

Welcome to our Zoom Webinar Series

Watering Wisdom: Growing a Healthy Lawn with Less Water

Part 4: Lawn Care Best Management Practices
The webinar will begin shortly



Future Webinars

- **Winterizing Your Lawn**

September 29, 2020 at 2:00 p.m.

- To view previous webinars and access PDF versions of each presentation please visit....

<https://turf.umn.edu/watering-wisdom>



Using Zoom

- Use Q&A to ask questions
 - Mouse over bottom of Zoom window to access Q&A
- Chat is disabled
- Live transcript can be turned off depending on device

Audio Settings ^

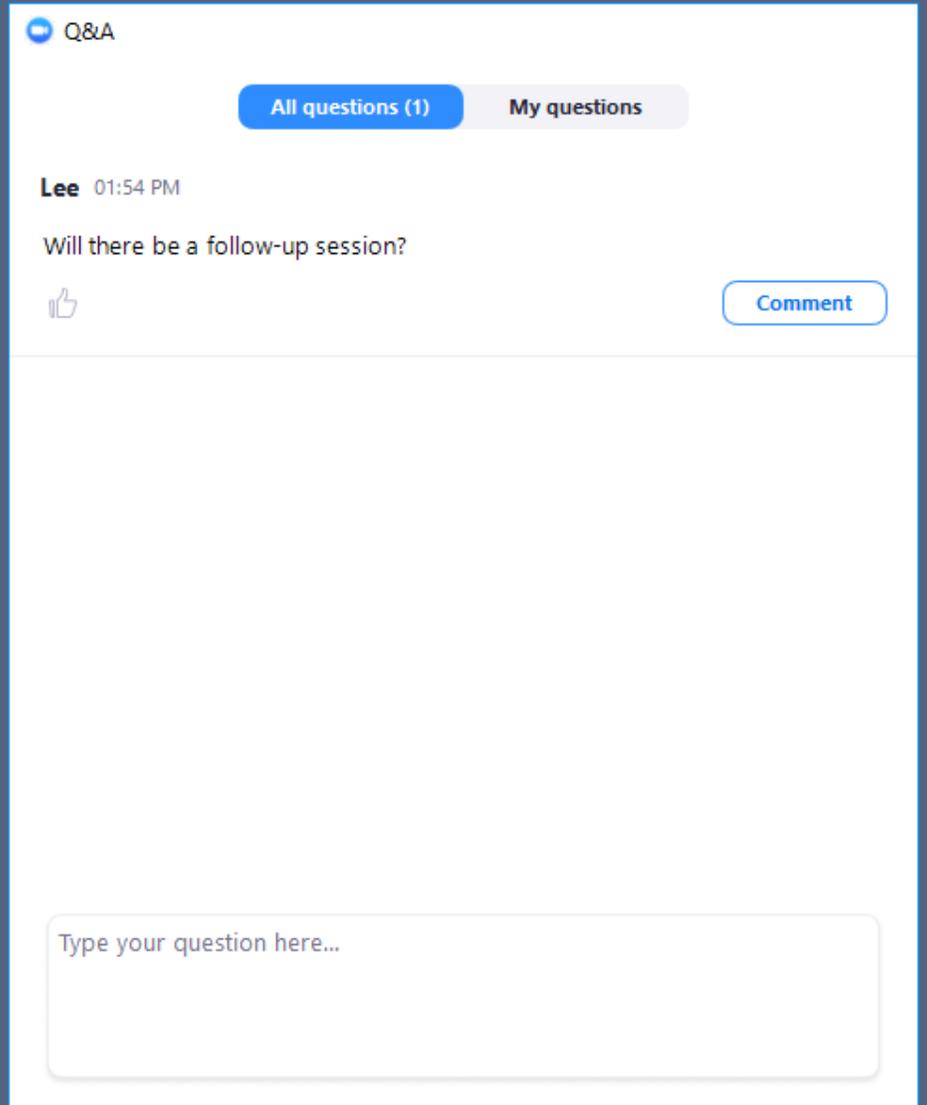


Chat



Q&A

Leave Meeting



The screenshot shows the Zoom Q&A interface. At the top, there is a 'Q&A' header with a minus sign icon. Below it are two tabs: 'All questions (1)' (active) and 'My questions'. A question from 'Lee' at '01:54 PM' asks 'Will there be a follow-up session?'. Below the question is a thumbs-up icon and a 'Comment' button. At the bottom, there is a text input field with the placeholder text 'Type your question here...'.

