Benton Conservation District

Heritage Gardens of the Columbia River Basin

Turf Alternatives

Waterwise Landscaping with Native Plants

Kelsey Kelmel – Heritage Garden Program Coordinator
Benton Conservation District

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The Heritage Garden Program

LANDSCAPED AREA DESIGNED TO HONOR THE CULTURAL AND NATURAL HERITAGE OF THE COLUMBIA BASIN WHILE UTILIZING SUSTAINABLE GARDENING PRACTICES.

PROMOTE THE USE OF NATIVE PLANTS, ESPECIALLY THOSE OF CULTURAL SIGNIFICANCE.

PROMOTE LOW-WATER-USE LANDSCAPING & EFFICIENT IRRIGATION METHODS.

EDUCATE OUR COMMUNITY ABOUT THE NATURAL HISTORY AND BIODIVERSITY OF THE REGION.

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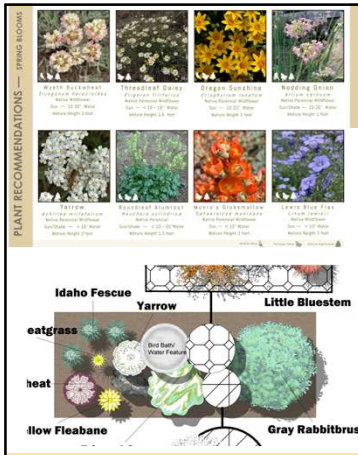

WHAT DO WE DO?

FREE SERVICES INCLUDE

SITE VISITS

CUSTOMIZED PLANT LISTS

PLANTING PLANS

TECHNICAL ADVICE + SUPPORT

Benton Conservation District

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WHAT IS A NATIVE PLANT?

NATIVE PLANTS ARE INDIGENOUS PLANT SPECIES THAT HAVE EVOLVED AND OCCUR NATURALLY IN A PARTICULAR REGION, ECOSYSTEM, AND HABITAT

WHAT IS OUR ECOSYSTEM OR REGION?

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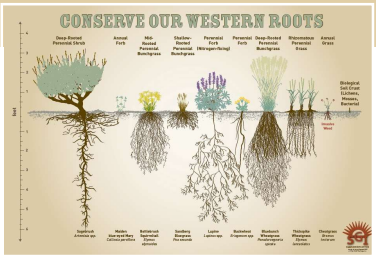
OUR LOCAL ECOSYSTEM
The Shrub-Steppe

Less than 10" Precipitation annually

Dominated by deep rooted shrubs (hence Shrub) and bunchgrasses (Steppe)



An estimated 80% of historic shrub-steppe lands have been degraded or lost due to disturbances such as development and agriculture—

When we lose the ecosystem, we lose biodiversity and resilience that lies within these systems.

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THE LAWN IS A WASTE

30" Precipitation or more to keep a lawn alive.

How much rain do we get here again?!?

Where does our water come from?

Nob Hill Water Association metered their water use on an acre of turf... **1,000,000 gallons of water used in one summer!**

How much of the lawn do we actually use?

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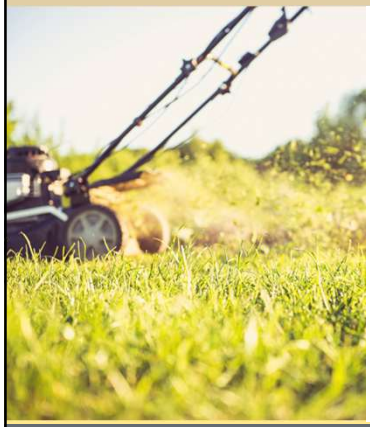

THE LAWN IS A WASTE

1/3 of potable water is used on landscaping

Local example - City of West Richland notes that household water use average 495 gallons per day* meaning roughly 165 gallons per day per household is put on the landscape.

Water aquifers are diminishing at a high rate than they are being replenished.

Snowpack is variable - currently we are at 45% of our usual amount for the year.

More development = water use/demand rising.

*Source: City of West Richland meeting August 15th 2023 Page 196

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THE LAWN IS A WASTE

Each year 80 million lbs of herbicides & pesticides & fertilizers are used on American lawns – many of which have detrimental effects on human health.

That's 10 times more herbicides than farmers use on their crops in the US.

