APPENDIX A
CLIMATE AND WEATHER GRAPHS

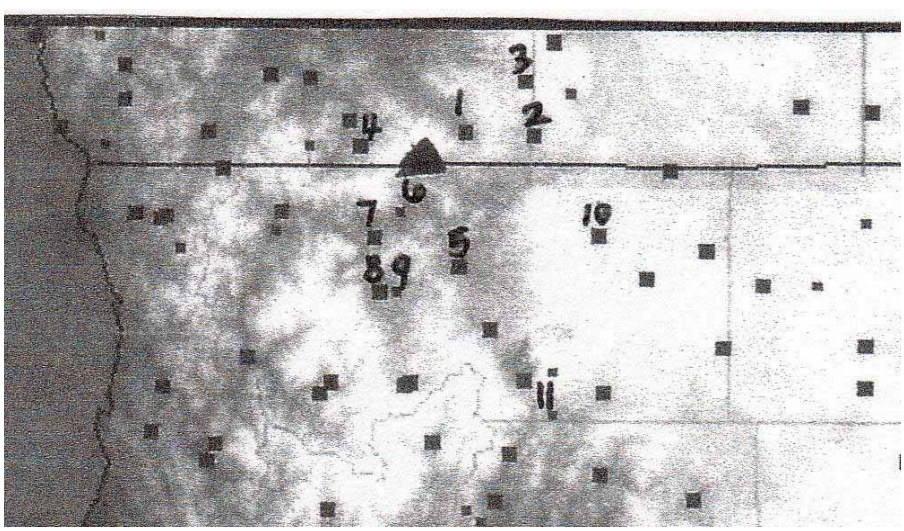
Western Regional Climate Center
RAWS Site Map

OREGON SITES

*1.Buckhorn Springs El. 2780'
Lat. 42 07'11'' W
Long. 122 33'48'' W
2.Parker Mtn. El. 5280'
3.Dead Indian El. 4900'
4.Squaw Peak El. 4964'

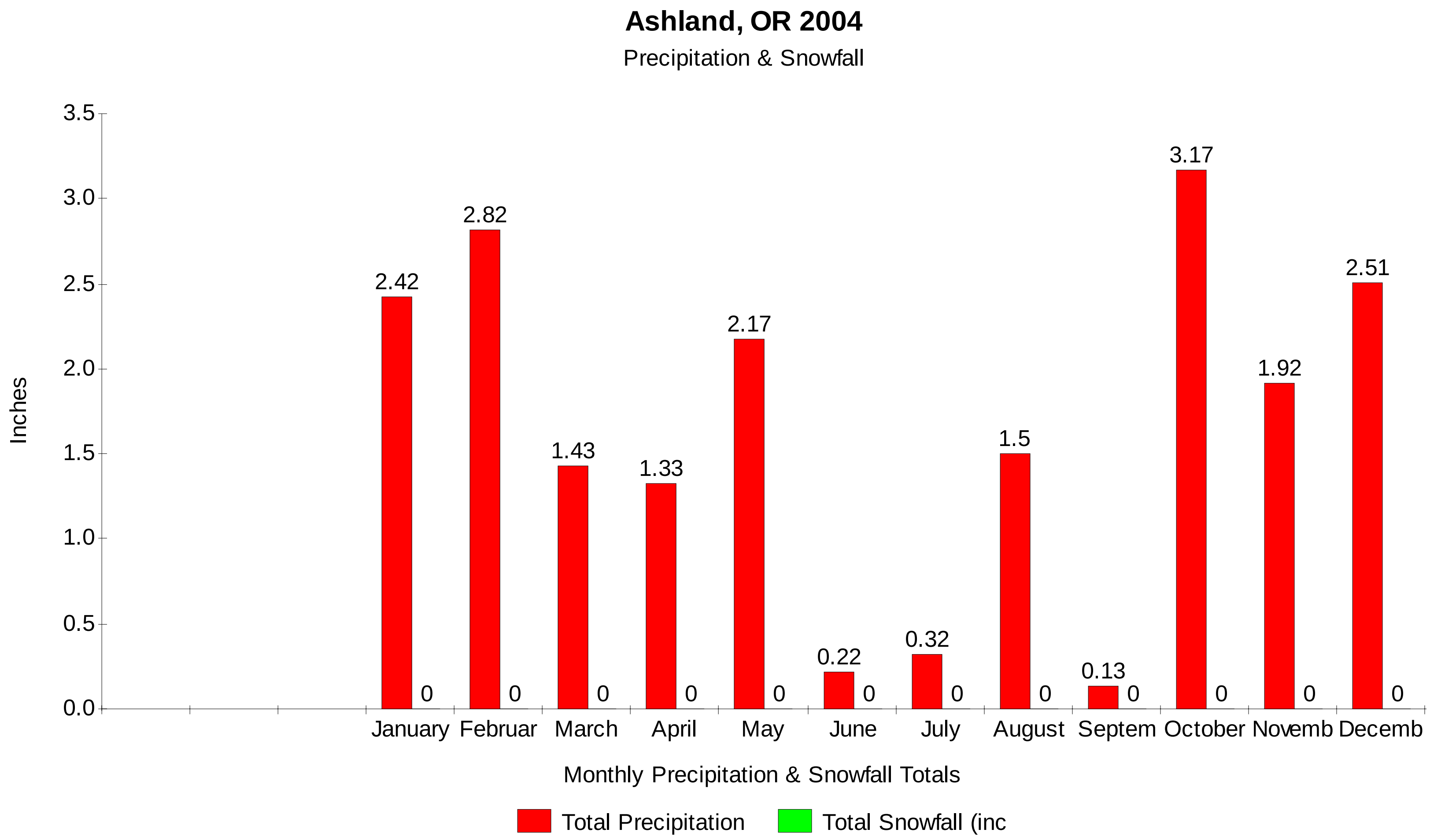
CALIFORNIA SITES

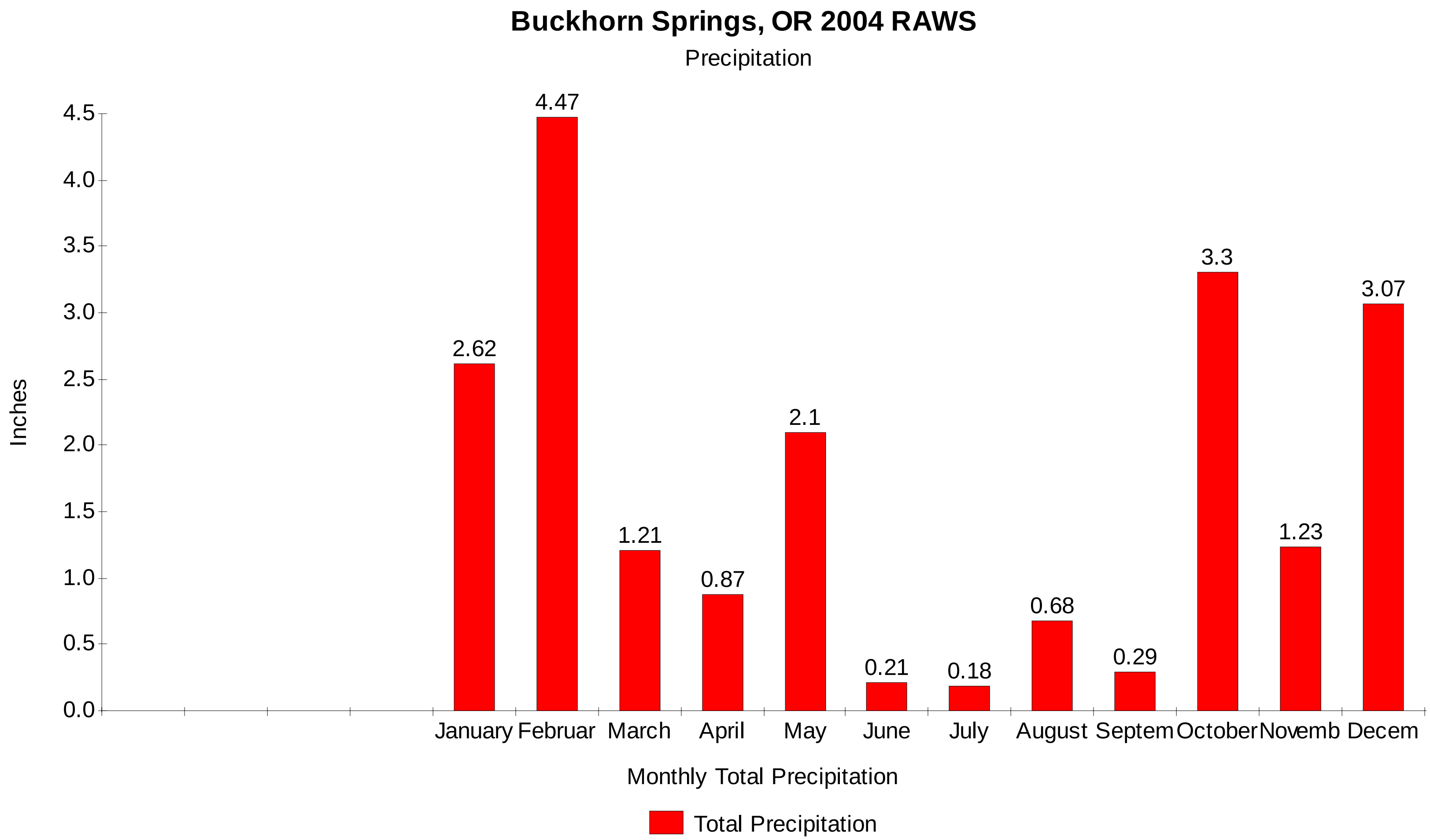
*5.Brazie Ranch El. 3000'
Lat. 41 41'07'' N
Long. 122 35'39'' W
6.Oak Knoll El. 2100'
7.Collins Baldy El. 5493'
8.Quartz Mtn. El. 4238'
9.Scott River El. 4000'
10.Juanita Lake El. 5400'
11.Mt. Shasta El. 3500'

