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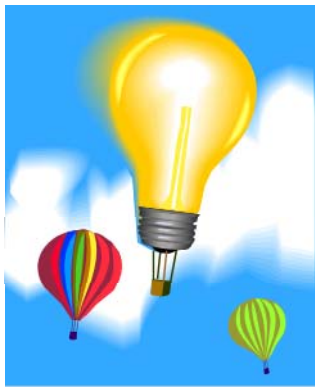
Northeast Extension Connection

DO YOU NEED A MISSION STATEMENT?

By Bill Taylor, Area Community Development Educator



A mission statement and a vision statement are distinctly different. Every non-profit needs both.

The two statements differ in these ways:
· Mission **controls** while vision **inspires.**
· A mission statement keeps an organization on track and guides it in the right direction.
· A vision statement motivates and offers a framework for the mission to grow and change.

A **mission statement** clarifies what an organization does right now. In one or two sentences, the mission describes the essence of an organization and its purpose.

The mission must live within an organization. Use it as a screen saver on your computers, print it on all your publications, and make sure staff and board know it by heart.

A **vision statement** articulates the future of an organization. The statement should be a meaningful description of what an organization hopes to make happen.

A vision is a critical part of strategic planning. Usually, it is the first step in a strategic planning process. If a framed mission statement hangs on the wall by the door, where would you put a vision statement in your office? Paint it on the ceiling.

A mission statement helps in the day-to-day life of an organization. It guides daily decisions, upcoming programs, and short-term goals. It is the "yellow brick road." A vision statement is Oz. This statement motivates the organization, the board, and the staff while keeping the nonprofit from getting into a rut. The vision statement is a liberating force that allows the mission to adapt to a changing world.

Why have a mission statement?
The mission statement provides the basis for judging the success of the organization and its programs. A powerful mission statement attracts donors, volunteers, and community involvement. It helps the organization and its stakeholders to verify whether the organization is doing its intended job and making the right decisions. It provides direction when the organization needs to adapt to new demands, helps the board to stay true to its primary purpose, and serves as a touchstone for decision making during times of conflict. The mission statement can also be used as a tool for resource allocation.

Characteristics of a mission statement
An effective mission statement is concise, to the point, realistic, operational, inspirational, motivational, informative, and even emotional. It is not too abstract or even too intellectual. The mission clearly states the purpose of the organization. It is forward-thinking, positive, and describes success. It is clear and focused so that the reader can identify with the statement. It reflects the organization's values, and clearly enumerates the reasons why the organization exists.

Creating and revising a mission statement
Creating a mission statement is a group effort. Board members, present and past officers, staff, members, donors, and constituents can provide valuable input during the creative process, but the final wording of the statement needs to be approved by the board.

The mission statement should be referred to continuously. It should be reassessed on a regular basis and not simply tucked away in a binder with other board documents. It should be present everywhere: on letterhead, brochures, the Web site, and other official documents. It should be referred to in the articles of incorporation and the bylaws. Before joining a board, all potential board members should review the mission statement to verify whether their understanding of the purpose of the organization is compatible with their own beliefs.

Samples of mission statements
When developing a mission statement, the drafters should think of what the organization is trying to accomplish rather than how it will get done. Note the following examples:

NO: "Our mission is to provide free books to local schools."
YES: "We want to stimulate love of learning and reading in young people."

NO: "Our mission is to assist people in searching for their roots and draw their genealogy chart."
YES: "We hope to enrich people's lives by helping to enhance their link to their past."

NO: "Our theater is the venue for the most contemporary and avant garde ballet creations."
YES: "We want to enlighten, excite, and educate the audience through dance."

Taken from BoardSource at www.BoardSource.org.

STRATEGIC THINKING

by
Bill Taylor, Area Community Development Educator

Strategic thinking is critical reasoning applied to matters that most influence the future performance and viability of your organization. Strategic thinking focuses on what matters most.

Board members individually and collectively do strategic thinking by being intentional and disciplined.

Intentional about improving strategies and performance. Board members explicitly search for issues, topics, and opportunities that will improve and defend the organization strategically. They choose carefully what they spend time on.

Disciplined about what and how to be thinking. They adopt more effective ways of examining complex and provocative issues. They look at subjects in new ways and from different angles — not just looking backward to see where the organization has come from, or forward when they engage in strategic planning, but over, under, and around the issues. They ask why, what if, and what do others do?

Thoughtful conversations — about the external environment, community needs and perceptions, peers, and competitors — will identify crucial issues and lead to more relevant, timely, and constructive decisions.

