Plastic Pollution Prevention Toolkit

A Guide for the Recreational Fishing Community in the Great Lakes

Pollution Probe

OFAH
Ontario Federation of Anglers & Hunters

About Pollution Probe

Established in 1969, Pollution Probe is a national, not-for-profit organization dedicated to improving the health and well-being of Canadians with a steadfast commitment to clean air, clean water and a healthy planet. Pollution Probe has a proven track record of working in partnership with industry and government to develop practical solutions to the most complex environmental challenges. www.pollutionprobe.org

About the Ontario Federation of Anglers & Hunters

The Ontario Federation of Anglers and Hunters (OFAH) is a non-profit, conservation-based organization dedicated to protecting Ontario's fish and wildlife resources and promoting sustainable outdoor traditions. Representing 100,000 members, subscribers, and supporters, and hundreds of member clubs, the OFAH advocates for science-based conservation, responsible fishing and hunting practices, and the protection of natural habitats. Through education, research, and conservation partnerships, the organization plays a leading role in preserving Ontario's outdoor heritage for future generations.

This project was made possible through funding from the Ontario Ministry of Environment, Conservation and Parks (MECP) as part of the Great Lakes Local Action Fund, which supports community-led projects that have a positive environmental impact on the Great Lakes and their connecting rivers.

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About this Toolkit

The recreational fishing community has a strong connection to the Great Lakes and their tributaries, often witnessing the impacts of plastic pollution firsthand. With deep knowledge and care for these ecosystems, the fishing community is uniquely positioned to help protect the lakes, ensuring clean water and healthy fish populations for current and future generations.

Our 2025 survey of recreational fishers in the Great Lakes revealed that:

81%
consider plastic pollution to be a very important issue

59%
notice plastic pollution in the water or environment every time, or often, when they fish

These findings underscore a shared concern and opportunity for recreational fishers to be leaders in preventing pollution and protecting the places they value most.

Project Overview

This toolkit is a key output from a project that arose out of a recognized need to better understand the perspectives and concerns of local communities, and to support locally driven actions to address plastic pollution.

In collaboration with the Ontario Federation of Anglers and Hunters (OFAH), Pollution Probe developed and distributed a region-wide survey to gather insights from recreational fishing communities on plastic-related challenges, observations, and opportunities. Guided by the findings from the survey and Pollution Probe's research, recycling receptacles for fishing line and cigarette butts were installed in key locations, such as boat launches, parks, and conservation areas, in collaboration with municipalities, conservation authorities, marinas and local community organizations.

The knowledge and experience gained through these other project elements directly informed the creation of this toolkit, a resource that aims to reflect the voices of recreational fishers, highlight best practices for appropriate waste disposal and recycling, and inspire collective action to reduce plastic pollution in the Great Lakes.

Survey for the Recreational Fishing Community

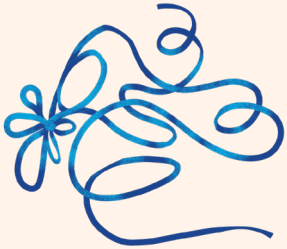
With valuable input from the Ontario Federation of Anglers and Hunters (OFAH), Pollution Probe launched a regional survey of the recreational fishing community across the Great Lakes. The goal was to gain deeper insight into their experiences, concerns, and ideas related to plastic pollution in their local waterways.

The survey was distributed to over 90 community groups and organizations in Ontario. Responses were received from a range of individuals, including those who identified as racialized and visible minorities, Indigenous, 2SLGBTQIA+ community members, persons with disabilities, women, and newcomers to Canada.

Respondents reported fishing in a wide variety of locations and waterbodies across the region, including areas near Lake Superior, Lake Huron, Georgian Bay, Lake Simcoe, Lake Erie, and Lake Ontario. Responses highlighted key perspectives and issues related to plastic pollution, its interaction with wildlife, as well as interest in local stewardship opportunities.

Why Recycle Fishing Line?

Fishing line is a commonly observed type of plastic debris found along shorelines and nearshore environments throughout the Great Lakes region. Durable gear such as monofilament and braided line is essential for fishing, but if not properly disposed of, it can pose a serious threat to wildlife and aquatic ecosystems. Fishing line can also break or snag, resulting in lost or discarded pieces in the environment.



Most fishing line cannot be recycled through regular curbside or municipal programs. While some retail stores offer drop-off options, they are not always convenient for recreational fishers who are out on the water or visiting remote fishing sites. Recognizing this gap, a key element of this project was to install dedicated recycling receptacles in strategic locations to provide a simple and accessible way to appropriately dispose of used or damaged gear.

Visit our website to find a fishing line recycling receptacle near you!

tinyurl.com/recycle-your-gear

Why Recycle Cigarette Butts?

Cigarette butts are one of the most common types of plastic found in the environment, including in the Great Lakes region. Cigarette filters are made of plastic fibres and can take years to degrade. Once discarded, cigarette butts can also leach harmful pollutants into the water, negatively impacting both wildlife and water quality.

Based on data from the Great Lakes Plastic Cleanup, cigarette butts make up over 5% of all debris characterized and are one of the most common items found on shorelines and in stormwater systems.

To help address this challenge, this project also involved the installation of dedicated cigarette butt receptacles, providing a safe, convenient way to dispose of them and helping to protect our Great Lakes ecosystem. Collected cigarette waste is recycled in partnership with TerraCycle, helping ensure the material is diverted from landfill.

