



# GROUNDED

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## Firewise Landscaping Ideas . . . by *Diane Escure*

It's too soon to get an accurate forecast of wildfire potential in the northwest next year, but it's never too soon to consider understanding good firewise landscaping practices and taking action to protect your property in case of fire.

Here's why: According to the Washington State Department of Ecology's Drought in Washington 2019 report, nearly half of the state or 27 watersheds, are included in the state's drought emergency area. Governor Jay Inslee declared a drought emergency on April 4<sup>th</sup>, 2019, for the Methow, Okanogan, and upper Yakima watersheds. As of September 9<sup>th</sup>, however, the absence of heatwaves last summer helped make this summer's drought less extreme and damaging. June through August ranked as the 22<sup>nd</sup> warmest period since 1895, and August was the 15<sup>th</sup> warmest month. For precipitation, June through August ranked as the third driest since 1895.

Fire season begins in the Columbia Basin in early May and runs through October in typical years, although the Moses Lake Fire District 5 has fought fires in November in some years. If you live in an urban/wildland interface, carefully consider the location and spacing of plants within your home landscape and surrounding area. These areas are often surrounded by trees, shrubs, and grasses that can be very flammable. The idea is to create a defensible space to greatly reduce your chances of a wildfire reaching your home.

Defensible space is the area between a structure and an oncoming wildfire (or between a burning structure and wildland vegetation) where nearby vegetation has been modified to reduce a wildfire's intensity and ability to spread. Having a defensible space not only protects homes, it also helps protect those who are defending homes by providing safe ingress and egress. Decks and siding can easily ignite when plants that burn quickly and produce high heat are placed adjacent to the home. A burning plant or group of plants in front of windows can cause glass breakage allowing fire to enter the home. Reconsider planting highly flammable plants, particularly when bunched together, at home entry locations or close to the walls of your home.

A well-maintained lawn, as well as conservation grasses, clover, and bulbs, can be included in a fire-resistant landscape and serves as an effective fuel break. Noncombustible materials in planting areas around your house, such as rock, brick, and concrete, also provide a barrier to fire. Bark mulch,

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which is often used in home landscapes, can ignite, conveying a fire to your home. A combination of wood bark surrounded by decorative rock is less flammable than wood bark mulch alone, and will not scorch plants.

The most important thing you can do is create defensible space, or a safety zone, immediately surrounding your home.

- **Zone 1:** This zone is 0-5 feet from your house if the structure has one-hour flame-resistant siding or 0-10 feet if the structure has non-flame-resistant siding. In this zone, the goal is to prevent ignitions on or near a structure.
  - Plant no trees or shrubs.
  - Use only inorganic mulch. Do not use wood or bark mulches within 5 feet of your house.
  - Plant fire-resistant plants with high moisture content.
- **Intensive Zone 2:** This zone is 0-30 ft from buildings.
- **Extensive Zone 3:** This zone is 30-100 ft from buildings.



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It's never too late to assess the landscape of your property to reduce the fuel and minimize fire hazards and to consider replacing highly flammable plants with those that are fire-resistant next spring. And what plants are considered fire-resistant? Does landscaping for defensible space mean creating an unattractive, unnatural or sterile-looking landscape? The answer is that a wide variety of attractive groundcovers, vines, shrubs, and trees are fire resistant and grow well in our area.

Fire-resistant plants do not readily ignite from a flame or other ignition sources. In the event of fire, these plants can be damaged or even killed, but their foliage and stems do not significantly contribute to the fuel or the fire's intensity.

Several factors influence the fire characteristics of plants, including plant moisture content, age, total volume, dead material, and chemical content.

#### Characteristics of Fire-Resistant Plants

Moist and supple leaves  
Little dead wood and tend not to accumulate dry, dead material within the plant

Water-like sap; doesn't have a strong odor

#### Characteristics of Highly Flammable Plants

Contains fine, dry, or dead material within the plant  
Leaves, twigs, and stems contain volatile waxes, terpenes (naturally occurring compounds in the cells of certain plants), or oils

Leaves are aromatic (strong odor when crushed)  
Sap is gummy, resinous, and has a strong odor  
May have loose or papery bark

Both native and ornamental plants can be highly flammable. One example you see planted throughout the Columbia Basin is the spreading or upright juniper, which is highly flammable due to its accumulation of old, dead needles, and the volatile oils in its foliage. Other highly flammable plants include yews, brittle brush, sagebrush, Leyland cypress, and conifers in general. A few conifers, however, are fire-resistant: Western larch (*larix occidentalis*), Ponderosa Pine (*Pinus ponderosa*), and Lodgepole pine (*Pinus contorta* var. *latifolia*), whose foliage are moderately resistant to fire.