Watering Wisdom: Growing a Healthy Lawn with Less Water

Lawn Care Best Management Practices

Presenter: Shane Evans



Overview

- Mowing
- Fertilization
- Weed Management
- Pest Management
- Irrigation Scheduling
- Other Maintenance Practices
 - Aeration
 - Thatch Management
 - Overseeding



Overview

- **Mowing**
- **Fertilization**
- Weed Management
- Pest Management
- Irrigation Scheduling
- **Other Maintenance Practices**
 - Aeration
 - Thatch Management
 - Overseeding



Mowing Best Management Practices

- Change oil
 - Run cleaner
 - Longer life
- Wash underside of lawn mower
 - Seed contamination
 - Hard to start
- Keep blade sharp
 - Clean cut = healthy lawn



Mowing Best Management Practices

- Dull blades
 - Leave jagged edges
 - Plant is more susceptible to disease
- Cleanly-cut blades
 - Can help conserve water
 - Maintains plant health and looks good

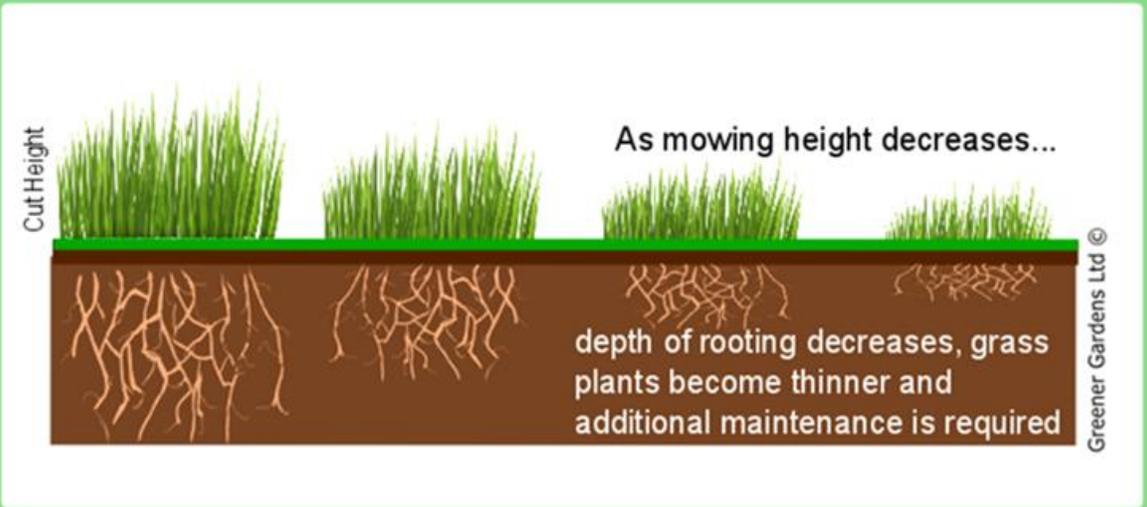


Mowing Height

- Maintain a lawn height above 3"
- The 1/3 rule..... do not mow more than one third of the height of grass in one cut
(3" x 1.33 = 4.5")
- Low mowing height = more water and more maintenance



Cutting Height and Lawn Health



Adjust the mowing height for the season.
Do not mow more than a third of the height of grass in one cut.

Research at the University of Minnesota

HoC = Height of Cut DAI = Days after last Irrigation DAR = Days after Recovery

Perennial ryegrass dominant mixture

14 DAI

60 DAI

28 DAR

3.5"
HoC



2.0"
HoC



Fine Fescue dominant mixture

14 DAI

60 DAI

28 DAR

3.5"
HoC



2.0"
HoC



Research at the University of Minnesota

HoC = Height of Cut DAI = Days after last Irrigation DAR = Days after Recovery

Perennial ryegrass, rough bluegrass and alkaligrass



Tall Fescue dominant mixture



F. sessoms

Lawn Clippings

- In most cases do not remove clippings from your yard
- Benefits of clipping
 - Natural fertilizer
 - Adds organic matter to the soil
 - Can be composted
 - Use as mulch



<https://extension.umn.edu/lawncare/what-do-lawn-clippings>

Mowing Best Management Practices

- When can I remove clippings?
 - Presence of turf disease
 - Scalping the turf (cutting the lawn really short)
 - Unsafe to use mower without collection bag
 - Clipping end up on sidewalks or in gutters



Mowing Best Management Practices



<https://adopt-a-drain.org/>



Mowing Best Management Practices

- Nutrient pollution from storm drains increases the chance for harmful algal blooms in our lakes
- Algal blooms can contain toxins that damage both humans and animals
- Algal blooms reduce the amount of oxygen in the water



Fertilizer Management

- When used correctly, fertilizers can help you improve and maintain your lawn. Healthy lawns limit erosion, cool the environment and provide many other benefits.



