



# 2014 Arizona Fire Season Outlook

## Arizona State Forestry Division

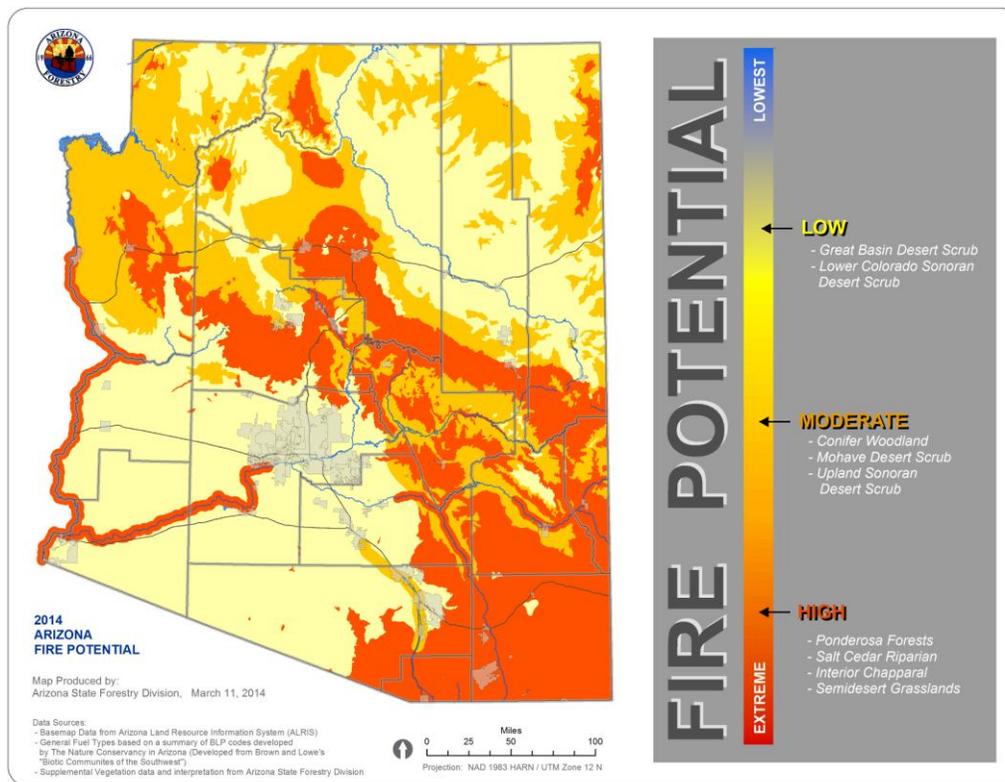
### Scott Hunt, State Forester

### March 13, 2014

#### Statewide General Fire Season Forecast

Similar to the 2013 fire season, the concern for higher wildfire potential will generally be above the 3000 foot elevations, in the perennial grasslands, chaparral, woodlands, and our pine forests. Deserts below 3000 feet elevations are expected to have a lower potential than they had in 2013 from lower annual grass and weed production due to lack of precipitation. See Figure 1 below.

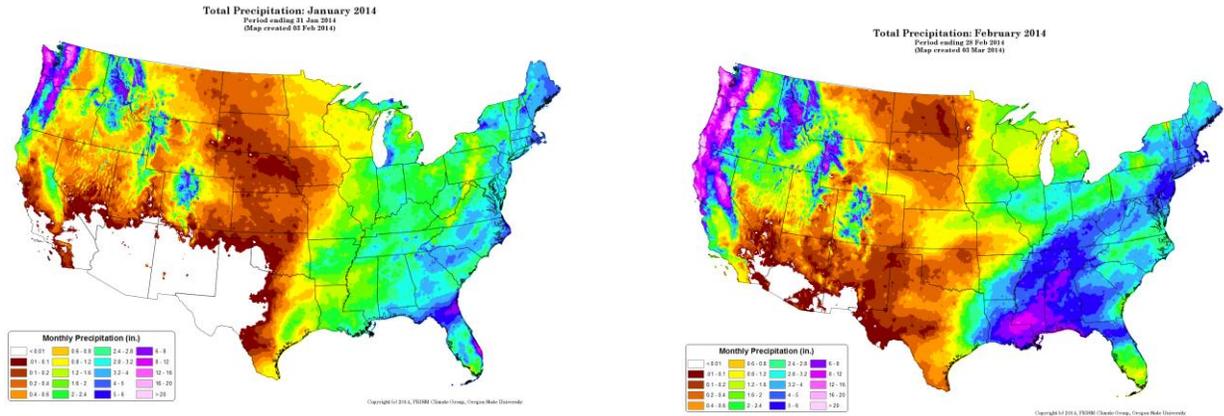
Arizona's fall and winter's weather has been characterized by below average precipitation, with January and most of February being exceptionally dry. The state has experienced 114 wildland fires on all agency lands since January 1, 2014. Drought stricken fuels and a predicted hot and dry spring and summer are setting the stage for a long and severe fire season. Some weather models are showing a potential for some unsettled conditions in April and May that could lessen severity in the early portion of fire season.