Done well, strategic thinking makes the board a significantly richer strategic asset. Board work is far more productive and satisfying to board members. And the staff will find it has more time to deal with significant issues, no longer being drawn by the board into operational or inconsequential matters.

Retool your meeting agendas by allocating sufficient time for thinking. Strategic matters take time; rich debate won't flourish if the entire meeting is absorbed in discussing operational issues or those of little strategic consequence. Ask if the most important items are on the agenda.

To have catalytic discussions, ask yourself the following questions:

- What three adjectives or short phrases best characterize this organization?
- What will be most strikingly different about this organization in five years?
- What do you *hope* will be most strikingly different about this organization in five years?
- On what list, which you could create, would you like this organization to rank at the top?
- Five years from today, what will this organization's key constituents consider the most important legacy of the current board?
- What will be most different about the board or how we govern in five years?
- What has a competitor done successfully that we would not choose to do as a matter of principle?
- What have we done that a competitor might not do as a matter of principle?
- What headline would we most/least like to see about this organization?
- What is the biggest gap between what the organization claims it is and what is it actually ?

And here are some techniques to stimulate board discussions that are spontaneous and encourage participation:

►Silent Starts. Take two minutes at the beginning of the board meeting for members to anonymously write the most important questions the board and management should address. Read and tally.

►One Minute Memos. At the conclusion of each discussion, board members take a minute to write down what they would have said if there had been more time. Collect for review by the chair and CEO.

►Future Perfect History. In breakout groups, develop a future-perfect narrative of how the organization moved from its present state to its envisioned state. Compare story lines, pathways, and detours.

►Counterpoints. Randomly designate two board members to make the most powerful counterarguments to initial staff recommendations.

►Role Plays. Ask subsets of the board to assume the perspective of different constituent groups likely to be affected by the issue at hand. How would they frame the issue and define a successful outcome? What would each group regard as a worst-case scenario?

►Surveys. Prior to discussing a major issue, board members take an anonymous survey that includes questions like: What should top our agenda next year? What are we overlooking? What is the most valuable step we could take to be a better board? What are the most/least attractive and worrisome aspects of the proposed strategic plan? Analyze the responses for subsequent discussion.

Taken from an article by Terry Williams in BoardSource at http://www.boardsource.org/

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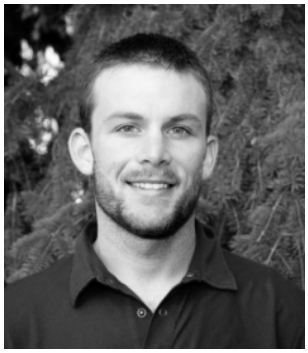
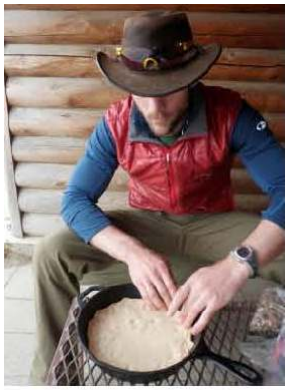


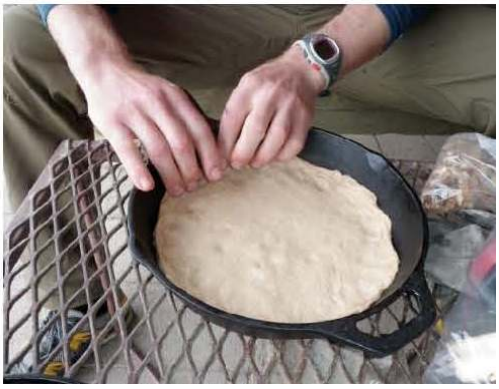
Backcountry Pizza

I like pizza. Unfortunately, many pizzas you can buy are made with refined grains and processed foods, high in sodium and saturated fat. This is a great reason to make your pizzas at home from scratch, where you can use whole grains and whole foods—making pizza a true 'health food'. Pizza also happens to be one of my go-to menu items when out camping. I've found that a Dutch oven (or simple iron skillet) and some hot coals can make a really great pizza.

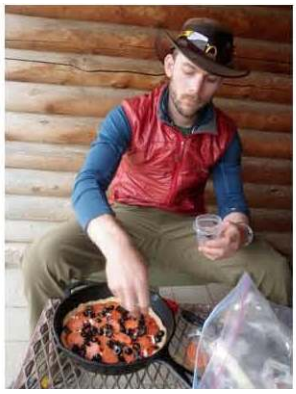
I would like to highlight this iron skillet method using some photos from a pizza I made on a recent canoe trip on the Missouri River.