Fortunately, there are many attractive fire-resistant plants for you to choose from that grow well in our area.

**Examples of Fire-Resistant Ground Covers and Perennials**

<b>Ground Covers</b>	<b>Perennials</b>
Carpet Bugleweed ( <i>ajuga reptans</i> )	Sea thrift ( <i>armeria maritime</i> )
Kinnikinick ( <i>Arctostaphylos uva-ursi</i> )	Astilbe ( <i>astilbe cultivars</i> )
Mock Strawberry ( <i>Dechesnea indica</i> )	Sun rose ( <i>Helianthemum nummularium</i> )
Hens and Chicks ( <i>Echeveria species</i> )	Sedges ( <i>Carex species</i> )
Snow-in-Summer ( <i>Cerastium tomentosum</i> )	Daylilies ( <i>Hemorocallis hybrids</i> )
Yellow Ice plant ( <i>Delosperma nubigenum</i> )	Coreopsis ( <i>Coreopsis species</i> )
Japanese Pachysandra ( <i>Pachysandra terminalis</i> )	Campanulas ( <i>Campanula species</i> )
Creeping Phlox ( <i>Phlox subulata</i> )	Coral Bells ( <i>Heuchera species</i> )
Creeping Thyme ( <i>Thymus praecox</i> )	Hosta lilies ( <i>Hosta species</i> )
Sedum or Stonecrops ( <i>Sedum species</i> )	Red-hot poker ( <i>kniphofia uvuria</i> )
Periwinkle ( <i>Vinca minor</i> )	Evening primrose ( <i>Oenothera missouriensis</i> )
Epimedium ( <i>Epimedium x discolor</i> )	Penstemon ( <i>Penstemon species</i> )
Speedwell ( <i>Veronica species</i> )	Lupine ( <i>Lupinus species</i> )
Dianthus, Garden Carnation or Pinks ( <i>Dianthus species</i> )	Columbine ( <i>Aquilegia species</i> )
Pink Pussytoes ( <i>Antennaria rosea</i> )	Iris ( <i>Iris species</i> )
Rock cress ( <i>Aubrieta deltoidea</i> )	Blanket flower ( <i>Gaillardia varieties</i> )
Wild strawberry ( <i>Fragaria species</i> )	Yucca ( <i>Yucca species</i> )
	Oriental Poppy ( <i>Papaver orientale</i> )

**Examples of Fire-Resistant Shrubs and Vines (Perennials)**

Red-osier dogwood ( <i>Cornus stolonifera</i> )	Currant ( <i>Ribes species</i> )
Cotoneaster ( <i>Cotoneaster species</i> )	Hardy shrub rose ( <i>Rosa species</i> )
Creeping Oregon grape ( <i>Mahonia repens</i> )	Spirea ( <i>Spiraea species</i> )
Oregon boxwood ( <i>Pachystima myrsinites</i> )	Snowberry ( <i>Slymphoricarpus albus</i> )
Tall Oregon grape ( <i>Mahonia aquifolium</i> )	Lilac ( <i>Syringa species</i> )
Burning bush ( <i>Euonymus alatus</i> )	Cranberry bush ( <i>Viburnum trilobum</i> )
Mock orange ( <i>Philadelphus species</i> )	Serviceberry ( <i>Amelancier alnifolia</i> )
Sumac ( <i>Rhus species</i> )	Weigela ( <i>Weigla florida</i> )
Rose-of-Sharon ( <i>Hibiscus syriacus</i> )	Russian sage ( <i>Perovskia atriplicifolia</i> )
Honeysuckle ( <i>Lonicera species</i> )	Viburnum ( <i>Viburnun species</i> )