**Figure 1: 2014 Arizona Fire Potential Map**

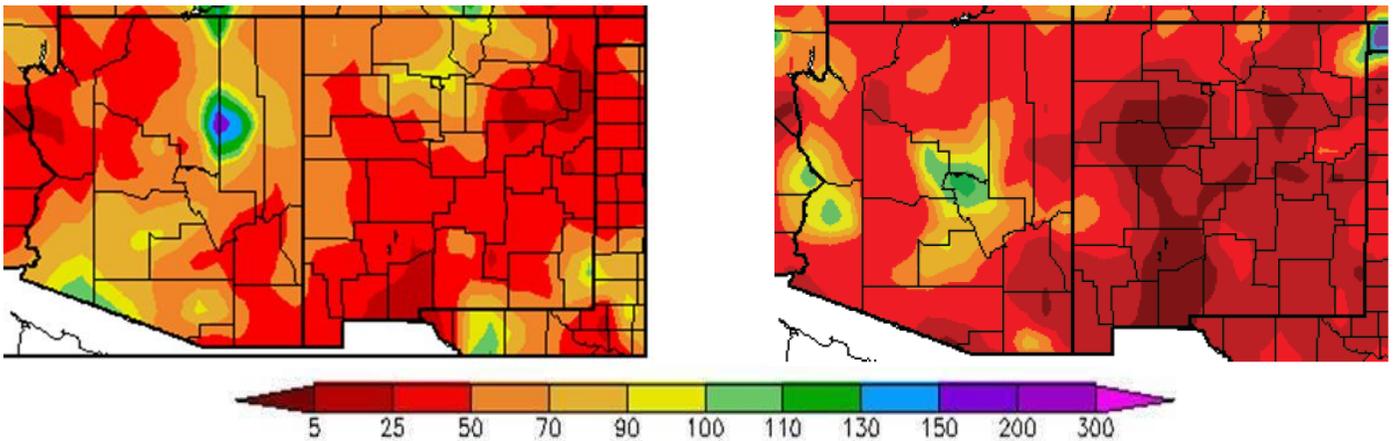
2013/2014 Fall, Winter, and Spring Weather

Arizona is in its third consecutive dry winter, and the unseasonably warm conditions statewide have exacerbated the drought. January and February were abnormally dry throughout the state. See figure 2 below.



**Figure 2: 2014 US Precipitation Maps. White areas show Arizona receiving almost no moisture in January, and very limited moisture in February**

A statewide drought still persists, with water year precipitation showing only 50 to 70% of average for much of Arizona for the period of October 2013 through March 2014. A statewide storm at the end of February and first few days of March that brought over an inch of precipitation across much of the state has temporarily alleviated escalating fire danger conditions. Below are the 2014 vs. 2013 water year comparisons showing 2014 to be marginally better than 2013.