Many of those fertilizers end up in our waterways contributing warmer waters which lead to more instances of aquatic life die off and toxic algae.

Not to mention lack of habitat for pollinators, birds and critters.

The lawn is the biggest monoculture crop the US produces.

Who does it feed?

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THE LAWN IS A WASTE

How many of our lawn spaces are serving an actual use?

Functional vs non-functional

The lawn is the norm.
Why are we installing such water intensive landscapes in areas where we're not even using it?

How can we shift away from the lawn towards something that will better serve us economically and ecologically?

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WE ARE EXPERIENCING

Extended periods of drought

Longer periods of extreme heat

Increased Demands on our watershed

Increasing human caused wildfires

Losses of Biodiversity

What happens to these water heavy landscapes when we run out of water?

OUR YARDS AND PUBLIC SPACES CAN BE RESILIENT TO THESE EXTREMES BY RE-INCORPORATING NATIVE + WATERWISE PLANTS

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HOW CAN NATIVE PLANTS HELP?

65% less irrigation compared to a lawn

Habitat for volunteer Pest Managers (beneficial insects)

No soil amendments required.

Connects and unlocks the web of microorganisms, fungi, nutrients underground.

Erosion control

Soil temperature mitigators + Soil builders

Adaptable to climatic conditions

Self sowing

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OK, I'M READY– WHERE DO I BEGIN?

Gardening with native plants is different than food gardening or traditional horticulture.

Our region is unique and so are the plants.

Get to know our local flora! How?

Check out the local native plant nurseries to see what they grow.

Set up a Heritage Garden Site Visit for a customized plant list for your space.

Check out the local native plant society chapter (Columbia Basin WNPS) cbwnps.org for wildflower walks and native plant related events.

Visit a demonstration garden!

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HAVE A PLAN + MAKE IT MANAGEABLE

Work in Phases that make sense for your time and budget

Don't bite off more than you can chew

The transition will take time. Instant gratification is rare.

There will be a learning curve, that's ok!

Some things will die, that's ok! Failures tell us something about the space

A plan is a strategy, not set in stone! Follow the prompt but know it's ok to shift things around if needed.

Slow and steady wins the race.

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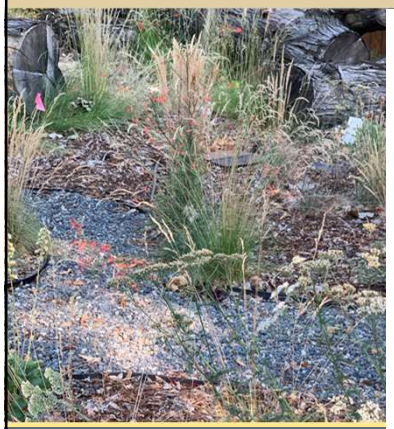

CHOOSE THE RIGHT PLANTS + STRATEGIES FOR YOUR SPACE

Will there be irrigation available long term?

Is it full sun?

What's it like in Winter vs Spring vs Summer?

What time of year are you planting?

Is there a lot of wind?

Can you direct that roof runoff to your planting area?

Once you know the answers to these questions, you can start thinking about what style landscape will suite your site and gardening style.

Let's talk lawn alternatives!

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LAWN ALTERNATIVE

Xeriscaping aka Rock Garden

PRO	CON
Very Waterwise	Rock is expensive
	Rock retains heat/radiates heat
	Life finds a way aka weeds will move into the space over time

Expected Maintenance

Consistent weed management of rock areas (Ex, flaming, leaf blowing)

Weeds will always find a way and soil builds up in the rock crevices over time.

Avoid plastic fabric – opt for burlap or cardboard underneath

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Xeriscaping

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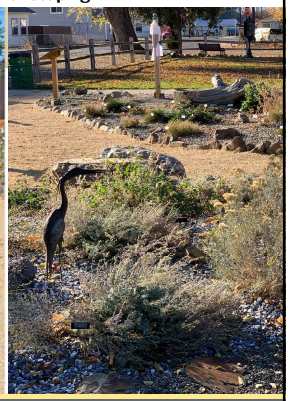
Xeriscaping



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Xeriscaping

Photos by Kelsey Kelmel Douglas Dustymaiden Carey's Balsamroot + Gray Rabbitbrush

