



COLUMBIA BASIN SUSTAINABLE WATER COALITION (CBSWC)

Groundwater levels in areas of the Columbia Basin have been declining for decades and now impact almost all water wells. It is critically important that water systems have a reliable water source. A coalition of water purveyors and other municipal and small community water system stakeholders was created to develop locally and regionally implementable activities to address the issue for domestic groundwater supplies.



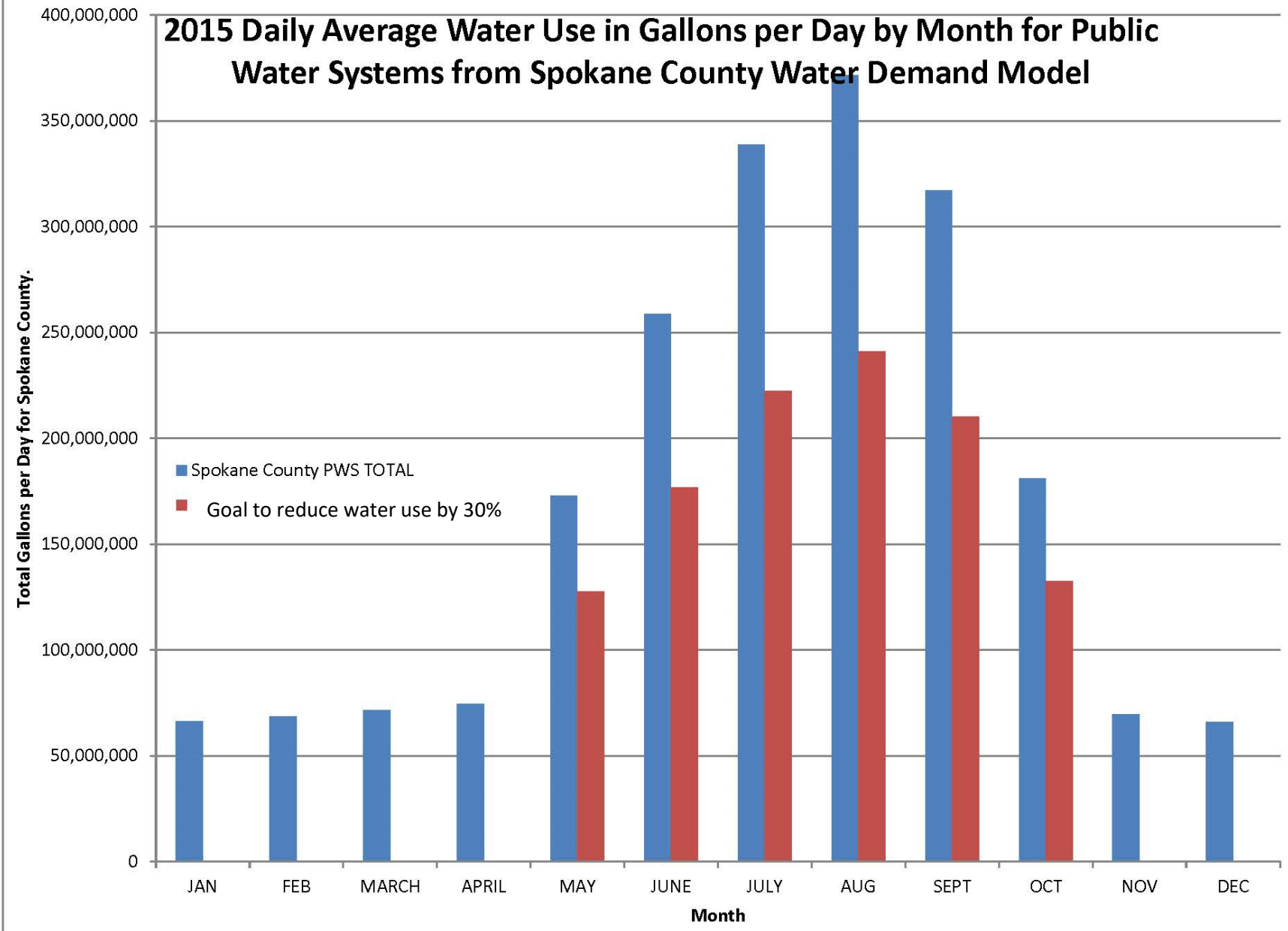
Water Conservation Strategies

Tonilee Hanson, SAJB Program Manager
September 21, 2023



- The [Spokane Aquifer Joint Board](#) (SAJB) is comprised of 21 public and private water providers in Spokane County WA who rely on the Spokane Valley Rathdrum Prairie (SVRP) Aquifer, a sole source aquifer for over 600,000 residents in WA and ID.
- The [Spokane River Forum](#) is a WA 501c3 dedicated to regional dialogues and individual empowerment to protect the Spokane River watershed.
- The [Idaho Washington Aquifer Collaborative](#) is an Idaho 501c3 comprised of Idaho and Washington municipal and private Class A and B water and wastewater purveyors.

2015 Daily Average Water Use in Gallons per Day by Month for Public Water Systems from Spokane County Water Demand Model



2015 – 2022 Water Conservation Awareness

- Invited speakers and researched other programs.
- Created Videos such as “[Our Water Our Future](#)”.
- Social Media and Display Ads Media Campaigns .
- Convened Conferences to discuss water quality and supply issues.
- Developed and Published [Efficient Irrigation and Landscape Design Guidelines](#).
- Roadshows to introduce the Design Guidelines.
- Technical Workshops on irrigation and landscape best practices.
- October 2022-March 2023 created website “Outdoor Watering Nerds”

Outdoor Watering



SPOKANE AND KOOTENAI COUNTIES

A Regional Resource Created By



Individual actions make a difference.
Everyone can do their part
to protect the Spokane River and
Spokane Valley Rathdrum Prairie Aquifer.

[Saving Water Matters to Protect the Spokane River & SVRP Aquifer >>](#)

Looking for Outdoor Watering Solutions?

Outdoor Watering Nerds can connect you to Professionals and Do It Yourself resources for outdoor leak detection, sprinkler repair and retrofit, and landscape design. The Nerds are excited to bring you how-to videos, water saving tips, rebates, classes, and events in Kootenai and Spokane counties. Saving water outdoors protects your pocketbook, economic growth, the Spokane River, and our sole source of drinking water, the Spokane Valley Rathdrum Prairie Aquifer. Good for you. Good for our future.



