Explore Your Watershed

Clark County Watersheds

Did you know that you can learn about and explore so much of our county's nature from your device? What a great way to get to know our watersheds before heading out to explore!

Here's what we are going to do – first, follow this link: https://tinyurl.com/ykdu373k

Next, explore the **Clark County Watersheds** chapter to learn the basics of watersheds, how land and water work together to create important habitats, and fun facts about YOUR watershed!

1. What is a watershed? Hint: Watch the video in the 'What is a watershed?' section.
    a. An area of land that drains to a common stream, river or lake.
    b. A shed that holds water.
    c. A place in the forest where water comes from.

2. How many miles of streams are in Clark County? Hint: Look in the 'Clark County streams' section.
    a. 1,000 miles
    b. 2,000 miles
    c. More than 2,400 miles

3. What is the largest watershed that is entirely in Clark County? Hint: Watersheds along the border of Clark County also include land in other counties.
    a. Burnt Bridge Creek
    b. Salmon Creek
    c. East Fork Lewis River

4. Which watershed is Fifth Plain Creek a part of? Hint: This watershed drains into the Washougal River just before meeting with the Columbia River.
    a. West Slope
    b. Gibbons Creek
    c. Lacamas Watershed

5. What river flows southwest through Clark County for its final 12 miles? Hint: Most of this 33-mile river is in Skamania County.
    a. Washougal River
    b. East Fork Lewis River
    c. North Fork Lewis River

6. Which creek flows directly into Vancouver Lake? Hint: This creek is in the most urbanized watershed in the county.
    a. Salmon Creek
    b. Burnt Bridge Creek
    c. Gee Creek

7. What do we call the watershed that is comprised of four unconnected smaller creeks? Hint: The creeks include Gee, Whipple, Flume and Allen Canyon.
    a. West Slope – the key is in the hint - Gee, Whipple, Flume and Allen Canyon creeks make up West Slope
    b. Gibbons Creek
    c. Columbia Slope

8. How many square miles is the Columbia River drainage basin? Hint: Look in the 'Your watershed' section.
    b. 193,000 square miles
    c. 258,000 square miles
    d. 312,000 square miles

8. What watershed do you live in? Hint: Go to the 'What's your watershed?' section and click on the magnifying glass in the upper left corner of the map to input your address.

9. What subwatershed do you live in? Hint: After you've found your watershed, go to that section and click on the magnifying glass in the upper left corner of the map to input your address.

10. Which is a tributary, or subwatershed, of the North Fork Lewis River?
    a. Tenny Creek
    b. Campen Creek
    c. Cedar Creek

What Can You Do To Protect Water?

Now that you know more about the watersheds in Clark County, you can really focus on ways that you can make a difference!

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Next, explore the **What You Can Do** To Protect Water? chapter to learn about how you can stop pollution from getting into our creeks and streams, so YOU can help protect your watershed!

1. What is okay to put down the storm drain? Hint: You may have seen the answer on the blue and silver medallions beside some storm drains.
    a. Leaves and grass.
    b. Only rain in drain – most storm drains lead directly to local streams.
    c. Soapy water from washing a car.

2. What can dog owners do to protect the health of their watershed? Check all that apply.
    ☐ a. Always pick up after their pets – even at home - so stormwater doesn't mix with the poop and runoff into our streams.
    ☐ b. Keep dogs on leash in sensitive areas so their scent doesn't scare away wildlife.
    ☐ c. Bring an extra bag on your walks to offer pet owners who forgot theirs.

3. Which is NOT a good place to wash a car and prevent pollution?
    a. At a car wash where they recycle the water and it gets treated to remove pollutants.
    b. On the street or driveway where wash water goes down the storm drain and into our streams.
    c. On the grass where wash water can soak into the ground.

