



**You find leaches on your paddle. Lose a turn as you pick them off.**



Leaches are tolerant to some pollutants and can survive in low dissolved oxygen environments, so the presence of many leaches can indicate that the water is unhealthy. Leaches are often a sign of organic pollutants.

**You spot invasive Japanese stilt grass at a stream crossing. Go back 1 space**



Stilt grass grows in dense patches and outcompetes native plants for resources. This plant has a silver midvein on each leaf that is just off center, making it easier to identify.

**Lose a turn as you stop to pull invasive garlic mustard on the stream bank.**



Garlic mustard is a common invasive plant in Indiana. The first year the plant is a single leaf, the second year the plant grows tall and flowers. The best way to remove this plant is by pulling it up by the roots, bagging it, and throwing it away.

**You float into a patch of giant knotweed. Go back 1 space while you get out.**



Giant knotweed is a large plant with heart shaped leaves. If any part of the root is left in the ground, more will continue to grow. Knotweed can cause wet areas to fill in with excess soil caught at the base of the plant.

**You get close to the bank where Japanese barberry is and get covered in ticks! Lose a turn.**



Japanese barberry is a thorny invasive shrub that creates a microclimate favorable to ticks. Not only will the thorns get you, but ticks can as well!

**You get close to the bank and brush against stinging nettles. Lose a turn as you stop the burn!**



Stinging nettles is a native plant that has dense hairs that contain a chemical that temporarily and lightly "stings" your skin. Be on the lookout for jewelweed, it will help ease the sting!





**You get stopped by cattle in the stream. Go back 2 spaces to get safely around.**



**Cattle in streams lead to poor water quality due to pathogens from feces. Cattle can erode the stream banks which can increase the turbidity of the water. It is a best management practice (BMP) to keep cattle out of streams.**

**You get stuck in a patch of invasive phragmites. Lose a turn as you get out.**



**Phragmites are a very tall invasive grass whose stem resembles that of corn. It can be so aggressive that it can consume shallow ponds and marshes in just a few years by holding sediment.**

**You pass a conventionally tilled agricultural field. Lose a turn while you navigate the muddy waters.**



**Conventional tillage can lead to sediment runoff which can result in muddy, cloudy water, and stream sedimentation that can negatively impact stream habitat.**

**An invasive Asian Carp hits you off your boat! Go back 2 spaces.**



**As the name suggests, Asian Carp are originally from Asia. They lay thousands of eggs at a time which causes them to quickly outcompete the native fish in the rivers. This decreases the populations of native fish.**

**You run into a logjam. Lose a turn while you clean up the mess.**



**Logjams block fish and sediment from moving down the river and can cause serious flooding which can be dangerous for wildlife and humans.**

**A tree has fallen and is blocking your path! Go back 1 space!**



**This tree fell because of an eroded stream bank. This erosion causes sediment to wash into the stream. That sediment significantly impacts stream life, including a loss of wildlife habitat, higher levels of nutrients, and clouding of the water.**





**You observe a pipe draining waste materials directly in stream. Lose a turn.**



**Pipes draining directly into streams could be dumping harmful materials such as sewage or other chemicals into the stream, directly affecting the organisms and water quality.**

**You get tangled up in invasive honey suckle! Go back 2 spaces.**



**Japanese Honey Suckle (vine) and Amur Honeysuckle (bush) are an invasive plant that can be very detrimental to the environment because they grow and take over quickly. It is very hard to remove these plants.**

**You find illegal dumping in the river. Lose a turn while you call your local solid waste district.**



**Dumping trash into waterways can cause pollutants to harm the aquatic organisms. It also makes the water unsafe for humans to drink and wade in. By calling your local solid waste district, you can help get the trash out of the river and improve the water quality.**

**A snapping turtle bites your paddle! Go back 1 space.**



**Snapping turtles are freshwater turtles that can become aggressive when they feel threatened. However, just as with many animal species, snapping turtles play an important role in their ecosystem.**

**Excess fertilizer from a crop field runs off into the river and creates an algal bloom. Go back 1 space.**



**Fertilizer brings excess nutrients into the water and creates algal blooms which can deplete dissolved oxygen which is vital for aquatic organisms.**