Outdoor Leak Detection



Sprinkler Systems



Landscapes



How to Videos

Useful Links

- [Calculate Water Needs](#)
- [DIY Resources](#)
- [Find a Professional](#)
- [How to Videos](#)
- [Irrigation & Landscape Guidelines](#)
- [Rebates](#)
- [Tips to Save Water](#)
- [Help Us Improve Our Site](#)

Sponsored by



Useful Links

Calculate Water Needs

DIY Resources

Find a Professional

How to Videos

Irrigation & Landscape Guidelines

Rebates

Tips to Save Water

Help Us Improve Our Site

49 Webpages
links to 246 external
resources

Videos
69 external
56 embedded
DIY Resources 42
Find a Professional 12
topics and 65 listings

Calculate Water Needs

Wondering how much to water your lawn? In this section you can find out how much water your lawn needs by week or season. After you know how much water your lawn needs, you can measure how much water your sprinklers are applying. Then you can calculate how long to run your sprinklers for a healthy lawn that doesn't waste water.



Daily Calculator



Seasonal Water Needs



Calculate Sprinkler Time

Seasonal Water Needs

Want to do your part to save water? Grass needs much less water in April, May and September. Adjust your lawn watering based on Spokane and Kootenai counties seasonal watering needs. A calendar of watering needs was calculated using daily data from local Agrimet Stations for the years 2015, 2016, 2018, 2019, 2020, and 2021. A three-day running average was calculated to estimate how much water you would need to apply to your lawn if you water every three days. Notice how much less water is needed in spring and fall.

3 Day Average Lawn Watering Needs (inches)



Weekly Average Lawn Watering Needs (inches)



Monthly Average for Daily Lawn Watering Needs (Inches)



3 Day Average Lawn Watering Needs (inches)

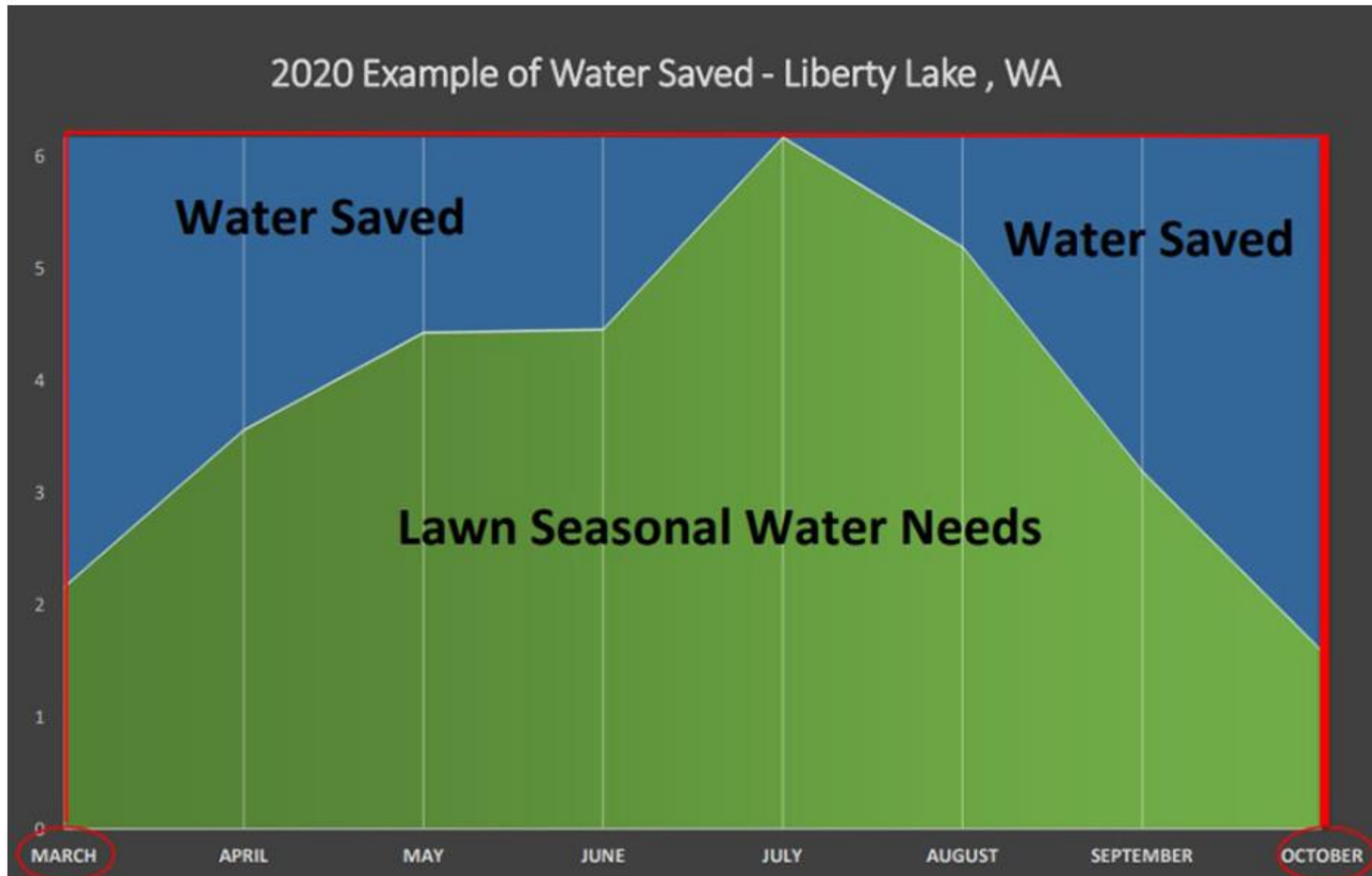
Date (April-May)	3 Day Average Lawn Watering Needs (inches)
3-Apr	0.20
6-Apr	0.18
9-Apr	0.23
12-Apr	0.27
15-Apr	0.27
18-Apr	0.39
21-Apr	0.40
24-Apr	0.38
27-Apr	0.41
30-Apr	0.44
3-May	0.49
6-May	0.52
9-May	0.52
12-May	0.55

Date (June-July)	3 Day Average Lawn Watering Needs (inches)
2-Jun	0.50
5-Jun	0.59
8-Jun	0.49
11-Jun	0.46
14-Jun	0.54
17-Jun	0.51
20-Jun	0.55
23-Jun	0.54
26-Jun	0.60
29-Jun	0.63
2-Jul	0.60
5-Jul	0.65
8-Jul	0.63

Date (Aug-Sep)	3 Day Average Lawn Watering Needs (inches)
1-Aug	0.65
4-Aug	0.57
7-Aug	0.56
10-Aug	0.49
13-Aug	0.50
16-Aug	0.57
19-Aug	0.51
22-Aug	0.53
25-Aug	0.46
28-Aug	0.42
31-Aug	0.45
3-Sep	0.41
6-Sep	0.39

Scheduling in a Box

The red line shows how much extra water you will use if you turn your sprinklers on in March and turn them off in October without adjusting for how much water your lawn needs. To have a healthy lawn and save water, adjust your sprinklers with the changing seasons.