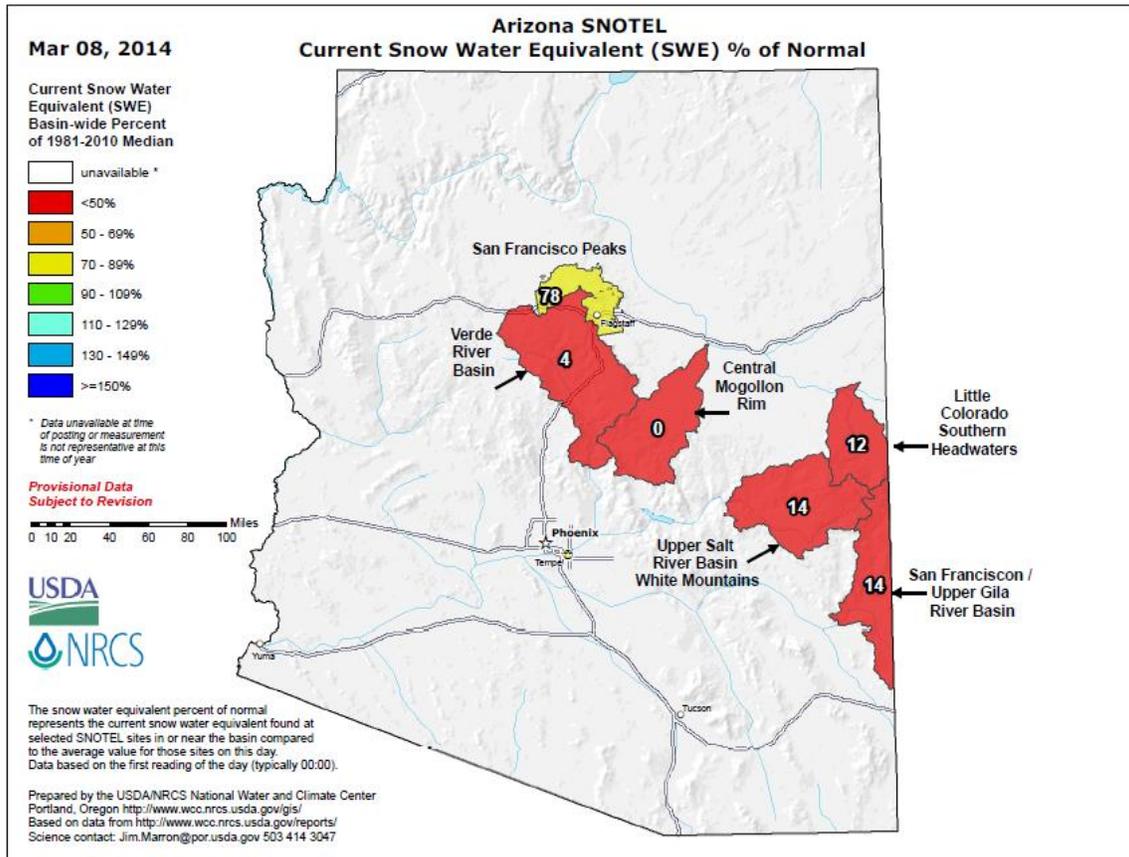


**Figure 3: 2014 Water Year  
% of Average Precipitation Oct 1, 2013 to March 7, 2014**

**Figure 4: 2013 Water Year  
% of Average Precipitation Oct 1, 2012 to March 20,**

## Snowpack

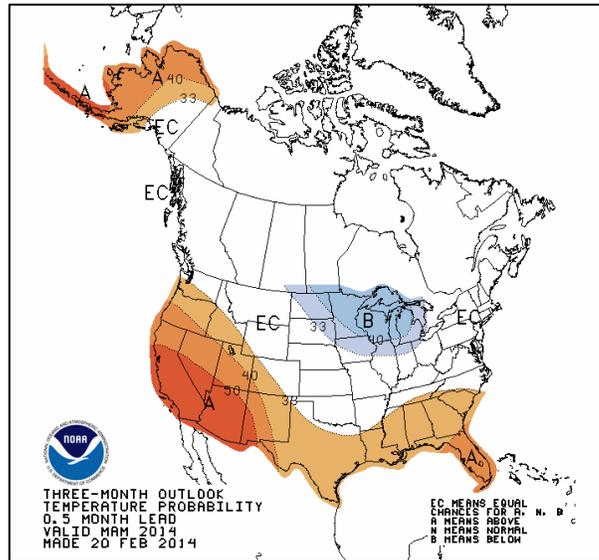
Arizona's snow pack is currently showing an average 0 to 78% of normal, (see Figure 5 below). Snowpack slows and shortens fire seasons by providing moisture to both living and dead vegetation. Below average snowpacks are often attributed to earlier and more severe fire seasons in our higher elevations.



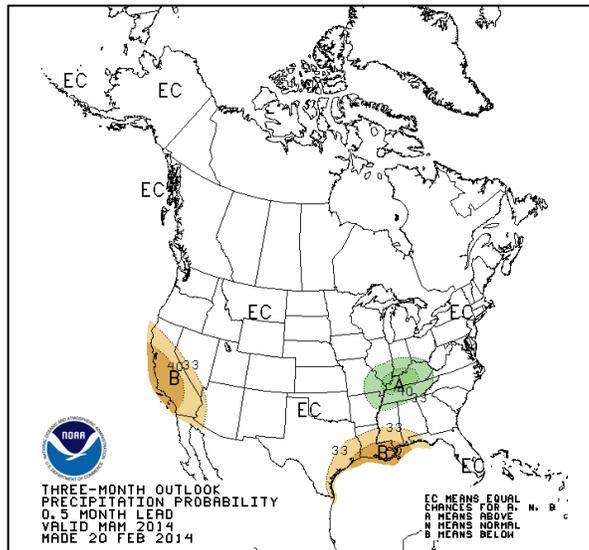
**Figure 5: Current snow water equivalent percent of normal map**

## Spring through Summer Weather Outlook

The National Weather Service Climate Prediction Center's three month forecasts for temperature and precipitation show above average probabilities for hotter conditions, and equal chance probabilities for either above or below average precipitation, (see Figure 6 & 7 below).

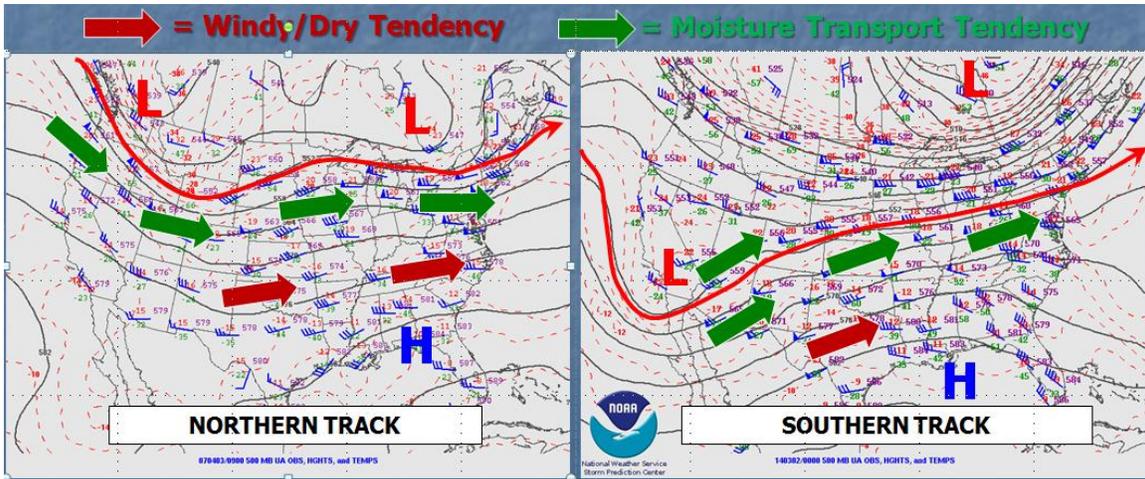


**Figure 6: March, April, May 2014  
Temperature Probability Map**



**Figure 7: March, April, May 2014  
Precipitation Probability Map**

The USFS Southwest Area Predictive Service Center is currently predicting two fire season weather scenarios for the spring and early summer 2014 fire season: one scenario is overall dry and generally warmer than normal. Under this scenario an early spring and summer weather pattern is expected to have a persistent westerly flow which will lead to more consistently warm, dry and breezy conditions. The second scenario consists of more unsettled weather patterns with some weather models showing the possibility of moisture and less windy conditions for spring and early summer (see Figure 8 below). This second scenario would generally reduce fire danger in April and May.