1. I start by preparing my favorite New York Style Crust Recipe using whole wheat flour. The only changes I make are a slight reduction in salt (just use 2 tsp.) and I divide the dough into four portions instead of three. This smaller amount of dough works well with the 10-inch skillet I commonly use. I put together this batch of dough a few days before the trip. The dough went into the freezer, thawed over the course of 3 days in the cooler, and was pulled from the cooler to warm and rise a bit, maybe 3-6 hours before dinner time.
2. Once you've found your campsite with a good fire ring, start your charcoal. I used about 30 briquettes for this pizza. According to a commonly used Dutch oven temperature chart this is enough to get my oven to ~450 degrees. Now get to work on that pizza! The charcoal will be ready in 20-30 minutes which should be plenty of time to put the pizza together.
3. Form your dough into the iron skillet. I am definitely not skilled enough to 'toss' mine as the professionals do. I just stretch it out a bit and try to evenly press it into the skillet.

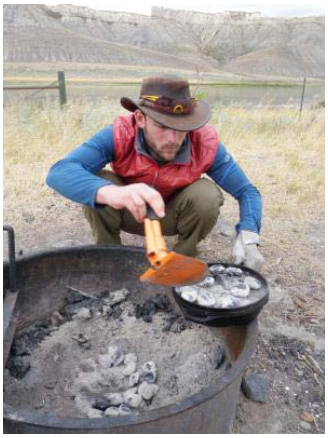




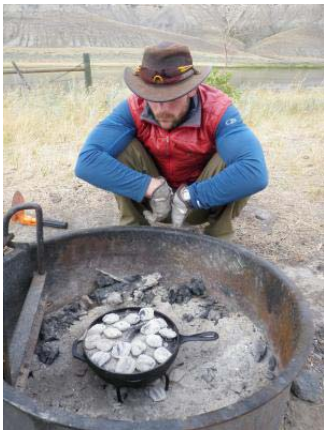
4. Top your pizza however you like. The one pictured has black olives and pepperoni. Keep reading for some more unique topping combinations.



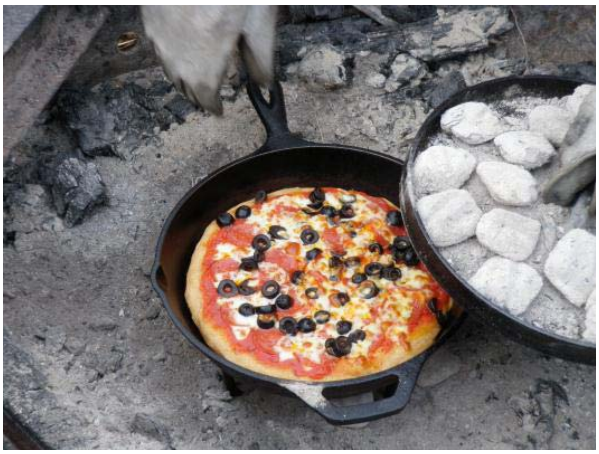
5. If the charcoal is ready then it's time to get things cooking! Evenly distribute about 2/3 (about 20) of your charcoal briquettes onto the lid of the skillet. The remaining 1/3 (about 10) will be the heat from the bottom. Note: you don't want your skillet to sit directly on the coals underneath, this is why camp Dutch ovens have little legs to stand up on. A lid stand or a few well-placed rocks will do the trick if you're using a smooth-bottomed oven or skillet.



6. Wait. Clean up your food prep mess and set the table (if you've got one). You're welcome to rotate the skillet and lid once or twice if you're concerned about hotspots or really like to feel like you're doing something. With this method you can start checking the pizza after 20 minutes—they are typically done between 20-30 minutes depending on toppings, weather, etc.