This toolkit offers practical guidance and best management practices for responsible use, maintenance, and disposal of fishing gear. It is designed to support the fishing community in preventing plastic pollution in the Great Lakes and surrounding environments. By highlighting simple, effective actions that individuals can take to choose and maintain their gear and reduce pollution, the toolkit aims to inspire responsible practices and environmental stewardship.

How to Use the Toolkit

This toolkit is designed as a practical, easy-to-navigate guide for recreational fishers, community members, and organizations seeking to learn about and take action to reduce plastic pollution in the Great Lakes. It can be read from start to finish for a complete overview or each section can be referenced on its own when planning fishing trips, events and community outreach activities.

The following outlines what is covered by each section:

Impacts of Plastic Pollution in the Great Lakes

This section provides an overview of how plastic pollution affects water quality, fish and other wildlife, and human health, highlighting why prevention efforts are critical. This section also includes insights and observations from the recreational fishing community who have witnessed increasing pollution and its impacts on fish and their habitats across the Great Lakes.

Challenges and Solutions

This section explores the broader barriers to addressing plastic pollution, from the complexities of managing diverse plastic materials to gaps in recycling infrastructure. It also highlights existing initiatives, community efforts, and the vital role of the fishing community in identifying and implementing local solutions.

Best Practices for Recreational Fishers

This section explains how different types of fishing gear, such as lures, lines and other equipment can contribute to plastic pollution if lost or discarded. It outlines simple actions that can be taken before, during, and after fishing trips to prevent these impacts. This includes guidance on choosing and caring for lures, managing fishing lines responsibly, selecting and maintaining durable high-quality gear and properly disposing of damaged or unwanted items.

How to Reduce Plastic Pollution While Fishing

This section brings together all the practical strategies described throughout the toolkit. It summarizes the ways recreational fishers and the broader community can prevent plastic pollution, covering everything from choosing durable gear and maintaining fishing lines to reducing single-use items and handling waste responsibly.

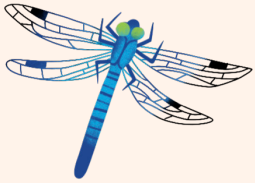
Call to Action

This section highlights ways to take meaningful action to protect the Great Lakes. From adopting recycling receptacles to reporting pollution, these opportunities empower recreational fishers and other community members to expand knowledge about pollution in their communities and become stewards of the Great Lakes.

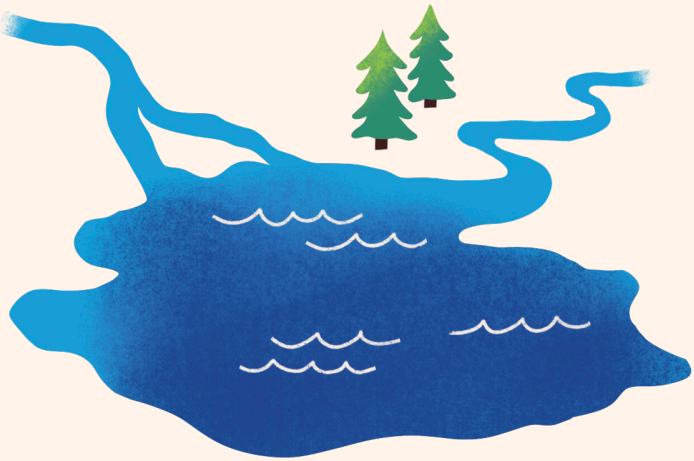
The Importance of the Great Lakes

The Great Lakes make up the largest freshwater system on Earth, holding about 21% of the planet's available freshwater. More than 107 million people depend on the lakes for drinking water, recreation, and cultural connections. They also support a more than $6 trillion regional economy, which includes commercial and recreational fishing, tourism, shipping, and trade.

The lakes are home to over 3,500 species of plants and animals, many of which are found nowhere else in the world. This biodiversity makes the Great Lakes one of the most ecologically significant freshwater regions in the world, providing critical habitats for both aquatic and terrestrial species.



The Great Lakes are deeply interconnected with thousands of tributaries, including rivers, creeks, streams, and wetlands, that flow into them. The health of the lakes depends on these local waterbodies that provide habitat, sustenance, and pathways for migration for wildlife and support nutrient cycling and water flow, essential to the Great Lakes ecosystem.



The Plastic Pollution Problem in the Great Lakes

It is estimated that 10 million kilograms of plastic enter the Great Lakes each year, originating from a wide range of sources, including urban runoff, wastewater, recreational activities, and industrial discharge. Once plastic enters the environment, it can persist for decades, accumulating along shorelines and in the water.

More than 80% of the debris found on Great Lakes shorelines is plastic. Over time, materials can become weathered by sunlight, wind, and water, gradually breaking down into smaller pieces until they become microplastics. These tiny pieces, which are less than 5 mm in diameter, can be ingested by fish, birds, and other aquatic species, potentially travelling up the food chain and into the human diet. Plastics can also release harmful pollutants as they degrade. These pollutants can leach into the surrounding waters and affect the quality of drinking water sources for the millions of people who depend on the Great Lakes.

Findings from the Great Lakes Plastic Cleanup

The Great Lakes Plastic Cleanup, an initial of Pollution Probe and the Council of the Great Lakes Region, is the largest initiatives of its kind in North America, using innovative capture technologies to prevent and remove plastic in the Great Lakes, from the St. Lawrence River to Lake Superior and everywhere in between. Since 2020, the initiative has removed and analyzed thousands of pieces of plastic and other debris, offering valuable insight into the types and sources of pollution entering our freshwater systems.