Adjust your sprinkler run time from April-September to give your lawn only what it needs.

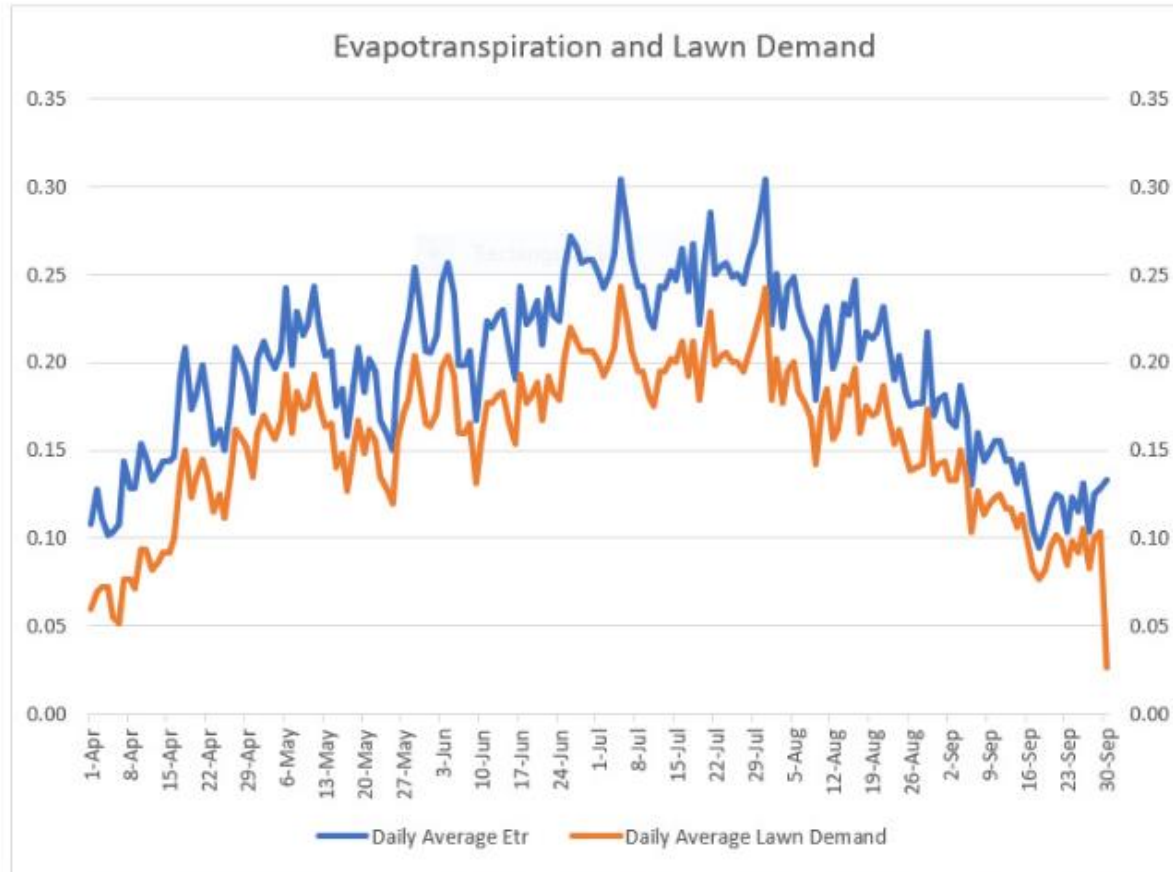


Figure 1. Evapotranspiration (Etr) and Lawn Demand, Daily Average, Spokane / Coeur d'Alene area.

Figure 1 shows the variability in evapotranspiration (ET) and Lawn ET values. Generally, lawn demand is about 70% of the reference ET. (Data is shown in inches).