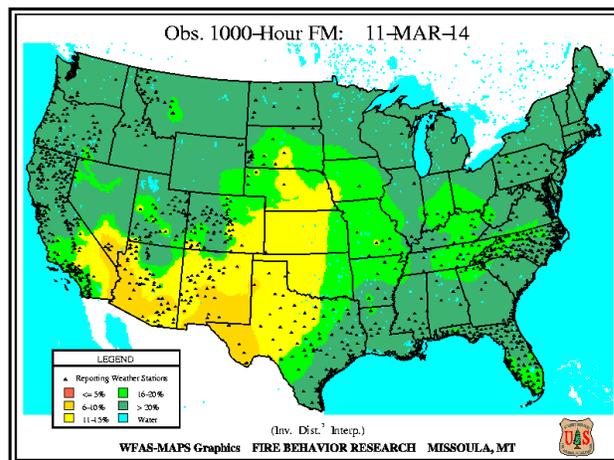
**Figure 8: Potential Spring and Early Summer Storm Tracks**

Source: SW Coordination Center Predictive Services

### Fuel Moistures

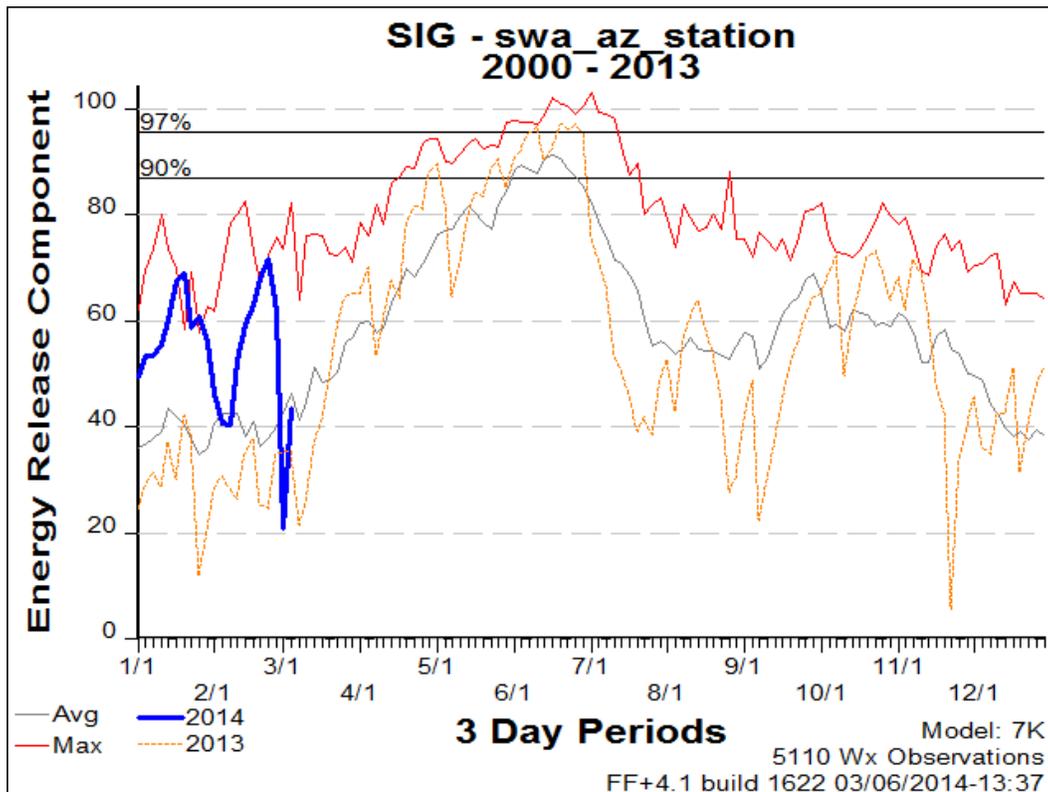
Dead vegetation fuel moistures are beginning to show percentages in the low teens that indicate vegetation is very receptive to ignition and spread. Figure 9 shows moisture content of many of our 1000 hour fuels (3” to 8” diameter logs) are reaching similar dryness as kiln-dried lumber.

**Figure 9: 1000 Hour Timelag Fuel Moistures (3” to 8” diameter logs)**



## Energy Release Component

The Energy Release Component (ERC) is a fire model based on the estimated potential available energy released per unit area in the flaming front of a fire. The day-to-day variations of the ERC are caused by changes in the moisture contents of the various fuel size classes. The ERC is derived from predictions of (1) the rate of heat release per unit area during flaming combustion and (2) the duration of flaming. Below in Figure 10 is Arizona's statewide ERC chart representing forest vegetation. The chart tells us the conditions have been considerably more severe than 2013 levels and were hovering near maximum fuel dryness on record until the early March storm provided some needed precipitation.



**Figure 10: Statewide Energy Release Component Chart**

# **District Forester Reports on Fuel Conditions and Fire Potential**

**Flagstaff District  
Mohave, Coconino, Apache, and Navajo Counties  
2014 Fire Season Assessment  
Kevin Boness, District Forester  
Prepared March 7, 2014**

The fire season on the Flagstaff District based on current conditions, is expected to start early. The fire season also has a higher potential to have more fires and to have fires that grow larger in size. This is based on current fuel moistures and the widespread fine fuels remaining from the record monsoon season of 2013. Prior to the recent snow/rain event most of the high country of the District was devoid of snow cover. The recent snowfall was restricted to the 8,000 foot levels and above. The associated rain at lower elevations was heavy, but this caused most of it to run off and had an insignificant effect on the live fuel moistures and the larger dead fuels. We have also been experiencing an early green up in shrub species at mid elevations that could add to the fuel loading should a few days of freezing temperatures occur (which is very probable for this time of year) causing vegetation to freeze and adding additional fine fuels to the mix. The early green up in the shrub species could also work to bring the mid elevations into fire season earlier than average due to earlier drying and maturation of those fuels. It is still too early to tell if there will be a robust green up in the grass and forb species but should we continue to get periodic precipitation any green up in these fuels could add to the existing fuels left over from last year and expand the area that could carry fires. Without the snow cover the continuous needle cast that is ever present will become a factor earlier in the season and could support earlier larger fires in the pine type.