THE GREAT LAKES PLASTIC CLEANUP

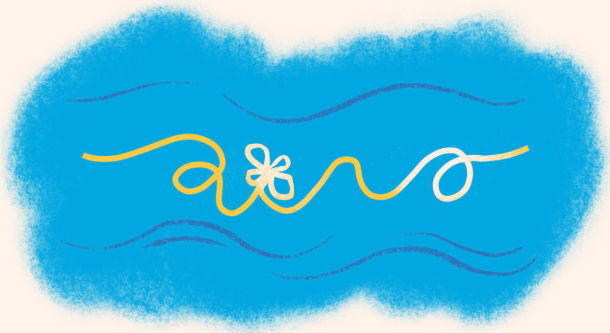
Among the most commonly found items are small hard plastic fragments and foam pieces, which appear consistently across environments, including in the water, along shorelines, and within wastewater and stormwater systems. The addition of new mobile plastic capture technologies in 2024, such as the BeBot, a sand-sifting robot, has expanded cleanup efforts to beaches and shorelines and revealed that fishing and hunting gear, including fishing line and lures, are frequent finds in the environment.

Cigarette butts are consistently one of the most common types of plastic debris found in the environment globally and across the Great Lakes region. A study from 2021 estimates that 300,000 tonnes of microplastic fibres from cigarette butts enter aquatic environments globally each year. In the Great Lakes, cigarette butts account for a significant portion of anthropogenic debris found on all Great Lakes shorelines. Cigarette butts were recorded as the third most common plastic item found by the Great Lakes Plastic Cleanup in 2024.

Impacts of Plastic Pollution in the Great Lakes

Water Quality

Plastics often contain harmful pollutants that can leach into water as the material breaks down. Not only does plastic introduce harmful pollutants into the environment but it can also absorb and transport other pollutants, acting as carriers that spread them throughout the water. Research shows that 90% of water samples from the Great Lakes contain microplastics, leading to growing concern for ecosystem health.



From our survey of the recreational fishing community in the Great Lakes region:

57%

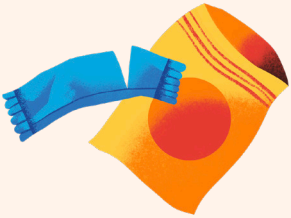
have noticed an increase in plastic pollution over time in the locations where they fish

90%

have observed plastic bottles or containers

80%

have observed food wrappers or packaging

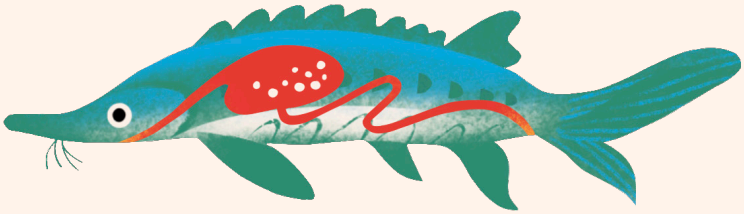


80%

have observed plastic bags

Fish and Wildlife

Birds and fish often mistake microplastics in the environment for food, which can lead to digestive blockages and malnutrition. Ingested plastic can also carry toxic chemicals that may affect the reproductive and immune systems of wildlife and disrupt growth.

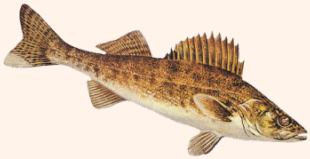


Entanglement is another risk, where fishing line, plastic packaging, and other debris can trap animals, restrict their movement, cause injury, or impair feeding or nesting behaviour.

Academic research has shed light on the impacts of plastic pollution on freshwater fish in the Great Lakes. A 2022 study found that every one of the 212 fish (from 8 species) sampled from Lake Ontario contained microplastics in their digestive tracts. A brown bullhead catfish caught in Hamilton Harbour was found to contain 915 microplastic particles, the highest count ever recorded in a single fish. These findings suggest that plastic ingestion in Great Lakes fish is not the exception, but rather a common occurrence.

As plastic pollution continues to accumulate in the environment, its long-term effects on fish populations and aquatic ecosystems remain a growing concern.

Common Fish Caught in the Great Lakes



Walleye

Yellow Perch

Northern Pike

Chinook Salmon

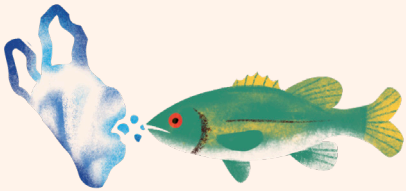
Lake Trout

Smallmouth Bass

Rainbow Trout

Muskellunge

Largemouth Bass



From our survey of the recreational fishing community in the Great Lakes region:

58%

have observed fish interacting with plastic in their habitat

32%

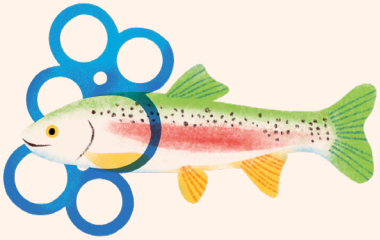
have found plastic ingested by fish, including lures, fragments, and line

23%

have found plastic debris externally attached to fish, such as lures and fragments

18%

have seen fish entangled in plastic, including rings or bags



Human Health

Microplastics can reach humans through multiple pathways, including the consumption of fish and other aquatic life that have ingested plastic particles. They have also been found in tap water, bottled water, and even the air we breathe, meaning exposure can occur through ingestion and inhalation.