**Examples of Fire-Resistant Deciduous Broadleaf Trees**

Big leaf maple ( <i>Acer macrophyllum</i> )	European mountain ash ( <i>Sorbus aucuparia</i> )
Amur maple ( <i>Acer ginnala</i> )	Honeylocust ( <i>Gleditsia triancanthos var.inermis</i> )
Norway maple ( <i>Acer platanoides</i> )	Kentucky coffee tree ( <i>Cymnocladus dioica</i> )
Red maples ( <i>Acer rubrum</i> )	Walnut ( <i>Juglans species</i> )
Horse chestnut ( <i>Aesculus hippocastanum</i> )	American sweetgum ( <i>Liquidambar styraciflua</i> )
Birch ( <i>Betula species</i> )	Crabapple ( <i>Malus species</i> )
Western catalpa ( <i>Catalpa speciosa</i> )	Aspen/Cottonwood ( <i>Populus species</i> )
Common hackberry ( <i>Celtis occidentalis</i> )	Flowering Cherry ( <i>Prunus species</i> )
Eastern redbud ( <i>Cercis Canadensis</i> )	Chokecherry ( <i>Prunus virginiana cvs</i> )
Flowering dogwood ( <i>Cornus florida</i> )	Bur oak ( <i>Quercus macrocarpa</i> )
Beech ( <i>Fagus species</i> )	Mountain alder ( <i>Aluns tenuifloia</i> )
Ash ( <i>Fraxinus species</i> )	Willow ( <i>Salix species</i> )

For further insight, you can visit a firewise home landscape that was designed by the Chelan County Master Gardeners and maintained by the local fire department. It is located adjacent to the fire station on Eastmont at 4th Street, East Wenatchee, Washington. Signs mark different firewise landscape zones, working from the zone closest to a house outward to the zone furthest away. Plants closer to the “building” are lower and further apart, and may be taller farther away. The landscape includes aesthetic features that add diversity to a yard and non-flammable mulch.

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## Celebrating a Way of Living . . . By Barbara Guiland

September 22, 2019, was the first day of Washington State University Master Gardener Week as proclaimed by Governor Jay Inslee. Former Master Gardeners, active Master Gardeners, and friends gathered together to celebrate the WSU Master Gardener Program in Grant- Adams Counties. The program was designed to dedicate a bench to all WSU Grant-Adams Master Gardeners, past and present, which was placed at the Moses Lake Civic Park in the Drought-Tolerant and Native Plant Garden, adjacent to the Moses Lake Public Library this past summer.



Back row: Iris Fung, Marylou Krautscheid, Glenn Martin, Duane Pitts, Tina Bradley, Joyce Cooley-Wood. Seated on bench: Diane Escure, Marta Tredway, Barbara Guiland, and Cynthia Calbick. They represent some of the WSU Master Gardeners who have received WSU MG certificates since 1982. The 2019 class has just begun.

In 1982 Ray Hunter, horticultural and tree fruit extension agent for Grant County, established the first WSU Master Gardener program and recruited four gardeners from Othello, Royal City, and Moses Lake. By 1984, 32 gardeners were taking the Master Gardener course. Over the years, at least 200 gardeners have taken it in Grant and Adams Counties. The curriculum, coursework of about 10 weeks, and 50 volunteer hours completed before certification as a WSU Master Gardener are still approximately the same requirements that they were in 1982. The great

difference is that a major portion of the course is now delivered through WSU online.

In proper Master Gardener tradition, the Master Gardeners gathered to talk about gardening, share records and photos from past years, enjoy



Marylou Krautscheid, Marta Tredway, Iris Fung, and Cynthia Calbick enjoying a break

refreshments, including fresh melon grown by one of the gardeners, and the mild September sun. They also cleaned up the drought-tolerant garden, pulling weeds, trimming plants, and putting down new mulch. The occasion was also an opportunity to view the bench dedicated to all Grant-Adams Master Gardeners.



Diane Escure, Duane Pitts, Kelly Hoyt, and friends of MGs doing serious weeding.

Over the years, WSU Master Gardeners in Grant and Adams Counties have answered thousands of questions at the WSU extension office and at plant clinics held at farmers markets, conferences, festivals, and Grant and Adams County fairs. Many have visited individual gardens and provided pruning and planting demonstrations for individual community members and new Master Gardeners. They have given advice on shoreline planting and maintenance and gave presentations to clubs and service organizations to share information about trees, best practices for gardening in the Columbia Basin, growing roses, and drought-tolerant gardens.