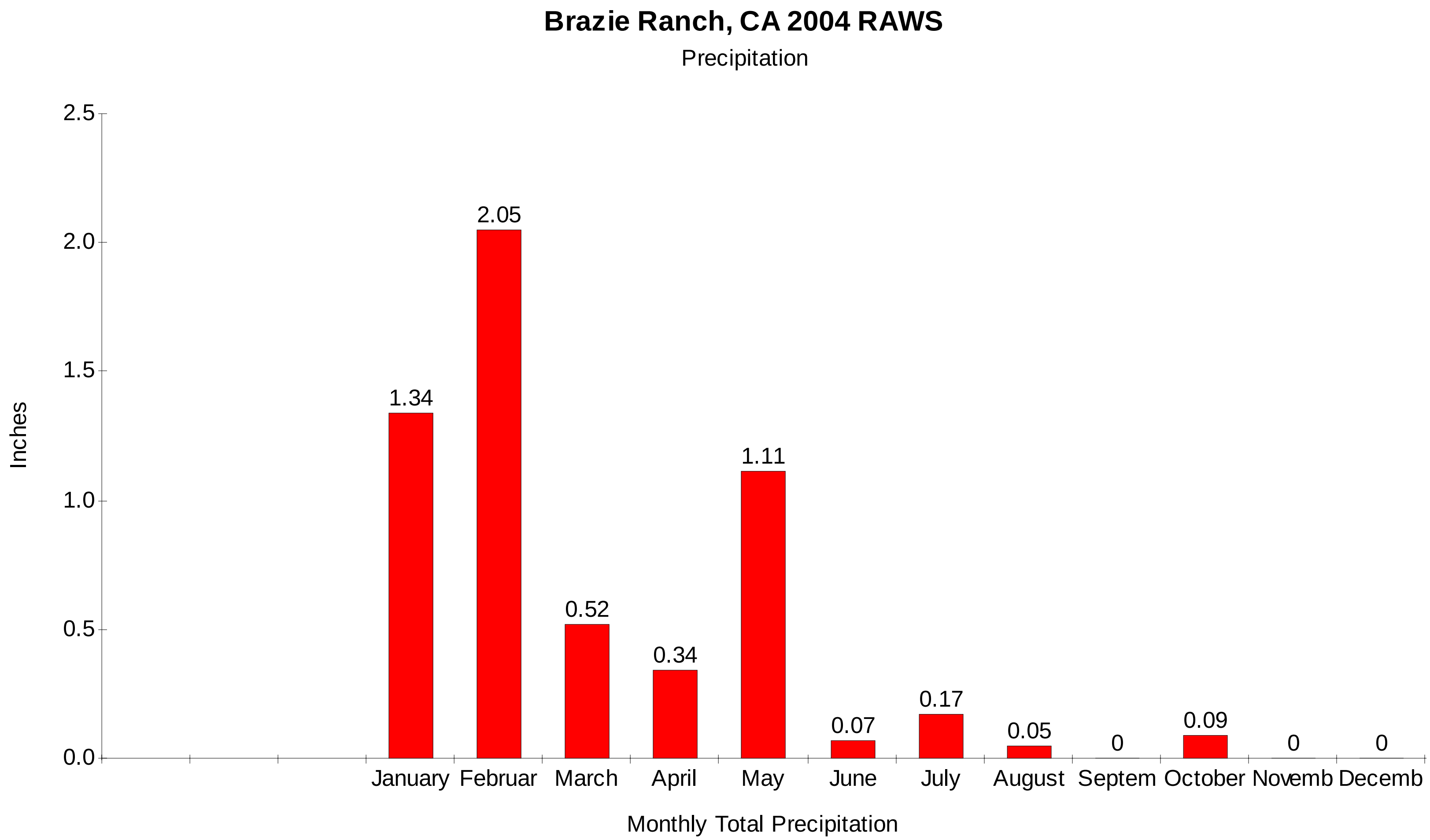


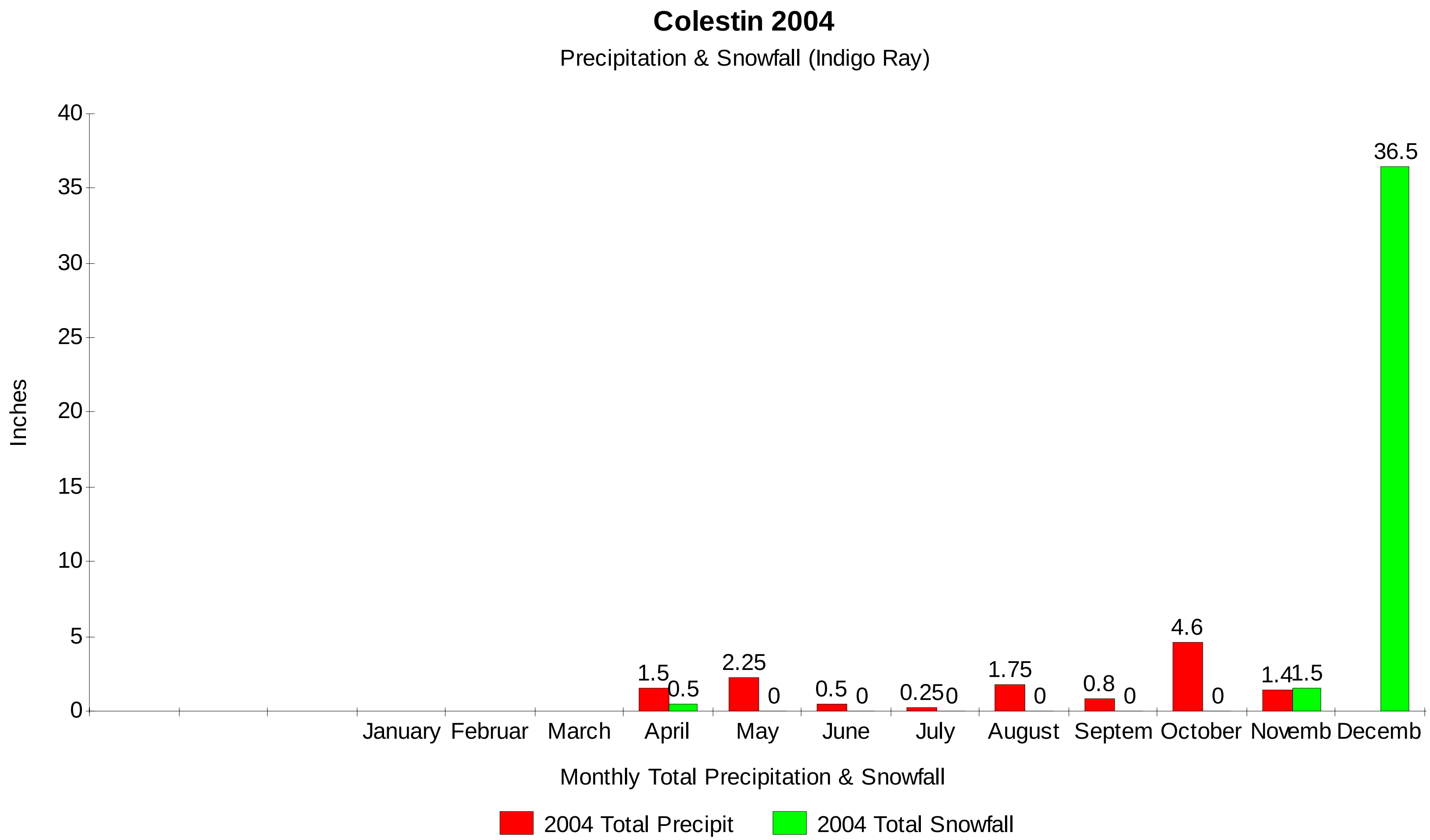
▲ Colestin
* sites recommended for data by Dennis Gettman, NWS, Science and Operations Officer

PRECIPITATION AND SNOWFALL GRAPHS

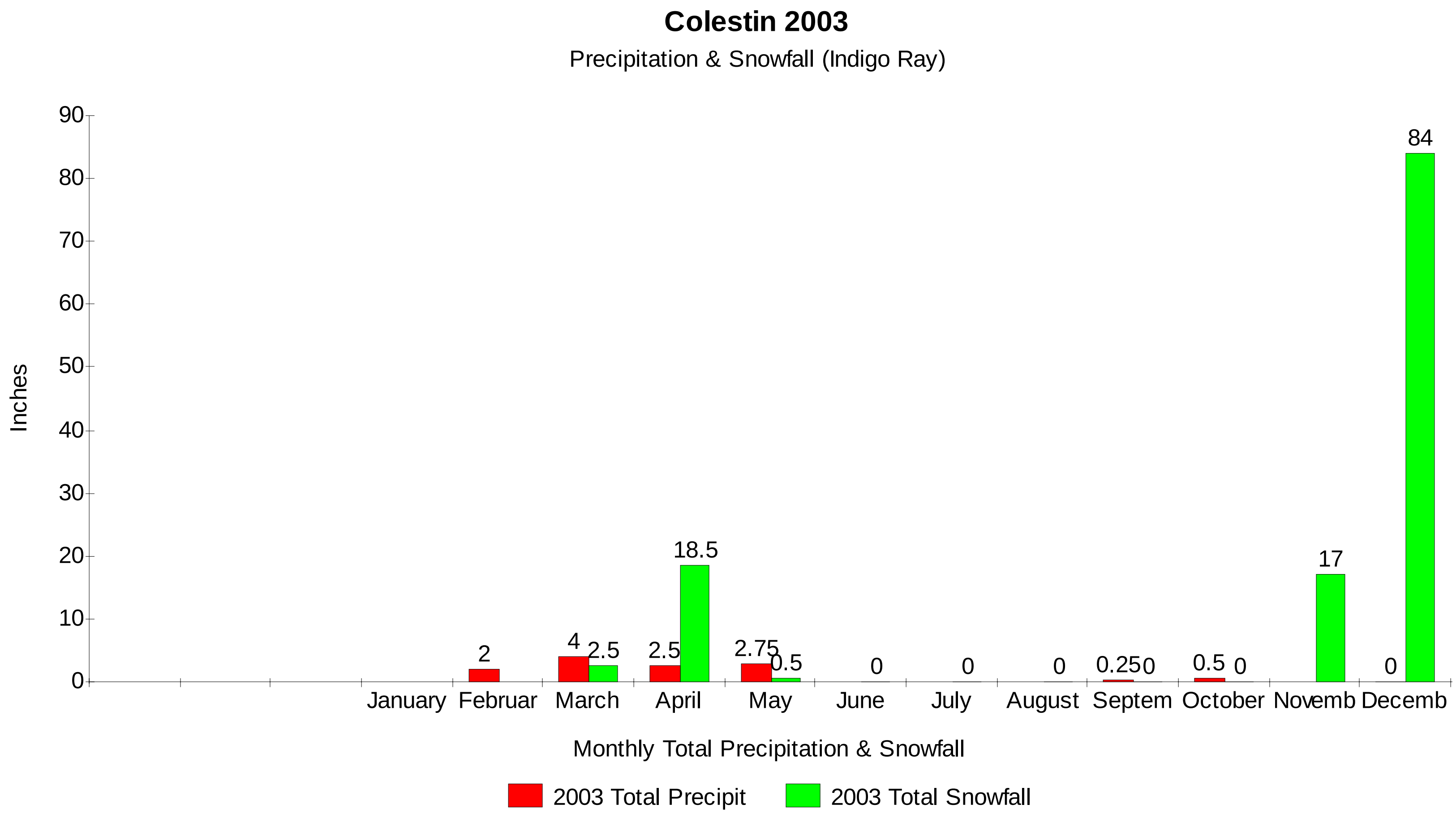

Ashland, OR 2004
Precipitation & Snowfall
Inches
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2.42
2.82
1.43
1.33
2.17
0.22
0.32
1.5
0.13
3.17
1.92
2.51
0
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decemb
Monthly Precipitation & Snowfall Totals
Total Precipitation
Total Snowfall (inc


Buckhorn Springs, OR 2004 RAWS
Precipitation
Inches
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2.62
4.47
1.21
0.87
2.1
0.21
0.18
0.68
0.29
3.3
1.23
3.07
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decem
Monthly Total Precipitation
Total Precipitation

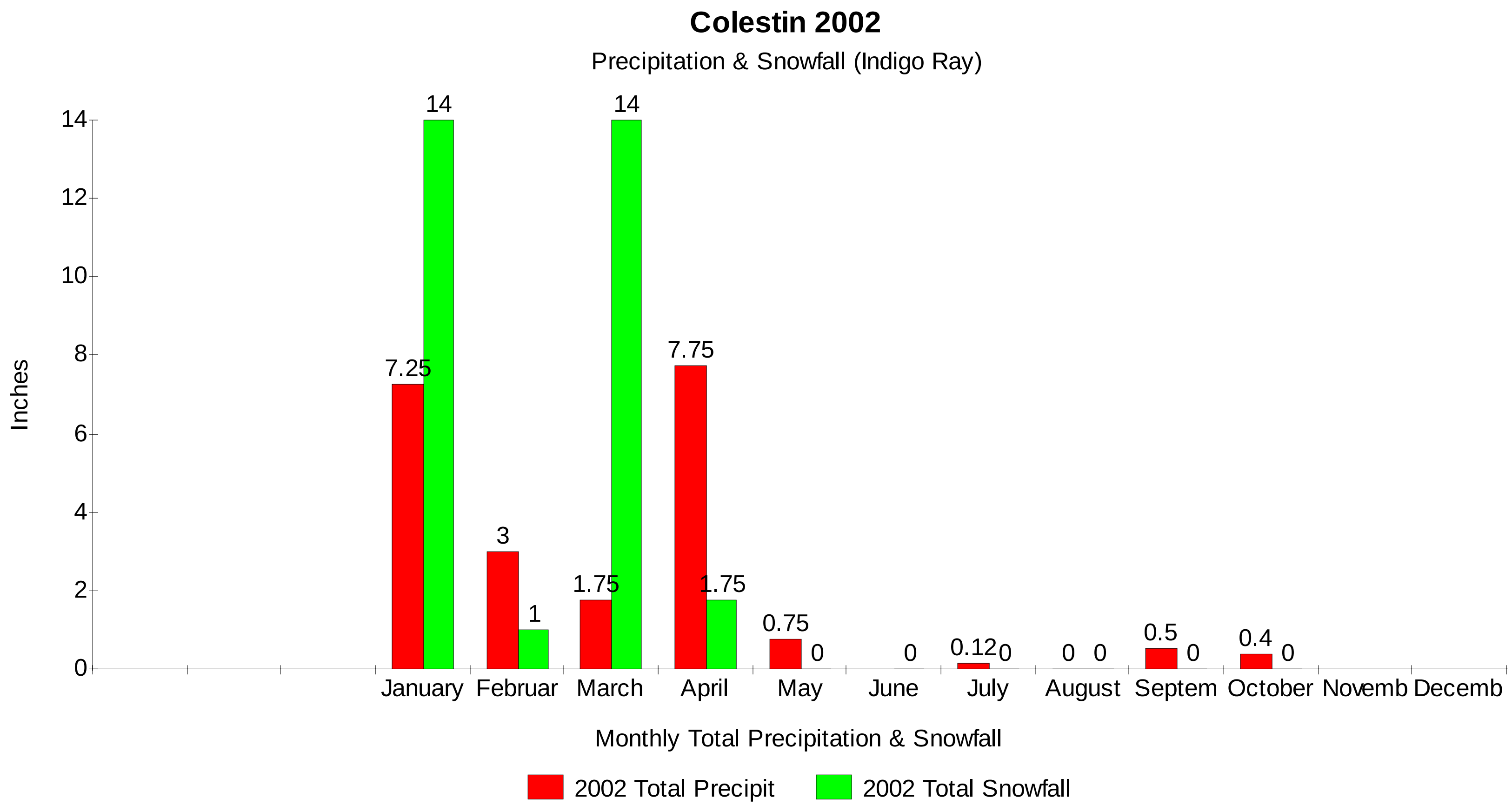

Brazie Ranch, CA 2004 RAWS
Precipitation
Inches
2.5
2.0
1.5
1.0
0.5
0.0
1.34
2.05
0.52
0.34
1.11
0.07
0.17
0.05
0
0.09
0
0
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decemb
Monthly Total Precipitation



