fire Company Station #53, CAL FIRE Station #58, Chappie OHV Areas facilities, and public shooting ranges, Centimudi Bay Marina.



Toyon Learning Center



Baptist Church



WAPA Powerlines



Antiques Business



City of Shasta Lake Substation



SLFPD Fire Station



MAPS OF KESWICK BASIN PLANNING AREA

1. KESWICK BASIN PROPOSED PROJECTS AND PLANNING AREA
2. FIRE SEVERITY RATING
3. VEGETATION
4. SPECIAL STATUS SPECIES AND HABITAT

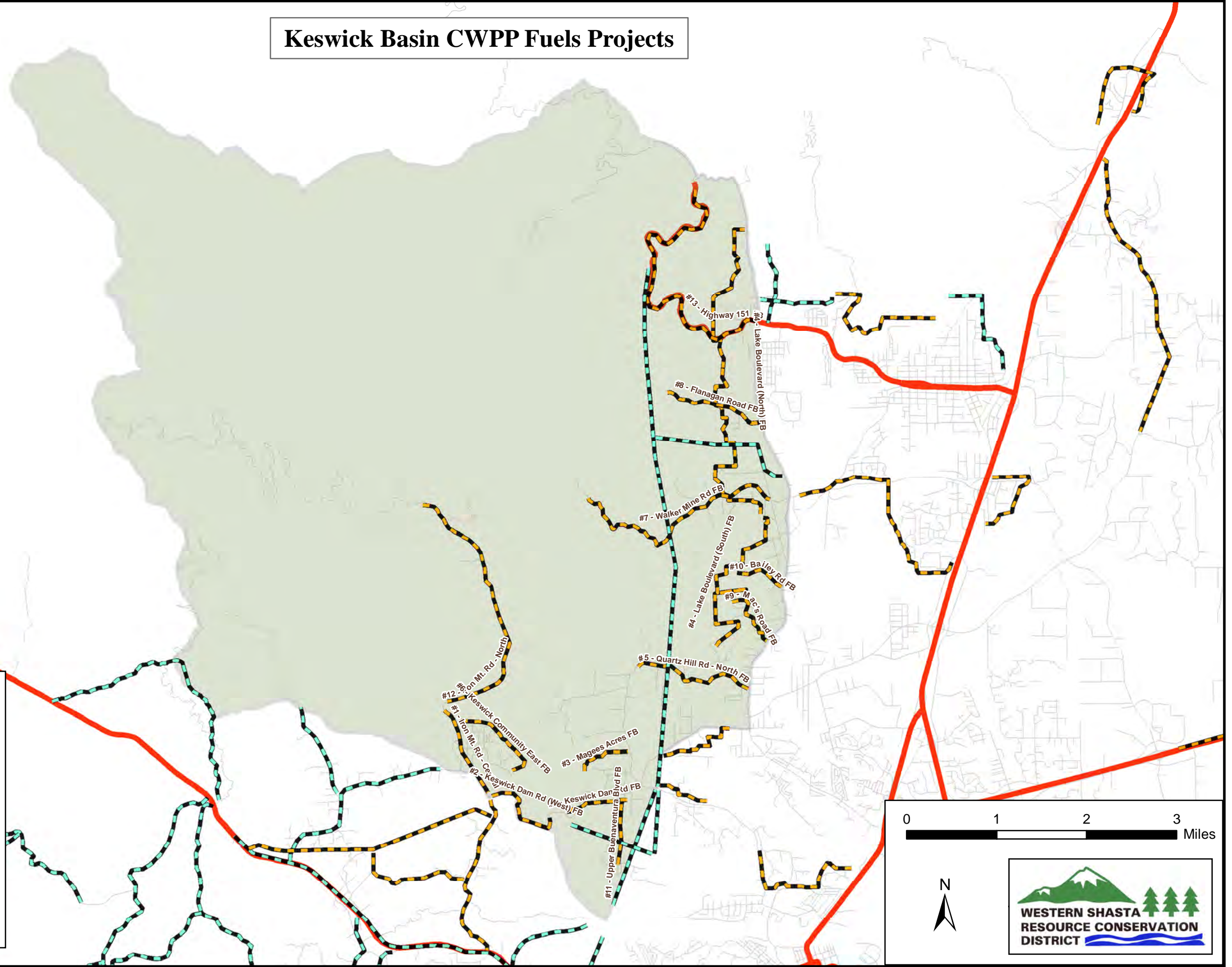
Keswick Basin CWPP Fuels Projects

Legend

Projects


-  Proposed
-  Complete

Priority	Project Name
1	Iron Mt. Rd - Central
2	Keswick Dam Rd FB
3	Magees Acres FB
4	Lake Boulevard (North) FB
4	Lake Boulevard (South) FB
5	Quartz Hill Rd - North FB
6	Keswick Community East FB
7	Walker Mine Rd FB
8	Flanagan Road FB
9	Mac's Road FB
10	Bailey Rd FB
11	Upper Buenaventura Blvd FB
12	Iron Mt. Rd - North
13	Highway 151 FB