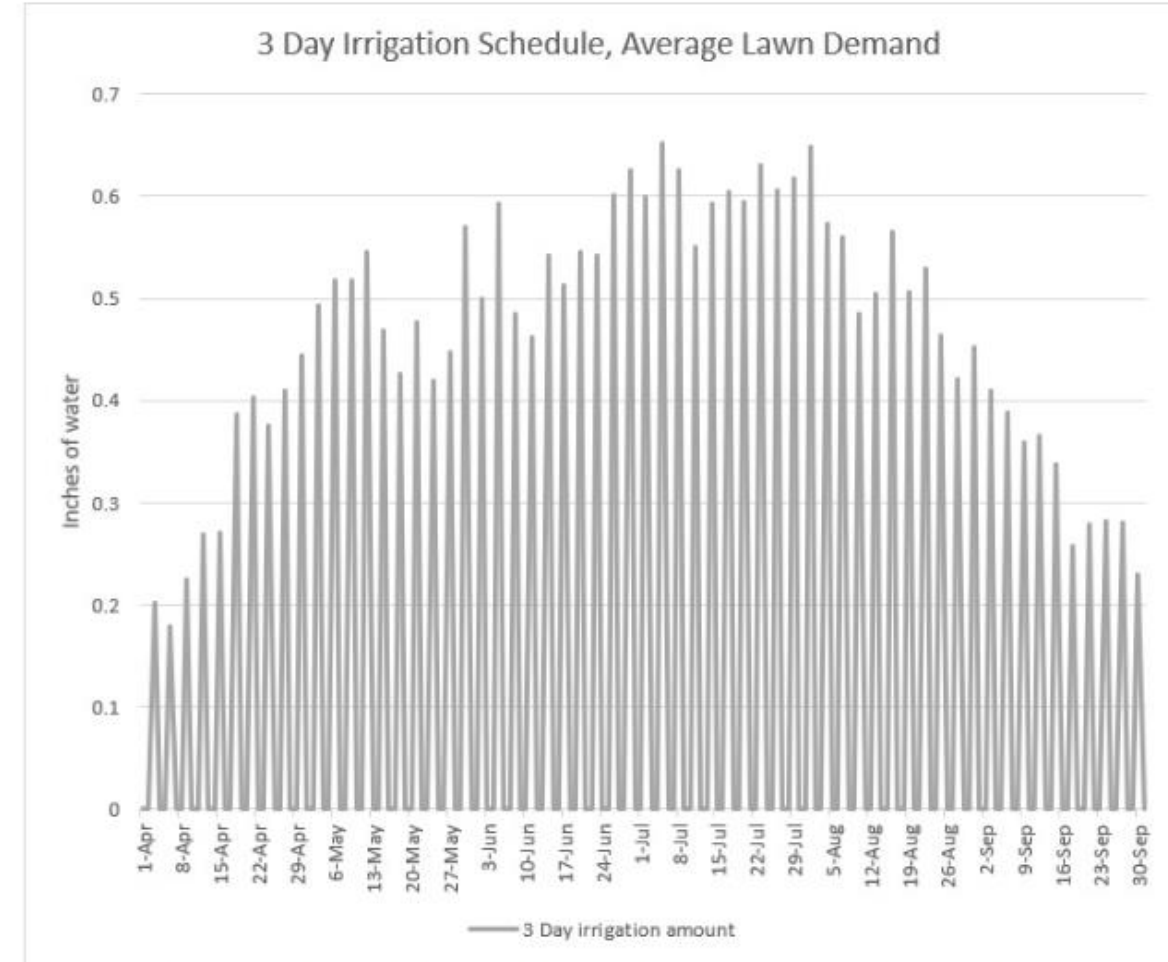


Figure 2. Amount of water to be applied if watering every 3 days, Spokane / Coeur d'Alene area.

Figure 2 shows the 3-day watering needs of lawn crop. In only a few cases should a lawn crop demand an amount in excess of 0.6 inches in one watering event.

DIY Resources

Listing of professionals does not include a recommendation or certification.

Choose from the list of DIY resources below by checking the boxes to narrow your search.

Spokane & Kootenai Counties ▾

- Drip Irrigation (13)
- Hardscape (11)
- Landscape Design Architect (1)
- Native Plant Nursery (19)
- Sprinkler Timer (13)
- Web Supplier (11)
- Education (5)
- Landscape Design (7)
- Leak Detect & Repair (3)
- Sprinkler Repair & Repair (14)
- Topsoil, Bark, & Gravel (13)

[Clear filters & show all](#)

Found 42 Results Page 1 of 1

Find a Professional

Listing of professionals does not include a recommendation or certification. Want to verify a business license or endorsement? In WA go to the [Department of Revenue](#). In ID go to the [Secretary of State](#).

Choose from the list of professionals below by checking the boxes to narrow your search.

Spokane & Kootenai Counties ▾

- Arborist (17)
- Drip Irrigation (5)
- Landscape Design (16)
- Leak Detect & Repair (10)
- Native Plant Nursery (3)
- Sprinkler Repair & Retrofit (23)
- Backflow Assembly Testers (Listed by Water Provider) (1)
- Education (2)
- Landscape Design Architect (11)
- Maintenance (14)
- Professional Installation (12)
- Sprinkler Timer (15)

[Clear filters & show alphabetical list of all professionals](#)

Found 64 Results Page 1 of 1

Below are useful tips on how you can save water

How do I know if I have a leak? +

Why has my water bill increased? +

Is there a best time to run my sprinklers? +

How often should I water? -

Adjust your watering frequency and length based on temperature and rainfall. For sprinkler systems, install rain shut-off devices that will automatically shut off your sprinklers when it rains or weather-based irrigation equipment that adjusts run times based on real-time weather data. [Install a Weather Based Irrigation Timer that will adjust watering based on weather data.](#) Look for the EPA Water Sense logo.

Water your lawn once every three days during the summer. Even during the hottest part of the year, most lawns do not need to be watered every day. By watering only once every three days, you promote deeper root growth and that makes your lawn more water efficient..

Here are three tests to determine if water is needed:

1. Push a 6" long screwdriver shaft into the ground. If it goes in easily, don't water.
2. If your lawn has a grayish cast or appears to dull green, it needs water.
3. Walk on your lawn. If your footprints don't disappear quickly, the grass blades don't have the needed moisture to spring back and need water.

From October 1st to March 31st lawns in our area go dormant and do not need watering. A brown lawn is not a dead lawn. See [Calculate Water Needs](#).

What type of sprinkler head is best? +

How long should I water? +

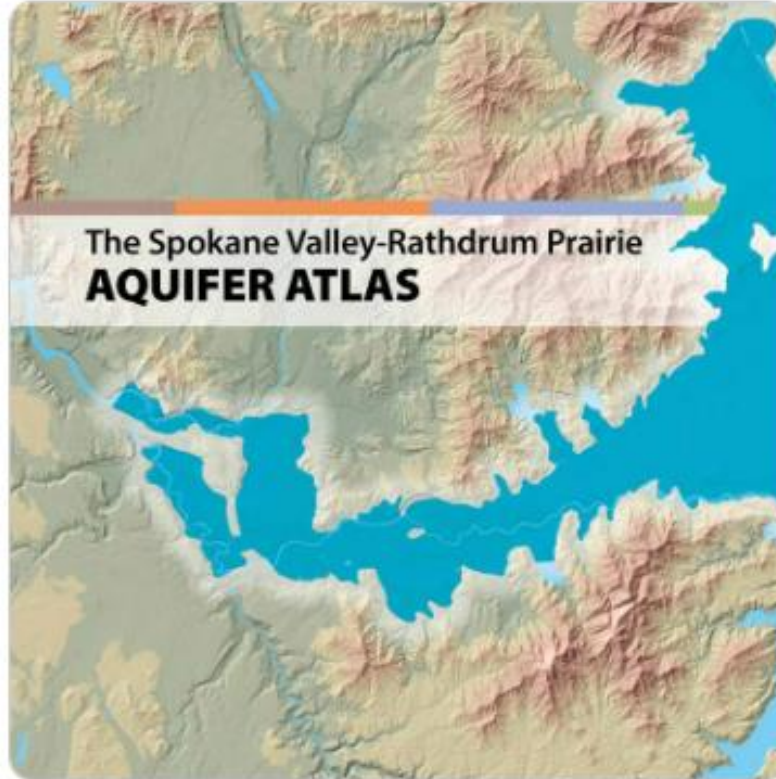
Saving Water Matters

Explore our Story Map to learn how water quality and water quantity are both essential to the SVRP Aquifer, Spokane River, and our quality of life. Want to become a Water Nerd? The Aquifer Atlases and videos are filled with amazing facts and details about the river and aquifer.

