



Gardening in a Changing Climate

Hosted by:



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"The conditions for a truly successful, beautiful and healthy garden, namely good soil, ample water, suitable air temperature, manageable pests - and a dose of luck - all need to be in balance with each other."

- Cornell Cooperative Extension's
Gardening in a Warming Climate

Our changing climate means adapting our plant selection and garden maintenance to the changing climate.

CLIMATE VS. WEATHER

- Weather consists of the short-term (minutes to months) changes in things like:
 - Temperature
 - Humidity
 - Precipitation
 - Cloudiness
 - Brightness
 - Visibility
 - Wind
- Climate is changes in the long-term averages of daily weather. These changes include:
 - Prolonged periods of excessively high temperatures
 - Drought
 - Floods
 - Increased number of heavy rainfall events
 - Shift in the growing season
 - Plants sprouting earlier in spring subject to extreme late winter storms

Gardeners help with Sustainable and Smart Gardening Strategies

PRESERVE AND IMPROVE THE SOIL

- Soil is a carbon reservoir
- Healthy soil requires less fertilizer
- Increase organic matter in the soil
 - Helps manage stormwater
 - Improves soil's ability to absorb stormwater
 - Improves drainage in heavy soil
 - Increases water holding ability of fast draining soils
- Minimize soil disturbance to minimize CO₂ released
 - Topdress soil and lawn with compost
 - Use no dig methods whenever possible
 - Lasagna Gardening
 - Make the outline of the garden bed
 - Cut grass and weeds very short
 - Cover area with newspaper or cardboard
 - Cover this with compost
 - Make a 4 - 8" layer of compostable plant debris
 - Cover this with a layer of compost
 - Sprinkle a low nitrogen fertilizer like Milorganite over this
 - Repeat until the bed is 18-24" high
 - Hugelkultur
 - The bottom layer is logs and branches
 - * No cedar, black locust or black walnut
 - Fill voids with leaves and twigs
 - Build lasagna garden on top of this
 - Cardboard and Compost
 - Measure and mark your garden bed
 - Cover the surface with non-shiny cardboard
 - * Remove any staples and tape
 - Cover the cardboard with 5" (12+cm) of organic matter
 - Plant seeds and transplants into the compost

Utility-friendly Tree Planting Tips from We Energies

Trees growing too close to power lines can cause sparks, fires, power outages and shock hazards. To avoid these problems, plant trees that won't interfere with power lines when fully grown. Small ornamental trees or shrubs that will not exceed 15 feet in height such as serviceberry, dogwood and low-growing evergreens are best to plant around power lines. Trees such as maple, basswood, burr oak, white pine or spruce grow more than 40 feet high and should be planted more than 50 feet from any overhead power lines.

And don't forget to call 811 at least three days before planting to check the location of underground services.

Learn more utility-friendly planting tips at we-energies.com.



- Every year, spread an additional 2" (5cm) of compost
- Accessing sufficient compost may be a challenge
 - * Lack of space to make enough of your own
 - * Source that is free of invasive weeds and jumping worms
- **Deep Mulching** (Ruth Stout)
 - Cover garden with an 8" (20cm) layer of hay, straw or plant trimmings
 - Pull the mulch aside to plant seeds and transplants
 - Poor and compacted soil may need additional organic matter
 - * Incorporate organic matter before implementing this method
 - Some gardeners had problems with voles, slugs and cold soil
- Keep the soil covered year round
 - Mulch and/or perennials
 - Reduces risk of soil erosion and compaction
 - Cooler than bare soil
- Keep the soil filled with roots year round
 - Roots release sugars and other compounds that support soil microbes
 - As old roots decompose they add organic matter to the soil
 - Roots provide pathways through soil for stormwater
 - Help remove pollutants from stormwater before entering groundwater
 - Use cover crops in vacant gardens

MAKE YOUR OWN COMPOST

- Check municipality for any regulations
- Select a convenient location
 - Where raw materials can be added
 - Where compost can be easily harvested
 - Access to water if needed
 - Sun (pile heats up and dries out faster)
 - Shade (pile stays cooler and moister so decomposes slower)
- Bins used to contain and hide compost pile
 - Tumblers make turning the pile easier
- Place compostables in pile and let them rot
 - More work invested the sooner you have compost
- What to compost
 - Greens (nitrogen rich)
 - Manure
 - Vegetable clippings
 - Fruit and vegetable kitchen scraps
 - Herbicide-free grass clippings
 - Seaweed and kelp
 - Browns (carbon rich)
 - Fall leaves
 - Straw and hay
 - Coffee grounds
 - Evergreen needles
 - Cornstalks and corn cobs
 - Non glossy paper and cardboard
- Do not compost:
 - Meat
 - Fat
 - Dairy
 - Perennial weeds
 - Invasive plants
 - Annual weeds with flowers or seeds

Landscaping Around We Energies Utilities

Plants and other landscaping features can interfere with utility equipment and cause safety risks. Remember to:

Maintain equipment visibility: Use techniques that camouflage rather than hide utility equipment. Hearty grasses and/or flowers are preferred. They provide aesthetic improvements and grow back quickly should equipment access be necessary.

Ensure easy access: When fencing is used, choose a split-rail type, which can be easily dismantled when equipment access is needed. Be sure fences are located more than 3 feet from transformer sides and no permanent fence post is located in front of transformer door.