4. On what website can you find a list of yard products that ranks their safety and provides safer alternatives? Hint: They're all great websites, but only one of them compares a wide variety of yard care products to help you choose the safest.
    a. Clark Green Neighbors www.clarkgreenneighbors.org
    b. Don't Drip and Drive www.fixthoseleaks.org
    c. Grow Smart, Grow Safe www.growsmartgrowsafe.org

5. What should you do if you suspect your car may be leaking? Hint: The program Don't Drip and Drive offers help to people with car leaks.
    a. Learn about checking for fixing leaks at Don't Drip and Drive!
    b. Go to the store and buy every type of fluid your car needs and keep adding more of every type.
    c. Get an oil change.

6. On a farm, what can be a pollutant if left uncovered outside, OR become a slow-release fertilizer if covered and composted? Hint: Large animals, such as horses, make about 50 pounds of this a day!
    a. Seeds
    b. Fence posts
    c. Manure

7. What's the best way to clean up dirt that spilled on the driveway? Hint: Don't let that dirt get down the storm drain.
    a. Sweep it up with a broom and put on a landscaped area
    b. Use a pressure washer to move it into the street
    c. Use a blower to blow it into the street

8. Where can Clark County residents dispose of hazardous household waste for free on weekends? Hint: Hazardous household wastes contain the words *poison, danger, warning, caution, toxic, explosive* or *flammable* on the label.
    a. Their regular trash can
    b. Local transfer stations
    c. Dump it down the storm drain

9. What is one organization from the 'Volunteering in Your Community' section that you'd be interested in volunteering with someday?

10. What will you do to protect the health of your watershed?

Our Pollution

Sometimes, people are MESSY. We don't always mean to be, but some of our everyday activities and behaviors can have a really big impact on our watersheds, the animals that live here and human health.

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Next, explore the **Our Pollution** chapter to learn about our struggles with stormwater runoff, chemicals that get into our waterways, and ways that YOU can help protect Clark County's watersheds!

1. What is the number one source of water pollution in our streams today? Hint: The Clean Water Act of 1972 targeted 'point sources' of pollution – the worst polluters that dumped directly into waterways.
    a. Factories dumping waste
    b. Municipal wastewater treatment plants discharging treated sewage
    c. Stormwater – a mix of pollutants picked up by storm runoff

2. Watch the video "Solving Stormwater". In the experiment where scientists placed some salmon in stormwater and others in well water, what percent of the salmon in stormwater died?
    a. 100%
    b. 72%
    c. 55%

3. Forested land results in less than 1% surface runoff. How much surface runoff is typical after that land is developed? Hint: Check out the diagram in the 'How we got here' section.
    a. 5-10%
    b. 10-20%
    c. 20-30%

4. Which is NOT an impact from nutrients pollution caused by over fertilizing, animal waste, failing septic systems and phosphate soaps and detergents? Hint: Think about how nutrients affect plants AND the entire lifecycle of those plants.
    a. Swim beach closures from toxic algae blooms
    b. Less turbid (i.e. clearer) and cooler water
    c. Less dissolved oxygen in water due to decomposing plant material

5. How does sediment pollution make survival difficult for salmon?
    a. When sediment settles, it fills in gravel beds that salmon need to lay their eggs
    b. Sediment pollution can make water cloudy, which makes it difficult for salmon to see and breathe
    c. All of the above

6. Name one of the main sources of fecal coliform bacteria (poop) in urban (city) areas. Hint: Many people include one of these as a non-human family member.
    a. Cow manure lagoons
    b. People not picking up after their dogs
    c. Bears

7. What is the leading source of oil pollution in our waterways? Hint: A little bit from a lot of things can really add up.
    a. Small vehicle leaks and drips that land on hard surfaces and get carried by stormwater to waterways
    b. Large oil spills from ships and large tanker trucks
    c. Natural oil bubbling up from underground

8. What pollutant can be reduced by planting trees that create shade over waterways? Hint: This pollutant is not one that people typically think of, but it does hurt many of our important fish species.
    a. Litter
    b. Temperature
    c. Metals