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LAWN ALTERNATIVE

Bunchgrass/Meadowscaping

PRO	CON
Seeds readily available	Usually not native to our region
More waterwise than standard grass mixes	Require irrigation
	Can look 'messy' if not maintained

Water Savings: Low to High pending the species you choose

Expected Maintenance
Seasonal Mowing

Weed management, especially in the first 3 years as plants establish

Plants will migrate around the space

Contrast with clean lines (ex wide paths, mow strips, dry creek beds free of vegetation) to create contrast and show intentional planting

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Bunchgrass/Meadowscaping

Photos by Kelsey Kelmel Douglas Dustymaiden Carey's Balsamroot + Gray Rabbitbrush

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Bunchgrass/Meadowscaping

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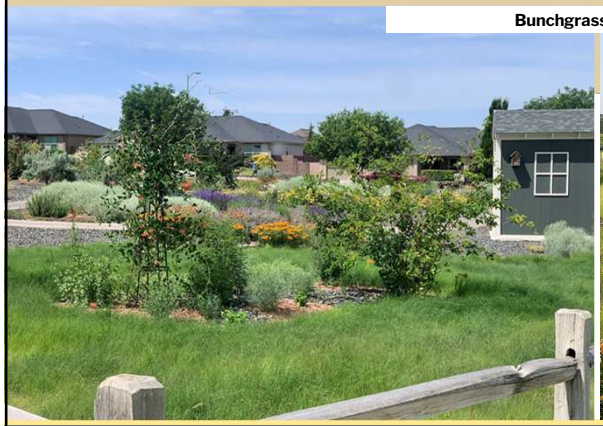
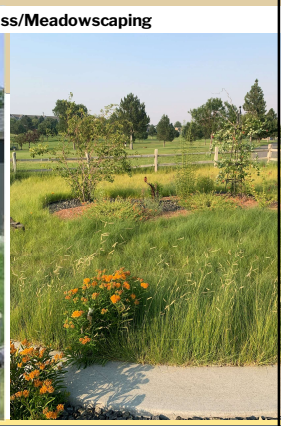
Bunchgrass/Meadowscaping





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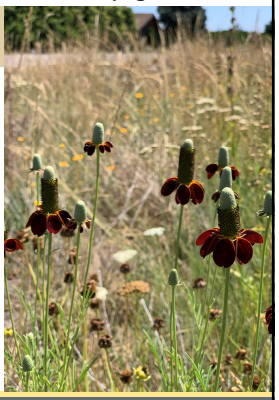
Bunchgrass/Meadowscaping



Photos by Kelsey Kelmel Douglas Dustymaiden Carey's Balsamroot + Gray Rabbitbrush

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LAWN ALTERNATIVES

Lawnlike mixes

PRO	CON
Seeds more readily available	Usually not native to our region
More waterwise than standard grass mixes	Require irrigation

Nothing is going to be exactly like the monoculture that is the lawn.

Embrace Biodiversity

Yarrow (Achillea millefolium) is your best friend!

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LAWN ALTERNATIVES

Shrub-Steppe 'meadow' seeding
Low Growing, for naturalized areas
Less than 10" precip annually
Height 10" or less

1. ***Poa secunda* (Sandberg bluegrass)**
2. ***Sporobolus cryptandrus* (Sand Dropseed)**
3. *Elymus elymoides* (Bottlebrush Squirreltail)
4. *Eriophyllum lanatum* (Oregon sunshine - B/P)
5. ***Achillea millefolium* (Yarrow- P) — this plant is a rockstar.**
6. Erigeron filifolius (Threadleaf fleabane- P)
7. *Eriogonum heracleoides* (Parsnip-flowered buckwheat P)*
8. *Eriogonum niveum* (Snow buckwheat - P)*
9. *Phacelia tanacetifolia* (Lacy Phacelia - A)
10. *Dieteria canescens* (Hoary Aster - A/B)

Suggested Seed Mix Component

60% Bunchgrasses, 30% Perennial forbs (P), 10% Annuals/biennials (A and B)

NATIVE PERENNIAL BUNCHGRASSES ARE AN ESSENTIAL COMPONENT

FOR SEED MIXES

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LAWN ALTERNATIVE

Heritage Garden

PRO	CON
Very waterwise	**I'm biased.**
Regionally appropriate species and strategies	
Localized knowledge	
Cost can vary and you can make it work on a budget.	