No Data for January-March
Total Precipitation data includes snow melt
Snowfall data is depth of snow



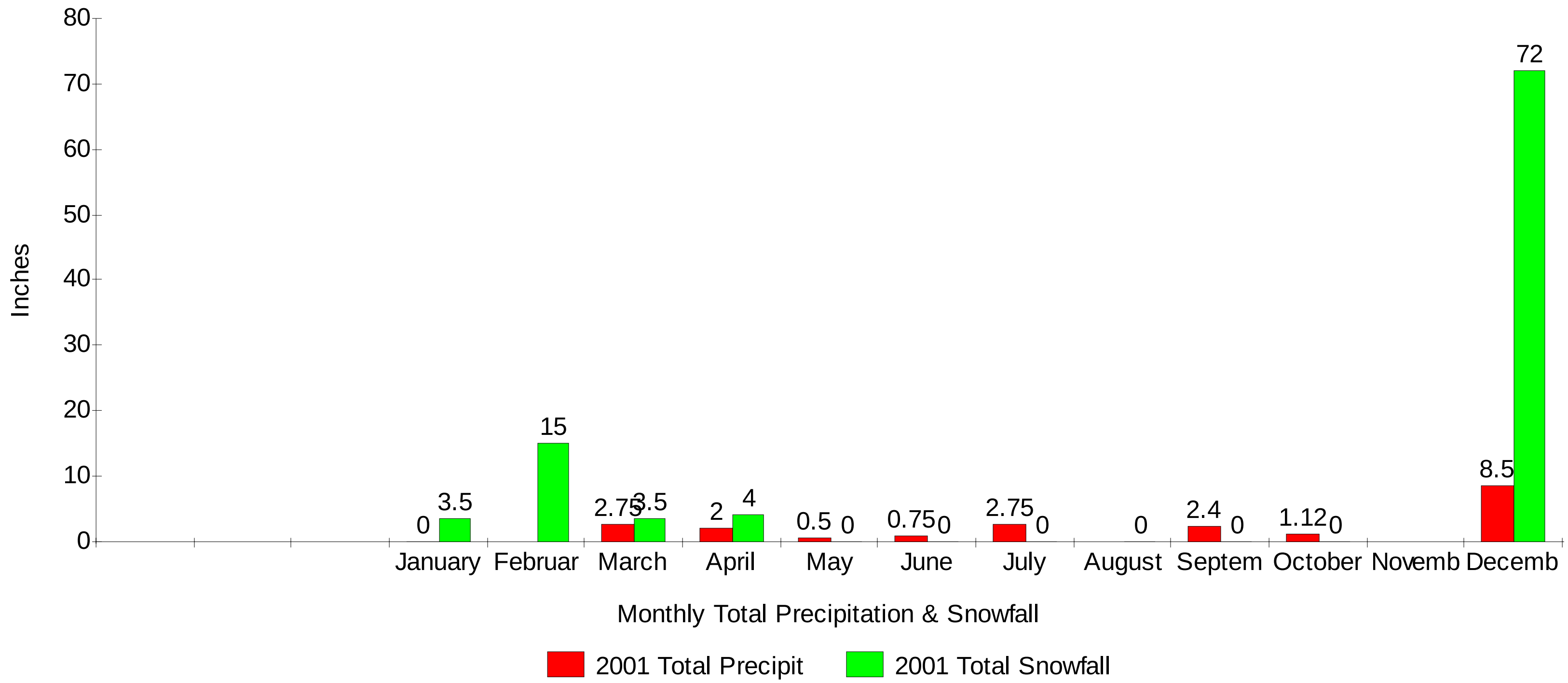
No Data for January
Total Precipitation data includes snow melt
Snowfall data is depth of snow



No Data for November and December
Total Precipitation data includes snow melt
Snowfall data is depth of snow

Colestin 2001

Precipitation & Snowfall (Indigo Ray)



No Data for November
Total Precipitation data includes snow melt
Snowfall data is depth of snow

Period of Record : 7/ 1/1948 to 9/30/2004

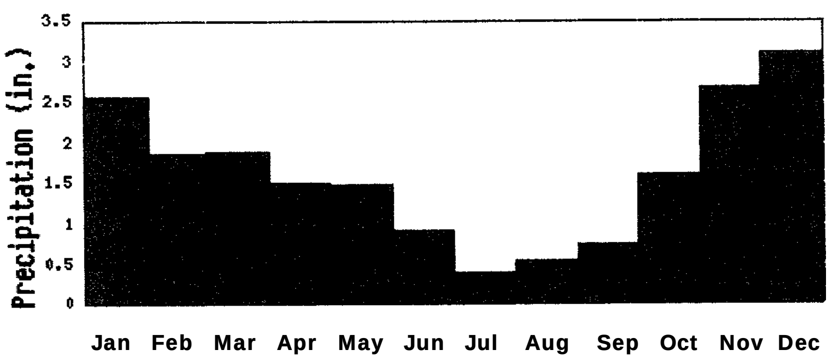
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	46.7	52.3	56.4	62.5	70.1	78.4	86.9	85.6	79.2	66.8	52.9	46.0	65.3
Average Min. Temperature (F)	29.7	31.6	33.3	36.2	41.6	47.3	51.4	50.8	45.3	38.4	33.1	30.1	39.1
Average Total Precipitation (in.)	2.58	1.86	1.91	1.47	1.47	0.92	0.41	0.54	0.75	1.61	2.70	3.12	19.34
Average Total SnowFall (in.)	2.7	1.4	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.6	7.1
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.

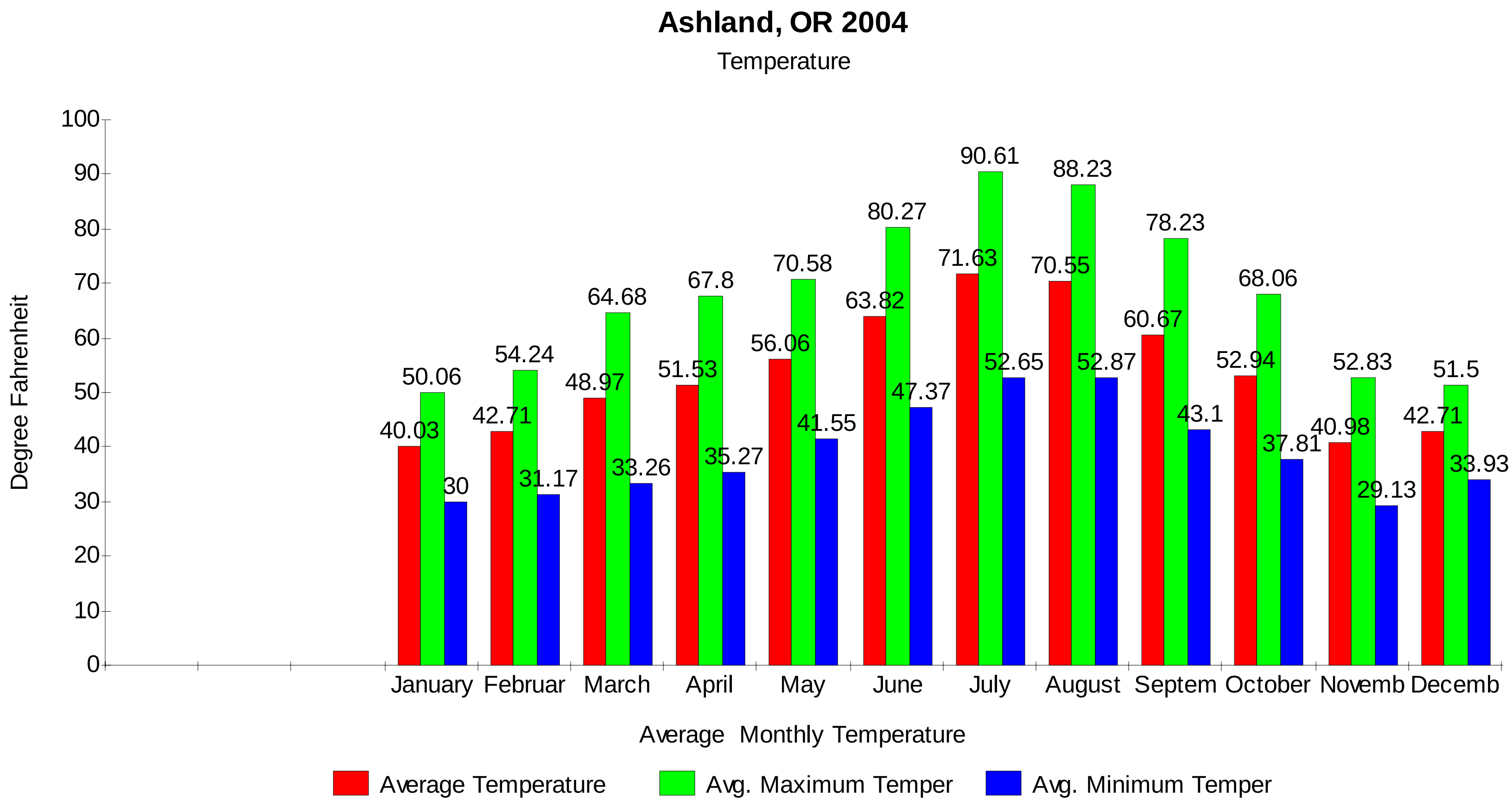
Max. Temp.: 99.2% Min. Temp.: 99.1 % Precipitation: 99.3% Snowfall: 98.7% Snow Depth: 98.6%

Check Station Metadata or Metadata graphics for more detail about data completeness. *Western Regional Climate Center; wrcc@ dri.edu*