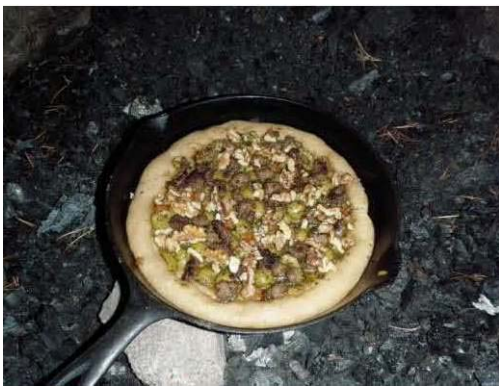


7. Pull off the charcoal, carefully remove lid, and let cool just a bit before cutting and serving.

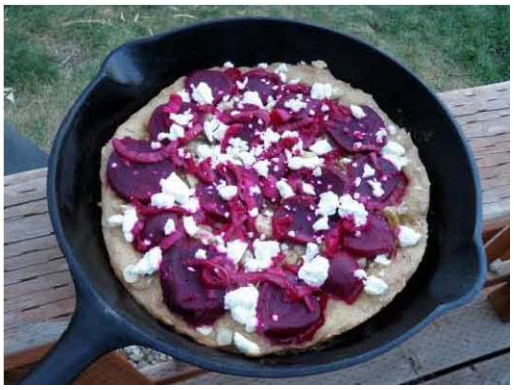


8. Enjoy!

As we harvest the summer bounty of vegetables it is a great time to get creative with your pizza toppings. Here are a couple more combinations that I've put together in an iron skillet.



Green olive, walnut, and sausage pesto.



Pickled beet, onion, and goat cheese with garlic/olive oil.

Whether in the oven, on the grill, or on the ground, an iron skillet is a great tool for making healthy home-made pizzas. Start with garden-fresh ingredients and it's tough to go wrong. Kentz Willis, M.S., *is the University of Wyoming Extension Educator in Nutrition and Food Safety for Northeast Wyoming. He can be reached via email at kwillis3@uwyo.edu.*

Cast Iron Cook Ware

Cast iron is ideal for open-fire or Dutch-oven cooking but one must follow a maintenance plan.

- cook over low heat, to avoid damage to the pan
- use plastic or wooden cooking utensils to prevent scratching
- remove acidic foods from your pans immediately after cooking, and wash promptly to prevent damage to the seasoning
- do not store foods in cast iron, as this can break down the seasoning
- never submerge cast iron in water
- never put cold water in a hot pan; this can cause the pan to crack or warp
- do not wash cast iron in the dishwasher

Pumpkins Aren't Just For Jack-o-lanterns!

By Vicki Hayman: University Extension Educator -
NE Area Nutrition and Food Safety

Benefits:

- Pumpkin is an excellent source of vitamin A, potassium, and fiber.
- Vitamin A promotes healthy eyes, gums, and skin.
- Fiber aids in digestion.(15 oz.)
-

Facts:

Pumpkins are a fruit.

Pumpkins are 90% water.

One cup cooked pumpkin has 50 calories, 3 grams of fiber and is low fat.

Tips:

◊ **Select a "pie pumpkin" or "sweet pumpkin" for cooking.**

◊ **Choose pumpkins with bright orange hard skins without blemishes or soft (moldy) spots and heavy for the size.**

◊ **The stem should be 1-2 inches long or it will decay quickly.**

◊ **Store in a cool, dry place for up to 3 months.**

◊ **Wash all fruits and vegetables before cutting.**

◊ **Refrigerate leftovers promptly.**

◊ **Cook several pumpkins at one time, then freeze for later use.**

Cooking Pumpkin

Boiling/Steaming Method: Cut the pumpkin into rather large chunks. Rinse in cold water. Place pieces in a large pot with about a cup of water. The water does not need to cover the pumpkin pieces. Cover the pot and boil for 20 to 30 minutes or until tender, or steam for 10 to 12 minutes. Check for doneness by poking with a fork. Drain the cooked pumpkin in a colander. Reserve the liquid to use as a base for soup.

Oven Method: Cut pumpkin in half, scraping away stringy mass and seeds. Rinse under cold water. Place pumpkin, cut side down on a large cookie sheet. Bake at 350°F for one hour or until fork tender.

Microwave Method: Cut pumpkin in half, place cut side down on a microwave safe plate. Microwave on high for 10-15 minutes, check for doneness. If necessary continue cooking at 1-2 minute intervals until fork tender.

PUMPKIN RECIPES

MICROWAVE PUMPKIN OATMEAL

½ cup quick cooking oats
¾ cups water
⅓ cup canned pumpkin (not pumpkin pie filling)
¼ cup milk
½ tsp. cinnamon or pumpkin pie spice
1 Tbsp. maple syrup or brown sugar, or other sweetener

Combine oats and water and cook in a large bowl and microwave for 1 minute.

Add pumpkin and milk and cook for another minute or until it is at desired consistency.

Add cinnamon or pumpkin pie spice and syrup and any additional toppings. Servings: 1

PUMPKIN SMOOTHIE

1 can (15 oz.) pumpkin pie filling
3 cups milk (more if needed)
½ cup vanilla yogurt
A few dashes of cinnamon
Cinnamon graham crackers, crushed

Well ahead of time, place pumpkin pie filling into a freezer-safe container. Freeze for a few hours or until frozen solid.

