

# STREAM CARE



a guide for property owners in the  
**upper salmon river watershed**

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# RIVER WATERSHED

## A LITTLE CARE GOES A LONG WAY

As citizens of the Upper Salmon River Watershed, we know that the health of our rivers and the health of our communities are closely tied. Our river and its tributaries are irreplaceable natural assets and an economic driver, deserving of our care and protection. The actions taken by each individual, property owner, rancher, and riverside community help to sustain the vitality of our water systems.

# BEFORE YOU START

A number of different local, state, and federal agencies regulate work in streams and wetlands. Before beginning any building, stream enhancement, or bank stabilization project, be sure to check with these agencies for guidance. Permits may be required for work in stream channels, stream banks, floodplains, and wetlands. The contacts listed in the back of this booklet are a good source of information.

see page 18 for contacts

WON'T YOU BE A STEWARD FOR A CLEAN  
AND HEALTHY WATERSHED?

# PROTECTING CLEAN WATER

## EVERYONE HAS A PART

**T**he streams within the 4 million acre Upper Salmon River Watershed are a source of pride and pleasure for all of us. They provide the beautiful backdrop for where we live, work, and play, contributing to the quality of life we all enjoy. They are the nursery and pathway for ocean-going salmon and steelhead that complete the longest river migration in the lower 48 states. Our streams and aquifers give us the water we drink, and are valued economic drivers that sustain our communities.

Whether we live next to the Salmon, the Lemhi, the Pahsimeroi, or along one of their many feeder streams; whether we work in town or the surrounding rural landscape, many of our daily activities can affect water quality in the watershed.

This guide offers residents practical tips to make their home and property “stream-friendly.” Read on to learn how you can protect an irreplaceable part of our lives—clean water in the Upper Salmon River Watershed.



jerry myers

## THE PAYOFF OF STREAM STEWARDSHIP

**A** stream running through your property is an invaluable amenity. Whether it flows year-round or seasonally, a stream provides drinking water, wildlife habitat, agricultural water supply, floodwater pathways, and countless recreation opportunities. Our streams are ribbons of life—sustaining people, plants, and animals along their journey.

You can make the most of your location next to a waterway by helping to keep it clean and healthy—and by helping your neighbors do the same. Even a little stream care can go a long way.

In this booklet, you will find out how you and your streamside neighbors can:

- ▶ **Avoid flood losses,**
- ▶ **Prevent erosion problems,**
- ▶ **Preserve water quality,**
- ▶ **Provide habitat for birds, fish, and wildlife, and**
- ▶ **Boost the value of your property.**



jerry myers



jerry myers

# SALMON: OUR RIVER'S

**T**he salmon and steelhead of the Upper Salmon River are a true Idaho legacy: as much a part of our natural heritage as the treasured landscapes in which they return to spawn — places like Redfish Lake, the upper Lemhi Valley, and the Frank Church-River of No Return Wilderness.

Wild salmon and steelhead are survivors — tough, resilient creatures adapted to withstand natural disturbances in an ever-changing environment. Salmon and steelhead are anadromous, meaning they spawn in fresh water streams and lakes, grow to maturity in the ocean, and return to their birth waters to spawn. They don't just live in water; they live in a watershed stretching some 900 river miles and 6,500 vertical feet from mountain to sea.

The 3 species of wild salmon and steelhead returning to the Upper Salmon are listed as threatened or endangered under the Endangered Species Act to protect critically low populations. Construction of dams and reservoirs on the lower Snake and Columbia rivers has been the primary human-caused factor in their decline, but other factors, including historic overfishing, habitat degradation, and competition with hatchery fish, have contributed to declines. Native resident bull trout in the Upper Salmon River and elsewhere in the Columbia River Basin are also listed as threatened due to habitat degradation and population declines mirroring those of salmon and steelhead.