**An eroded stream bank collapses in front of you! Go back 1 space.**



**Stream bank erosion can lead to excess sediment and nutrients in the habitat as well as decreased habitat for aquatic organisms.**





**Oh no! An undersized culvert is blocking your path! Lose a turn while you go around.**



**Undersized culverts (or pipe) can lead in inadequate drainage, streambank erosion and habitat fragmentation.**

**Oh no! You find a box turtle tangled in some trash! Lose a turn while you free it.**



**Box turtles are a threatened species in Indiana due to loss of habitat and increased road mortality. Pollution also degrades the box turtle's habitat.**

**You found some plastic bottles that someone left in the river. Lose a turn while you clean up the trash.**



**Not only is littering illegal, but it is also not good for the rivers and the organisms that live in and around the rivers. These bottles take a long time to decompose, and the organisms can consume parts of the bottles which can harm them.**

**Some river otters swim next to you. Advance 3 spaces as you keep up with them!**



**River otters are predators of streams and help control other animal populations. Their presence means the watershed ecosystem is healthy.**

**You observe a beaver building a dam. Advance 2 spaces.**



**New research shows that beaver dams are helping to clean pollution from streams. Beaver dams slow the movement of water and act as a natural water filter.**

**You spot bees pollinating cover crop plants. Advance 3 spaces.**



**Bees are pollinators, which means they are needed for plants to produce fruit. More than 1000 plants grown for food, beverages, fibers, spices and medicines need to be pollinated.**



**You pass by a river friendly farm sign. Advance 3 spaces.**



The River Friendly Farmer of Indiana is a state wide program that recognizes farmers who help keep rivers clean through good management practices.

**You observe a crop field planted in a cover crop. Advance 3 spaces.**



Cover crops provide many benefits to the soil to help keep it healthy such as fixing nitrogen, preventing erosion, holding moisture, and keeping the ground cooler.

**You pass by some crawfish. Advance 2 spaces!**



Crawfish are sensitive to water pollutants. If you find dead crawfish along your stream, the stream likely has toxic chemicals in it.

**You found and reported state endangered filmy fern! Advance 2 spaces!**



Filmy fern is a sensitive plant, it is only 1 cell layer thick! If you ever find an endangered species, contact the DNR.

**You pass several clumps of sedges! Advance 1 space.**



Sedges have edges, and are wetland indicator species! The stems of sedges are usually triangular, which helps you tell them apart from grasses. Sedges are typically a sign of good water quality and serve as a wildlife food source.

**You find an arrowhead. Advance 1 space.**



Arrowheads were made by Native Americans. If you find an arrowhead or any other type of artifact, take pictures, record your location and contact an archaeologist. It is important to leave the artifact where you found it so the area can be further evaluated.





**You find Jewelweed!  
Advance 1 space and  
save card.**



This card can be used to cancel out the stinging nettle card (Don't lose turn). Native Americans used the juices from this plant to help relieve the itch from stinging nettle, poison ivy, and insect bites.

**You find a school of  
tadpoles! Advance 2  
spaces.**



A tadpole is a young frog that lives and breathes in the water. After a few weeks they begin to grow back legs, then front legs. Shortly after that, the froglets will lose their tails and begin breathing air. Tadpoles are a sign of good water quality.

**A Hellbender swims  
under your boat.  
Advance 3 spaces!**



Eastern Hellbenders are an indicator species. The presence of an indicator species tells us something about the environment. Hellbenders need cool water with a lot of oxygen, which is why in Indiana, they only live in the Blue River.

**You see a water  
penny on the side of  
your boat. Advance 1  
space!**



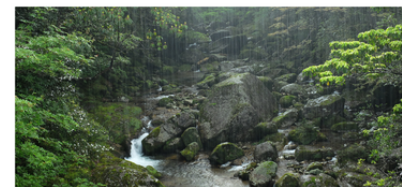
Water pennies are a type of microorganism that are very intolerant of pollution in water. So, they only live in healthy, good quality bodies of water.

**You pass a  
tributary that gives  
you a boost!  
Advance 3 spaces!**



Tributaries are smaller streams that feed into larger streams or rivers. Much like the stream on this game board!