A 2024 study examining plastic in fish caught for human consumption in Lake Ontario reported an average of 138 particles per fish, leading researchers to estimate that the average person consuming these fish could ingest up to 18,300 particles per year.

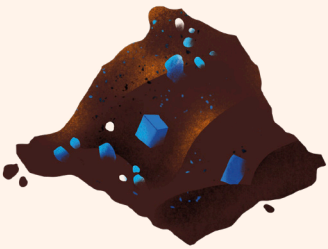
Research suggests that microplastics may pose health risks once ingested, including DNA damage, organ dysfunction, metabolic disorders, immune system disruption, and reproductive or developmental effects.

Determining the impacts of microplastics on human health is challenging given that the type, size, shape and concentration all play a role in potential health risks. Continued research is needed to fully understand the risks.

Challenges and Solutions

Systemic Barriers to Addressing Plastic Pollution

Plastic is deeply embedded in modern society, used across industrial, commercial, and personal applications. There are countless types of plastics, each with different chemical compositions, making waste management and recycling complex. Compounding this issue, most plastics take hundreds to thousands of years to fully decompose, resulting in significant amounts accumulating in landfills and the environment.



Discarded or mismanaged plastic waste can find its way into our environment, including the Great Lakes.

Existing Solutions

While plastic pollution in the Great Lakes can feel overwhelming, many organizations, researchers, and community groups are making meaningful progress in tackling the issue.

Recycling receptacles for fishing line have been successfully implemented in parks, marinas, and conservation areas in both Canada and the U.S. Initiatives such as Clear Your Gear has been working with communities to install fishing line recycling receptacles across Canada, preventing line from entering freshwater and marine environments, while raising awareness about the impacts of discarded gear on wildlife and ecosystems. Between 2021 and 2023, the University of Wisconsin Oshkosh collected and recycled 4,950 feet of monofilament fishing line from their bins across the Great Lakes region, demonstrating that, in a relatively short time and limited area, significant quantities of discarded fishing line can be diverted from landfills and freshwater ecosystems when disposal infrastructure is in place.

The Great Lakes Plastic Cleanup, a binational initiative of Pollution Probe and the Council of the Great Lakes Region, is deploying innovative plastic capture technologies to remove debris from the water while collecting valuable data on the types and amounts of plastic pollution in collaboration with local communities. This data helps inform policy, research, and upstream solutions aimed at preventing plastics from entering the environment in the first place.

Organizations such as the International Joint Commission have been advancing microplastics research, with recent reports highlighting key issues and potential solutions. Various academic and research institutions, are developing new ways to track, understand, and mitigate plastic pollution, determining how plastic breaks down into microplastics, and what impacts this has on wildlife, habitats, and human health.

Additionally, hundreds of local community groups and civil society organizations across the region are actively involved in organizing cleanups, raising awareness, and advocating for stronger action to reduce plastic pollution in the Great Lakes.

The Role of the Fishing Community as Part of the Solution

Recreational fishers are deeply connected to their local waterways and the broader Great Lakes. They are among the first to notice changes in the environment, such as pollution, degraded water quality, or the behaviour of local wildlife. This direct relationship with the water makes the recreational fishing community essential partners in the fight against plastic pollution. Their local knowledge can provide valuable insights into plastic pollution hotspots or changes in fish populations, helping to inform local action, research priorities, and conservation strategies.

57%

of surveyed anglers believe plastic pollution is increasing over time in locations where they fish

With the amount of time spent outdoors, recreational fishers make a significant effort to keep their local parks and waterways clean. The majority of recreational fishers that responded to our survey noted that they try to hold onto their broken line and gear to safely dispose or recycle, whenever possible.

They are enthusiastic and passionate about reducing plastic pollution, offering many solutions for prevention, including increasing access to proper disposal infrastructure and prioritizing education and stewardship, helping to ensure everyone has the tools and knowledge to participate. See what some of our survey respondents had to say!

Q: What do you believe would be helpful to support the disposal of fishing gear and pollution prevention?

"Bring it home. It's your duty and responsibility."

"Prioritize education"

"Recycling receptacles at all boat launches"

"More line recycling bins at boat ramps"

"Encourage keeping all trash and lines with you until you can properly dispose of it."

"We should have a culture of being stewards."

Best Practices for the Recreational Fishing Community

Plastic Pollution in Recreational Fishing

Recreational fishing is one of the most popular outdoor activities across the Great Lakes region, connecting millions of people to the water each year. However, some materials and equipment that makes fishing possible, such as lines, lures, and bait containers, are made from plastics designed for strength and durability.

When these items are lost, broken, or improperly discarded, they can remain in the environment for hundreds of years. Lost or abandoned fishing gear (often called “ghost gear”) can entangle or be ingested by fish and other wildlife, continue to trap animals long after it’s lost, or break down into microplastics that pollute the water. Small fragments of tackle or packaging can enter the water and be mistaken for food by aquatic organisms.