In the Upper Salmon River Basin, private lands comprise about 90% of occupied salmon habitat, underscoring the importance

# NAMESAKE

of citizen participation in the recovery of salmon and steelhead. The plan for recovery is a collaborative effort based on community problem-solving, support, and participation. Local examples include the establishment of voluntary programs by irrigators and other water users to improve instream flows for salmonids, screening of irrigation diversions to keep fish in stream channels, and the countless fish habitat restoration projects accomplished over nearly two decades. Each of these individual actions removes an obstacle from the path of salmon and steelhead recovery; each action creates a healthier river; each action supports a more sustainable relationship between salmon and our community.



Chinook salmon



sockeye salmon



bull trout



steelhead



# STREAM HEALTH INDICATORS

## HOW HEALTHY IS YOUR STREAM?

**S**tream care starts as simply as watching your stream for signs of distress and keeping tabs on its health. Is your stream clear and cold? Are native species thriving?

With some streams in our watershed, the signs of wear and tear are obvious: they're dammed, or channelized, or piped underground, or clogged with sediments. But with other streams, the clues are harder to discern. The water may flow free and look clean, but it may not support much aquatic life if it's too warm or contaminated

with invisible pollutants, such as metals or pesticides.

You can play a key role in your stream's rejuvenation. Although the water's overall health may be tied to activities far beyond your property boundary, paying attention to the stream's natural tendencies and cooperating with your streamside neighbors can prevent and reduce harm.

How do you know when your stream care efforts are paying off? Check the table of stream health indicators to see how the stream on your land is faring.

## RI-PAR-I-AN:

**T**his is the green zone next to streams and rivers where plants depend on the presence of water and periodic flooding. Riparian areas are integral to the overall health of the entire watershed—they make up 2% of Idaho's landscape, yet support at least 80% of our plant and animal species.

### HEALTHY STREAM

### UNHEALTHY STREAM

#### WATER QUALITY & FLOW

- ▶ Cool, clear water free of contaminants and excess algae
- ▶ Flow cycles that vary with seasons

- ▶ Poor water quality: excessive algae, suspended sediments, contamination from animal waste or sewage, presence of metals or other toxins
- ▶ High water temperature
- ▶ Reduced water flow

#### STREAMBED & BANKS

- ▶ Stable, vegetated banks
- ▶ Minimal erosion
- ▶ Presence of both slow pools and fast water running over shallow, rocky stretches
- ▶ Abundant rock and clean gravel
- ▶ Woody material is present

- ▶ Loss of natural stream channel, or a deeply incised streambed
- ▶ High proportion of crumbling, eroding banks lacking vegetation
- ▶ Stagnant water, absence of pools, riffles, or clean gravel
- ▶ Litter, trash, and other dumped debris

#### VEGETATION & WILDLIFE

- ▶ Abundance of native streamside vegetation of varied age classes
- ▶ Thriving fish, amphibian, and insect populations
- ▶ Cover for small mammals, birds, and other wildlife
- ▶ Leaves, fallen logs, and other natural debris along the streambed and banks that support the aquatic food chain

- ▶ Lack of plant and animal diversity
- ▶ Barren streambanks
- ▶ Invading non-native plants choking out native species in the riparian corridor
- ▶ Diminished or non-existent fish, amphibian, and aquatic insect populations



# HOMESITE PLANNING FOR HEALTHY STREAMS

## BUILDINGS AND ROADS:

**S**treams have work to do. They must transport water and sediment, and to do so effectively they need room to roam. Here's how to protect your home from flooding:

- ▶ Check with your local planning office for floodplain information, maps, and setback requirements before building.
- ▶ Place your home a safe distance from the stream's high water mark and make sure it's out of the floodplain. What is a safe distance? It depends on the size and nature of the waterway and the streambank.

