

August 2010

Emergency Preparedness Pointers

Earth, Wind and Fire

The Highway 16 Fire that just occurred in northern Ada County is a tragic reminder of one of the dangers of lightning strikes. Fire is a creature of opportunity and when conditions are right, it springs into action. It can take on a life of its own, seeking ways to stay alive, consuming whatever it can in order to keep growing. For this reason it is important to be aware of your surroundings. Whether you are recreating in the foothills, camping in the mountains or if you live on a property surrounded by sagebrush, wild grasses and trees, keeping a “weather eye” on the environment is an important life saving skill.

The Environment and the Fire Triangle

There are three elements to the fire triangle.

- 1.) Fire needs fuel to burn (sagebrush, grass, trees).
- 2.) Oxygen from the air.
- 3.) Heat source to start (lightning, cigarette, campfire).

Once a fire has started, its size and growth will be determined by several factors. Three major factors that affect the fire are fuel load, weather and topography. Fuel load refers to the amount of flammable materials in the area. Spring rains may bring a bounty of flowers, grasses and shrub growth. However, if this spring weather is followed by dry conditions in the summer, it can create an explosive combination for wildfires.



Photo courtesy Bureau of Land Management

Weather and Fire

The weather can play a major role in the birth and growth of a wildfire. When humidity is high, fuel is less likely to be dry and it will be harder to ignite. The lower the humidity the better the conditions are for a fire. The lightning storms of summer can find fuels on the ground while providing too little moisture to subdue fires started by the lightning. This is particularly dangerous during late afternoon storms when the temperatures are high and the fuels have been dried out by the sun.

Once a fire has started, wind greatly affects its behavior. Unfortunately, wind mostly helps the fire act in an unpredictable fashion. It supplies the fire with additional oxygen, dries out more fuel, pushes the fire to greater rates of speed and can rapidly change the direction of the fire. As the fire grows, it generates wind of its own that can be as much as ten times faster than the surrounding winds. These winds can throw embers into the air creating spot fires out away from the main blaze.

The Lay of the Land

Fire is not like most people, it travels faster uphill than downhill. The steeper the slope, the faster it goes. The heat from the fire rises, which dries the fuel in front of the fire making it easier to ignite. Traveling downhill it is not able to preheat the fuel as well, so it travels more slowly. On flat land, it is the fuel load, fire break and wind combination that determine fire speed and direction. Existing fire breaks in the environment, such as rivers, rock ledges or roads may stop or redirect a fire. It is the wind that may push a fire past these obstacles.

Awareness is the First Step

A wildfire can start in the blink of an eye. Pay attention to winds, types of storms and how dry the vegetation is around you. Lightning with little to no rain is dangerous summer weather. Be aware of your surroundings; plan how to evacuate any area you are in. Identify more than one evacuation route. Keep emergency supplies together so that you may evacuate immediately once you have seen the danger or are notified to do so by authorities.