In the summer months as we are pumping more water from the aquifer to water our lawns, the Spokane river flow is at its lowest. It is during this time that the river needs water the most to maintain a healthy environment for fish, wildlife, and recreation. It takes all of us doing our part to protect our aquifer and river by using water wisely and finding ways to reduce water waste.



Aquifer and River Story Map



Aquifer Atlases



Videos

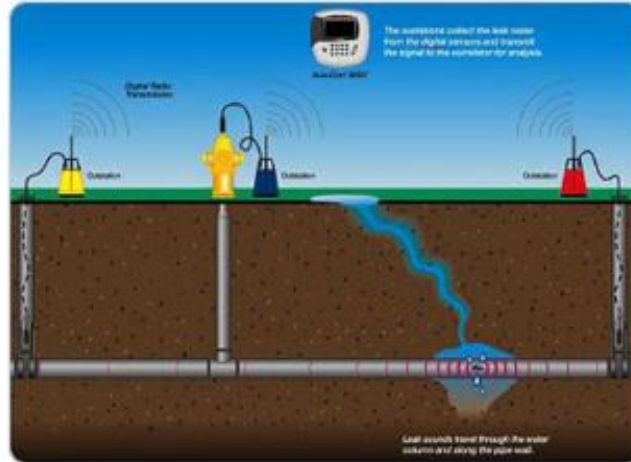
Outdoor Leak Detection

Wondering how to find a water leak? Let Outdoor Watering Nerds help you find and fix leaks before they damage your property and cost you money. In this section you'll find out how a water meter and other technologies can help you detect, locate, and repair leaks.



Leak Detection Dial
Sweep Hand

Read Your Water Meter



Underground System Leaks



Leak Detection Videos

Read Your Water Meter

Step 1. Locate your meter

The water meter is generally located in the ground near the curb in front of your house.



The meter box will often have a metal or plastic lid with "Water Meter" marked on top.



Step 2. Open the meter box

To read the meter, remove the lid of your water meter box. Be careful! Lids can be heavy. And sometimes, bugs and small animals hide inside the meter boxes. Replace the lid each time you finish looking at the meter to avoid a safety hazard.



Step 3. Identify your meter

There are many types of water meters. The one you have is based on who provides your water. Your meter may measure water in cubic feet (CF) or in gallons (GAL).

Analog Dials



Digital Dials

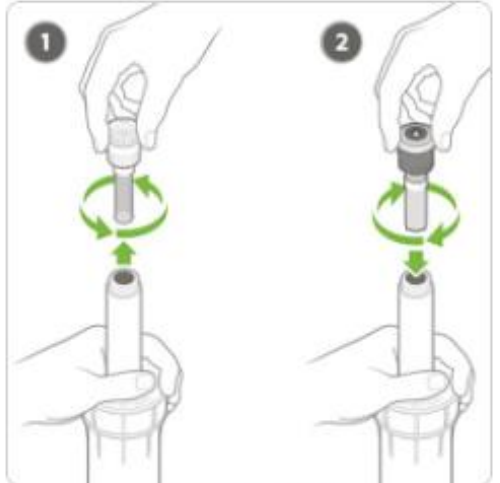


Sprinkler Systems

Wondering how to maintain, repair, or retrofit your sprinkler system? In this section you'll find a sprinkler system checkup, how to videos, links to professionals and DIY resources for every part of your sprinkler system. Find out how a backflow device can protect your drinking water.



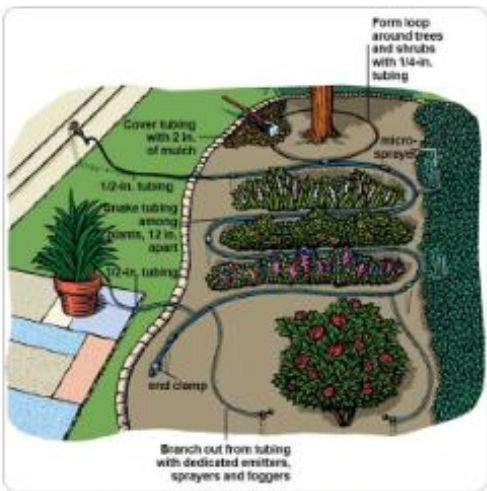
Sprinkler System Checkup



Repair and Retrofit



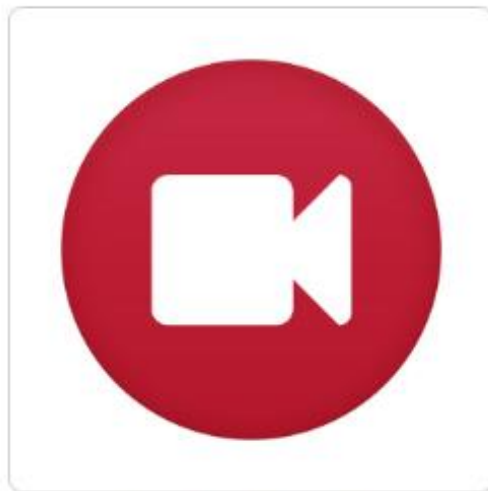
Smart Controllers and Sensors



Drip Irrigation & Soaker Hoses



Backflow Protection



Sprinkler System Videos

Sprinkler System Checkup

Repair and Retrofit

Smart Controllers & Sensors

Drip Systems & Soaker Hoses

Backflow Protection

Sprinkler System Videos

Repair

Repair Common Sprinkler System Problems – Explore [DIY Resources](#) or [Find a Professional](#).

Why do my sprinklers produce uneven coverage or poor spray patterns?



Why is my lawn soggy?



Why do I have brown or dry spots in my lawn?