To make the smoothie: place milk, and yogurt to a blender. Drop in the frozen pumpkin pie filling and blend until the frozen filling is completely mixed. Add more milk or yogurt as needed to get desired consistency.

Pour into individual glasses and sprinkle the tops with graham cracker crumbs. Serve immediately! Servings: 8

PUMPKIN DIP

2 cups pumpkin puree, canned or fresh
1 large pkg. cream cheese, softened
1 cup brown sugar
1 tsp. ground cinnamon
1 tsp. pumpkin pie spice

Mix pumpkin and cream cheese in a large bow. Add all the other ingredients; mix until smooth and cream. Refrigerate at least 4 hours.

Serve with crackers, sliced vegetables, gingersnap cookies.

PUMPKIN HAM SOUP

2 cups canned pumpkin
2 cups milk
½ tsp. salt
¼ tsp. pepper
¼ tsp. cinnamon
¼ tsp. nutmeg
1½ tsp. butter
½ cup. diced cooked ham

In saucepan combine pumpkin, milk and spices. Heat until smooth and hot. DO NOT BOIL. Add butter and ham. Servings: 2-3

QUICK PUMPKIN PUDDING

1 pkg. (5 1/10 oz.) vanilla instant pudding and pie filling mix
1 can (12 fl. oz.) evaporated low-fat 2% Milk
1 can (15 oz.) pumpkin
1 teaspoon pumpkin pie spice
Whipped topping (optional)

Beat pudding mix and evaporated milk according to package directions in large bowl; refrigerate for 5 minutes. Add pumpkin and pumpkin pie spice; mix well. Spoon into dessert dishes. Refrigerate for 10 minutes or until ready to serve. Top with whipped topping, if desired. Servings: 7 (½ cup)

- Goal Setting Within 4-H -

Stacy Madden, UW 4-H/Youth Educator, Weston County

October is an exciting time for the 4-H program as it closes one year with celebrations of member and leader achievement and kicks off a fresh new 4-H year. With the start of the 4-H year, I encourage 4-H members and leaders to begin planning and set ting some goals. Have you been thinking about those things you would like to accomplish? Perhaps you would like to enhance your club participation, try a new project, improve your skills, or get all projects completed in a timely fashion (not the week before the fair). If you have not set goals, I encourage you to think about what you want to accomplish this year and set goals.

Goal setting can be a powerful motivator, focus your time and energy, and help you build essential life skills. Setting goals is not always easy, we can become caught up in grand ideas about those things we want accomplish. I encourage you to make realistic goals, those that you can accomplish this year. It is easy to set goals that are not so easy to accomplish, (mine would be hitting the gym everyday) so think about your capabilities and make sure your goals are attainable. I like to use the SMART goal framework.

- ►Make your goals specific. The more general and open you leave your goal, the harder it is to accomplish. For example: Instead of, "I will improve my knowledge about my livestock project this year," try making your goal more specific like, "I will learn about 3 new diseases that affect my livestock project this year."
- ►Make sure your goals are measureable. If you cannot measure progress, it is harder to know that you are accomplishing this goal. The more specific you are, the easier it is to measure a goal, and therefore accomplish it.
- ►Ensure that the goal you set is attainable. For example, winning grand champion or having perfect club attendance are not goals that are attainable. These goals have elements that are out of your control, instead, consider goals that you can control and therefore accomplish. For example try, "I will improve my project skills by attending a workshop and practicing the skills I learn," or, "I will work harder to incorporate interesting topics into club meetings to encourage higher attendance."
- ►Make your goals realistic. As I mentioned, know your capabilities and then make your goals realistic. Sometimes it helps to get ideas from others; they can help you keep your goals realistic by reminding you of your capabilities so you don't spread yourself thin.
- ►Lastly, ensure that you are working toward your goal in a timely fashion. Sometimes it helps to set benchmarks for yourself. For example: (Goal) "I will learn a new sewing project this year." (Benchmarks) "By the end of March I will attend a sewing workshop to develop new sewing skills, by the end of May I will find an appropriate pattern, gather all supplies to create my sewing project and practice the skills I learned at the workshop, by mid-July I will have completed my sewing project."

I encourage 4-Hers to think about their projects for the year, then open your Section 1 project record and set your goals for your project now. Once you have accomplished this, use your goals to set benchmarks and monitor your progress throughout the year. This will help you plan your time and reduce stress before fair during that rush to complete your projects! Also, keep your records up to date, you will appreciate your organization at the end of the 4-H year when your Portfolio Record Books are due!