Monthly Average Total Precipitation

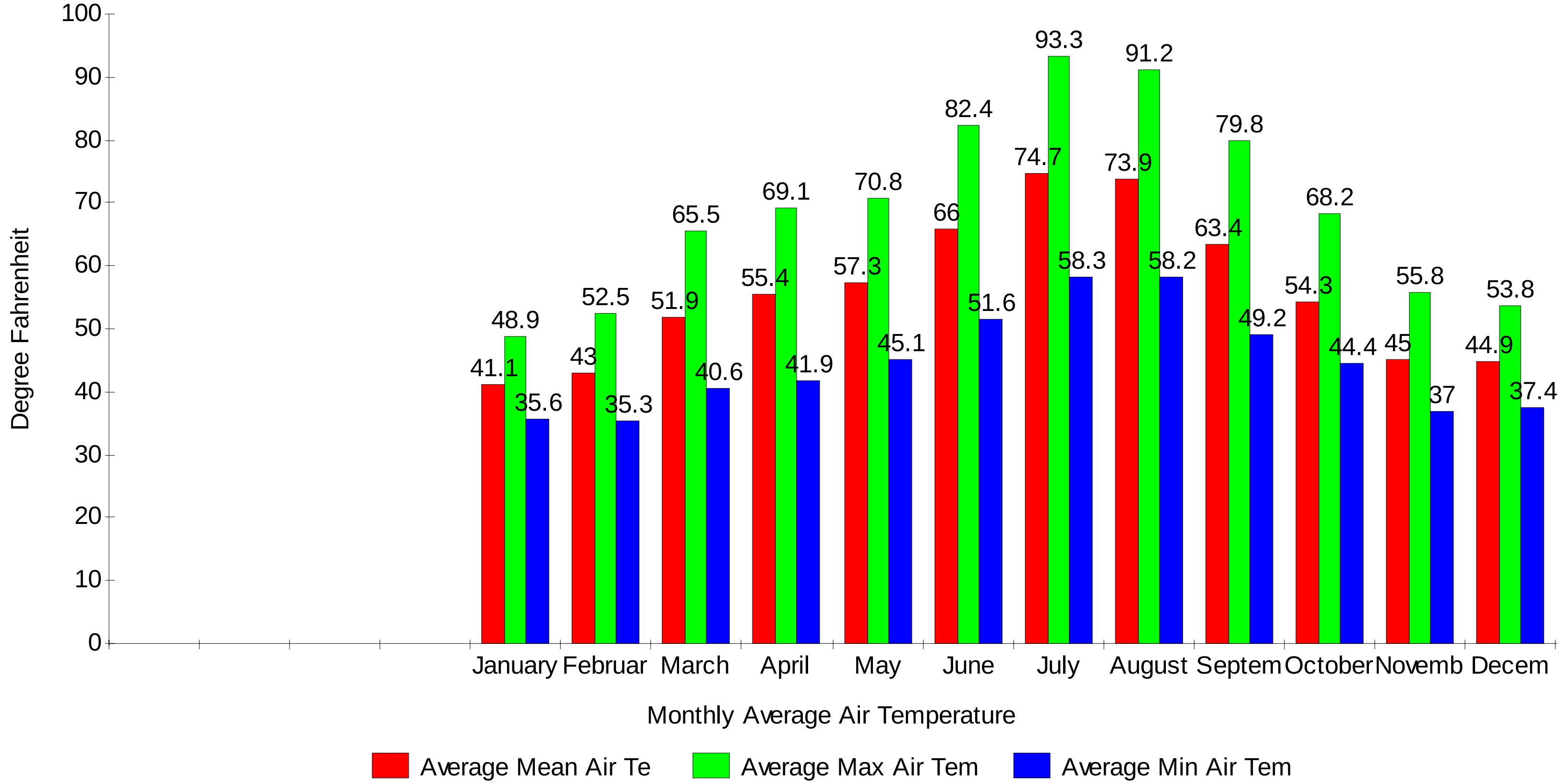


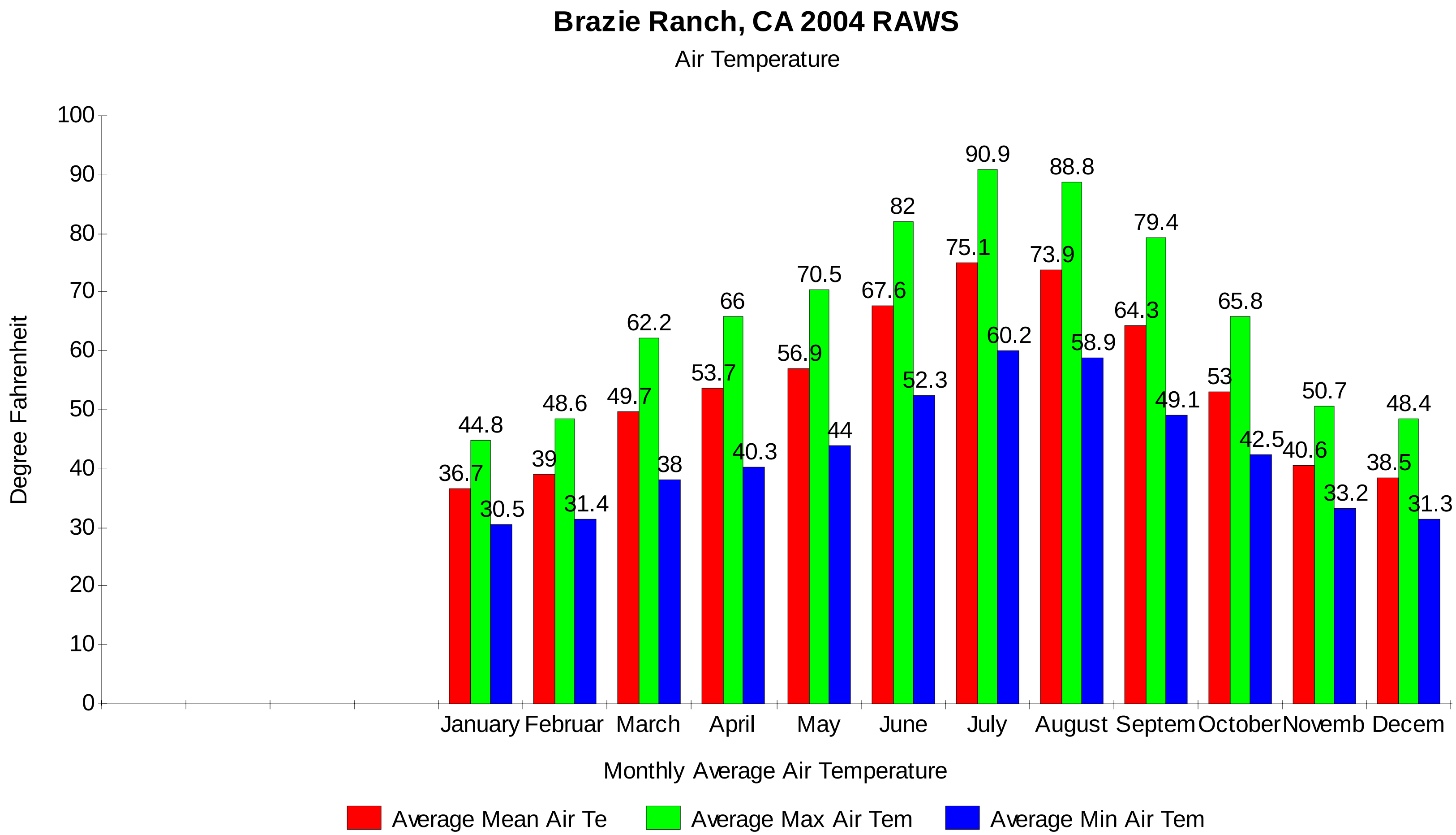
AIR TEMPERATURE GRAPHS


Ashland, OR 2004
Temperature
Degree Fahrenheit
100
90
80
70
60
50
40
30
20
10
0
50.06
40.03
30
54.24
42.71
31.17
64.68
48.97
33.26
67.8
51.53
35.27
70.58
56.06
41.55
80.27
63.82
47.37
90.61
71.63
52.65
88.23
70.55
52.87
78.23
60.67
43.1
68.06
52.94
37.81
52.83
40.98
29.13
51.5
42.71
33.93
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decemb
Average Monthly Temperature
Average Temperature
Avg. Maximum Temper
Avg. Minimum Temper