WSU Master Gardeners have produced plans for landscaping many local government installations, including a pet rescue building in Othello and entryways to public buildings like the Grant County Courthouse. As members of the Master Gardener Foundation they have staged garden tours, grown plants and held plant sales to finance their gardening projects.

WSU Master Gardeners have also participated in planting many of the landscapes they designed. Some Master Gardeners have taught gardening classes for community programs year after year and others helped establish and maintain portions of community gardens in Othello, Royal City, Ephrata, Coulee Dam, and school gardens in George. Demonstration gardens were started as educational areas at the Moses Lake Library, the Quincy Reiman-Simmons Historical Buildings, the Othello Old Hotel Garden, Soap Lake Healing Waters Gardens, and a no-till vegetable garden at Patton Park.

All in all, Master Gardeners think of gardening and spreading the word about sustainable gardening as a way of life. They not only grow and care for their own gardens in every part of Grant County but they spend thousands of hours sharing the advantages of that way of living with our communities. They epitomize the WSU Master Gardener Program mission “to deliver science-based information to Washington State communities that helps conserve and enhance our natural resources while improving the quality of life and wellbeing of Washington State residents.”

## Fall Cleanup . . . *By Diane Escure*

If you haven't already prepared your garden and landscape for winter, there's still time to take care of it. Here are some tips on how gardeners can prepare their areas to have healthy landscapes and edible crops during the next year's growing season.

- Pull up any annuals you don't want to self-seed.
- Prepare roses for winter. In early November, prune the top third out of plants to reduce and eliminate snow damage in case there's an early, wet snow. Mulch with bark, dry leaves, or compost, but remove in spring to prevent mold. Cover at least to above the graft, or, if the plant is on its own roots, to above the root crown, which is the point at which the stems of the rose meet the roots. Be sure to remove the mulch in early spring – otherwise it becomes a breeding place for a variety of molds.
- Cut chrysanthemums to 6" from the ground.
- Rake your flower beds to prevent over-wintering diseases on fallen leaves. If left on the ground, winter and early spring rains will cause the spores from infected leaves to 'bounce' right back up on the plants and the disease will spread. Also, debris left in beds gives winter protection to pests.
- Place mulch around berries for winter protection.
- Cover rhubarb and asparagus beds with composted manure and straw.
- Protect tender evergreens from drying wind.
- Tie limbs of upright evergreens to prevent breakage by snow or ice.
- Leave ornamental grasses up in winter to provide texture in the landscape. Cut them back a few inches above the ground in early spring.
- Cut down rotting fruits, vines from squash and pumpkins, tomato plants, weeds of all kinds and put in your compost pile or bin.
- Use leaves not showing disease as a great mulch for a compost pile since they decompose quickly when they are shredded. If you don't have a shredder, just run over them with the lawn mower. Tip: When using a lawn mower, spread them out in a very large circle and mow them blowing towards the center.
- Add a thick layer of compost or mulch on bare ground in beds and borders.
- After your trees have dropped their leaves, prune to shape them, and remove crossing branches and dead wood.
- If soil is dry, water shrubs and trees to ensure they enter winter with adequate moisture.
- Clean up your tools and reorganize your storage areas keeping in mind what items you will need first in the spring.
- Winterize faucets and store hoses.

- Make notes of what worked in your garden and what you want to change next year.
- If you have taken in plants for over-wintering inside, be sure to spray them with insecticidal soap and isolate them for about 10 days to keep whiteflies and other outside pests from infesting your other houseplants. Don't forget to spray the underside of the leaves.

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### Benefits of Leaving the Leaves . . . *By Mark Amara*

As days get shorter and the days and nights turn colder, leaves and needles are dropping everywhere around the Columbia Basin. Rather than sweeping or raking them up, putting them in the garbage can or taking them to the dump or landfill, burning or letting them blow away (often into the neighbor's yard), keeping and using them should be an option. Leaves (or wood chips, yard waste like grass, brush, or clippings, or even crop residues) used as mulch (compost or cover) are great ways to reduce landfill space. They are free annual and renewable resources that can help improve soil conditions.