There are still a few factors that could come in to play that could change the potential for this year's fire season. Significant precipitation could obviously lower the potential. We usually experience spring winds and if this is not accompanied by precipitation this would dry fuels even more and add to the potential for an active fire season (this is what occurred in 2010 with the Schultz fire following a record winter snowfall).

## Winter Climate Statistics (December 2013 – February 2014)



Flagstaff, AZ

<b>Flagstaff</b> <small>Period of Record 1899-2014</small>				<b>Payson</b> <small>Period of Record 1949-2014</small>			
	Observed	Departure from Normal	Ranking		Observed	Departure from Normal	Ranking
<b>Average Temperature (F)</b>	33.2	+2.7	12 <sup>th</sup> Warmest	<b>Average Temperature (F)</b>	42.1	+2.1	13 <sup>th</sup> Warmest
<b>Precipitation</b>	1.95"	-2.89"	11 <sup>th</sup> Driest	<b>Precipitation</b>	1.43"	-5.25"	5 <sup>th</sup> Driest
<b>Snowfall</b>	19.7"	-41.3"	15 <sup>th</sup> Lowest	<b>Snowfall</b>	3.4"	-10.6"	15 <sup>th</sup> Lowest

<b>Show Low</b> <small>Period of Record 1985-2014</small>			
	Observed	Departure from Normal	Ranking
<b>Average Temperature (F)</b>	38.6	+2.3	6 <sup>th</sup> Warmest
<b>Precipitation</b>	0.25"	-3.51"	2 <sup>nd</sup> Driest

<b>Winslow</b> <small>Period of Record 1915-2014</small>				<b>Prescott Airport</b> <small>Period of Record 1948-2014</small>			
	Observed	Departure from Normal	Ranking		Observed	Departure from Normal	Ranking
<b>Average Temperature (F)</b>	38.4	+1.8	15 <sup>th</sup> Warmest	<b>Average Temperature (F)</b>	42.6	+3.1	2 <sup>nd</sup> Warmest
<b>Precipitation</b>	0.07"	-1.47"	2 <sup>nd</sup> Driest	<b>Precipitation</b>	0.48"	-2.99"	3 <sup>rd</sup> Driest

This chart from the National Weather Service shows that across northern Arizona we have overall been warmer and drier so far this winter. The National Weather Service is also predicting that this trend may continue into May.

### Mohave County:

- U.S. Drought Monitor (USDA and NOAA) has indicated that most of Mohave County, is still in a moderate or severe drought for the third year in a row with significant portions progressing into severe drought, however this index focuses on broad-scale conditions and local conditions may vary (report as of March 14, 2014). <http://droughtmonitor.unl.edu/>
- The U.S. Seasonal drought outlook February 20 -May 31, 2014 indicates that drought is likely to persist or intensify during that time for Mohave County (report as of February 20, 2014). Areas along the river which were not considered to be in drought last year were identified in drought conditions currently. [http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/season\\_drought.png](http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.png)
- NOAA predictions for Mohave County include slightly above normal chances for decreased average temperatures March-May 2014 and below normal chances of average precipitation (report made Feb 2014).
- Fine fuels estimates by NOAA show that in most regions of Mohave County there are near normal to above average in fine fuel production.

## Fuels Outlook

- Excessive late monsoon moisture has brought above normal seasonal growth to lower elevation grass and shrub for the second year in a row. The continued increase of grass production especially in eastern Mohave County has established a substantial fuel bed that is uncharacteristically tall and continuous. This condition is even present in places where grazing normally moderates fine fuel growth. In the eastern portion of the county (between 3,500 and 6,000 feet) monsoon rains in July, August and September of 2013 produced a good crop of grass and fine fuels that are present in greater quantity than in previous years. Weed and forb production will largely be dependent on April and early May precipitation and May temperatures.
- Residual grass crops from last year still exist, and are much more continuous than in years past and have the potential to carry fire for substantial distances especially if pushed by a significant wind. The lower elevation intermittent grass crops are sporadic and are generally not continuous enough to carry fire. Local conditions can and do vary with notable exceptions including areas east of Kingman in the Hualapai Valley, areas north of Dolan Springs, and areas between Golden Valley and Union Pass in the Black Mountains where the grass is uncharacteristically continuous.
- Pinyon/juniper stands and brush stands are relatively dry with a significant dead fuel component and could carry fire with a light wind due to the significant addition to the grass understory which is now present in the eastern portion of the county. Little to no new mortality in pinyon/juniper in the area has been seen for the past 3 years. Heavier than normal fuel loading exists in the pinyon/juniper woodlands as a legacy of the 2003 Ips beetle outbreak which caused significant mortality leaving a higher 100-hour and 1,000-hour fuel loading and a greater number of dead standing trees per acre; the effect of this should produce a greater chance for spotting, higher intensity surface fires and increased group torching. This area between US 93 and Juniper Mountains west of Seligman have a substantially increased risk of large fire development in the 2014 fire season.
- Lower elevation drainages along the Colorado River and Virgin River that hold moisture or are in historic flood plains are fully stocked with mature salt cedar with heavy dead component and possess the greatest potential for intense fire behavior within Mohave County, but are typically confined to the drainages and flood plains along the Colorado River and along the Virgin River in the far north west corner of the state. There is a substantial amount of wildland urban interface mixed in with this salt cedar that will always be at a significant risk to wildland fire and that risk will not be limited to the traditional fire season due to the significant dead component to the fuel.
- Hualapai Mountain and the surrounding peaks is always an area of significant concern for the potential of a significant wildfire in Mohave County. There has been an early green up in the brush in the lower elevations which could lead to