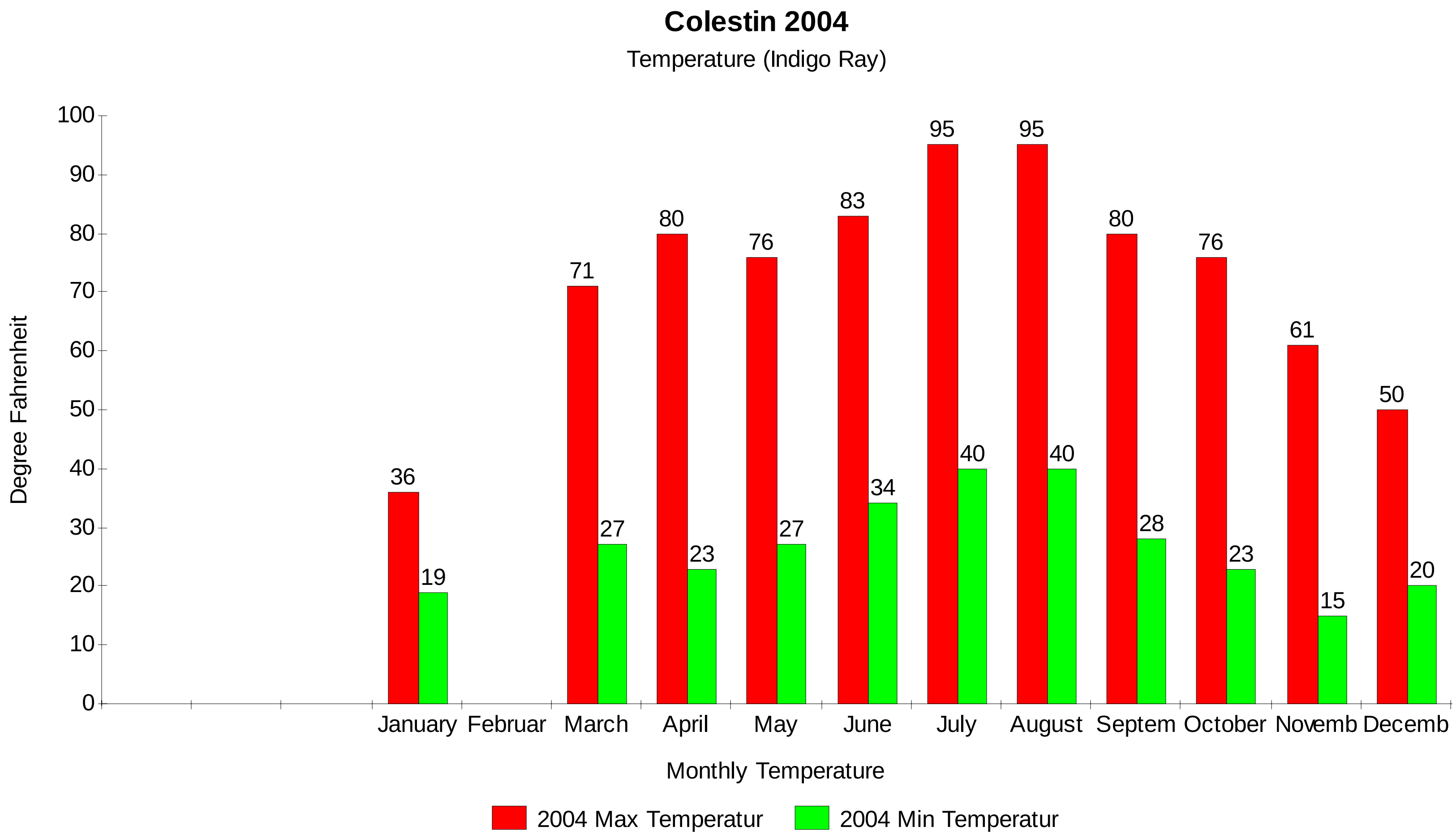
Buckhorn Springs, OR 2004 RAWS

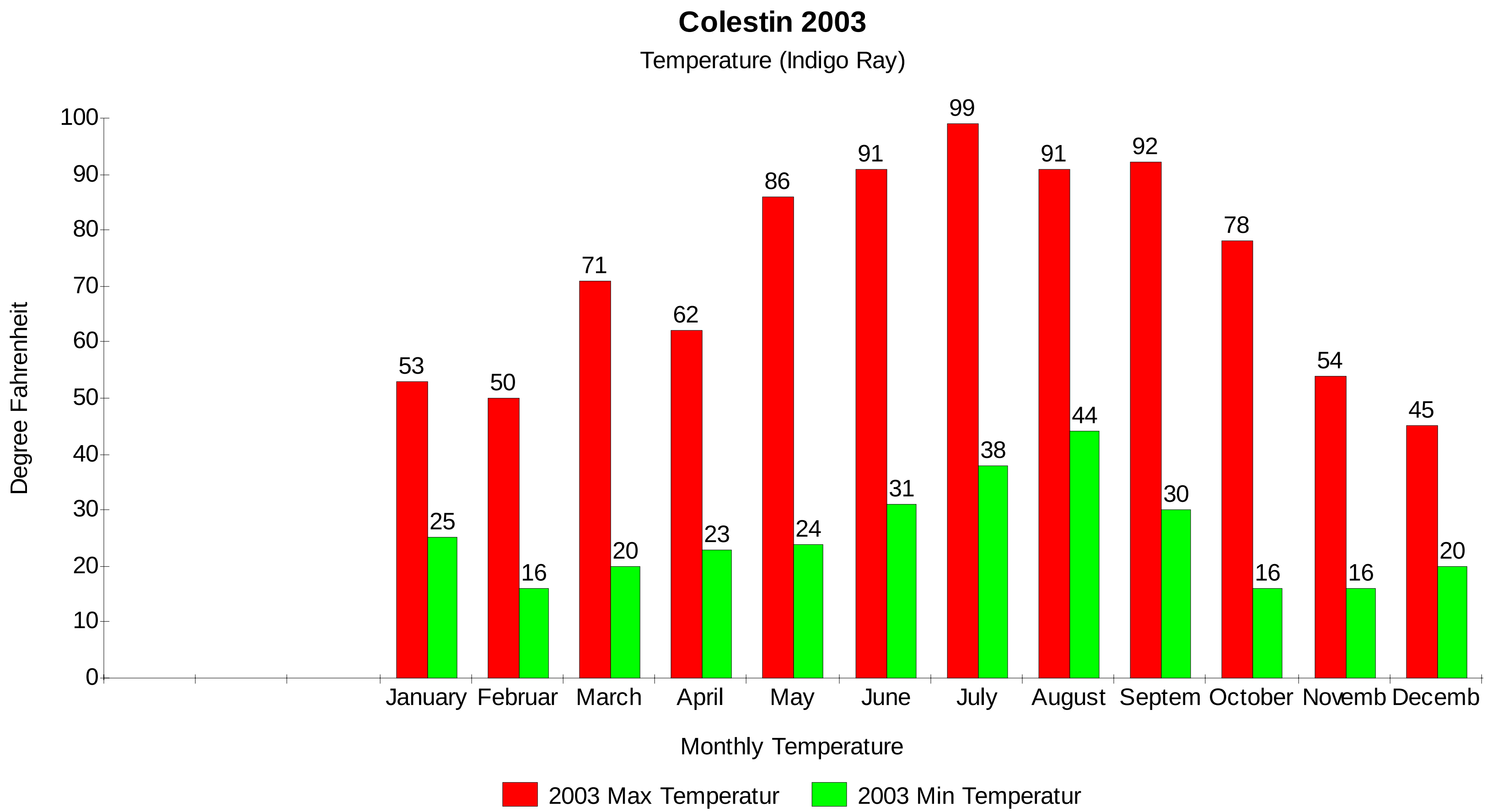
Air Temperature

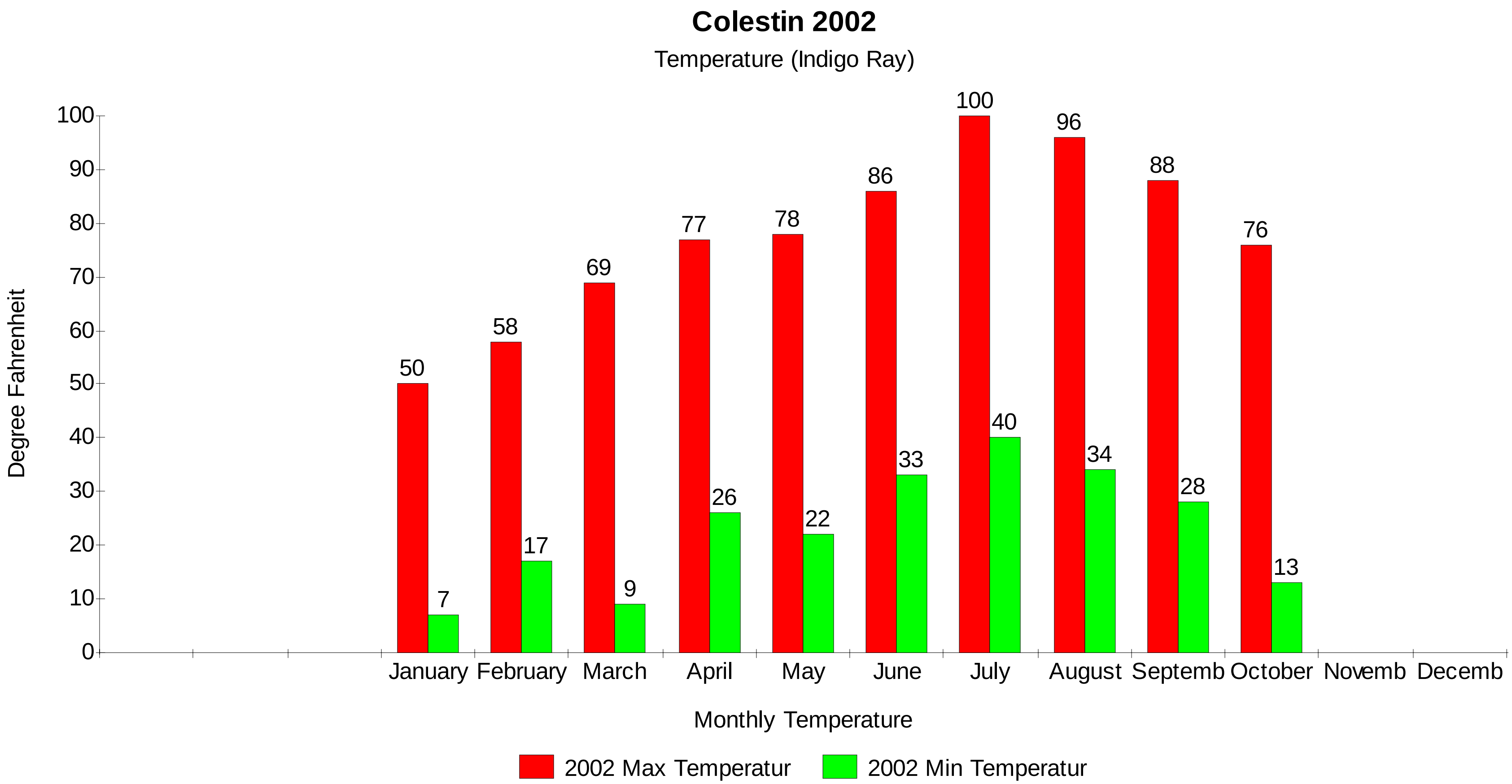


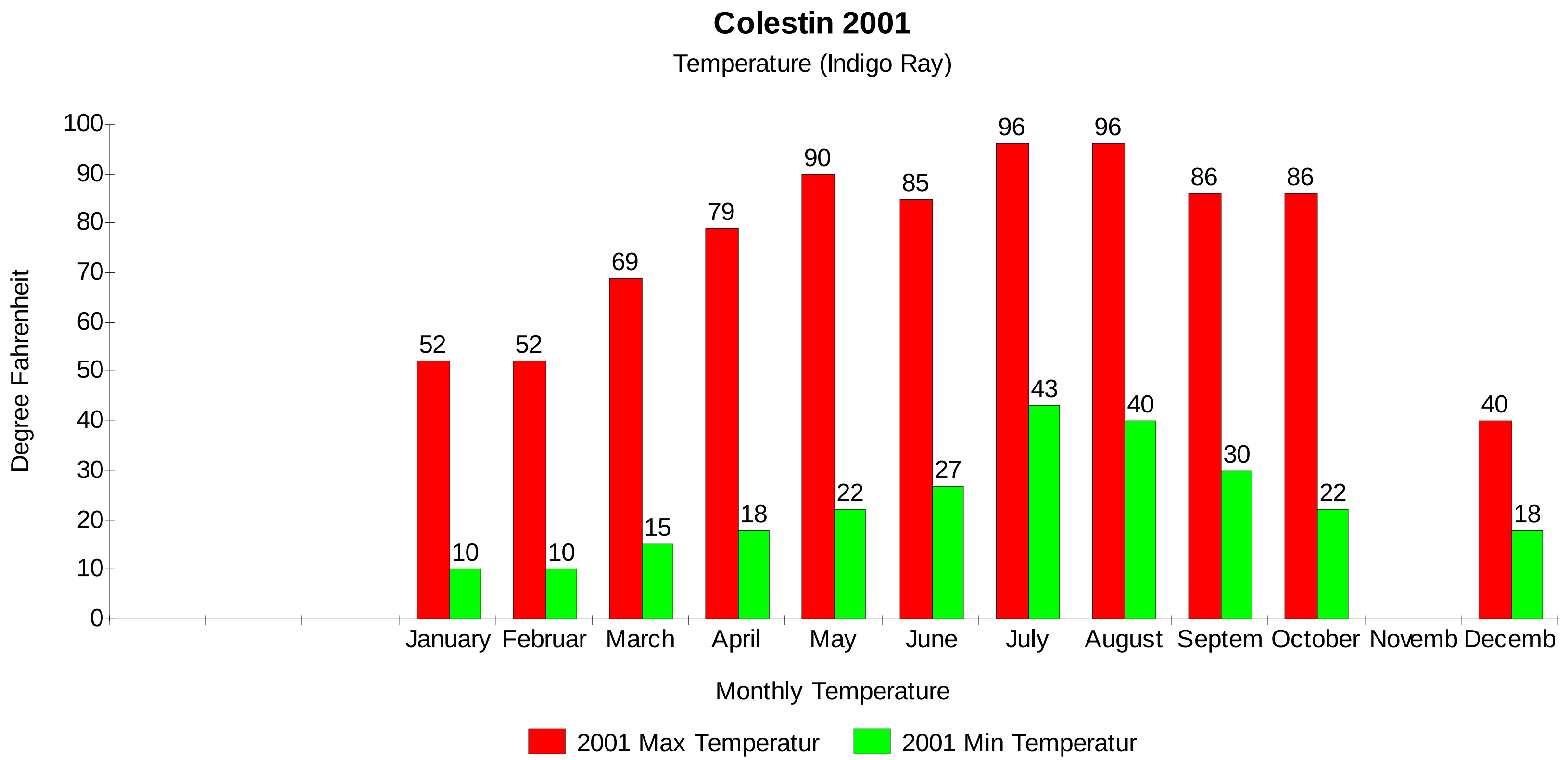


Brazie Ranch, CA 2004 RAWS
Air Temperature
Degree Fahrenheit
100
90
80
70
60
50
40
30
20
10
0
44.8
36.7
30.5
48.6
39
31.4
62.2
49.7
38
66
53.7
40.3
70.5
56.9
44
82
67.6
52.3
90.9
75.1
60.2
88.8
73.9
58.9
79.4
64.3
49.1
65.8
53
42.5
50.7
40.6
33.2
48.4
38.5
31.3
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decem
Monthly Average Air Temperature
Average Mean Air Te
Average Max Air Tem
Average Min Air Tem


Colestin 2004
Temperature (Indigo Ray)
Degree Fahrenheit
100
90
80
70
60
50
40
30
20
10
0
36
19
71
27
80
23
76
27
83
34
95
40
95
40
80
28
76
23
61
15
50
20
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decemb
Monthly Temperature
2004 Max Temperatur
2004 Min Temperatur