Leaders and parents, encourage your 4-H'ers to begin setting project goals now. Once they have set their goals, you will have a better idea about what tools and resources they will need to help them reach these goals. Utilize this knowledge and communicate with your Extension Educators to ensure educational programs will help members reach their goals. Overall, utilize their goal information to create meetings and lessons of interest to members, this will ensure that your meetings and lessons are FUN! Leaders, don't forget to set goals of your own, they can help keep you organized and prepared throughout the 4-H year!

Once you have set your goals, don't procrastinate, get started early! Routinely check-in with yourself to assess your progress, or work with a friend to motivate each other to meet your benchmarks and reach your goals! So, get to work, and have FUN!

Considerations of What to Expect Following a Fire

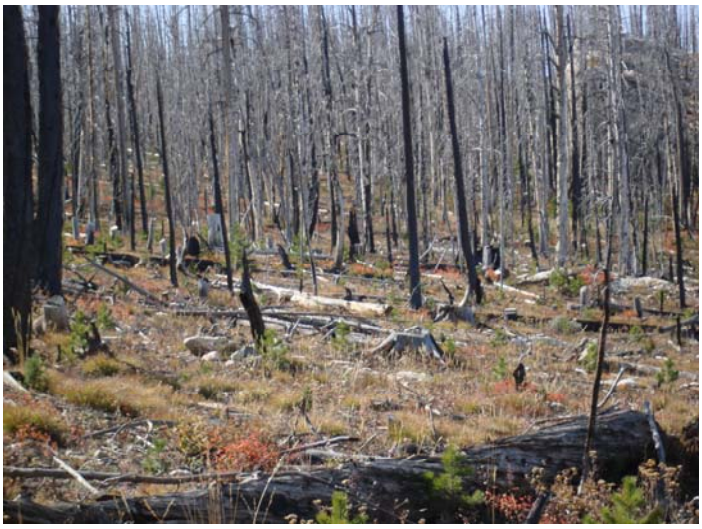
Brian Sebade
Extension Educator for Northeast Wyoming

Charred vegetation and barren soil are not the iconic view we desire for our property. Wildfires are a common occurrence in the Western United States and prompt unique and challenging post fire management. Just like people, no two wildfires are the same. Fires burn at different intensities and duration depending on weather, topography, and vegetation fuel loads. Differences in burn severity, vegetation, soils, hydrology, weedy plants, topography, and climate dictate what to expect following a fire. After the smoke has cleared and cleanup begins you may encounter that "deer in the headlights" feeling. Hopefully, this article will you get you steered in the right direction for what to do following a wildfire and what to expect.

The most important consideration following a fire is safety. It is very disheartening to lose a prized pasture or stand of trees, yet serious injury to humans or livestock is a greater issue. Standing burned trees are a major concern when assessing damage. The roots of trees could have burned and weakened during the fire, increasing the risk for blowing or falling over. These trees are a major hazard and you should consult an expert if you are unsure if they are safe or not. It is also important to keep an eye out for burned out stump holes that fill with ash. These pits can stay hot for many days following a fire. The proper protective gear should be worn to prevent injury when cleaning and assessing damage. You should expect to wear a mask for fine dust and ash particles and other personal protective gear such as hard hats, gloves, leather boots, and eye protection. Water wells should also be assed for any damage.

Burn severity affects plants, soil, and water differently and may ultimately dictate recovery time and management practices. A hot fire that burns for a long duration will have a greater effect on plants soils and water than a low heat and short duration fire. Grass and lighter fuels generally experience a lower burn severity compared to thick shrubs or areas with large logs and heavy fuel loads. As you asses the burn severity of your property, keep in mind what the area looked like before the fire. Was there a healthy stand of vegetation or trees? Was there a lot of areas overrun with weeds or undesired plants? Was there soil erosion before the fire? Recovery for areas with healthy plant communities and little erosion before the fire will have a faster and lower input recovery compared to areas with lots of weeds and high erosion. High erosion and undesired plants will require more intensive management. Stands of trees that have been destroyed will take decades to recover compared to grass dominated areas.

An increased potential of erosion is expected for all areas that have burned. This potential increases because there is more soil exposed, less vegetation to reduce the impacts raindrops, and less litter to cover soils. With fewer plants to intercept precipitation and suck up water, water runoff increases. As water runoff increases so does the amount of soil particles it takes with. Steep slopes further increase the erosion potential. In some cases high intensity and long duration fires may cause soils to turn hydrophobic which means they will not absorb any water. These soils intensify the runoff potential. Fortunately, there are a few things we can do to decrease the risk of erosion. For immediate results mulch can be placed on soils. The mulch reduces the impact of precipitation on the soil, slows water movement, and helps soils absorb water.



