I LIVE IN THE DPA, WHAT CAN I DO?

Understand how much water you use. Track your use with your bill and learn to read your water meter – contact the City of West Richland Public Works Dept. (509.967.5434) for help if you need it.

Reduce lawn irrigation by a minimum of 25% - this will reduce the amount of water that seeps past the root zone and contributes to groundwater level rise.

Design or retrofit landscaping with water conservation in mind. For example, consider xeriscaping.

BASIC IRRIGATION TIPS:

- In spring, do not water your lawn until the lawn shows signs of stress or walking on the lawn leaves footprints. This encourages deep root growth.
- Most lawns only require irrigation:
  - every 3-4 days if exposed to lots of sun and wind.
  - as little as every 6-8 days if shaded.
- Begin irrigation when the top 2 inches of the soil are dry and crumbly.
- Irrigate to get moisture to a depth of 6 to 12 inches, depending on depth of soil. This should moisten the root zone for the lawn.
- Regular lawn irrigation should end in mid/late September, allowing plants to slow down growth and prepare for winter.
- Irrigate before sunrise (ideally 11pm–4am) for most efficient use of water, avoiding evaporation, and reducing the chance of fungus.
- Conduct spot watering, rather than increased circuit timing, to address dry spots and limit excess watering.

DRAINAGE PROBLEM AREA (DPA):

DPA STUDY FINDINGS:

LAND USE AND GEOLOGY

- The DPA is underlain by fine-grained soil that does not drain well.
- Prior to development, the DPA was vegetated by shrubs and grasses that were suited to the West Richland climate.
- This natural groundcover used all the water placed on it and little, if any, seeped past the root zone.
- In the last 15 years, the density of houses and lawns within the DPA has increased dramatically.

GROUNDWATER

- During this same 15-year time period, lawn watering has added far more water to the area than the geologic conditions can drain away.
- As a result, groundwater levels have risen to within a few feet of ground surface throughout much of the DPA. City monitoring data indicates DPA water levels drop in the winter, and then rise after irrigation season starts.
- With the elevated groundwater table, water seeps into low areas and ponds on the surface during large rain and snow melt events.

Residential Irrigation

WITHIN THE DPA

Increased groundwater levels within the Drainage Problem Area (DPA) have caused poor drainage and flooding impacts. Excess lawn watering and seepage past the root zone is a primary cause of the rise in groundwater levels. You can help neighborhood drainage problems and reduce your water bill by ensuring that your irrigation system is as efficient as it can be. The City of West Richland has prepared this guide to help you understand how to eliminate excess lawn watering and to suggest xeriscaping as an alternative to a conventional lawn.

city of West Richland

More information can be found at WSU Extension, including informational brochures EB0684E, EB1090, and EB0482E.

Benton Conservation District also offers advice and resources if you are interested in learning more about xeriscaping.

Xeriscaping

Xeriscaping is landscaping with water conservation in mind. Xeriscaping uses drought-tolerant and native plant species that require less water than turf grass.

XERISCAPING TECHNIQUES

THE GOAL

Create a landscape that is centered around water conservation.

When compared to a traditional turf lawn, xeriscaping can reduce outdoor water use by as much as 70%.

IRRIGATION

Group plants by water need. Divide landscape into full, moderate, and low irrigation areas.

REDUCED TURF AREAS

Reduce or eliminate turf grass, particularly grass species that are not drought-resistant.

APPROPRIATE PLANT SELECTION

Use native plants that are already adapted to the West Richland area.

SOIL PREPARATION

Our soils tend to be sandy. When xeriscaping in our area, use compost to create a water-holding soil. Native plants generally do not require soil amending. If planting non-native plants, amend with compost and not sand.

Local Resources for Drought Tolerant Plants

Washington Native Plant Society: Native Plants for Dry Areas
https://www.wnps.org/files/147/Plant-Lists-by-Habitat/586/Plants-for-Dry-Areas.pdf

Washington State University Extension: Drought Tolerant Landscaping for Washington State, EM087E
https://pubs.extension.wsu.edu/drought-tolerant-landscaping-for-washington-state-home-garden-series

DROUGHT TOLERANT PLANTS

DECIDUOUS TREES

Rocky Mountain Maple, **Red Sunset Maple**, Autumn Brilliance Serviceberry, Summit Ash, Scarlet Oak, American Basswood, and others

CONIFEROUS TREES

White Fir, Incense Cedar, Arizona Cypress, Hoopsil Colorado Blue Spruce, Shore Pine, **Douglas Fir**, Emerald Green Arborvitae, and others

DECIDUOUS SHRUBS

Brilliant Red Chokeberry, Red Twig Dogwood, **Golden Currant**, Wild Mockorange, and others

EVERGREEN SHRUBS

Blue Blossom, Gold Coast Juniper, Oregon Grape, **California Wax Myrtle**, and others

GROUNDCOVERS

Bar Harbor Juniper, Creeping Mahonia, Barren Strawberry, **Russian Stonecrop**, and others

Local Resource for Xeriscaping

Benton Conservation District: Beginners Guide to Xeriscaping

TIPS FOR YOUR LAWN:

CHECKING LAWN MOISTURE

Before running a sprinkler circuit, determine soil moisture using a soil tube, spading fork or a shovel to dig into the turf and look at the soil profile.

- Begin irrigation when the top 2 inches of the soil are dry and crumbly.
- Irrigate to get moisture to a depth of 6 to 12 inches, depending on depth of soil. This should moisten the root zone for the lawn.

LAWN MOWING

In our region, grass should be left 2-3 inches high (depending on the grass type) following mowing, and generally no more than 1/2 to 1 inch of the grass should be cut off during mowing.

- Leaving lawn clippings on the ground generally is good for the lawn as it returns nutrients to the soil.
- However, the thatch of dead and decomposing grass should be kept less than about a half inch thick to allow water and air to seep into the root zone.
- Periodically aerate your lawn to reduce thatch and improve lawn health.

ORGANIC MATTER

Increasing the organic content of topsoil can increase water retention. Before laying sod, incorporate peat, sawdust, straw, compost and/or similar organics into the upper 6 inches of the soil profile. Add 2 inches of this organic material to the soil surface, then thoroughly mix it in.

Each spring and fall, established lawn areas can be top dressed with a light layer of compost or other top dressing designed to increase water retention.

CALIBRATION

If water is running off lawn during watering, too much water is being applied.

If water is landing on the sidewalk and/or street and flowing into the street drain, adjust the sprinkler coverage.