frost kill later in March of 2014 if temperatures dip or earlier progression to dormancy, both of which would make the fuel more prone to significant fire growth earlier in the year and make containment of fires much more difficult. The majority of last year's Dean Peak fire occurred in this fuel type. Lower live fuel moisture in the brush at lower elevations and a more significant component of dead fuel in the brush at both lower and mid elevations combined with the steep slopes and limited containment options make this area a significant concern every year, but more so this year. Although it is early, an earlier than normal request to go into campfire and smoking restrictions for this area is anticipated for the second year in a row and without further moisture could occur as early as mid to late April.

- Arizona Strip portion of Mohave County also experienced increase grass production due to the longer lasting monsoons in the summer of 2013. This increased grass crop is evident in the Antelope Valley and Clayhole Valley portions of the Kaibab Plateau, south of the communities of Moccasin and Colorado City. These grass and grass and sagebrush fuels would still need sustained winds to develop into a fire with large potential. Where elevation increases and pinyon/juniper woodlands mix with the increased grass crop, there is an increased potential of fire affecting the community of Cane Beds southeast of Colorado City. The communities of Beaver Dam and Littlefield in the far northwest corner of the state did not receive the moisture that produced the grass crop in the other parts of the county and are exceptionally dry with little grass evident.

## Summary

As with any seasonal assessment done in March, it is simply too early to accurately predict. Spring moisture patterns will yield more specific areas of concern and high winds can always carry fire through fuels that would normally not support fire. At this point the areas of greatest concern for Mohave County are the drainages and flood plains along the Colorado River containing salt cedar within the wildland urban interface, the community of Pine Lake, the Hualapai County Park, the other recreation areas of the Hualapai Mountains and the eastern portion of the county both north and south of Interstate 40 between US 93 and Juniper Mountains west of Seligman. Areas of note also include the area east of Kingman in the Hualapai Valley, areas north of Dolan Springs, and areas between Golden Valley and Union Pass in the Black Mountains where the grass is uncharacteristically tall and continuous. As always the timing and quantity of ignitions will be the biggest factor in determining wildland fire in Mohave County.



**Eastern portion of Mohave County and PJ on I-40**



**Continuous grass filling in under pinyon/juniper Eastern Mohave County**



**15 foot + salt cedar in wildland urban interface Mohave Valley**



**Substantial and continuous grass west of Golden Valley on the slopes of the Black Mountains**



**Significant grass crop north of Dolan Springs on north edge of Cerbat Mountains**



**Eastern slopes of Cerbat Mountain North of Kingman in Hualapai Valley**



**Oak brush and Pine mix southern aspect Dean Peak north of Pine Lake**



**Lower Elevation Oak Scrub East of Pine Lake near Pinion Pine**

**Coconino County:** Coconino County has experienced its 11<sup>th</sup> driest winter on record, with little to no snowpack in the higher elevations. Prior to that, abundant monsoon moisture in late summer and early fall has given rise to excess fine fuel loading in both higher and lower elevations. Should late winter and early spring remain dry, the

opportunity for large wildfires will exist. Should precipitation return to near normal levels, as has been forecast, the area should return to a more normal wildfire season.

The most recent precipitation event provided some relief but will have only a short term effect at elevations below 8,000 feet. Snow fell above that elevation and rain below it. The rain levels were significant (greater than 1” in most areas) but came down heavy enough at times that it ran off and will have no long term lasting effect.

Areas of concern will be:

- North of Flagstaff in the grasslands and south of the reservation.
- Should the precipitation hold off until the start of the monsoon season all of the ponderosa pine belt in the Kaibab and Coconino National Forest.
- Oak Creek Canyon is perennial in its wildfire risk and this year could be elevated if precipitation continues below normal.



**Area in picture is along 89 north of Flagstaff. A mixture of grass fuels that are 10-16” tall. A 15 acre fire occurred in February in close proximity to where this picture was taken**



**Additional view of fuels north of Flagstaff along Hwy 89**



**Approximately 8 miles SW of Flagstaff. Photo shows tall grass and lack of snow. Snow pack would have compressed the tall grass component in this picture if the winter had been normal in the amount of snow.**

## **Apache and Navajo Counties**

Most of the area in the lower elevations (below 6500 to 7000 foot elevation) consisted of tall continuous grass understory. These areas contained mostly alligator juniper and pinion juniper species as the woody hard wood materials. These areas are of great concern due a lack of precipitation over the past winter. This area is prone to wind driven fires and large acres burned.



**Approx 2 miles NW of Eager on Hwy 260 looking South. This area was involved during burn out operations in 2011 to slow the progression of the Wallow fire. Plains grass and Blue Grama is the primary light fuels that exist in this area. The current height of these fuels is approximately 2 feet.**



**View of fuels located on Hwy 261 looking NE. Fuel Break South of the town of Eager 7000 elevation.**

State Forestry Division crews have been working in this area for the past four years creating a fuel break for the protection of the town of Eager. This area was also subjected to burn out operations during the Wallow fire. Even with recent fire and thinning taking place this area is a concern due to the grass understory.