A look at a ten year old burn in a lodgepole pine forest.

Barriers can be placed parallel to slopes to capture soil and slow water for increased absorption. Desired plant seed can also be spread on areas to recover plant communities. Native perennial grasses and forbs will take a longer time to establish than the mulch and barrier techniques.

Understanding if you need to reseed and what to expect for recovery can be a difficult task to complete. Every area of your property will respond differently depending on burn severity, the types of plants present before the fire, erosion potential, and weeds present. Let's look at two scenarios to help make sense of what to do. Scenario one, you have a riparian area on your property that has experienced a low intensity burn. Half of the desired plants did not burn. The desired plants are perennial grasses and sedges that have mature seeds. There is also a small population of Canada thistle that is an aggressive weed and will most likely spread after the disturbance from the fire. For this scenario it is not necessary to reseed since many desired plants are unharmed and will recovery and produce more seeds. The only action that needs to occur is keeping the Canada thistle under control by chopping the new shoots or possibly spraying thistle plants. Scenario two, you have an eastern exposure hill on your property that was covered with Wyoming big sagebrush, which does not sprout back, and mixed perennial grasses before the a wildfire came through and eliminated all vegetation. Cheatgrass, an invasive and aggressive winter annual grass, was also found in small patches. For this scenario more intensive management is required. If sagebrush is desired, plants will need to be seeded for a faster recovery. It is also a good idea to seed perennial grasses to speed up recovery, help compete with the cheatgrass that is notorious for moving in after a fire, and decrease erosion potential on the hill. Consult an expert for advice on using herbicides for beating back the cheatgrass and other weeds if reseeding does not seem to work.

There is not an exact recipe for getting your property back to shape after a wildfire or what exactly you should expect. Constants that can be expected are plant communities recovery at different speeds and most likely will look different than before the fire. After safety has been considered, targeting areas that have suffered the worst burn severity, have the highest erosion potential, and are certain to have an influx of weeds is a good place to start with recovering your property. For further questions on these subjects please consult your local Extension Office.

Mature Canada thistle plants going to seed in a burn.

"A stand of trees with a relatively low vegetation fuel load"

Will We Have Another Dry Spring?

By Blaine Horn, NE Area Range & Forage Management Educator

Most, if not all, of you are well aware that spring precipitation drives rangeland forage production in the region. If it is drier than average range forage yields will be less than the norm but if greater than average they'll be higher. Winter precipitation fills reservoirs but does little for grass growth and summer rains may keep things green but there is little growth unless the range is dominated with warm-season grasses such as blue grama, prairie sandreed, or little bluestem. Fall precipitation probably helps the plants go into the dormant season in a healthier state, especially if summer moisture was low and/or temps hotter than usual as was the case this year, but again does not appear to be a big player with regard to the following year's grass yields. Thus with regards to when moisture comes in relation to what kind of grass year we will have we are primarily concerned with April — June precipitation and in particular that for April and May.

Based on the above, the question bears asking what are the odds that we will have a dry spring next year. Reviewing the long-term precipitation amounts for April, May, and June from four National Weather Service Cooperative Observers in NE Wyoming (Buffalo—84 years, Gillette 9ESE—85 years, Sundance—95 years, and Newcastle—90 years) found that in the years spring precipitation was below average the chance that the following year's spring precipitation would also be below the norm was 55%. This is not as bad as it could be but still not in our favor for next year's spring moisture being average or above.

With a 55% chance that next April — June will be drier than average do you wait until the end of June next year before you engage your drought plan, especially if you did not have to this year, or sometime before? Dr. Mike Smith, UW Range Professor and Extension Specialist, has 30+ years of data from the Saratoga area that indicates April moisture is the key month for what range forage production will be for the year.