How much fertilizer do I need?

- A soil test can help determine what type and the amount of fertilizer you buy

- Inexpensive

- <http://soiltest.cfans.umn.edu/>

Soil Testing Laboratory		SOIL ANALYSIS REQUEST SHEET		
Send this information sheet with ONE (1) soil sample				
MAIL SOIL TEST REPORT TO:		OPTIONAL REFERENCE:		
Name _____	Soil Location: County _____	_____		
Address _____	_____	_____		
City, State, Zip _____	Check for \$ _____ enclosed	_____		
Phone _____	_____	_____		
Please provide a name for this sample, consisting of no more than 4 numbers and/or letters. Indicate this name on the sample container and record it here. _____ The report you receive will use this name to identify your sample.	Fertilizer Recommendations Requested for: (check <u>only</u> one) Lawn <input type="checkbox"/> (101) Before seeding or sodding <input type="checkbox"/> (102) Existing lawn Gardens <input type="checkbox"/> (110) Vegetable Garden <input type="checkbox"/> (111) Flower Garden	Fruit <input type="checkbox"/> (112) Tree Fruits <input type="checkbox"/> (113) Small Fruits <input type="checkbox"/> (114) Blueberries Tree and Shrubs <input type="checkbox"/> (115) Broadleaf <input type="checkbox"/> (116) Evergreen <input type="checkbox"/> (117) Azalea & Rhododendron	For Grass Only Is grass watered regularly? <input type="checkbox"/> Yes <input type="checkbox"/> No Are clippings removed? <input type="checkbox"/> Yes <input type="checkbox"/> No	Check Tests Requested <input type="checkbox"/> Regular Test, \$17.00 - includes total organic matter, phosphorus, potassium, pH - lime requirement, and estimated texture <input type="checkbox"/> Soluble salts, \$7 - testing for excessive salts <input type="checkbox"/> Lead test, \$16 - (separate sample required) <small>*See back for additional instructions</small> <small>*Additional tests, primarily of interest to land care professionals</small> <input type="checkbox"/> Sulfur \$7 <input type="checkbox"/> Calcium/Magnesium \$7 <input type="checkbox"/> Nitrate \$8 <input type="checkbox"/> Iron, Zinc, Copper, and Manganese \$12 <input type="checkbox"/> Boron \$7
	Tests provided by the University of Minnesota Soil Testing Laboratory are intended to aid in evaluating the fertility status and chemical condition of your soil. Based on these test results	Problems with plants may be caused by factors other than soil fertility, e.g., disease, insects, insufficient light, soil moisture or compaction, or climatic conditions. An evaluation of soil fertility and pH is an important <i>first</i>	Because nitrogen is extremely mobile in soils, nitrogen recommendations are based on plant requirements and soil organic matter levels as determined by the laboratory.	

How much fertilizer do I need?

- 1 pound of nitrogen per thousand square feet (1lb N/1000 sq. ft)
 - may need more than one application per year
- My lot is $\frac{1}{4}$ acre
 - $\frac{1}{4}$ acre = 10,890 sq. ft.
 - 5000 sq. ft. of your lot is covered by house, driveway etc...
 - Meaning approximately 5,000 sq. ft. is lawn you need to fertilize



How much fertilizer do I need?