9. Zinc is a metal pollutant that is toxic to fish and interferes with their gills. What is the primary source of zinc pollution? Hint: It's all over the road, but you seldom see it.
    a. Rusty cars sitting outside
    b. It's a byproduct that factories dump
    c. Tire residue that rubs off on the road from driving around

10. What river in Ohio was so polluted that it caught fire 13 times and provided an important image that helped lead to passing the Clean Water Act in 1972? Hint: Look at the timeline of key water protection laws at the end of this chapter.
    a. Cuyahoga River
    b. Columbia River
    c. Rio Grande

Clark County Stream Health Report

What is stream health? How do scientists measure it? Check out this chapter for information about water quality testing, how that helps us understand the health of the entire watershed and see some real stream health data!

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Next, explore the **Clark County Stream Health Report** chapter to learn more about how to study stream health, how our watersheds are doing, and ways that YOU can help protect Clark County's watersheds!

1. What activity helps to identify pollutants, allocate resources for watershed improvements and measure the effectiveness of actions taken in a watershed?
    a. Planting trees
    b. Monitoring stream health
    c. Inspecting stormwater facilities

2. What stream health factor looks at the creatures living in a stream to determine its health?
    a. Water quality
    b. Biological health
    c. Stream flow

3. A healthy stream should have_____. Hint: Check out the section on Healthy Streams.
    a. A meandering, curvy stream channel
    b. A direct, straight stream channel
    c. A zig-zagging stream channel

4. How do most pollutants get into streams? Hint: Look at the graphic in the section 'Threats to Stream Health'.
    a. People throw trash into streams
    b. Businesses dump waste from their factories
    c. Stormwater picks up pollutants from hard surfaces and carries them to storm drains that lead to nearby streams

5. How much more runoff is generated from areas that are 75-100% impervious (hard) surface compared to natural ground cover? Hint: Look at the graphic in the section 'Threats to Stream Health'.
    a. 25% more
    b. 35% more
    c. 45% more

6. Look at the map in the Stream Health Comparison map. Which statement best summarizes the information on the map?
    a. Streams in urban areas are just as healthy as streams in forested areas.
    b. Streams in forested areas are typically healthier than those in urban areas.
    c. Streams in urban areas are healthier than those in forested areas.

7. Which is NOT a common parameter used in monitoring water quality? Hint: Look at the Water Quality Parameters map.
    a. Litter observation – the amount of litter observed in a stream
    b. Turbidity – a measurement of how cloudy or clear water is
    c. Bacteria – measurement of E. coli in water

8. How do macroinvertebrates help scientists assess the health of a stream? Hint: Look in the Monitoring for Biological Health section.
    a. The more macroinvertebrates found, the healthier the stream.
    b. Macroinvertebrates found floating on water is a sign of good stream health.
    c. Since macroinvertebrates vary in their tolerance to pollution, the types found help indicate the health of the stream.

9. A scientist looking for macroinvertebrates finds mostly stoneflies and mayflies. The biological health of this stream is likely _____. Hint: See the graphic in the Monitoring for Biological Health section.
    a. Poor
    b. Fair
    c. Good

10. Which creek is trending up for the OWQI (Oregon Water Quality Index)? Hint: Look at the Stream Health Trends map.
    a. Whipple Creek (WPL050)
    b. Cougar Creek (CGR020)
    c. Rock Creek North (RCN040)

Fish and Wildlife

Have you ever wondered what animals live nearby? Explore this chapter to learn more about the creatures living in our waterways and the land that surrounds them – you know, our **watersheds**!

Here's what we are going to do – first, follow this link: https://tinyurl.com/ykdu373k

Next, explore the **Fish and Wildlife** chapter to get to know our local fish and fauna, explore different habitats and how animals adapt to live all around us, and learn ways that YOU can help protect animals living in Clark County's watersheds!