Collecting and spreading leaves on or around the garden and yard help retain soil moisture and conserve water, minimize weeds, improve soil quality and health, reduce compaction, add nutrients to the soil, and even help promote plant growth. As cover, leaves (or other organic materials) that are spread on the surface (or mixed into the surface layer) are called mulch. Adding leaves can help improve soil texture, moderate fluctuations in soil temperature, and reduce evaporation during dry spells.

Here we are in fall with mountains of leaves to deal with. Collecting them is sometimes a challenge. Whatever way they are collected, there are many benefits to keep and use them in the landscape. Spreading leaf mulch helps smother weeds, reduces soil and water runoff, and increases water retention the following year. Laying materials down 2-4 inches thick or more helps keep weeds from surfacing assuming the ground is relatively weed-free to start with. If the layer is too thick, it will repel water, decompose more slowly, and can actually smother young desirable annuals. Always keep mulches several inches away from trunks of trees and shrubs and stems of herbaceous plants to help keep excessive moisture away from these contacts (which can deter rots and other diseases). Remember that mulching does not control weeds indefinitely and materials should be reapplied for continuing benefits. Placing leaves higher and deeper up to 3-6 inches around perennial trees and shrubs is of benefit. Perennial weeds like field bindweed, horsetail, or quack grass are not controlled by mulching and will have to be pulled or dug up by hand or might even require some kind of chemical removal both before and after mulch is applied. Using leaves in walkways or between plant rows are effective ways to control weeds and add organic nutrients.

All plant mulches have some nutrient value in terms of nitrogen, phosphorus, potassium, calcium and magnesium and can provide 50-80% of the plant's needs each season. It is always best to soil test at least every few years unless specific fertilizer needs are known. The addition of biodegradable plant mulches helps stimulate microbial activity, which combined with rooting, decomposition, and residue breakdown, allows the release of nutrients into the soil. As leaves break down, they also provide food for earthworms that help aerate the soil. Most leaves are a good source of potassium and often have pH from 6-7.5. The potential for increased biological activity in the soil can help improve biodiversity and help prevent plant diseases.

Some tips and precautions to think about:

- Do not use treated leaves or other materials that have been sprayed because pesticide residues can affect subsequent plant growth.
- Avoid using leaves or other organic materials that have diseases or insect problems as these can spread to other parts of the yard or garden.
- Maple leaves can add as much as 2-3% nitrogen and don't seem to have any drawbacks. Like oak, cottonwood leaves are higher in tannins than most tree leaves, but adding small quantities of shredded cottonwood leaves mixed with other materials as mulch should not be a problem.
- Since Black walnut leaves are toxic to many plants, they should not be used in the garden or compost pile.
- Adequately composting yard materials is a good way to reduce harmful impacts.



This leaf catcher is pulled behind a lawn mower. It picks up leaves and shreds them for easy removal. Here it is being emptied into my garden this fall.

Shredded leaves (or other materials) are more desirable than those not shredded. Shredding helps with decomposition, and the increased surface area helps keep leaves in place (as they are less likely to blow away). If materials are not shredded, depending on how thick and compacted they get, they can form barriers that block water and oxygen movement in the soil. If there are only a few trees in the yard, consider shredding leaves and leaving them in place on the lawn using a mulching mower which can be more effective than leaving the leaves in place as is.

In my yard, I have spent countless hours raking, piling, loading the wheelbarrow and spreading leaves in my garden. However, even with the effort, I know I am adding a great soil-building product to my soil. My next-door neighbor has a machine he drives around his yard that picks up leaves and shreds them. I can have all that I can get from him at no charge.

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**Holey Moley! It's That Time of Year Again . . . by Duane Pitts**

Last week, I pointed out to my oldest son that we had moles in the backyard, by the back fence and in the Japanese quince shrubs. I thought they were hibernating. Obviously, I was wrong. That piqued my curiosity to find out more. Thus, this article.

Moles are active year-round. They do their major tunneling and mound building in the spring and in the fall. And it is fall now! We have mounds and mounds out back.