0 1 2 3 Miles

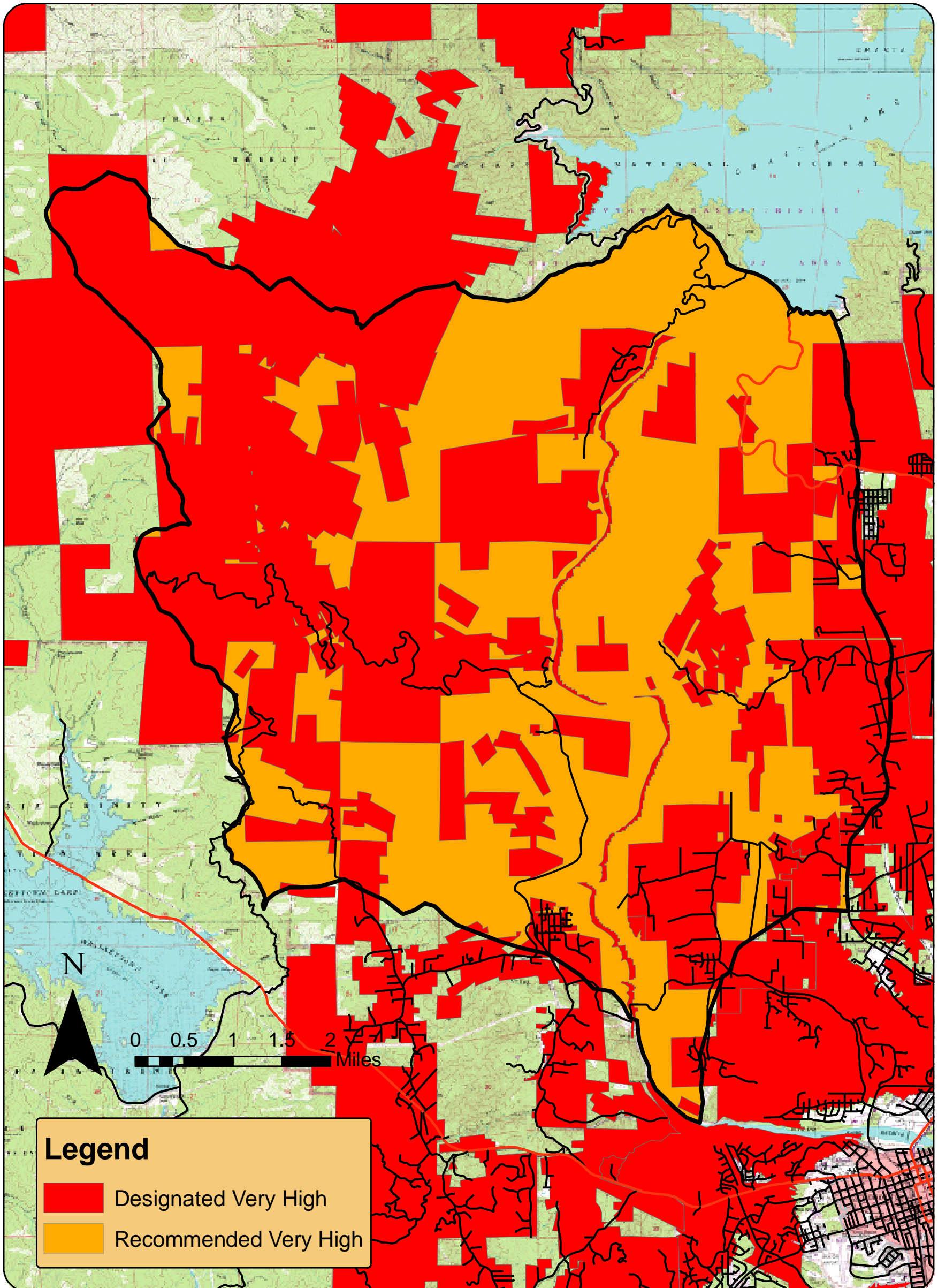
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**WESTERN SHASTA
RESOURCE CONSERVATION
DISTRICT**