**View NE of Penrod Rd elevation 6300 feet. This photo is a good example of conifer species that consist of alligator juniper, pinion juniper and some pine that exist near the Show Low area.**



**Rodeo/Chedeski fire South of Hwy 260 continuous live and dead Fuels.  
6200 foot elevation.**

The Rodeo/Chedeski Fire has a very high reburn potential, heavy fuel loading consists of both live and dead fuels standing and down. Heavy fuel loading makes fuels continuous. Low precipitation levels this winter make these fuels readily available to fire. Extreme fire behavior and large fire growth could be expected. Fuels consist of Gamble Oak, Plains grass, Pinion Juniper, Alligator Juniper and jack pots of Manzanita with tall grass. The current situation in this area is of great concern to the residents and fire departments of Show Low, Lakeside, and Pinetop

Significant areas of concern within Apache/Navajo County:

- The cities of Show Low, Lakeside and Pinetop (fire threat due to the reburn of the Rodeo Chediske Fire.)
- The Cities of Springerville, Eager, and State Trust Lands (fire threat due continuous grass understory.)
- Communities of Pinetop Country Club and White Mountain Summer Homes

**Tucson District**  
**Pima, Cochise, Graham, Greenlee, Cochise, Santa Cruz, and So. Pinal Counties**  
**2014 Fire Season Assessment**  
**Gene Beaudoin, District Forester**  
**Prepared March 5, 2014**

A fuel assessment of Tucson District revealed the most of the district in the lower elevations (under 3000 foot elevation) consisted of sparse short grass understory in the Sonoran desert areas. These areas contained mostly velvet mesquite and palo verde species as the primary woody materials. The only areas of concern would be washes and river bottoms and flood plains which showed a tall grass understory within mesquite bosque's and areas along rivers (San Pedro, Santa Cruz, and Gila River's) which contain dog hair thickets and a large amount of dead and down salt cedar, cottonwood, and various other species of woody species. These river bottoms and flood plains also contained a high amount of decadent forbs as well (see pictures 1, 2, & 3).



**Picture #1, Robles Fire, Southern Pinal Co., Santa Cruz River Flood Plain near Red Rock (Robles Fire, 2-4-14). Fuel is six to eight foot high decadent forbs (Cuckleburrs).**



**Picture 2, Transmission Fire, Vail Arizona, 1-21-14, Elevation 2800 feet, South of I-10 and west of State Hwy 83, within a small unnamed drainage. Fuel was two foot high grass and forbs.**



**Picture 3, Valencia Fire 2/23/14, within Tucson City Limits, south of I-10 and east of Tucson International Airport. Fuel was tall grass, mesquite, and palo verde**

Above 3000 feet elevation to approximately 6500 feet the wildland fire situation remains the similar to last year with several years of growth in the tall grass understory of the mesquite grasslands, oak woodlands, and the pinyon-juniper. It appears as almost a continuous sea of grass within these areas (See Picture #2). Much of this grass crop is due to a robust 2013 monsoon season where some areas received 2.5 times the normal moisture.

The chaparral vegetation in Oracle Arizona is showing very noticeable dead and decadent shrub and live oak and Manzanita with tall grass (various spp.) and bear grass clumps. Even with continuous thinning projects taking place over the past 10 years within the community of Oracle and along its outskirts by US Forest Service and Arizona State Forestry, the community remains a serious concern of the Fire Chief of Oracle, US Forest Service, State Parks, and the Arizona State Forestry Division (See Picture 4, 5, & 6).



**Picture 4, Mesquite Grassland southwest of Oracle. Continuous grassland fuels**



**Picture 5, Cody Loop in Oracle looking northeast 4800 foot elevation.  
Continuous chaparral fuels.**



**Picture 6, Cody Loop in Oracle looking south-southwest, 4800 foot elevation.  
Continuous chaparral fuels.**



**Yavapai Fire, 1/20/14, Elfrida Arizona in the Sulpher Springs Valley, elevation 4300 feet, tall grass fuels**



**Texas Fire 1/18/14, Texas Canyon, elevation 4400 feet, tall grass fuels**



**Google Earth view of where the Ft Thomas Fire burned on 1/30/14. Along the Gila River in the Salt Cedar within the Ft Thomas Fire District**

Above 6500 feet the fuel quantity and type remains much as it was last year but significantly drier than last year. There has been less precipitation received this past winter and forested areas are expecting an early start to fire season with potential for larger fires than last year.

**Significant areas of concern within the Tucson District (no specific order):**

1. Oracle, Arizona
2. Baboquivari Mountain Range (catastrophic fire threat to Kitt Peak, the wilderness area, and to significant range land.)
3. Patagonia and Sonoita/Elgin, Arizona
4. Mount Lemmon, Arizona
5. Mt Graham (catastrophic fire threat to the forest and telescopes)
6. Portal, Arizona
7. Bisbee, Arizona
8. Herford, Palominas, and areas of Sierra Vista, Arizona
9. St. David, Benson, Pomerene, and Cascabel, Arizona

**Phoenix District**  
**Pima, Cochise, Graham, Greenlee, Cochise, Santa Cruz, and So. Pinal Counties**  
**2014 Fire Season Assessment**  
**Jim Downey, District Forester**  
**Prepared March 7, 2014**

**General District Overview:**

Limited winter precipitation and a warm early spring have left the lower elevation fuels sparse at best. A mid-December snowfall at higher elevations evaporated with limited snowpack to alleviate last year's droughty conditions. A sixty-nine day drought period from December 23 until March 1 has left the brush and Manzanita fields with limited moisture to raise the live green fuel moistures. It is predicted the spring green up will be limited and short in duration without additional precipitation coming into the state. Green up in Yavapai and Gila Counties has just started. The Sonoran Desert has benefited from the rain from early March, producing a fine, thin carpet of grass and forbs in the lower desert. Without subsequent spring rains those fine fuels should not provide an increase in fuel loading and fire behavior in the lower desert. The upper foothills received slightly more rainfall and should have an average amount of fine fuels.