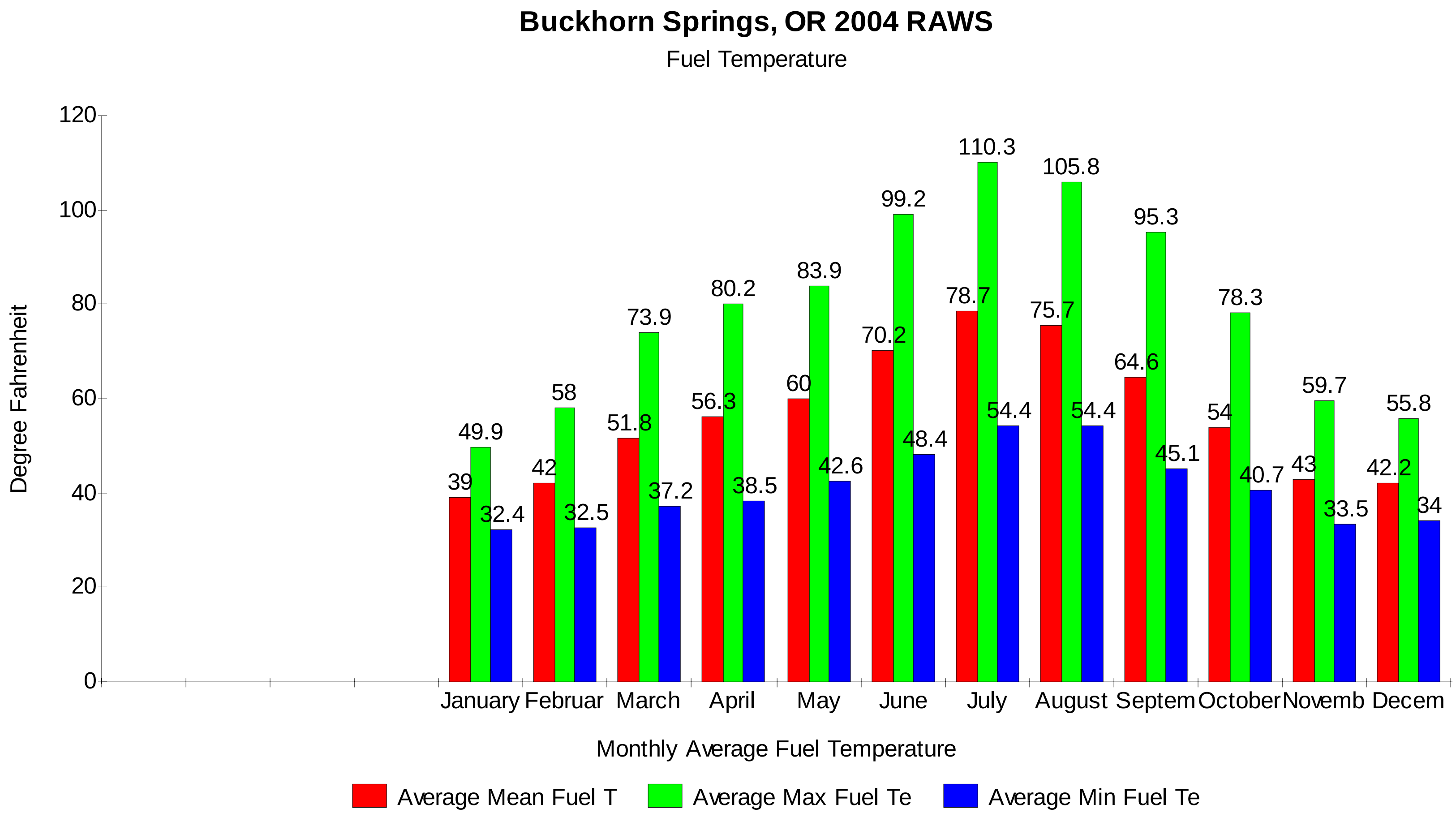

Colestin 2003
Temperature (Indigo Ray)
Degree Fahrenheit
100
90
80
70
60
50
40
30
20
10
0
53
25
50
16
71
20
62
23
86
24
91
31
99
38
91
44
92
30
78
16
54
16
45
20
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decemb
Monthly Temperature
2003 Max Temperatur
2003 Min Temperatur

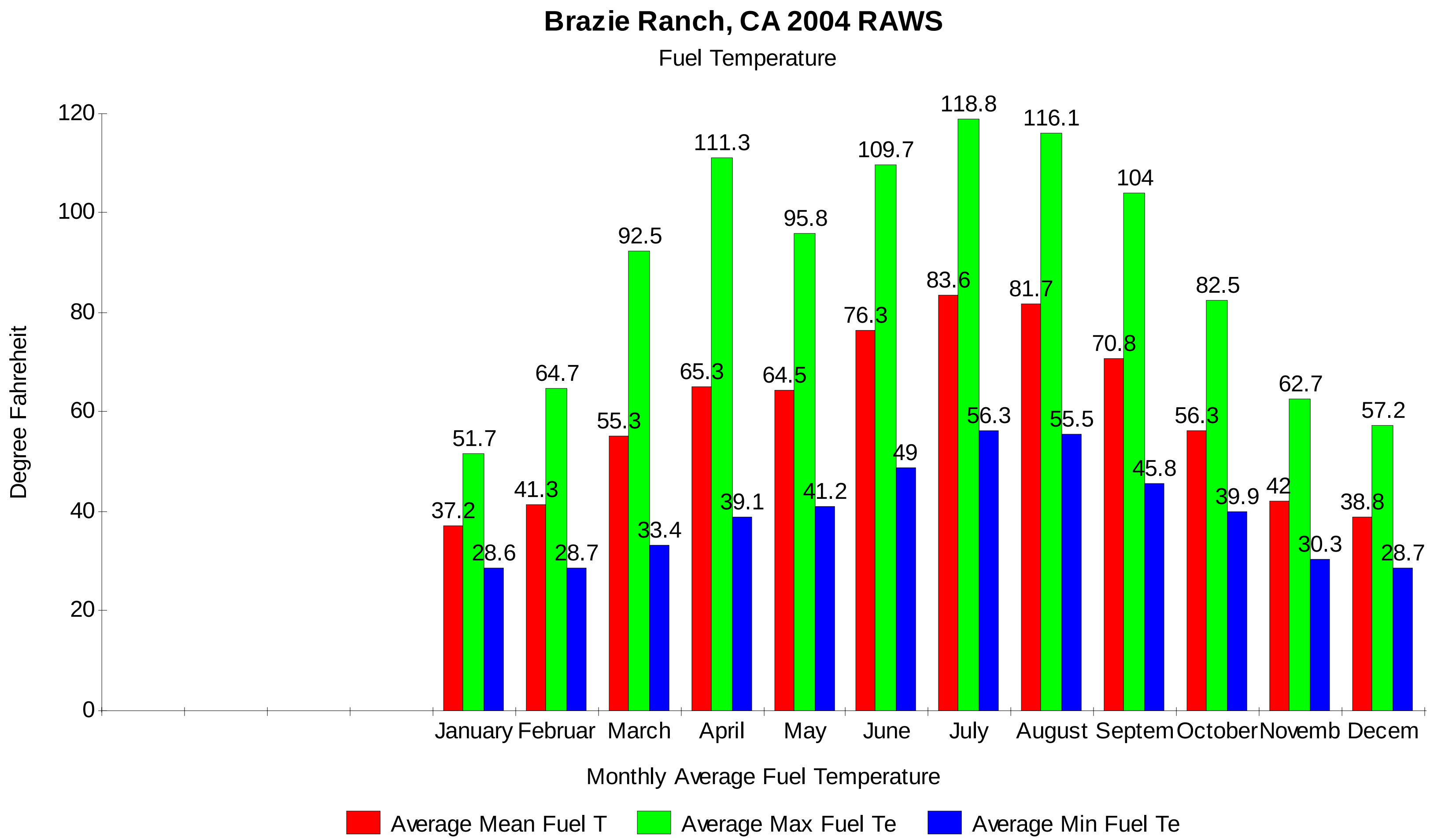

Colestin 2002
Temperature (Indigo Ray)
Degree Fahrenheit
100
90
80
70
60
50
40
30
20
10
0
50
7
58
17
69
9
77
26
78
22
86
33
100
40
96
34
88
28
76
13
January
February
March
April
May
June
July
August
Septemb
October
Novemb
Decemb
Monthly Temperature
2002 Max Temperatur
2002 Min Temperatur



Colestin 2001
Temperature (Indigo Ray)
Degree Fahrenheit
100
90
80
70
60
50
40
30
20
10
0
52
10
52
10
69
15
79
18
90
22
85
27
96
43
96
40
86
30
86
22
40
18
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decemb
Monthly Temperature
2001 Max Temperatur
2001 Min Temperatur

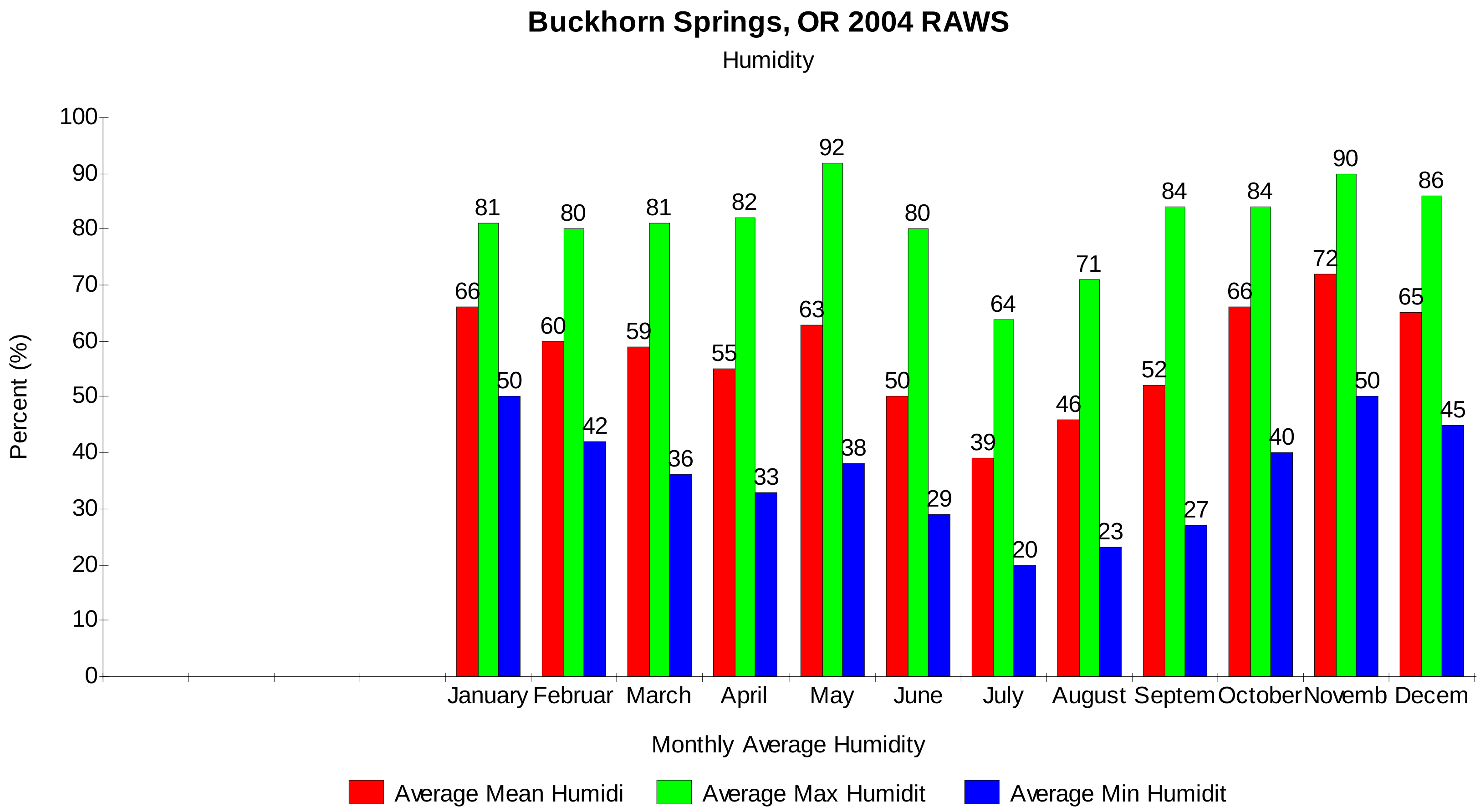
FUEL TEMPERATURE GRAPHS


Buckhorn Springs, OR 2004 RAWS
Fuel Temperature
Degree Fahrenheit
120
100
80
60
40
20
0
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decem
39
49.9
32.4
42
58
32.5
51.8
73.9
37.2
56.3
80.2
38.5
60
83.9
42.6
70.2
99.2
48.4
78.7
110.3
54.4
75.7
105.8
54.4
64.6
95.3
45.1
54
78.3
40.7
43
59.7
33.5
42.2
55.8
34
Monthly Average Fuel Temperature
Average Mean Fuel T
Average Max Fuel Te
Average Min Fuel Te