Moles are insectivores (insect eaters), not rodents as some may think. The ones we have in eastern Washington are the Townsend's mole (*Scapanus townsendii*). Moles all have short, velvety grayish or black fur, a short tail that is mostly hairless, and a slender and pointed snout with small needlelike teeth. Their eyes and ears are not noticeable, and, as seen in the photo, they have shovel-like hairless paws, the forepaws of which are tipped outward for digging. It is no wonder that they can dig and dig.



<https://pixabay.com/photos/animal-mole-garden-meadow-molehill-1347755/>

Moles are solitary creatures and territorial - and they like our yard! Moist earth with all those delicious earthworms, grubs, small slugs, and cutworms and other insects seem to be favorite meals. What a feast! They are rarely seen aboveground and in the wild they live up to 3 years. So, they make the most of their time and dig away heartily, which explains the mounds we have.

Usually in February the males get really ambitious and search for a female. Since they stay in their tunnels, they dig away in search of love. In fact, one mole was seen to make over 300 mounds in 77 days! Some males just get carried away when in love, eh.



Moles mate during February and March and give birth up to 3 young between late March to early May. Just four weeks after birth, the young moles move to find their own territory. And our backyard looks like they all migrated here.

<https://unsplash.com/s/photos/mole>



<https://unsplash.com/s/photos/mole>

Moles build two types of tunnels. The permanent tunnels are 3-12 inches (maybe up to 40 inches) below the surface and used for moving around their territory and collecting food, mostly earthworms. The temporary tunnels are about 4 inches deep and used only for collecting food. Most moles have a vast tunnel system in their home territory. That explains why my backyard is looking like miniature earth volcanoes dotting the yard.

Now, I imagine you are like me and my oldest son. What to do with these moles?

Let me start with what NOT to do, because it is a long list, and we need to get this done first. If you know what not to do, you will realize there are only a few choices left. And I will leave those for last.

“Catch and release” is illegal, as is setting mole traps that will pierce moles. Some people like to use concussive charges, sonic devices, or smoke bombs - to no effect. Mole baits and castor oil are also ineffective. Using pesticides to kill insects in the lawn will kill the insects, but will not kill earthworms, the main diet of moles. So, ending up with dead insects, damaged soil, dead grass if you apply too much pesticide, and moles dominating the yard means there is no bargain in using pesticides.

“What about home remedies?” you ask. If you mean remedies like chewing gum, mothballs (illegal), flooding the tunnels, cigarette butts, mole plants, rose canes, wind-mills, pet droppings, human hair, pit-fall traps, etc., none of them work. Just because people believe they will work does not mean they will. Plus, there is no science-based evidence that will support those claims. At this point you may think you are out of options.

Surprise! You have three basic choices.

1. If your yard is small, build an underground barrier. Dig a ditch about 30 inches deep, bury galvanized hardware cloth, bend bottom 6 inches outward (away from the yard) and allow at least 6 inches above the ground. However, if moles are already present in your yard, too late! Plus, this is a lot of work, even for a small yard.
2. Try manual elimination: flatten the mole hills and wait for the mole to re-build the mound. When the mole pushes up the soil, quickly dig it out and hit it with a sharp blow with the shovel. One mole down! 99 more to go. How quick are you digging? If you do well at digging clams, this will work for you.
3. Learn to “Live and Let Live!” Rake the mounds, remove the excess soil and sprinkle on the grass seed. This is the easiest to do. The benefit in letting them live is that they aerate the soil with their digging, they help soil conditions by improving water absorption through all their digging and pushing and moving dirt around, and they mix the soil so you don’t have to with a rototiller. I like the idea of working less. How about you?

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### Mark Your Calendar

**March 2020** - date to be announced: Ephrata Seed Library Annual Seed Swap

**April 18, 2020** - Sixth Annual Columbia Basin Eco-Gardening Symposium, CB Technical Skills Center, Moses Lake, 9-1 pm. This is a jointly organized effort by the WSU Grant-Adams Master Gardeners and Grant County Conservation District. Three keynote speakers, mini-demonstrations, an exhibitor showcase, door prizes, and food are provided. Registration can be done by going to the Grant County Conservation District’s website ([www.columbiabasin cds.org](http://www.columbiabasin cds.org) symposium) signup window early in 2020.

#### Grant-Adams Counties Foundation Officers:

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#### *Grounded Staff*

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