Water Savings: High

All of the previous alternatives can meet the Heritage Garden Certification Requirements!

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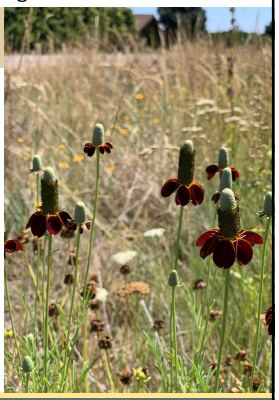
Heritage Garden



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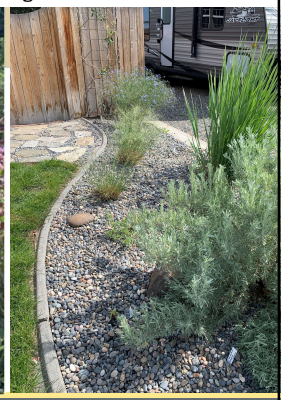
Heritage Garden



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Heritage Garden

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15 x 4 ft Area – Full Sun
Low Water (10-15")

Plant Legend

Symbol	Qty	Common	Botanical	Symbol	Qty	Comm
	3	Bluebunch Wheatgrass	Pseudoroegneria spicata		1	Richardson's P
	3	Desert Yellow Fleabane	Erigeron linearis		1	Strict Buckwhe
	3	Idaho Fescue	Festuca idahoensis		2	Wyeth Buckwh
	3	Lewis' Blue Flax	Linum lewisii		1	Yarrow

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LAWN REMOVAL METHOD

Manual Removal – or Sod Cutter - Dig Dig Dig

PRO	CON
Effective	Rental has a cost Labor intensive if hand digging.

Overview of Steps:

Cut existing lawn as short as possible

Rent a sod cutter from a local hardware store or hire a landscaper to remove.

Plan for where the sod will go once removed (dump, green bin)

Can be done anytime the ground is not frozen.

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LAWN REMOVAL METHOD

Stop Watering + Let the Sun Toast it

PRO	CON
Low Cost	Takes Time Unsightly Dirty looks from the neighbors?

Overview of Steps:

Cut existing lawn as short as possible

Stop watering.

Continue mowing as short as possible/manage any weeds that try to move in.

Best for summer.

Not effective on Bermuda grass.

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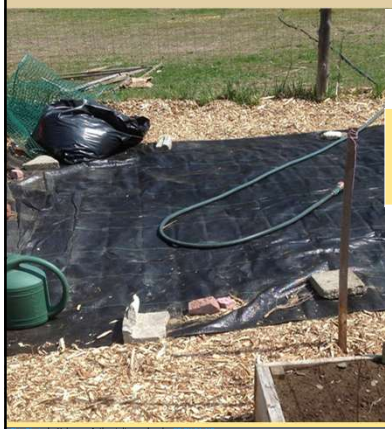

LAWN REMOVAL METHOD

Smothering

PRO	CON
Low Cost Can use upcycled tarps for smothering (ex vinyl billboards, old thick tarps)	Takes Time Unsightly

Overview of Steps:

Cut existing lawn as short as possible

Water deeply

Cover with smothering material (old thick tarps, used billboard vinyls)

Secure edges to ground with landscaping pins, large rocks, large boards, etc.

Wait 9-24 months (pending species underneath).

Can be effective on Bermuda grass

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LAWN REMOVAL METHOD

Cardboard/Burlap + Mulch

PRO	CON
Low cost/Free Materials Builds soil (acidic)	Not all plants like wood mulch Breaks down over time into soil (also can be a PRO) Will need to be refreshed every few years.

Overview of Steps:

Cut existing lawn as short as possible

Water deeply

Lay down overlapping layers of cardboard.
large undyed pieces (think furniture boxes or bike boxes)
no tape, no staples)

Top with 6-10" wood chips - If you do a shallow layer of mulch, it will blow away!

Water deeply to settle

GOT BERMUDA GRASS? Do not use this method.

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LAWN REMOVAL METHOD

Solarizing

PRO	CON
Low cost	Takes Time 3-6 months Summer only Pending species, may take multiple rounds of smothering

Overview of Steps:

Cut existing lawn as short as possible

Water deeply

Cover with thick clear plastic. Goal is to create a greenhouse effect and slowly roast the grass and seedbank.

Secure edges to ground with landscaping pins, large rocks, large boards, etc.