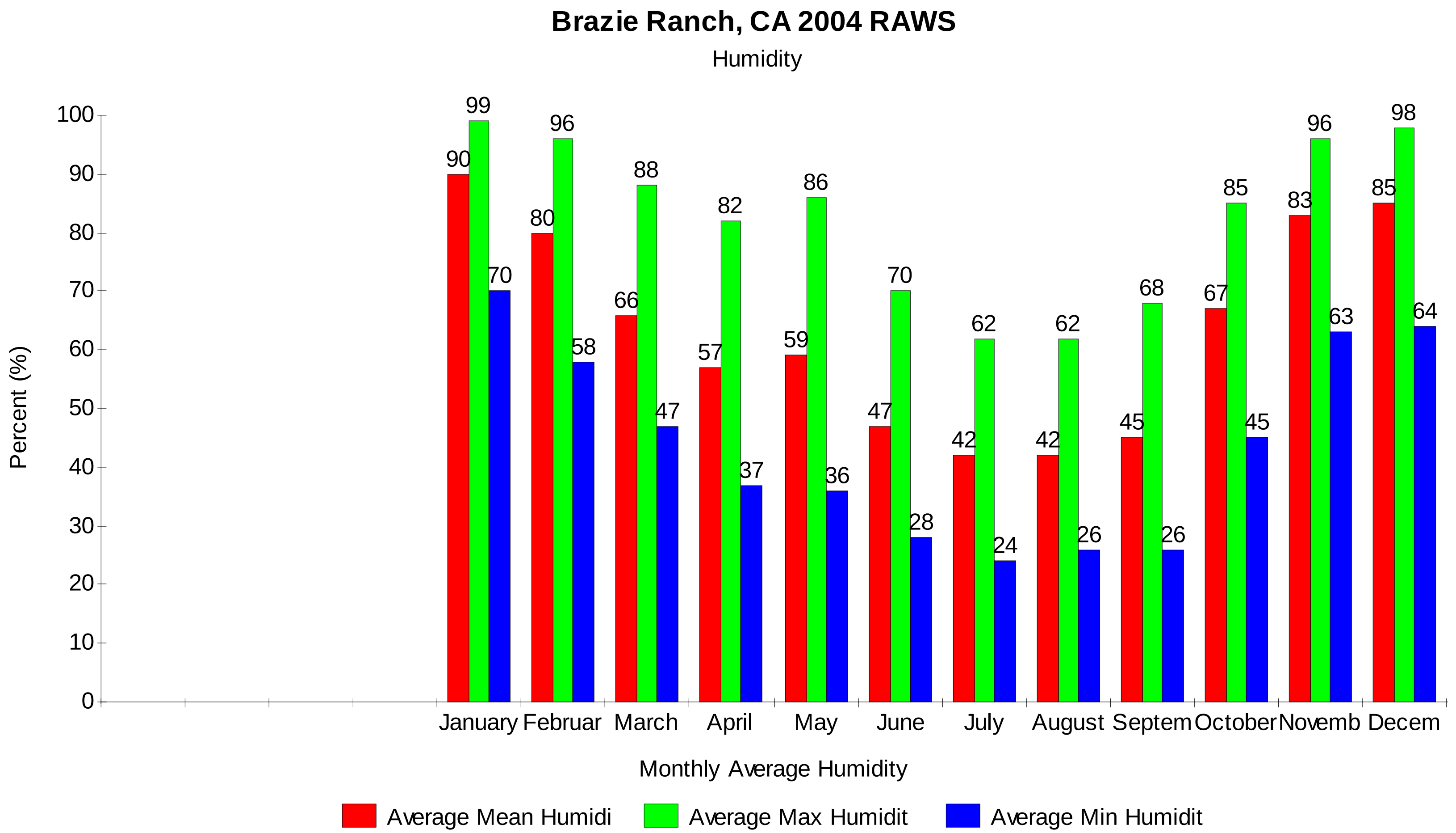


Brazie Ranch, CA 2004 RAWS
Fuel Temperature
Degree Fahreheit
0
20
40
60
80
100
120
37.2
51.7
28.6
41.3
64.7
28.7
55.3
92.5
33.4
65.3
111.3
39.1
64.5
95.8
41.2
76.3
109.7
49
83.6
118.8
56.3
81.7
116.1
55.5
70.8
104
45.8
56.3
82.5
39.9
42
62.7
30.3
38.8
57.2
28.7
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decem
Monthly Average Fuel Temperature
Average Mean Fuel T
Average Max Fuel Te
Average Min Fuel Te

HUMIDITY GRAPHS



Buckhorn Springs, OR 2004 RAWS
Humidity
Percent (%)
100
90
80
70
60
50
40
30
20
10
0
66
81
50
60
80
42
59
81
36
55
82
33
63
92
38
50
80
29
39
64
20
46
71
23
52
84
27
66
84
40
72
90
50
65
86
45
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decem
Monthly Average Humidity
Average Mean Humidi
Average Max Humidit
Average Min Humidit


Brazie Ranch, CA 2004 RAWS
Humidity
Percent (%)
100
90
80
70
60
50
40
30
20
10
0
90 99 70
80 96 58
66 88 47
57 82 37
59 86 36
47 70 28
42 62 24
42 62 26
45 68 26
67 85 45
83 96 63
85 98 64
January
Februar
March
April
May
June
July
August
Septem
October
Novemb
Decem
Monthly Average Humidity
Average Mean Humidi
Average Max Humidit
Average Min Humidit

APPENDIX B
LIVING WITH FIRE

APPENDIX C
FIREWISE LANDSCAPING INFORMATION

Selected Common Plants of the Klamath Siskiyous Region

Trees

- ☐ Ponderosa Pine
- ☐ Douglas-fir
- ☐ White Fir
- ☐ Incense-cedar
- ☐ Oregon White Oak
- ☐ California Black Oak
- ☐ Western Juniper
- ☐ Bigleaf Maple
- ☐ Black Cottonwood

Shrubs

- ☐ Deerbrush
- ☐ Wedgeleaf Ceanothus
- ☐ Greenleaf Manzanita
- ☐ Whiteleaf Manzanita
- ☐ Rubber Rabbitbrush
- ☐ Green Rabbitbrush
- ☐ Klamath Plum
- ☐ California Hazel
- ☐ Snowberry
- ☐ Willows
- ☐ Tall Oregon Grape
- ☐ Dwarf Oregon Grape
- ☐ Pacific Serviceberry
- ☐ Oceanspray
- ☐ Choke cherry
- ☐ Bitter cherry
- ☐ Curleaf Mountain Mahogany
- ☐ Birchleaf Mountain Mahogany
- ☐ Wild Rose
- ☐ Blackberry spp.
- ☐ Red-flowering Currant
- ☐ Blue Elderberry
- ☐ Poison Oak

Forbs & Grasses

- ☐ Cheatgrass
- ☐ Mudusahead Grass
- ☐ Bluebunch Wheatgrass
- ☐ Lemmons Needlegrass
- ☐ Idaho Fescue
- ☐ Dryland Sedge
- ☐ Calypso Orchid
- ☐ Phantom Orchid
- ☐ Tolmie's Cats Ear
- ☐ Klamath Fawn-lily
- ☐ Western Trillium
- ☐ Spotted Coralroot
- ☐ Striped Coralroot
- ☐ Owl Clover
- ☐ Larkspur
- ☐ Tower Butterweed
- ☐ Blue Flax
- ☐ Indian Paintbrush
- ☐ Foothill Lomatium
- ☐ Fern-leaved Lomatium
- ☐ Fiddleneck
- ☐ Pursh's Milk-vetch
- ☐ Shelton's violet
- ☐ Western Buttercup
- ☐ Sierra Snakeroot
- ☐ Tarweed
- ☐ Columbine
- ☐ Sulphur Eriogonem
- ☐ Miner's Lettuce
- ☐ Dwarf Waterleaf
- ☐ California Waterleaf
- ☐ Wild Strawberry
- ☐ Oregon Gold
- ☐ Balsamroot
- ☐ Storksbill
- ☐ Star Flow
- ☐ Yarrow
- ☐ Royal Polemonium
- ☐ Spring Beauty
- ☐ Spreading Phlox
- ☐ Azure Penstemon
- ☐ Yerba Santa
- ☐ Sierra Stonecrop

Rare, Threatened or Endangered Plants

- ☐ Greene's Mariposa Lily
- ☐ Pygmy Monkey-flower
- ☐ Clustered Lady's Slipper
- ☐ Bellinger's Meadowfoam
- ☐ Ashland Thistle
- ☐ Sierra Onion
- ☐ Green-flowered Wild Ginger
- ☐ Siskiyou Fritillary

APPENDIX D
REGIONAL FIRE HISTORY

The following is an edited selection deriving from a paper written by Evan J. Frost and Rob Sweeney entitled “Fire Regimes, Fire History and Forest Conditions in the Klamath-Siskiyou Region: An Overview and Synthesis of Knowledge”. The paper is comprehensive and can read in full on www.crfd.org.

Lightning-caused Ignitions

Lightning and humans are the two sources of fire ignitions that occurred historically and continue to occur in the Klamath Mountains. Lightning strikes are frequent across most of the region during the summer and have a sufficiently high density to ignite numerous fires. [1] The regional storms can ignite hundreds of fires almost simultaneously and can easily overwhelm fire suppression capabilities. For example, during the major fire episode of 1987, more than 1,600 lightning strikes were recorded during a twelve hour period in late August in southwest Oregon alone, leading to ignition of 600 fires. [2] For more discussion of lightning, see page 9.

Human-caused Ignitions

Anthropogenic (human-caused) ignitions have also been important in many forest types of the Klamath-Siskiyou region and can be divided into those started by Native Americans and by white settlers. While the exact extent and frequency of Native American ignitions remains unknown, it is clear from historic accounts that the Shasta, Takelma, Karuk, Tolowa and other tribes used fire for tribes for a variety of reasons: to maintain open stands of oaks, aid in the collection of insects, fungi and acorns, clear areas for travel, and to improve habitat for favored plants and game animals. [3] Indian burning appears to have been most frequent in low-elevation oak woodlands, prairies in the coastal forest belt, and eastside ponderosa pine/Douglas-fir forests. [4] According to Leiberg (1900), most Indian set fires occurred in the fall and were “small and circumscribed” but of frequent occurrence. In general, fires were ignited more frequently at lower elevations and decreased as elevation increased. [5] Outside of oak and pine-dominated forests, little convincing evidence exists that aboriginal ignitions were ecologically significant across large landscapes. “Within the vast mid-elevation, mixed conifer and mixed evergreen forests [comprising the largest vegetation types in the Klamaths], the extent of anthropogenic fire likely was limited and localized – i.e. confined to creating scattered, small openings. Aside from these localities, lightning-caused fire probably deserves more of the credit for the formerly open, park-like stands of most mid-elevation, mixed conifer stands”. [6] While further investigations may shed light on the relative importance of Native American burning, at present the case for widespread influence in conifer-dominated forests in the Klamath-Siskiyou region is not convincing.

After Euro-American settlement, the relatively stable areas of land burned on a regular basis by Native Americans was replaced by accidental and land use fires ignited by white settlers. [7] Beginning in the mid-1800’s and through early decades of 20th century, miners and ranchers were responsible for frequent ignitions. Historical accounts indicate that settler-ignited fires were generally larger in extent and burned at higher intensity than Indian fires, and most often occurred during the hot, dry summer as opposed to spring or fall. Settler fires also affected a broader range of vegetation types than those lit by Indians, and may have more greatly influenced the region’s mid-elevation conifer forests. The primary reasons for historic-era burning that have been documented include: to remove vegetative obstacles for mineral prospecting or for easier travel, to drive game, enhance forage for livestock, and to clear land for agriculture. [8] Typically the intent was to burn off as much vegetation as possible. Many fires also were initiated accidentally from campfires "which the settlers rarely took the time or trouble to extinguish when breaking camp". [9]

Historical data from 1900 to 1969 for the Rogue River National Forest indicate that between 10 – 60% of fires per year were human-caused. [10] Contemporary human caused ignitions tend to occur along travel routes and in highly accessible/developed areas where people are concentrated. [11]

Fire Suppression

After many years of using fire to promote livestock grazing and clear vegetation, organized fire suppression was initiated in 1906 with the creation of the federal forest reserves, later to become the U.S. national forest system. Although a matter of public policy, relatively little energy was actually directed toward putting out fires on federal lands in the early decades of the 20th century, mainly because the manpower available for fighting fires was hopelessly inadequate. The typical forest reserve was comprised of a million acres with a staff of eight personnel, including clerks. [12] Individual rangers were responsible for fire detection and control on hundreds of thousands of acres of remote, mountainous forest land. As a result, many fires grew to considerable size before even being detected. Once discovered, lack of effective means of communication often delayed report to the headquarters office. After report of a fire was received, lack of roads and trails made it difficult and often impossible to get an adequate fire-fighting force together with the necessary tools and supplies to the scene. As a result, fires often burned uncontrollably until they either burned themselves out or were extinguished by the weather. [13]