- 1 pound of nitrogen per thousand square feet (1 lb. N/1000 sq. ft.)
 - may need more than one application per year
- 32% of this bag is nitrogen (N)
 - 16 lbs. of N in a 50 lb. bag of fertilizer
 - 3.125 lbs. of fertilizer = 1 lb. of N
 - We need approximately 15 lbs. of fertilizer to apply 1lb N/1000 sq. ft to our 5,000 sq. ft yard

<https://www.mda.state.mn.us/lawn-care-and-water-quality>

<https://extension.umn.edu/lawn-care/fertilizing-lawns>



Characteristics of Various Lawn Maintenance Programs

Levels of Maintenance	Watering Practices	Mowing Heights	# of Fertilizer Applications	Weed Control	Best Adapted
V.Low	none	3"+	0	None	Fine Fescue
Low	little to none	3"+	1	Only as needed	Fine Fescue Tall Fescue
Medium	some	2.5-3.5"	2	Only as needed	Kentucky BG Fine & Tall F
High	regularly	2-3"	3+	Controlled	Kentucky BG Perennial Rye

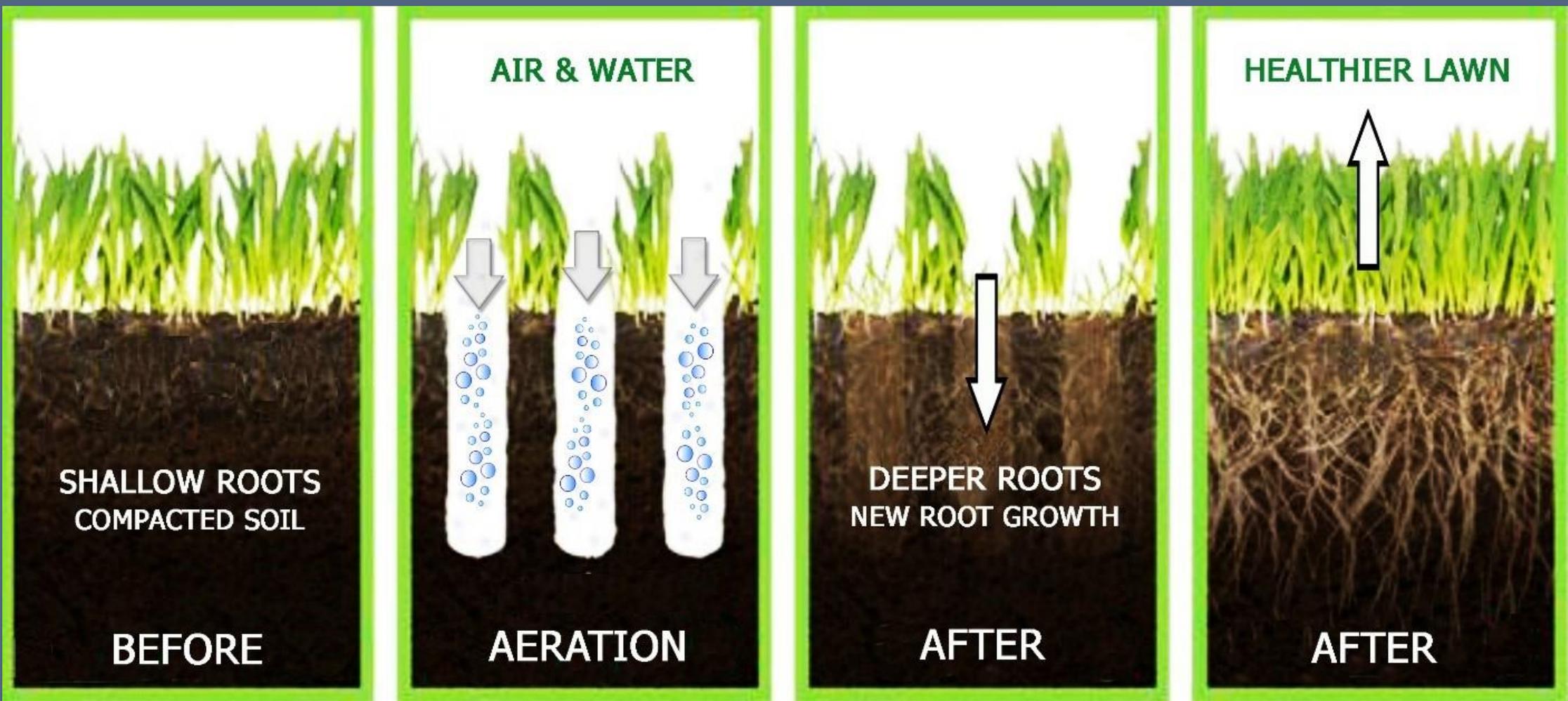
Other Maintenance Practices

- Aeration
- Thatch Management
- Overseeding



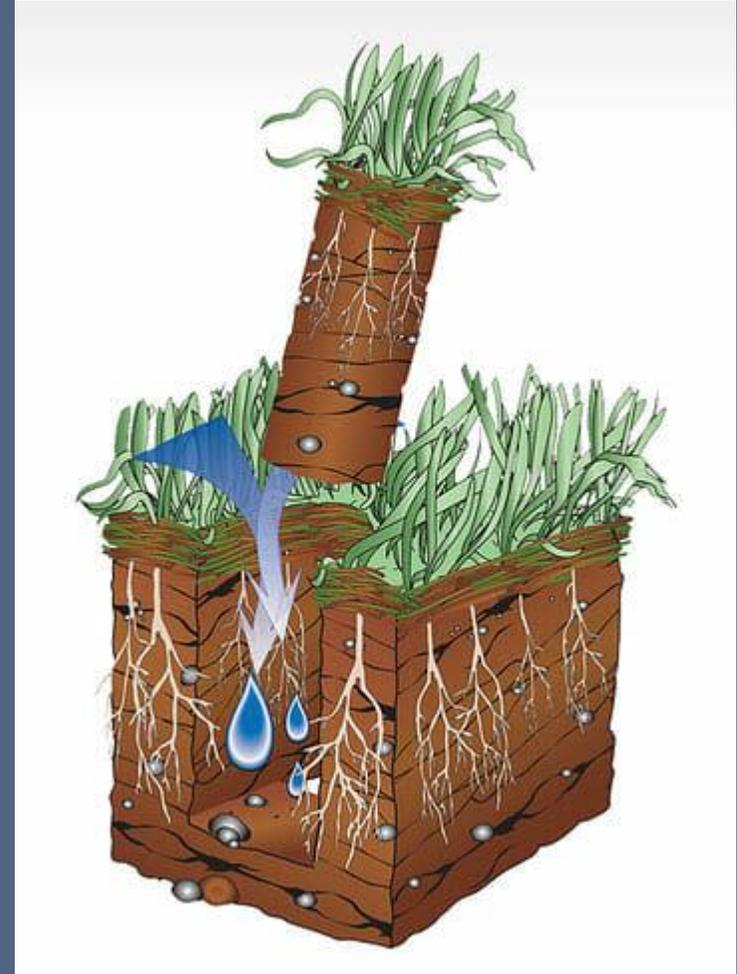
Aeration





Aeration Benefits

- Reduces soil compaction
- Improves water and oxygen infiltration
- Increases drainage of water through the soil profile
- Improves root growth



Thatch Management

- Living and dead organic debris just below the living turfgrass canopy and above the soil line
- Primarily made of roots, rhizomes, stolons and crowns of the turfgrass plant



thatch
layer



Thatch Management

- Too much of a good thing
 - Don't want more than ½ inch
- Lawn clippings add very little to the thatch layer
- Aeration can reduce the thatch layer



Thatch Management

Benefits