From our survey of recreational fishers in the Great Lakes region:

have found fishing gear, such as hooks, lures or string, in the stomach or digestive tract of fish they've caught

have found plastic fragments, such as hard pieces and packaging bits, in fish they've caught

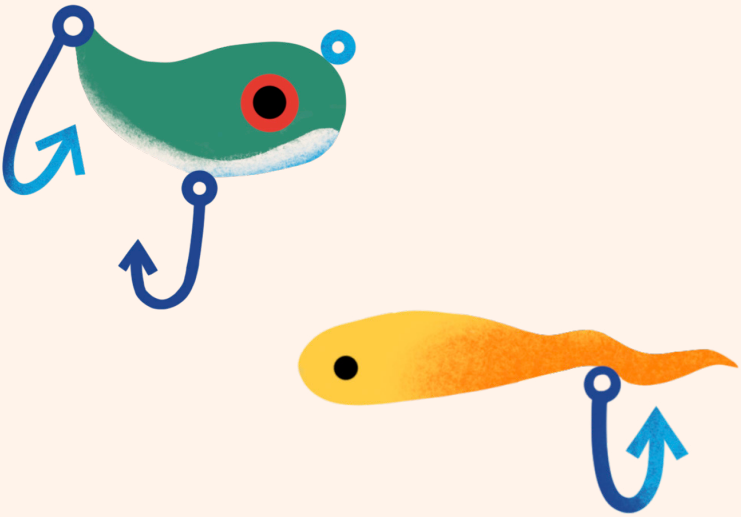
have found food wrappers or packaging items

These findings highlight how common plastic pollution from lost or discarded fishing gear and other sources has become, and how directly anglers are witnessing its effects on fish.

The good news is that recreational fishers are often the first to notice changes in their local waterways and are often the first to act. Their deep awareness and care make them valuable allies in addressing plastic pollution. By continuing to take simple steps, like managing gear responsibly and disposing of waste appropriately, the recreational fishing community can help lead the way in protecting the health of our Great Lakes.

Soft Plastic Lures

Soft plastic lures are widely used by recreational fishers because they are designed to mimic the movement and texture of live bait, and come in a range of sizes, making them effective for fishing. However, soft plastic lures have been identified as a significant concern among the fishing community because most are made from polyvinyl chloride (PVC), a material that does not readily break down in water and which can tear or fragment easily. When torn, bitten off, or lost during casting, this material can be either ingested immediately or settle on the lakebed, where it can persist for many years and come into contact with other aquatic species.



Snorkel surveys in Charleston Lake in Ontario, found that as many as 80 soft plastic lures can end up in the water for every kilometre of shoreline each year, suggesting that large numbers may be accumulating on lake bottoms.

Studies in Ontario and elsewhere have found soft plastic lures in the stomachs of wild-caught fish, such as lake trout and smallmouth bass. When swallowed by a fish, a lure can absorb water and expand inside the stomach, making digestion difficult. Lure ingestion has been linked to internal blockages, malnutrition, reduced feeding ability, and decreases in fish body weight and growth rates.

Soft plastic lures often contain additives such as plasticizers, and other materials like glitter, hardeners, salt, and scents. These additives are used to achieve the desired softness, durability, flexibility, sinking or floating properties, and visual appeal that make the lures attractive to fish. However, some of these chemicals are known to be persistent, mobile, and harmful. When lures are lost in the water, they can release these harmful substances, which may remain in the environment for long periods and move through aquatic systems. Some of these substances have been shown to disrupt hormones and interfere with biological processes, such as growth and reproduction in fish and other aquatic organisms.

Strategies for Reducing Pollution from Soft Plastic Lures

While the impacts of lost or discarded soft plastic lures are concerning, there are simple ways anglers can help reduce this type of pollution.

Choose alternatives

Whenever possible, opt for lures made from non-toxic, biodegradable materials, such as those derived from natural or food-grade components like gelatin, glycerin, or plant-based components. These alternatives are designed to break down more readily in water and soil. It is important to verify manufacturer claims, as breakdown rates can vary in cold freshwater.

Select lures that are less likely to break apart during use

Hard baits such as metal or hard-bodied lures are less likely to tear or fragment and can withstand repeated use, making them a more sustainable choice. Many metal lures are designed for durability and are suitable for a range of fish species, not just large or powerful ones. When selecting metal lures, opt for non-toxic materials and finishes (for example, avoid lead or lead-based components) to reduce the risk of harmful metals entering the environment if a lure is lost.

Handle lures with care

Before and during fishing trips, regularly inspect soft plastic lures for damage, especially around hook entry and exit points and along tails or appendages. Retire lures that are torn, chewed, stretched, or waterlogged to avoid losing bait in the water and to keep the lure working properly. Store soft plastic flat or in divided trays to prevent kinks or bends that weaken the material. Keeping bait away from excessive heat and direct sunlight prevents warping and degradation, extending lifespan.

Retrieve lost tackle

If a lure becomes snagged, make a safe and careful attempt to retrieve it to prevent it from remaining in the water and causing harm to fish and wildlife.

Try changing the angle gently to free the lure, avoiding aggressive “popping” on the main line, which can break the line and lead to lost tackle. Using lighter leader material and applying a steady, straight-line pull can also help free snagged lures without breakage.

When wading or boating, approach the snag from the opposite side if conditions allow; this can improve leverage on the snag and increase the chance of a successful retrieval. Avoid unsafe maneuvers that could put you or others at risk during the retrieval attempt.

Reduce loss through proper rigging techniques

To minimize tearing and loss of soft plastic lures, use rigging accessories such as screw-lock hooks, O-rings, or bait-keeper jig heads, which secure the plastic firmly and reduce breakage during casting and retrieval. However, no rigging method can fully prevent lure loss or ingestion by fish, and effectiveness varies with species, lure design, and conditions. Regularly inspecting lures for damage and promptly retiring comprimised baits remains an important best practice.