Fire potential is greatest in the forested and chaparral fuel types in Yavapai and Gila Counties due to sustained drought conditions affecting live fuel moistures. Fuels in the Sonoran Desert are expected to provide low to moderate level of fire activity. District wide, fire season severity is expected to be similar to 2012 and 2013 fire seasons with more fires in the upland country.

**Maricopa County:**

The majority of the county has a low to moderate potential for wildfires. The areas of most potential will be desert washes, north slopes, and road right-of-ways where moisture regimes may have produced more fine fuel loadings to carry fire.

The Salt Cedar vegetation that occurs along the Salt and Gila Rivers are predicted to have above average fire potential –some expanses of the Gila River near Buckeye/Robbins Butte could sustain large fires.



**Thunderbird Park – Glendale, AZ 3/7/14**



**Thunderbird Park 3/14/13**



**New River Road 3/7/14**



**New River Road 3/14/13**



**NE Phoenix 3/7/14**



**NE Phoenix 3/14/13**

**Pinal County (North of the Gila River):** Above 2000 feet in the Dripping Springs area enough moisture was received to produce enough grass that will carry fires. The chaparral fuel type should have high fire potential due to the extended drought. The lower elevations of Pinal County will be much like Maricopa County this year, with low to moderate fire potential in the Sonoran Desert areas. Examples of these areas are Apache Junction, Queen Valley, Queen Creek, and Superior.

The salt cedar in the Gila River corridors from Winkleman to just east of Florence is expected to have high fire potential. Annuals growing next to the river could provide increased potential for ignitions that spread to the salt cedar fuels. Rain in the Kearney area has produced annual and perennial grasses. Expect fine fuel continuity to carry fires up slope and allow for fires to escape out of the river bottom.



**Florence Junction 3/5/14**



**Florence Junction 3/14/13**

**Yavapai County:**

The pine type at 5000+ elevation in and around the Prescott Basin and on Mingus Mountain is predicted to have high fire potential. Winter snowpack was very limited throughout the county following an extensive drought period.

The chaparral vegetation type on State lands in areas around Prescott, Yarnell, Mayer, and Bagdad is expected to have a below average live fuel moisture that will react with high fire potential. Many of the chaparral stands are older with a high dead/live ratio that may prove resistant to control efforts due to low live fuel moistures. Seasonal green-up has been delayed with a dry winter, late spring moisture and new growth may prove too little and too late.

Temperatures and ground moistures have just started the green up/growth of seasonal grasses. Grass loading is expected to be average in the perennial grasslands areas in the 3000 to 5000 foot elevations near Cordes Junction, Mayer, Prescott Valley, Chino Valley, Verde Valley, and Peeples Valley. Good monsoon moisture from summer 2013 has produced a good grass crop in Northwestern Yavapai County from Bagdad to I-40. Fire potential is predicted to be moderate to high in the grass type and high in the brush.

Low to moderate fire potential is predicted in the below 3000 feet level in the Sonoran Desert areas such as Black Canyon City, Congress and Wickenburg. The annual grass/forb production is limited. The brush component will have lower levels of fuel moisture content, increasing fire intensity. Fires occurring in washes, road right-of-ways, and north slopes should be at normal levels. Variability is moderate – some areas may have lack of continuous fuels.



**Kirkland Junction 3/6/14 – Continuous grasses between brush stands.**



**Peeples Valley, AZ 3/6/14 – Continuous grasses.**



**Skull Valley, AZ 3/6/14 – Moderate grass loading among chaparral stands.**

**Gila County:**

Similar to the Prescott area, the pine type at 5000+ elevation in and around the Mogollon rim is predicted to have high fire potential. Winter snowpack was lacking throughout the higher elevations of the county.

The chaparral type on State lands south of Globe will also be similar to Yavapai County – expect high fire potential.

Areas below 3500 feet are expected to have a moderate to high potential due to higher grass loading and fuel continuity in perennial and annual grass/forb production. Low live fuel moistures may cause the brush component to be troublesome where continuity is present. These areas would include Tonto Basin around Roosevelt Lake and Dripping Springs in the southern tip of the county. This area may still have some evidence of frost kill from 2011 and 2012 still present in the vegetation.

Expect troublesome fire behavior and larger fires in the mid elevations on the Tonto National Forest.

**Yuma County:** Expect low fire potential in Yuma County. High fire potential can be expected in the Salt Cedar/River corridor that includes the Gila River between Yuma and Dateland, and the Colorado River from Yuma past Martinez Lake. Annual and perennial grasses are limited in distribution and continuity.

**La Paz County:** Like Yuma County expect low fire potential with limited annual and perennial growth in the southern regions around Ehrenberg and Quartzsite. The northern region around Parker may have enough fine fuels to carry fire in areas with fuel continuity. Some Sonoran Desert regions near Wenden may have enough annuals growing to carry with average fire potential. High fire potential and behavior can be expected for Salt Cedar/River fires in the Colorado River.