Why do I have moss and fungus in my lawn?



Why doesn't the sprinkler head pop up all the way or retract?



Why are some of my sprinkler heads putting out a mist?



Why are my sprinklers over spraying onto the street and sidewalk?



Why are my sprinklers constantly leaking?



How do I stop erosion and runoff on slopes and landscape contours?



Why isn't my drip system working?



- Low head drainage – install check valve
- Debris in valve diaphragm
- Sprinkler body cap issues

Low Head Drainage

The most common reason why a sprinkler will leak water when the system is off is called "Low Head Drainage." Low head drainage occurs when the lowest head on a zone allows water to drain from the lateral piping, out of the sprinkler. If it is low head drainage, residual water will stop flowing after all the water has left the pipe.

The solution is to install check valves on sprinklers at the lowest points in a zone. Check valves are a device inside a sprinkler head that prevents water from leaking out after the zone turns off. This keeps water in the underground pipes and prevents gravity from pushing the leftover water out of the lowest heads in a zone. When purchasing a new head, be sure to look for models that have built-in check valves.



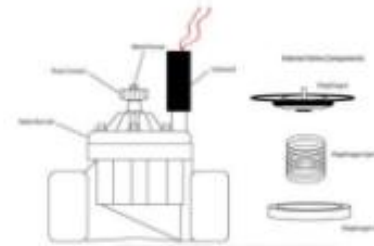
Why are my sprinklers constantly leaking?

Debris in Valve Diaphragm

Water may leak through the zone valve. A check valve in the sprinkler will not fix this leak. There may be debris obstructing the valve's diaphragm. If the zone valve for a particular zone is diagnosed as the problem then the solution is:

1. disassemble the valve
2. rinse all the parts with clean water
3. re-assemble the valve.

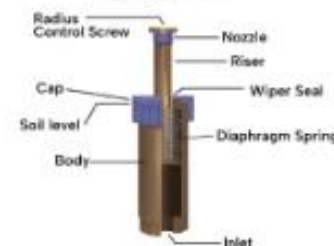
You may need to replace the diaphragm assembly if there is visible damage.



Sprinkler Body Cap Issues

The sprinkler body cap may be broken or cracked, missing the wiper seal, or there is debris between the body and the cap.

Anatomy of a Sprinkler Head – Diagram illustrating the Parts of a Sprinkler Head



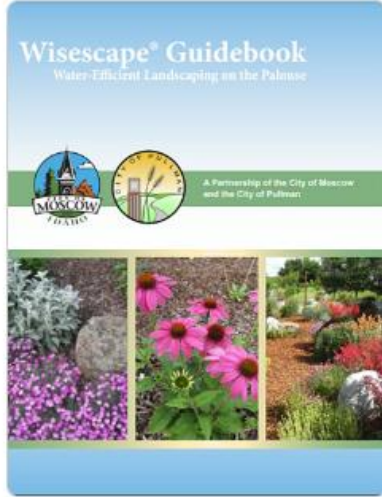
Wondering how to use native and drought tolerant plants to save water while adding beauty and drought resistance to your landscape? In this section you can explore landscape design ideas and demonstration gardens, find rebate programs that will help you shift turf to native plants, and learn how to safely use lawn chemicals.



Landscape Designs



SpokaneScape



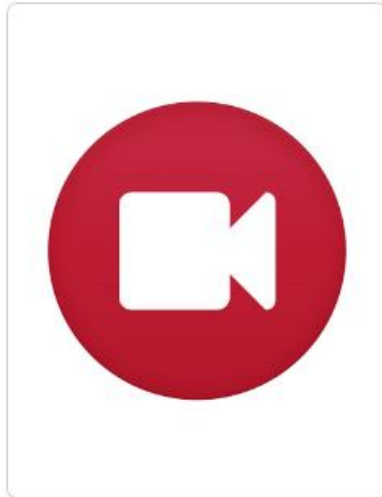
WiseScape



Drought Tolerant and Native Plants



Fertilizers, Pesticides, & Herbicides



Landscape Videos

Landscape Design

SpokaneScape

WiseScape

Drought Tolerant & Native Plants

Fertilizers, Pesticides and Herbicides

Landscape Videos

SpokaneScape

Turf Replacement Program

City of Spokane Water customers can earn up to a \$500 credit towards their utility bill after removing lawn and replacing it with water wise plants and mulch. For more information visit WaterWiseSpokane.org or contact the Water Wise Spokane Team at waterwise@spokanecity.org.

SpokaneScape turf replacement rebates are only available to residents of the City of Spokane, but anyone can use and adapt the great idea ideas and resources provided by SpokaneScape to reduce outdoor water consumption.

Removing turf grass is one of the most water conscious adjustments a homeowner can make to reduce their water usage and associated costs. A well-designed SpokaneScape will beautify your property, protect our natural resources and the environment; and will inevitably reduce yard maintenance.

- [Spokane Scape 2023 Guidebook](#) (PDF 10.6 MB)
- [Drought Tolerant Plant List](#) (PDF 3.2 MB)
- [Simple Drip Irrigation Diagram](#) (PDF 497 KB)
- [Noxious Weed List](#)
- [SpokaneScape Webinar](#)
- [SpokaneScape 101 Presentation](#) (PDF 7.0 MB)

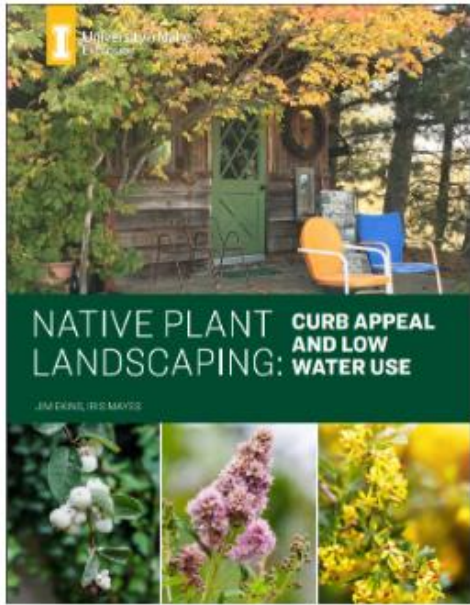


Before



After





UI Extension – Landscaping with Native Plants: Curb Appeal and Low Water Use.