Select a hook size that matches the thickness of the soft plastic bait. This prevents the lure from splitting or tearing prematurely. Ensuring the bait is rigged straight and centered on the hook also improves lure action and reduces stress on the plastic.

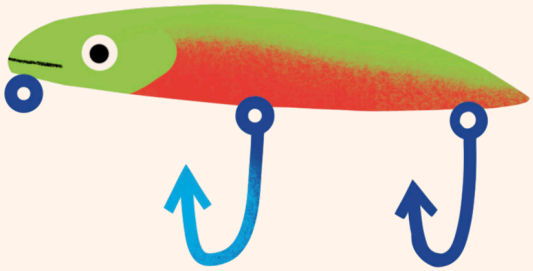
Set your drag to a moderate level to avoid sudden line breakage and always re-tie your line after repeated strikes or prolonged use to maintain knot strength and integrity.

When fishing in heavy cover or snag-prone areas, consider weed-guarded jigs or Texas rigs (a soft-plastic setup where the hook point is tucked back into the bait to reduce snags on weeds, wood, or rocks. These setups protect your lure from snagging and prolong the life of your bait while reducing tackle loss.

Appropriate disposal of damaged lures

Keep a resealable container, such as a “trash tub” or zip bag, to collect damaged soft plastic lures during fishing trips. If available, use local take-back or recycling programs designed specifically for soft bait recovery.

Where recycling options do not exist, dispose of damaged soft plastic in your regular household waste. Never discard them in the water or on shorelines.



Fishing Line

Most fishing line is made from plastic, including monofilament (nylon), fluorocarbon (polyvinylidene fluoride (PVDF)), and braided lines made from ultra-high-molecular-weight polyethylene (UHMWPE) fibers. These types of line are widely used by recreational fishers because they are strong, thin, durable, and weather-resistant. However, when lost or discarded, they can persist in the environment for many years.

Other types of fishing line include:

Copolymer line: Made from two different types of nylon polymers blended. This makes it stronger, more abrasion-resistant, and often less stretchy than traditional monofilament.

Braided line: Made by weaving together several strands of synthetic fiber. It is strong, has very little stretch, and has a small diameter for its weight.

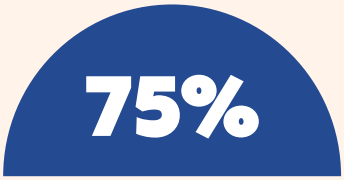
Fused line: Similar to braided line, but the fibers are heat-fused into a single strand rather than woven. This creates a smooth, strong line that casts well and sinks faster, but can be stiff and less flexible.

Fluorocarbon line: Made from a dense material that makes it nearly invisible underwater. It's more resistant to UV light and abrasion and sinks faster than monofilament.

Fly line: Thicker than other lines to help cast lightweight flies, it usually consists of a core material and an outer coating.

From our survey of recreational fishers in the Great Lakes region:

reported using monofilament line for fishing



reported using other plastic-based lines, such as copolymer, braided, fused, fluorocarbon, or fly line

reported using biodegradable fishing line

reported using recycled fishing line

In the water or along shorelines, loose line can entangle fish, birds, turtles, and mammals, restricting movement, feeding, or breathing and causing injury or death. It can also snag within wildlife habitat, continue to trap fish and animals unintentionally or break down into microplastic fibers that are easily ingested by wildlife. Keeping line out of the environment significantly reduces these risks.

Strategies for Reducing Pollution from Fishing Line

Recreational fishers can take several simple steps to prevent line loss and keep waterways safe.

Match line to conditions

Choose line types and strengths suited to the characteristics of the location where you're fishing. Use abrasion-resistant line around rocks, docks, or dense cover to prevent snapping. In open water, a lighter, more flexible line works better and helps prevent breaks. In cold water or strong wind, use a slightly heavier line to keep better control.

It is also important to choose the appropriate rod for your target fish. Light rods are suitable for smaller species, while heavy rods are better for strong or large fish to reduce strain and line breakage.

Set up your line properly

When putting a new line on your reel, apply steady tension and don't overfill the reel to prevent coils and tangles (also known as "bird's nests"). Replace your line annually or more frequently if it has been exposed to excessive sunlight or heavy use. If you use any line treatments, make sure they're made for your specific type of line.

Inspect, maintain, and retire on time

Run your fingertips along the first few meters of line every dozen casts to make sure it's not damaged. If it feels rough, has small cuts, or looks worn, cut off the damaged part so that it doesn't break when you're reeling in a fish. Check rod guides and reels for cracks or sharp edges that can cut your line unexpectedly.

If your fishing line looks old, faded, or stiff from the sun, it's time to replace it. Over time, sunlight and repeated use can weaken certain line types (such as monofilament or fluorocarbon) making them more likely to break.

Prevent breaks while fishing

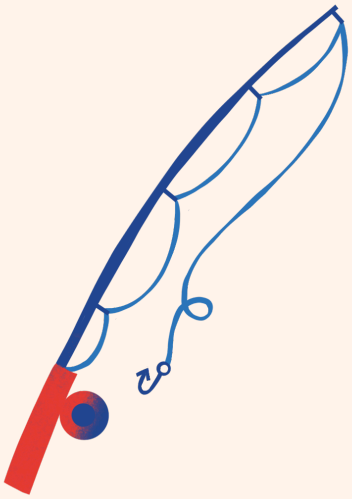
Set your reel's tension (drag) to a medium level, tight enough to control the fish, but loose enough to let the line slip if it pulls hard. Avoid lifting your rod too high or jerking it suddenly, as this can cause the line to snap. When targeting toothy species such as Northern Pike or Muskellunge, use an appropriately strong abrasion-resistant leader to reduce the risk of the line being cut.