- Thatch below ½” for home lawns
- Good environment for microorganisms
- Cushion to protect crown
- Reduced weed germination

Negative Impacts

- Thatch above ½” for home lawns
- Limits root penetration
- Scalping due to raised crown
- Hydrophobic (leads to runoff)
- Filter out pesticides before they reach target



Overseeding

- Improves weed resistance
- Provides a dense and thick turf canopy
- Covers up bare spots



Overseeding

- The time to overseed is now
 - (mid August – mid September)
- Allow the seed to make good contact with the soil
- Water often in order to keep the seeds/soil moist
- After germination decrease watering frequency as roots begin to grow



Summary

Minnesota Lawn Care Calendar

Key: P—Indicates preferable times to carry out certain lawn care practices.

A—Indicates acceptable times to carry out certain lawn care practices.

PRACTICE	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV
Fertilizing		A A A A	A A A		P P P	P P P P	P P	
Mowing		A A A A	A A A A	A A A A	A A A A	A A A A	A A A A	A
Watering		A A A A	A A A A	A A A A	A A A A	A A A A	A A A	
Aeration		A A A A			P P	P P P P	A A	
Dethatching		A A A A			P P	P P P P		
WEED CONTROL								
Broadleaf Weeds		A A A A	A A A			P P P P	P P P	
Crabgrass-pre-emergent		P P P						
Crabgrass-post-emergent			A A	A A A A				
Seeding		A A A A	A		P P P	P P P		A A
Sodding		P P P P	P P P A	A A A A	A A P P	P P P P	P P P	



Questions?

Please use the Q & A feature in Zoom to ask any questions you have

Please join us for our future
webinars

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Twitter - @WaterWiseShane