Authors Jim Ekins and Iris Mayes feature 5 native plants and where they might fit your landscape design and water conservation plans. A Native Plant Design Checklist is included along with a variety of suggested readings and resource links. 12 pages. 2022.

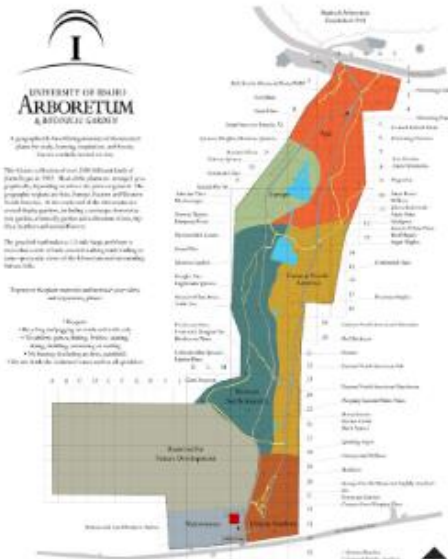
NATIVE PLANT LANDSCAPING

Drought Tolerant and Native Plants

UI Arboretum Botanical Garden Xeriscape Garden Plant Inventory



21 page pdf



2023 Media Campaign

IWAC and SAJB
April – October

KXLY- Phase 3 Digital
Facebook
Instagram
Display Ads
Retargeting
20 second videos

Outdoor Watering Nerds - Water Conservation https://spokanewateringnerds.org/	APR	MAY	JUNE	JULY	AUG	SEPT	OCT
Sprinkler Systems https://spokanewateringnerds.org/sprinkler-systems/							
Sprinkler System Checkup https://spokanewateringnerds.org/sprinkler-systems/sprinkler-system-checkup/	\$2,100						
Repair and Retrofit https://spokanewateringnerds.org/sprinkler-systems/repair-retrofit/		\$2,100					
Smart Controllers & Sensors https://spokanewateringnerds.org/sprinkler-systems/smart-controllers-sensors/			\$2,100				
Drip Systems & Soaker Hoses https://spokanewateringnerds.org/sprinkler-systems/drip-systems-soaker-hoses/						\$2,000	
Backflow Protection https://spokanewateringnerds.org/sprinkler-systems/backflow-protection/						\$2,100	
Leak Detection https://spokanewateringnerds.org/outdoor-leak-detection/							
Read your water meter & Underground Leaks		\$2,000					
Landscapes https://spokanewateringnerds.org/landscapes/							
Drought Tolerant & Native Plants https://spokanewateringnerds.org/landscapes/drought-tolerant-and-native-plants/			\$2,000				
Fertilizers, Pesticides & Herbicides https://spokanewateringnerds.org/landscapes/fertilizers-pesticides-and-herbicides/					\$2,000		
Saving Water Matters https://spokanewateringnerds.org/saving-water-matters/							
Protect the Aquifer - Story Map	\$2,000						\$2,100
Useful Links							
Calculate Water Needs https://spokanewateringnerds.org/calculate-water-needs/				\$2,000	\$2,100		
Tips to Save Water https://spokanewateringnerds.org/tips-to-save-water/				\$2,100			

IWAC Media Campaign April - \$2,000



Impressions	132,040
Clicks	1,136
CTR	0.49%
Google	456

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

SAJB Media Campaign April - \$2,100



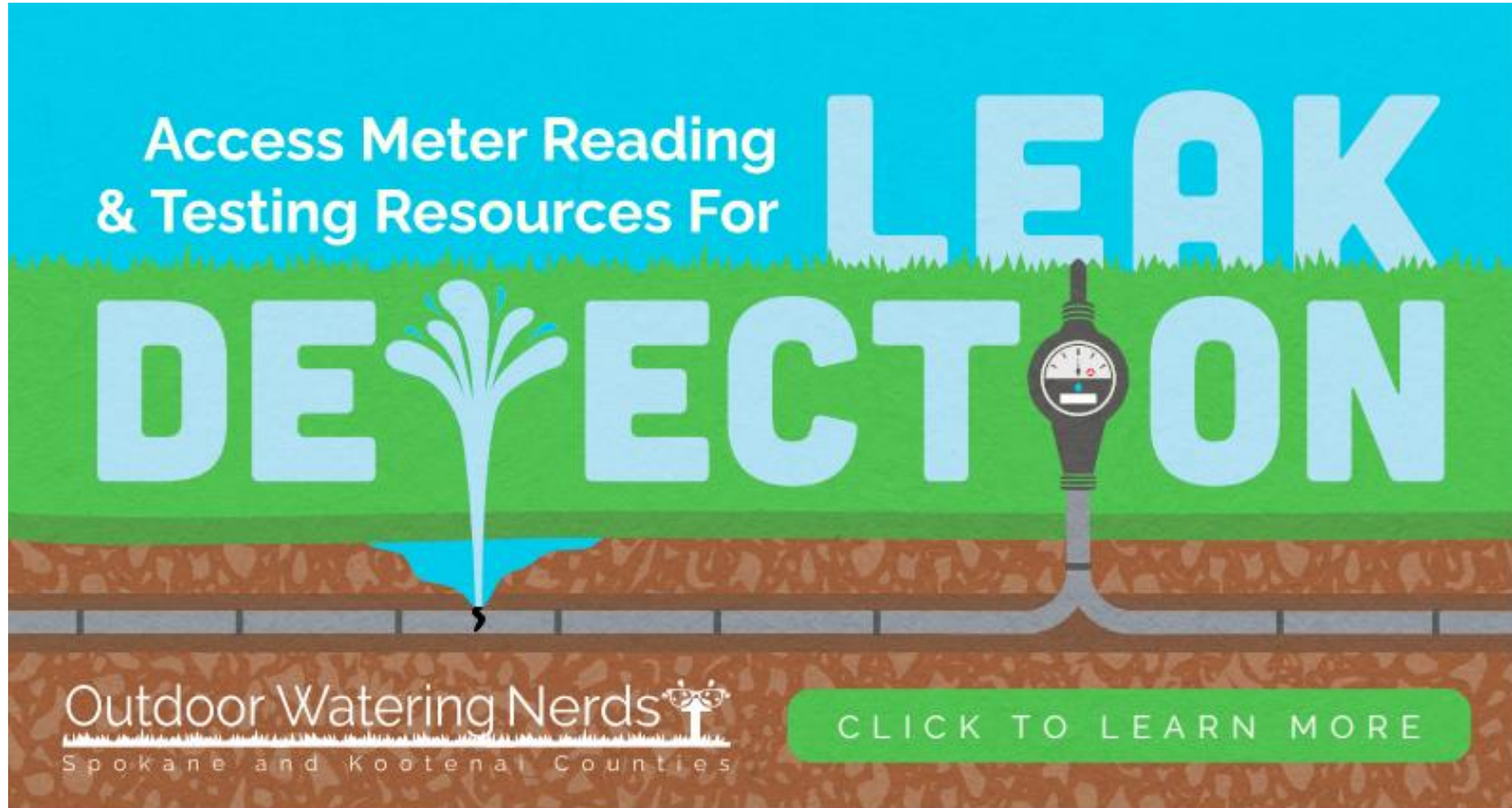
Impressions	142,040
Clicks	1286
CTR	0.74%
Google	341