Use knots suited to your line type and re-tie them after major strikes or snags. When fishing around rocks or plants, add a short, slightly weaker piece of line (leader) near the hook so that only that section will break if it gets caught

Collect and appropriately dispose of fishing line

Bring a small container or spool to collect any bits of line that are cut while fishing. If discarded or tangled fishing line is spotted on the ground or in the water, pick it up and wind it onto the container. Even short pieces of line can harm birds and fish.

Use dedicated recycling receptacles, where available. If no recycling receptacles are accessible, dispose of the line in your regular household waste.



Other Gear Found in the Environment

A variety of other fishing-related items, such as hooks, sinkers, packaging, bait tubs and foam floats can contribute to plastic and other pollution in lakes and rivers. Single-use items like coffee cups, drink bottles, or snack wrappers can also accumulate near popular fishing spots and enter waterways. Many of these materials are lightweight and easily carried by wind or rain into nearby creeks, rivers, and ultimately, the Great Lakes.

Common fishing gear:

Hooks: Small, sharp pieces of metal usually tied to the end of a fishing line to catch fish. They come in a variety of designs, depending on the type of fishing and species of interest.

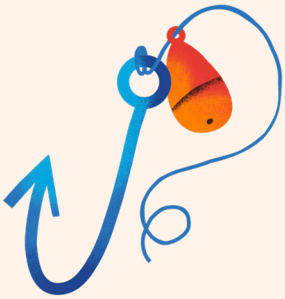
> **Barbed hooks** include a small backward-facing point (a barb) that helps keep fish from slipping off once caught.
> **Treble hooks** feature three hook points joined together at a single base.

Sinkers: Weights, often made of metal, attached to fishing line to help bait sink into the water.

Bait Tubs: Small plastic containers used to hold live or artificial bait (e.g. worms or minnows).

Foam Floats: Round or oval tools made of foam that float on the water's surface to show when a fish is biting.

Fishing hooks are typically made from high-carbon steel or stainless steel and may have protective nickel, tin, or black oxide coating added to resist corrosion. When lost, hooks can embed in fish or wildlife, causing injury, infections, or impaired feeding. Barbed hooks and multiple-treble designs increase the chance of tissue damage and snagging, while barbless or single-hook setups reduce harm if a fish is released after being caught.



Tackle containing lead, such as jigs and sinkers, can be hazardous when ingested by birds or other wildlife, either when mistaken for food or when eating a fish that still has broken fishing gear attached to them. In a bird's stomach (gizzard), the lead is ground up and dissolves, releasing this toxic substance into the body. Lead poisoning can cause weakness, trouble moving and eating, organ damage, and even fatality.

Strategies for Reducing Pollution from Other Gear

Thoughtful gear choices and careful handling help prevent pollution and protect the health of fish and wildlife.

Choose longer-lasting gear

Choose rods, reels, and tackle that are built to last, as cheap or low-quality gear is more likely to break and end up as pollution. Where possible, opt for corrosion-resistant tackle and reusable containers rather than brittle or foam-based plastics that fragment easily. Where fishing regulations allow, consider using single hooks (one hook point instead of multiple hooks) or barbless hooks (hooks without a backward-facing barb). These are easier to remove from fish and can make it simpler to recover gear if a line breaks, helping reduce the chance of lost equipment remaining in the water.

Avoid soft plastic lures that break easily. Soft plastics can tear or fragment, and break down into microplastics. Consider metal spinners, hard-bodied lures, or surface lures, which are longer-lasting and less likely to pollute.

Inspect your equipment

Before each trip, check rods and reels for any signs of damage, like cracks or loose parts, and replace damaged parts early. This can help prevent equipment from breaking and reduce the chance of lost fishing line or tackle in the water. Old, brittle fishing line, cracked reels, or rusted hooks are more prone to breaking and contributing to pollution. Reels should be checked regularly to ensure smooth performance and avoid sudden malfunctions.

Use non-lead options

Use sinkers and jigs made from non-toxic alternatives to lead such as steel, tin, bismuth, or brass. These materials perform well while preventing the risk of lead exposure to birds and wildlife when fishing gear is lost or left behind in the water. Tungsten is another lead alternative, but when choosing tungsten products, consider options that disclose responsible sourcing practices, where available, to support broader environmental and social sustainability goals.

Keep gear secure and organized

All gear should be stored in a dry and organized location to extend its life and reduce waste.

Store small items like hooks, weights, and clips in containers that close tightly so that they don't spill or get lost.

Avoid sticking sharp hooks into rods, reels, or other surfaces as a temporary storage method, as this can damage equipment, cause hooks to break or rust, and increase the risk of losing gear.

Use appropriate knots and rigging techniques to reduce the risk of losing tackle during casting or retrieval. Attach short cords or clips to tools like pliers and lightweight accessories, and secure them to a belt loop, vest, boat rail, or tackle bag. This helps prevent items from slipping or being blown into the water while you're fishing.

Manage packaging and single-use items

Prepare your gear at home and remove unnecessary packaging before heading out on the water. Wherever possible, bring reusable food and drink containers instead of single-use plastic. Pack out all waste, including bait tubs, sleeves, and wrappers. Small, lightweight items can be easily blown by the wind into storm drains or waterways.