Keep proper clearance: When woody shrubs or bushes are used, place them more than 3 feet from transformer sides and more than 10 feet from its door. Keep future growth in mind for the size of shrubs or bushes.

Learn more utility-friendly planting tips at we-energies.com.

- Building the pile
 - 8-10" (20-25cm) layer of greens and browns
 - Cover with finished compost or soil
 - Sprinkle 3 cups of Milorganite or other fertilizer over this
 - Repeat the layers until the pile is at least 3' (1m) high and wide
- Moisten to consistency of damp sponge
- Turn pile after temperatures in center cool
- Move material from center to outside and material on the outside to the center
- Harvest and use when crumbly and dark

MANAGE RAIN WATER TO SUPPORT YOUR LANDSCAPE AND PREVENT STORM SEWER OVERFLOWS

- Check your municipality for any regulations or rebates
 - Rain Barrels
 - Capture water to use for ornamental plantings and containers
 - Selecting a Rain Barrel
 - Installing Rain Barrels
 - Using the Water
 - Rain Gardens
 - Create gardens to capture stormwater runoff
 - Locate 10 to 30' from the house
 - Prepare planting bed and soil
 - Use plants suited to flooding and drought
 - More details in the WI Department of Natural Resources' *Rain Gardens: A Guide for Homeowners and Landscapers*

GROW PLANTS THAT HELP THE ENVIRONMENT

- Diversity of plants
 - Builds healthier soil
 - Avoid risk of insect pest or disease wiping out a monoculture planting

- Select plants that tolerate extreme heat and cold, moisture and drought
- Grow native plants whenever appropriate and suitable to the growing conditions
 - Evolved with insects and wildlife
 - Provide needed food and shelter
 - Help slow and capture rainwater
 - Deep roots create pathways to groundwater
 - Improve soil
- Plant trees
 - Manage stormwater
 - Intercept rainfall
 - Absorb water from soil and transpire into atmosphere
 - Help water infiltrate instead of running off the soil
 - Trees take up and store carbon
- Plant trees, shrubs and groundcovers
 - Properly placed help reduce heating and cooling costs
 - More on this in the September 13th free webinar: *Fall is for Planning and Planting an Energy-Saving Landscape*
- Grow edibles
 - Reduce fossil fuels used to transport and package food

KEEP INVASIVE SPECIES OUT OF THE LANDSCAPE

- Invasive plants negatively impact climate change mitigation efforts
 - Invaded habitats release more carbon through more severe uncontrolled fires
- Invasive species reduce water flow in streams with low water levels due to persistent drought



About Melinda

Nationally known gardening expert, TV/radio host, author & columnist Melinda Myers has over 30 years of horticulture experience and has written over 20 gardening books, including *Can't Miss Small Space Gardening*, the *Midwest Gardener's Handbook 2nd Edition* released 2022, and *Jackson and Perkins' Beautiful Roses Made Easy*. She hosts the nationally-syndicated "Melinda's Garden Moment" program airing on over 115 TV and radio stations throughout the U.S. Melinda also hosts the internationally distributed Great Courses "How to Grow Anything" DVD series and Instant Video, including the latest *Food Gardening for Everyone* DVD set. She is a columnist and contributing editor for *Birds & Blooms* magazine, writes the twice monthly "Gardeners' Questions" newspaper column and a nationally-distributed gardening column. She appears regularly as a guest expert on national and local television and radio shows.

Visit Melinda's website,
melindamyers.com

- Invasive tree pests reduce carbon sequestration rates in forests
- Aquatic invasives decrease the resilience of green infrastructure to resist flooding and sea-level rise
- Aquatic invasive species can also increase the temperatures which negatively influence the hydrologic cycle
- **Managing invasive species is good for our health**
 - Barberry and honeysuckle provide habitat for ticks
 - 10 times the rate of human disease causing bacteria infected ticks

SUSTAINABLE LAWN CARE

- **Reduce the amount of lawn**
- **More climate-friendly lawn maintenance**
 - Mow high
 - Leave grass clippings on the lawn
 - Fertilize with 1/4" of compost twice a year
 - Allow lawn to go dormant during dry weather
 - Yes, you'll have more weeds, but use less water
 - Use push or battery powered lawn mowers
 - Use a broom or battery operated leaf blowers
 - Keep equipment serviced and running efficiently
 - Sharpen mower blades
 - Use 22% less fuel
 - Lawn uses 30% less water

AVOID FURNISHINGS, PESTICIDES AND FERTILIZERS THAT ARE HEAVILY FOSSIL FUEL BASED

WORK WITH NATURE TO MANAGE PESTS

- Tolerate damage until songbirds, toads, frogs and predaceous insects eat the problem
- Handpick small insect populations and diseased plant parts
- Use barriers to keep pests off plants
- Traps to capture pests
- Sanitation
- Rotate plantings to reduce insect and disease problems

Contact Diggers Hotline or your local underground utility locating service BEFORE you start digging - It's a FREE service

In Wisconsin file online at diggershotline.com or anywhere in the U.S., including Wisconsin, call 811 at least 3 business days before putting the first shovel in the ground. Once your request is received, Diggers Hotline (or your local locating service) contacts all the appropriate underground utilities. The utility's locators will mark the location of the underground utilities in the work area. Avoid digging near the marks to reduce the risk of damage, personal injury or even death.



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September 13th Webinar

Fall is for Planning and Planting an Energy-Saving Landscape





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