The ineffectiveness of these early fire-fighting efforts was made worse by the fact that numerous lightning-caused fires were often burning at the same time, which "made it impossible for the small force of rangers and guards to cope with the situation successfully". [14] Fire-fighting efforts were primarily directed at the most accessible and heavily settled areas to protect human life and private property, with little or no resources directed to control fires burning in more remote areas. [15] Given these limitations, it's unlikely that fire suppression was an important factor influencing the character of vegetation across large portions of the Klamath Mountains until at least the 1940's. This date is corroborated by several fire history studies that have documented surface fires burning uninterrupted into the middle of the 20th century. [16]

Fire suppression efficiency in the Klamath-Siskiyou region improved dramatically in the 1940's, the time period that is generally recognized as the beginning of the modern era of fire suppression. [17] The ability to influence the role of fire greatly improved during this period for two reasons. First, a rapidly expanding road transportation system on federal lands allowed for relatively quick access to previously remote and isolated areas. Secondly, major advances in fire-fighting technology, including lighter chain saws, versatile vehicles for transportation, and aerial fire-fighting support played a major role in increasing effectiveness. [18] Efficiency further increased soon afterwards when airtankers, fire retardant and helicopters became part of the fire-fighting arsenal in the 1950's. [19]

While significant gains have been made in the success of suppression efforts, lightning fires that start in remote areas and steep topography of the Klamath Mountains continue to present a very difficult control problem, particularly when multiple starts occur at the same time. [20] Under favorable weather conditions, wildfires continue to grow to large size, a recent example being the

49,000 hectare Big Bar Fire complex that occurred in 1999 on the Shasta-Trinity and Six Rivers National Forests. According to Morford's study of fire history in Siskiyou County, California (1984), "A study of the action to control many of the individual fires causes one to ask if any progress has been made in the fire-fighting activity and methods in the last 40 years. In spite of dozers, tank trucks, helicopters and airtankers, fires continue to become large, doing great damage to the natural resources".

APPENDIX E

LOMAKATSI PRESCRIPTION AND TREATMENT EXAMPLES

LOMAKATSI RESTORATION PROJECT

Organizing Communities to Restore Native Eco-Systems

(541) 488-0208 * PO Box 3084, Ashland OR 97520

NATIONAL FIRE PLAN 2003 -FUEL HAZARD REDUCTION PROJECT

Prescriptions & Treatment Outlines

Introduction

Lomakatsi Restoration Project (LRP) will organize, facilitate and implement 5 separate fuel hazard reduction projects with 2003 National Fire Plan funds. LRP will carry out projects in Williams, Cave Junction, Talent, Siskiyou Mountain Park above Ashland, and the Colestin Valley.

To accomplish fuels reduction activities, LRP work crews will perform manual treatments by using chainsaws, gas operated pole pruners, chippers, drip torches, and hand tools.

Fuels Reduction Treatments will be site specific based on vegetation, soil types, slope, aspect, and individual landowner objectives. The methods of either hand pile and or swamper burning will be used to dispose of the majority of the slash and debris accumulated through the thinning operations. In certain situations chipping will be used to dispose of debris in areas close to roadsides, near homes sites, or as the preferred method of the landowner.

All projects will have detailed site-specific prescriptions written prior to project implementation.

Fuel Hazard Reduction Projects

Goals

1. To make the forest less susceptible to crown fire.
2. To reduce the intensity of wild fire.
3. To make fire suppression efforts safer and more effective as a result of reduced fuel loads along roads and around home sites.
4. To maintain native species diversity.
5. To maintain wildlife habitat.
6. To control problematic, invasive non-native species.

7. To provide erosion control where appropriate, (lop & scatter / contour falling) with materials from fuels reduction activities.

Method

1. Thinning the understory
2. Favoring the largest, most fire resilient, and most healthy trees adapted to the location.
3. Burning or chipping the smaller fuel loads.

Vegetation Types

There are four distinct vegetation types that Lomakatsi will carry out fuels reduction work for N.F.P. 2003 projects. Within these vegetation types, there are slight variations and conditions that are site specific to each location. Prior to on the ground treatments, prescriptions will be written to address the diversity of each situation.

Below are Lomakatsi standard prescriptions for treatment within each vegetation type.

Project Name	Location	Vegetation Type
Siskiyou Mountain Park	Ashland	1) pine oak savannah / chaparral woodland
West Williams	Mungers Creek Road	1) mixed Conifer / Mesic Port Orford cedar
	Caves Camp Road	1) mixed Conifer/ Mixed Harwood- Doug fir / madrone
Anderson Creek	Anderson Creek Road Mystery Creek Driveway	1) mixed Conifer/ Mixed Harwood- Doug fir / madrone
Colestin Valley	Colestin Road Railroad easement	1) oak woodland 2) mixed Conifer / mixed Harwood white fir zone

Cave Junction	coordination needed for exact locations.	1) oak woodland 2) mixed conifer / mixed hardwood 3) Pine oak savannah / chaparral woodland

Project Acreages

West Williams	100 acres
Cave Junction	100 acres
Colestin	75 acres
Talent, Anderson	50 acres
Siskiyou Mt. Park	25 acres

Pine Oak Savannah / chaparral woodland

Prescription Outline

- In Chaparral fields - Thin for a mosaic and fuel connectivity separation: Reduce manzanita and buck brush on site by 50% by creating randomly spaced clearings, corridors, clumps, and thickets.
- Retain all large hardwood and conifer specimens.
- The most favored trees in decreasing order of preference are sugar pine, ponderosa pine, Oregon white oak, California black oak, Doug fir, and madrone.
- Small stature trees (less than 7 feet) and brush should be removed within a thirty-foot radius of large over-story Ponderosa pine, and oak species.
- Douglas fir stems up to 8" and under that are encroaching under leave trees should be thinned from below and out from the driplines.
- High limb leave trees to increase fire resiliency. Prune & limb larger leave trees up to 12 feet. Prune smaller diameter leave trees up to 6 feet.
- For vegetative diversity it is recommended that representatives of all species on site be left.
- Retain all Mountain mahogany, however dead wood and lower fine fuel components of Mt. Mahogany should be pruned / removed as part of treatments.
- Due to lack of dead standing habitat, retain all large snags above 12" DBH.
- Thin individual clumps of madrone and black oak to encourage vertical structure and open form crown development.
- Reduce excessive dead ground fuels throughout the treatment area.
- Dispose of thinning debris by either hand pile or by swamper burning.

- Follow burning with the sowing of native grasses in the mineral rich ashes and disturbed soils to reduce colonization by non-native species.

Mixed Conifer / Mixed hardwood / Port Orford cedar

<u>Prescription Outline</u>

Roadside and Upslope Treatment

- Retain large conifers, thin excessive stems (8" and under) below the crowns of dominant trees.
- Mix the thinning treatment with releasing larger trees, and also thinning around clusters of trees.
- Leave clumps and groupings of conifers where it is appropriate. Thin aggressively around tree groupings to break up fuel connectivity between islands.
- Favor oaks and madrones. Retain hardwoods for habitat, and thin conifers away from hardwood crowns.
- Retain *all* Alders and big leaf maple.
- Retain *all* Pacific Yews on sites.
- Favor Chinquapin, scullers willow, red huckleberry, and pacific yew whenever possible to encourage biodiversity.
- Favor Port Orford cedar over Doug fir in most circumstances.
- Leave representatives of all species on site
- Lop and scatter some coarse woody debris on areas steeper than 55% slope.
- Reduce dense green huckleberry patches in the understory by 50%. Thin back excessive Doug fir stems around huckleberry patches to create filtered light conditions.
- Along roadsides and driveways: Remove over arching madrones and hazard tree snags.
- High limb all leave trees up to 12 ft.
- Reduce excessive dead ground fuels throughout the treatment area.
- Dispose of thinning debris by either hand pile or by swamper burning.
- Keep burning off of slopes of 60% or greater, especially at headwalls, along draws, and where lose boulders are found.
- Follow burning with the sowing of native grasses in the mineral rich ashes and disturbed soils to reduce colonization of such site by non-native species.

Mixed Conifer / Mixed hardwood / Douglas fir - Madrone Vegetation Type

<u>Prescription Outline</u>

- Retain large conifers, thin excessive stems under the crowns of dominant trees.
- Mix the thinning treatment with releasing larger trees, and also thinning around clusters of trees.
- Leave clumps and groupings of conifers where it is appropriate. Thin aggressively around tree groupings to break up fuel connectivity between islands.
- Favor oaks and madrones. Retain hardwoods for habitat, and thin conifers away from hardwood crowns.

- Thin small stems around late successional habitat islands, and below the drip lines of dominant trees to protect biodiversity and ecological integrity of these locations. Drag and burn thinned materials away from future late serial islands to prevent crown scorch.

- Thin out small diameter excessive madrone, to release competing Douglas firs.
- Reduce excessive dead ground fuels throughout the treatment area
- Thin excessive fir stems back and out from the driplines of dominant conifers.
- Retain and protect sugar pine by thinning excessive Doug fir stems from the drip lines.
- On exposed slopes favor ponderosa pine by thinning excessive fir stems.
- Leave representatives of all species on site.
- High limb leave trees up to 15 feet for fire resiliency. On more exposed sites high limb up to 8 feet to prevent sunscald on Douglas fir.
- Keep burning off slopes of 60% or greater especially at headwalls, along draws, and where loose boulders are found. In these situations, lop and scatter cut materials.
- Lay some cut material perpendicular to slope for soil stability
- Retain nurse logs to hold water, provide substrate for fungi and mycrorhiza associates, and to encourage slope stability
- Swamper burn cut material. – Drag and burn thinning debris away from leave trees to prevent excessive crown scorching.
- Reseed burn piles with native grasses to decrease risk of noxious weed spread

Oak Woodland

Prescription Outline

- Retain oaks and woodland form
- Remove only dead small diameter oaks.
- Thin excessive buck brush back from white oak groupings
- Thin Doug fir stems out from the driplines of oak clusters.
- In open buck brush fields, thin for a mosaic and fuel connectivity separation: Reduce buck brush on site by 50% by creating randomly spaced clearings, corridors, clumps, and thickets. Space buck brush islands up to 25 feet.
- Prune the buck brush clumps that are left to three feet height.
- Retain large dead standing oaks for wildlife habitat.
- Retain all Mountain mahogany, however dead wood and lower fine fuel components of Mt. Mahogany should be pruned / removed as part of treatments.
- Thin back serviceberry from oak groupings. Isolate and retain serviceberry patches.
- High prune mainly dead and low growing branches of larger oaks near roadsides and drive ways.
- Reduce excessive dead ground fuels throughout the treatment area.
- Dispose of thinning debris by either hand pile or swamper burning.
- Follow burning with the sowing of native grasses in the mineral rich ashes and disturbed soils to reduce colonization by non-native species

Snags

Roadsides, Driveways, Home sites

- Fall all snags directly along roadsides, driveways, or near home sites. Downed snags will be cut into manageable lengths to transport off site for firewood by the landowner.
- Retain 2 snags per acre in distances where snags are 100' from roadsides, driveways, or homes sites. The largest diameter snags will be chosen to leave, and preferably structural class 1 will be chosen for habitat longevity.
- All leave snags will be high limbed up to 15'.
- Vegetation and ground fuels will be thinned around leave snags.

Forestland Treatments - such as Siskiyou Mountain Park where entire stand die off in Douglas fir is severe due to flat headed borer beetle (*Melanophilia drummondi.)*

This encompasses 10 acres of the project area.

Treatment

- Snag fields will be reduced up to 90%, especially along ridgelines
- 2-4 snags per acre will be retained.
- In some cases, groupings of snags will be retained
- Leave a diversity of structural classes 1, 2, and 3.
- Snags with visible nests will be retained.
- Snags will be contour felled and ground contact will be made
- Tops and branches of snags will be burned.
- All snags left will be high limbed up to 15'

LRP has performed treatments over the last 8 years in the WUI in stands that resemble the condition mentioned above. Lomakatsi has worked with the City of Ashland Fire & Rescue, Ashland Parks & Recreation, and ODF to address this situation. We have consulted with the Ashland City Forester – Marty Main, to come up with the most ecologically responsible treatment in regard to habitat values and wildlife.

Prior to the treatment of units with these conditions present, LRP would like to consult with B.L.M. wildlife staff to receive feedback on this issue.

APPENDIX F
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