MAP 2

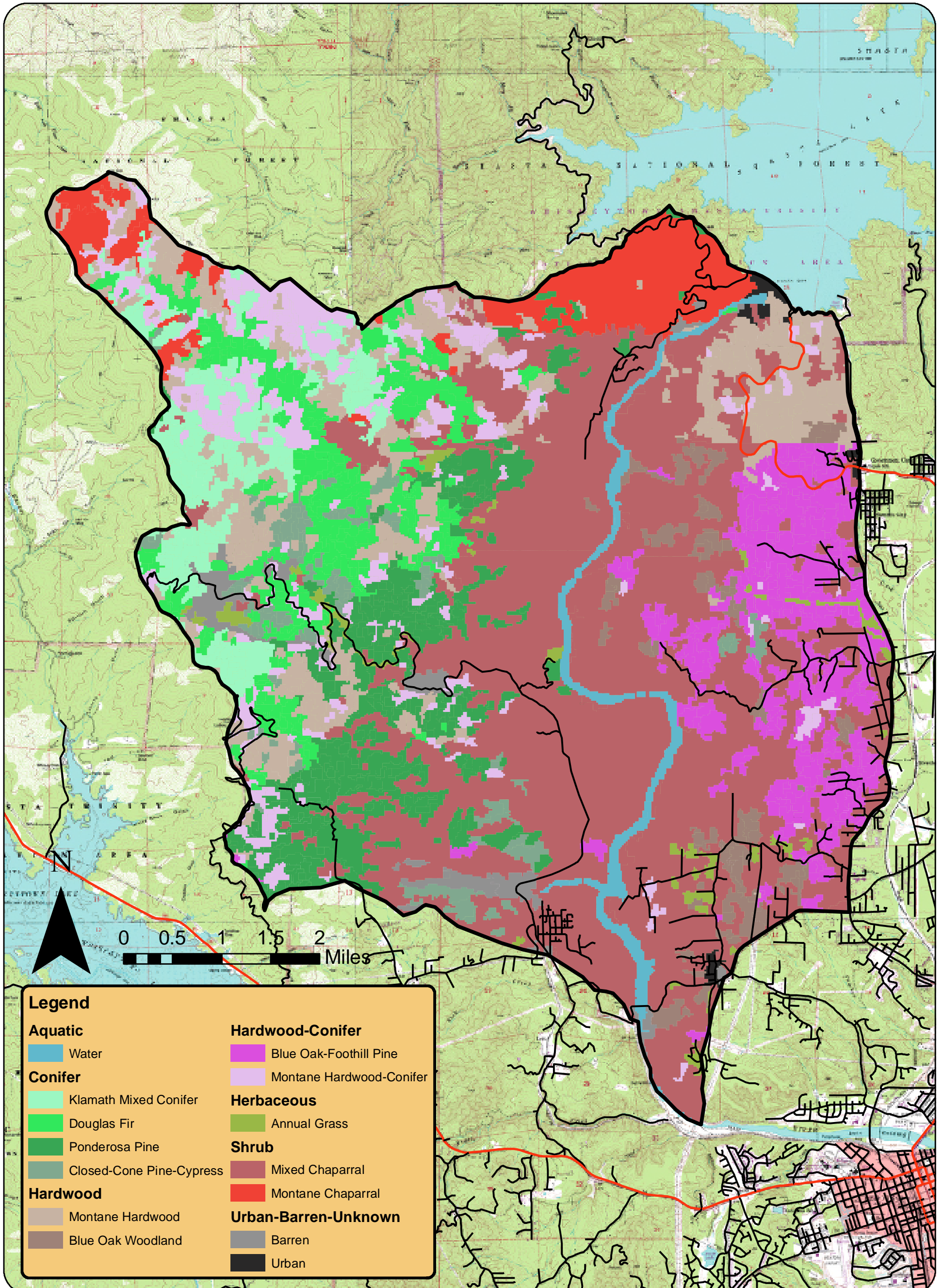
Keswick Basin - Fuel Hazard Severity Zone Rating*



* Cal Fire Rating

MAP 3

Keswick Basin - General Vegetation



MAP 4

Keswick Basin - CNDDDB



Department Name: Shasta County Board of Supervisors
Agreement Number: FAF-040020
Dollar Amount: \$53,500