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

IWAC Media Campaign May - \$2,000



Impressions	12,6495
Clicks	1019
CTR	0.55%
Google	1,351

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

SAJB Media Campaign May - \$2,100



Impressions	144,033
Clicks	1,148
CTR	0.62%
Google	1,149

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

IWAC Media Campaign June - \$2,000

Planting
**DROUGHT TOLERANT
AND NATIVE PLANTS**
is an excellent way to reduce outdoor water use
and still enjoy a beautiful yard!

Clover
Cupid's Dart
Yarrow
Rock Soapwort
Silver Sage

[CLICK TO LEARN MORE](#)

Outdoor Watering Nerds
Spokane and Kootenai Counties

The advertisement features a vibrant illustration of a garden bed with various plants. From left to right, the plants are labeled: Clover, Cupid's Dart (purple flowers), Yarrow (white flowers), Rock Soapwort (purple flowers), and Silver Sage (green foliage). The background is a light blue sky with a stylized sun. At the bottom, there is a green grassy area and a white button with the text 'CLICK TO LEARN MORE'. The logo for 'Outdoor Watering Nerds' is in the bottom right corner, with 'Spokane and Kootenai Counties' written below it.

Impressions	106,488
Clicks	1,688
CTR	1.33%
Google	636

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

SAJB Media Campaign June - \$2,100



Impressions	147,147
Clicks	1,082
CTR	0.54%
Google	2,117

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

IWAC Media Campaign July - \$2,000

Wondering how much to water your lawn?

**CALCULATE
WATER
NEEDS**

Date + Watering Frequency =
Water Needed for YOUR Lawn

with **The Nerds Water Needs Calculator!**

[CLICK TO LEARN MORE](#)

Outdoor Watering Nerds
Spokane and Kootenai Counties

Impressions	159,575
Clicks	1,488
CTR	0.56%
Google	1,261

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

SAJB Media Campaign July - \$2,100



Impressions	133,372
Clicks	2,487
CTR	0.86%
Google	1,380

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

4 Videos Aired in August - \$2,500

9,693 Video Thru Plays

- Leak Detection - <https://youtu.be/PoWR8W-ogp8>
- Repair & Retrofit - <https://youtu.be/8lNjqqmQU0c>
- Saving Water Matters - <https://youtu.be/Eqk9hy5EmCl>
- Sprinkler Savy - <https://youtu.be/Ca-ELDiLhtY>

Video Thru Plays: The number of times a video ad was viewed in its entirety.

IWAC Media Campaign August - \$800



Impressions	127,795
Clicks	395
CTR	0.09%
Google	397

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

SAJB Media Campaign August - \$800

Is your lawn getting overwatered?
CALCULATE WATER NEEDS
with the catch can test

CLICK TO LEARN MORE

Outdoor Watering Nerds
Spokane and Kootenai Counties

The advertisement features a blue background with white rain streaks. On the left, a black catch can is shown. In the center, a red T-shaped tool holds a clear funnel over a blue measuring cup. The cup is partially filled with blue liquid. A red bracket on the right side of the cup is labeled 'Excess' with a red 'X' mark, and a green bracket below it is labeled 'Excellent' with a green checkmark. The bottom of the ad has a green grass border and a white button with the text 'CLICK TO LEARN MORE'. The logo for 'Outdoor Watering Nerds' is in the bottom right corner, with 'Spokane and Kootenai Counties' written below it.

Impressions	128,524
Clicks	359
CTR	0.24%
Google	314

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

IWAC Media Campaign September - \$2,000

Grow a healthier garden and save time with
DRIP SYSTEMS & SOAKER HOSES

✓ Less Water

✓ Less Weeds

[CLICK TO LEARN MORE](#)

Outdoor Watering Nerds
Spokane and Kootenai Counties

Impressions

Clicks

CTR

Google

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

SAJB Media Campaign September - \$2,100



Impressions

Clicks

CTR

Google

Impressions: The number of times the ad was displayed.

Clicks: The number of times the ad was clicked on.

CTR (Click Through Rate): The number of clicks divided by the number of impressions.

SAJB Media Campaign October - \$2,100



Impressions	
Clicks	
CTR	
Google	

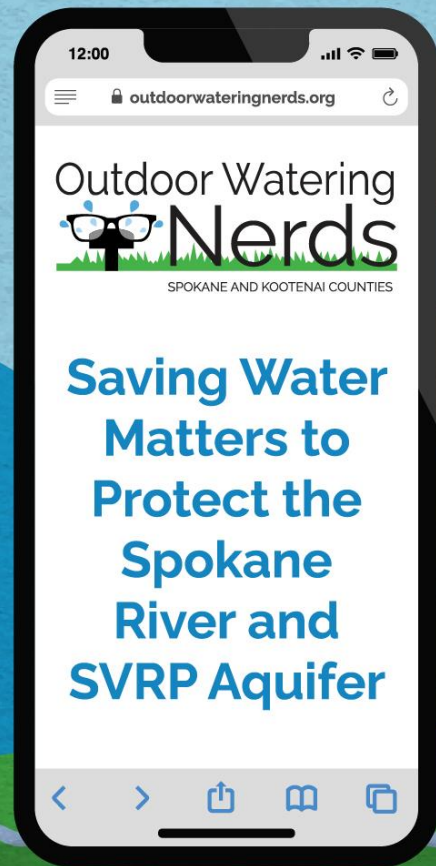
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Thank You Questions?

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