Not effective on Bermuda grass or morning glory.

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SO YOU'VE KILLED THE LAWN, NOW WHAT?

TIME TO REPLANT! LET'S TALK PLANTING METHODS

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PLANTING METHOD

Hydroseeding

PRO	CON
Effective on large areas, especially where a naturalized planting is desired.	Upfront cost
Dust suppression	May require multiple applications pending site conditions.
Helpful for very windy or erosion prone sites	Longer to establish (3-5 years)
Hydroseeding/hydromulching providers exist locally	Seedling ID needed for weeding out friends vs foes.

Direct seeding/Scattering

PRO	CON
Effective on large areas, especially where a naturalized planting is desired.	May require multiple applications pending site conditions.
Seeds find their perfect spot – those that germinate are more likely to succeed	More weeding up front
	Longer to establish (3-5 years)
	Seedling ID needed for weeding out friends vs foes.

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PLANTING METHOD

Plugs aka potted plants

PRO	CON
Plants are planted where you want them to go	Costs can add up for large areas
Faster to establish than by seed	
You know what you're looking at	

Best time to plant:
October – Early March

Irrigation after planting required for first couple seasons.

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REPLANTING METHOD

The Best Method?

A bit of seeding and a bit of plug planting

This helps a planting establish faster while also allowing for plants to find their happy spots in your yard.

A garden is a living landscape– it's not stagnant, it is always growing and shifting. As a steward in our landscapes, it's our job to help guide the plants to be their best selves in our spaces.

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THOUGHTFUL STEWARDSHIP LEADS TO LESS WORK AND MORE WATER SAVED IN THE LONG RUN.

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TIME YOUR PLANTING WELL- WHY?

Fall- Winter is when species naturally stop above ground growth and focus their energy on building strong roots.

When the plants go dormant, (ie. above ground sleep for winter) they are less prone to reacting negatively to the stresses of transplanting.

Most of our precipitation falls during this time period meaning water is more readily available to newly planted species.

Cool season planting allows plants to acclimate to their new home and establish themselves before the extreme temperatures of spring and summer.

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THERE IS NO SUCH THING AS ZERO MAINTENANCE.

Get to know your weed pressures

What are those weeds trying to tell you?

Example – Dandelions, plantain = lots of water and compacted soil

Tumbleweeds and cheatgrass + other weedy annual plants – signs of disturbed ground or empty space they want to fill

Are there other annual species that can outcompete?

Noxious weeds? Ivy? Tree of Heaven?

Include seasonal management of those weedy species in your maintenance strategy.

A Healthy planting of perennial shrubs and grasses will be more resistant to weed pressures after establishment. There will always be weeds but strategic management leads to less.

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START SMALL

A 4x10 Heritage Garden is estimated to save over 4,000 gallons of water per year

$ Estimated cost per plant plug is roughly $ 8.50 pending size. On par with other plants available commercially.

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RECAP – BEFORE PLANTING, PREP YOUR SITE

Ensure your planting area is free of weeds and vegetation before you start.

You want your plants and seeds to have a fresh start in their new home without competition from other plants.

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RECAP- INCORPORATE NATIVE PLANTS

Remember how we only get about 10" of precipitation in our region?

Local plants and seeds are adapted to our ecoregion's climate patterns meaning they already know what to expect from their surroundings

A list of native plant and seed vendors can be found on our website under 'Resources'

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AFTER PLANTING -- WATER WISELY

ALL PLANTS WILL NEED SUPPLEMENTAL WATER TO HELP THEM GET ESTABLISHED - OPT FOR DRIP IRRIGATION.

Drip irrigation directs the water where you want it to go meaning less is wasted

Weeds love overspray-- by switching to drip, you're less likely to have undesirable freeloaders pop up = less inputs from you

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TODAY'S ACTIVITY

Think about your space and all the strategies we talked about. Break your space down into manageable sections and designate a removal strategy and garden type for each section.

Things to think about:

Where is the non-functional aka not used lawn in your yard.

Are there already patches that are dying?

Is there a sprinkler zone that can be easily capped?

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CERTIFY YOUR SPACE

WHAT IT TAKES:

1. At Least 5 Plant Species
2. 75% of plants must be native to WA
3. 30% or more need no water once established
4. Less than 30% have high water needs
5. No weeds or noxious plant species.

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