1. What is habitat?
    a. Something animals do routinely
    b. Areas where animals can find food, water, shelter, and space to live
    c. A place where animals hunt

2. Which streams and rivers do spring Chinook use? Hint: Use the 'Fish Species' map in the Streams Lakes and Riparian Areas section and look at the fish species in the legend to see which streams and rivers they use.
    a. Columbia, East Fork Lewis, North Fork Lewis Rivers and Cedar Creek
    b. Columbia River, Burnt Bridge Creek, and Lacamas Creek
    c. Columbia River, Whipple Creek, Salmon Creek and Lacamas Creek

3. Name one mammal that spends a significant part of their life in river habitat.

4. Where can you see a great example of wetlands and plenty of wildlife in Clark County?
    a. Lewisville Regional Park
    b. Esther Short Park
    c. Steigerwald and Ridgefield National Wildlife Refuges

5. What is a standing dead tree called? Hint: It's an important habitat feature in forests.
    a. Nurse log
    b. Old leaner
    c. Snag

6. Which animal lives mostly on the forest floor?
    a. Pileated woodpecker
    b. Banana slug
    c. Douglas squirrel

7. Which is one of Clark County's rarest habitats today? Hint: Much of this habitat was lost because it was easy to convert to farmland and urban areas.
    a. Prairie and oak woodland
    b. Forest
    c. Beach

8. Name one type of butterfly that can be found in prairie and oak woodland habitats?

9. Why is creating habitat in urban areas important?
    a. So animals can come from natural habitats to form a closer bond with people
    b. Wetlands are becoming too crowded
    c. Urban habitats help animals connect natural habitats, which can become disconnected with man-made development

10. What program helps people create habitat in their own yards? Hint: You can contact the Watershed Alliance if you're interested in learning more about this program.
    a. Master Composter/Recycler program
    b. Certified Backyard Habitat Program
    c. Watershed Stewards program

Recreation

Get out and about in Clark County! Imagine the possibilities for fun all around you outside – you can go to a new park or your favorite neighborhood park, you can hike, fish, swim, watch interesting animals and maybe go adventuring on a boat.

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Next, explore the **Recreation** chapter to learn more about the exciting and calming ways you can explore the great outdoors of our county. Of course, you can also check out ways that YOU can help protect Clark County's watersheds!

1. What is your favorite park in Clark County? Use the map to explore!

2. Which pass do you need for some state lands and parks operated by Washington State?
    a. Discover Pass
    b. America the Beautiful National Parks Pass
    c. Clark County Parks Pass

3. Which fish species is commonly stocked in Clark County lakes and ponds where fishing is permitted?
    a. Sturgeon
    b. Brown trout
    c. Coho salmon

4. What is the name of the Washington State Department of Fish and Wildlife app that can show you nearby fishing locations and let you know up-to-date regulations?
    a. iFish
    b. Big Fish Now
    c. Fish Washington

5. Why is it important to use a boot brush at a trailhead before setting off?
    a. To make sure your boots have good grip on the trail.
    b. To remove weed seeds that may be stuck on your boots.
    c. The brushing sound alerts animals you're coming.

6. Which greenway trail would you like to explore? Use the map to find one!

7. Why are greenway trails usually a good place to spot wildlife?
    a. Greenways are often along waterways and animals frequently use riparian areas.
    b. City and county workers bring wildlife to greenways for viewing opportunities.
    c. There are usually no trees along greenway trails so you can see for a long way.

8. Which of these is a floatable stream with access to launch boats?
    a. Whipple Creek
    b. Lake River
    c. Burnt Bridge Creek

9. What can you do to protect a watershed while boating?
    a. Be careful not to spill fuel or soaps in the water.
    b. Clean your boat to make sure you're not carrying invasive species.
    c. Both A and B

10. Which is <u>NOT</u> a Clark County Public Health designated swim beach?
    a. Battle Ground Lake State Park
    b. Washougal River
    c. Vancouver Lake