**It rained! The extra  
flow gives you a  
boost. Advance 2  
spaces!**



All the rain within a watershed drains to a single point. For example, if it were to rain on the game board, all the rain in the smaller stream and would eventually end in the big river.



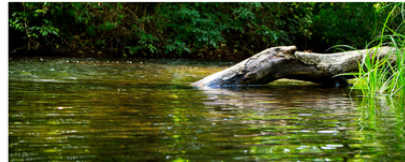


**You spot a bald eagles nest! Advance 3 spaces.**



Bald eagles typically nest in the tallest trees near a healthy water source. Spotting an eagles nest is a good indication that your watershed is healthy. An eagles nest on average is the size of a queen bed!

**You enter a shaded area of the stream and the cool air boosts your spirit which makes you paddle faster! Advance 2 spaces.**



The presence trees shading the stream can help to maintain a cool water temperature which is beneficial to the aquatic organisms.

**You find some duckweed plant! Advance 3 spaces**



Duckweed is a small freshwater plant that is favorite food of many bird species and serves as a bioremediator (a living organism that removes harmful materials such as bacteria).

**You hear some frogs croaking! Advance 1 space!**



The presence of amphibians such as frogs, toads and salamanders indicates a healthy habitat as these organisms are sensitive to pollution.

**A group of ducklings and their mother swim past your boat! Advance one space.**



Ducks are an important part of the ecosystem, like many animals. They also love to eat algae. This helps to keep the river clean!

**You got an Extra Paddle!**



**Keep this card and draw another! This extra paddle can help you out of any tough situations where you may have to go back spaces or loose a turn.**



**+5**



**Advance 5 spaces!**

**+5**



**Advance 5 spaces!**

**+5**



**Advance 5 spaces!**

**+4**



**Advance 4 spaces!**

**+4**



**Advance 4 spaces!**

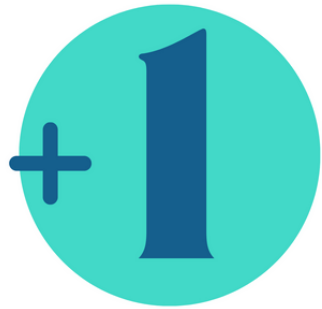
**+4**



**Advance 4 spaces!**







**Advance 1 space!**



**Advance 2 spaces!**



**Advance 3 spaces!**



**Advance 1 space!**

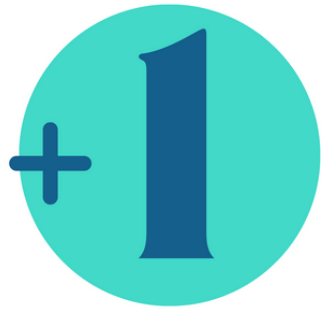


**Advance 2 spaces!**



**Advance 3 spaces!**





**Advance 1 space!**



**Advance 2 spaces!**



**Advance 3 spaces!**



**Advance 1 space!**



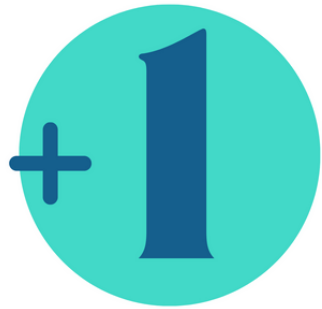
**Advance 2 spaces!**



**Advance 3 spaces!**







**Advance 1 space!**



**Advance 2 spaces!**



**Advance 3 spaces!**



**Advance 1 space!**

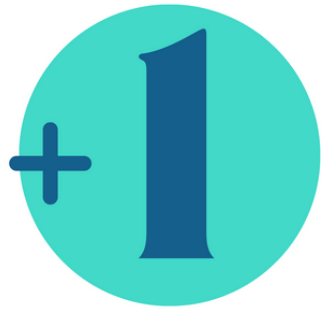


**Advance 2 spaces!**



**Advance 3 spaces!**





**Advance 1 space!**



**Advance 2 spaces!**



**Advance 3 spaces!**



**Advance 1 space!**



**Advance 2 spaces!**



**Advance 3 spaces!**





**You got an  
Extra Paddle!**



**Keep this card and draw another!  
This extra paddle can help you out  
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