I've been doing a similar study 10 miles south of Buffalo for the past 11 years and have found that April moisture may not be as important in this area as that which occurs in May. In seven of the 11 years April moisture averaged 41% of normal (1981-2010 average for Buffalo) but peak range forage yields in July were below normal in only four of those years at 55% of average. Note: Average peak forage yield for the study site is based on the amounts established by the USDA Natural Resources Conservation Service for mixed sagebrush/grass plant communities of Loamy and Shallow Loamy ecological sites; 10-14 inch precipitation zone; Northern Rolling High Plains. In the other three years range forage production averaged 139% of normal. May moisture was below average in four of the 11 years by an average of 41% with forage production averaging 57% of normal in those years. In five of the 11 years April moisture was below average but that for May at or above July peak forage yields were 126% of normal

With respect to June moisture, in seven of the 11 years it averaged 46% of normal but in only three of those years was peak July forage yields below average at 43% and in those years April and May moisture was only 43% of normal. In the one year when April moisture was slightly above average (112%), May's well below (22%), and June's at 187% peak range forage yield was average. 50% of the June moisture occurred during the first week and with maximum daily temperatures for the month nearly eight degrees below normal probably helped the range grasses grow more than they might have had the bulk of the moisture come later in the month and temperatures closer to the normal. Thus an average or above April and June, especially if the moisture comes in early June and temperatures are cool, can apparently overcome a dry May but what are the odds of this occurring? At Buffalo only 6 out of 84 years was April precipitation at or above average (182%) with the amount in May below (65%) and that for June at or above (156%), i.e. 7% of the time.

Based on the data so far collected in this study, NE Wyoming range-livestock producers should make the decision as to when to initiate their drought plan based not on April moisture alone but on that plus the amount received in May. However, if April moisture is below average dusting off your drought plan would be wise (more on that below).

How much reduction in range forage yield can be expected if April plus May moisture is below the 1981-2010 average? It appears that for every inch the amount is below average a 25% reduction in yields could be the result. Daily temperatures also influence plant growth but it is probably safe to use this reduction amount as a guide to make stocking decisions.

If April is dry what are the odds that May will be dry as well? For Buffalo, 40 out of 84 years April precipitation was below average and 22 of those 40 years May precipitation was below normal. This indicates that if April is dry there is a 55% chance that May will be as well in the Buffalo area. There was a 15% chance that May moisture would be normal and a 30% chance that it would be above average. These odds are probably similar throughout NE Wyoming thus if April is dry it would be wise to be prepared for a dry May and have your destocking plans in place in case it is.

Of all your ranching tools a good rain gauge may be one of the most important items you can possess. Depending on how wide spread your operation is it would probably be a good management decision to have rain gauges at other locations besides ranch headquarters. A 4" diameter schedule 40 PVC pipe capped at one end can be used as a make shift rain gauge for locations you will not visit on a regular basis but would want to check at least the end of April and again in late May. Length of the pipe would not need to be anymore than 12" that way a regular ruler can be used to measure accumulated moisture. To keep moisture from evaporating until you can check the gauge you'll want to put about a half inch of light motor oil in it. The gauges could be brought in for the winter but you would want to have them out by late March.

The following table lists the 1981-2010 April, May, and June precipitation averages for all NWS Cooperative Observers in NE Wyoming.

Location	April	May	June	Total
Big Horn	2.27	3.59	2.49	8.35
Billy Creek	1.35	2.42	2.15	5.92
Buffalo AP	1.38	2.47	2.10	5.95
Clearmont 5SW	1.46	2.28	1.96	5.70
Colony	1.44	2.45	2.41	6.30
Dayton	1.95	3.08	2.32	7.35
Devils Tower 2	1.78	2.76	2.89	7.43
Dillinger	1.73	2.64	2.18	6.55
Dull Center 1SE	1.52	2.34	2.04	5.90
Echeta[1]	2.07	2.77	2.32	7.16
Gillette 9ESE	1.86	2.93	2.42	7.21
Hulett	2.02	2.59	2.84	7.45
Kaycee	1.33	2.54	1.85	5.72
Leiter 9 N	1.71	2.51	2.32	6.54
Midwest	1.46	2.38	1.79	5.63
Moorcroft CAA	1.39	2.55	2.18	6.12
Newcastle	1.61	2.66	2.46	6.73
Rocky Point 1E	2.09	3.48	2.96	8.53
Recluse[2]	1.29	2.26	2.13	5.68
Sheridan AP	1.62	2.44	2.01	6.07
Story	3.77	4.35	3.29	11.41
Sundance	2.18	3.11	2.63	7.92
Upton	1.59	2.70	2.35	6.64
Weston	1.41	2.57	2.36	6.34
Wright 12E[3]	1.63	2.54	1.93	6.10
Wyarno[4]	1.39	2.53	2.29	6.21
Average	*1.74*	*2.73*	*2.33*	*6.80*

[1]Echeta: 1981-2006
[2]Recluse (14NNW): 1981-2005
[3]Wright 12W: 1991-2010
[4]Wyarno: AKA Sheridan Field Station

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