Prepare for snags and inclement weather

Bring tools such as a lure retriever, snag tool or multi-tool that can help to safely retrieve snagged lures or hooks by cutting and fixing the line. On windy or rainy days, make sure all containers are closed securely, and place any small bits of fishing line directly into a sealed container or waste tube so nothing blows away.

Clean up and report

Bring reusable containers, water bottles, and tackle boxes instead of disposable bags or packaging.

Collect damaged or unusable gear, such as cracked floats, rusted tools, or broken boxes, and take them home to dispose or appropriately. Don't leave anything behind, even if planning to return for it later.

Where it is safe and feasible, consider picking up small amounts of litter you come across while fishing, even if it is not your own, such as free lures caught on rocks, logs, or underwater structures to prevent pollution and harm to wildlife. Areas with a lot of litter, such as tangled fishing line, foam fragments or cigarette butts, should be reported. Make a note of the location and report using the form provided in this toolkit. Sharing this information will help with installing more recycling or disposal stations where they're needed most.

Call to Action

Adopt a Receptacle

Help protect the Great Lakes from plastic pollution by adopting and maintaining a fishing line or cigarette butt recycling receptacle in your area! Volunteers play a key role in keeping these receptacles clean, visible, and functional for everyone to use.

By adopting a receptacle, your responsibilities may include:

- Monitoring and emptying on a regular basis
- Tracking and reporting the amount of waste collected
- Shipping the waste collected (we'll cover the costs!)
- Notifying the project team of any maintenance needs

Benefits of participating

- Protect your local waterbodies by preventing plastic pollution
- Contribute to valuable data collection that can inform research and prevention strategies
- Become a community leader and inspire others to take action
- Play a hands-on role in protecting the largest freshwater system in the world

Find a receptacle near you!

tinyurl.com/recycle-your-gear

Interested in participating?
Reach out to us at info@pollutionprobe.org.

Recycle Fishing Gear

While fishing line and gear are built to last, even the most durable equipment can get damaged over time or reach the end of its life. When this happens, avoid disposing of it in the trash wherever possible! Recycling gear can not only help to prevent plastic pollution and keep our waterways clean, but it also ensures that valuable materials can be reused instead of ending up in the environment or in landfills.

Explore the following options to recycle or reuse fishing gear:

- **Use a designated recycling receptacle near you: tinyurl.com/recycle-your-gear**

  Drop off your used line in one of our receptacles located around the Great Lakes region.

- **Visit a local bait or tackle shop.**

  Some retailers offer take-back programs or accept line and gear for recycling.

- **Mail your line directly to a recycling partner.**

  Companies like Berkley Fishing accept monofilament line for recycling by mail! Visit their website for shipping instruction.

- **Reuse and repurpose your gear whenever possible!**

If recycling or reuse options are not easily accessible, dispose of damaged or unusable gear in a secure garbage bin to prevent it from entering the environment.

Report What You Find

Have you come across plastic pollution while fishing, boating, or just enjoying the outdoors? Whether it's lost or discarded fishing gear, cigarette butts, food wrappers, bottles, or other plastic debris, your observations can help build a clearer picture of pollution hotspots in the Great Lakes region. By reporting what you find, you can contribute valuable, community-driven data that can inform prevention strategies and inspire action.

Submit a Report

Use our quick online form to share what you observed and where.

If you prefer to use a physical copy, bring our tearaway sheet with you into the field! Take note of your findings and either:

- Submit the information using our online form when you get home, or
- Snap a photo of your sheet and email it to info@pollutionprobe.org.

Report What You Find: Great Lakes Pollution Field Sheet

Date and Purpose

Date of observation _____

Activity at the time (select one)

Fishing (shore) Fishing (boat) Boating/Paddling

Walking/Beach Day Other: _____

Location

Waterbody/Site name (e.g. “Lake Erie – Port Dover pier”)

_____

Municipality _____

Site type (select one)

Pier Boat launch/Marina Beach/Shoreline

River/Creek bank Wetland Park/Trail

Other: _____

Observations

Overall amount of plastic/debris observed

None A little (1–10 items) Some (11–50)

A lot (51–200) Heavy accumulation (200+)

Items observed (check all that apply)

☐ Fishing line ☐ Soft plastic lures ☐ Gear packaging (e.g. bags, sleeves)

☐ Other fishing gear (e.g. hooks, jigs, floats, bobbers, sinkers, bait tubs, etc.)

☐ Beverage bottles/caps ☐ Food wrappers ☐ Plastic bags/ film

☐ Foam fragments (polystyrene) ☐ Cigarette butts/ filters

Other: _____

Was any wildlife affected?

No impacts seen Possible interaction (fish/birds near debris)

Confirmed interaction (entanglement/ingestion) Unsure Prefer not to say

Local Infrastructure

Are fishing line, cigarette butt receptacles or garbage bins present nearby? (select one)

Fishing line receptacle Cigarette butt receptacle

Garbage bin None Not sure

Do you think this location needs further attention (such as cleanup efforts, additional disposal or recycling receptacles, or follow-up monitoring)?

Low priority Medium priority High priority

Tell us why (optional): _____

_____

Details (optional)

Name _____

Email _____

Would you like to be contacted about cleanups or adopting a receptacle?

- ☐ Cleanups only
- ☐ Adopting a receptacle only
- ☐ Both
- ☐ None

Consent

☐ **I consent to Pollution Probe using this information (and photos, if provided) for mapping, analysis, and program improvement. Personal details will not be shared publicly or used for any purpose outside of those noted herein.**

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