- ▶ Build structures and roads on stable soils away from streams, and avoid steep slopes to prevent road failure and sediment from washing into the stream.
- ▶ Avoid paving surfaces unless absolutely necessary. Pavement prevents rainwater from soaking into the ground and instead adds to runoff, which can increase soil erosion and flooding. Consider permeable alternatives to pavement.
- ▶ Design bridges so they're long enough to provide adequate capacity for flood flows. This will protect the stream channel area, and ensure your bridge lasts longer.
- ▶ Maintain the floodplain in its natural state.



Lemhi River at flood stage. Photo courtesy of Lemhi County Historical Society and Museum

## SOILS, SLOPE, AND RUNOFF:

**H**ome-building can kick up a lot of dirt. And on a day-to-day basis, rain or snowmelt can wash loose topsoil into nearby streams, eroding your property and degrading water quality.

- ▶ Make sure the slope of your building site is not too steep—two to four feet horizontal to one foot vertical is a good rule of thumb.
- ▶ Build around native trees and shrubs as much as possible—particularly native riparian vegetation, which does the best job of stabilizing soils and streambanks.

- ▶ Slow and filter storm water and let it percolate back into the soil by using: straw bale or log barriers, rock ditches, retaining walls, or slope-stepping around your construction site.
- ▶ Install underground drainage to intercept seepage that could cause problems for building foundations.
- ▶ Stabilize eroding soils and unstable slopes by spreading wood chips, mill bark, or straw mulch on bare ground during actual construction, and later by planting native shrubs, grasses, ground cover, and trees.

montana department of natural resources & conservation



## MAKING THE MOST OF YOUR PROPERTY AND YOUR STREAM

**P**erhaps you own a piece of land along a stream and are planning to build the home of your dreams. If that's the case, you have the chance to be "stream smart" from the beginning. It all starts with a comprehensive plan—one that makes sure your homesite avoids flood-prone land, disrupts soil only minimally, controls water runoff, and protects riparian vegetation, wildlife corridors, and wetlands.

# HOME SITE PLANNING FOR HEALTHY STREAMS



montana watercourse

## SEPTICS:

**A** faulty or poorly-placed septic system is a threat to your health and that of your stream. Excess nutrients, such as nitrogen and phosphorus, can leach from overloaded or improperly installed septic drain fields and cause unwanted algae in your waterway. Too much algae can rob the water of life-sustaining oxygen. Algae also makes waters less appealing for recreational use.

- ▶ Apply for a septic permit from the Eastern Idaho Public Health District—it's required by law.
- ▶ Consider replacing your old system with a modern, advanced treatment septic system.

### LEFT:

Building too close to the water's edge threatens both homes and streams.

- ▶ Locate drain fields out of flood-prone areas.
- ▶ Avoid driving or parking over the septic system to prevent soil compaction.
- ▶ Install water-saving showers and toilets.
- ▶ Use only phosphate-free cleaners and detergents.
- ▶ Keep grease, plastics, solvents, and chemicals out of the system. They can destroy friendly bacteria and contaminate groundwater.
- ▶ Do not use garbage disposals. They burden the system with grease and solids.
- ▶ Monitor your septic tank annually and pump it out every three to five years.
- ▶ Avoid septic cleaning additives. They can allow partially broken-up sludge to leave the tank and clog drain lines.

## STABILIZING STREAMBANKS:

**S**ome streambanks erode and shift quite a bit each year. Others only a little, or not at all. Though it's a natural stream process, too much sediment deposition can degrade water quality and aquatic habitat.

The best—and first—defense against eroding banks is to maintain native riparian vegetation. Other low-tech, low-cost, stream friendly options:

- ▶ Plant native shrubs, grasses, sedges, and rushes.
- ▶ Recontour streambanks (permit required) and revegetate with natives.
- ▶ Assess activities that could be harming your streambanks and redirect those activities out of the riparian zone.

### RIGHT:

Rip-rap locks a streambank in place, deflecting water velocity to downstream neighbors.

- ▶ Recruit your neighbors to practice "stream smart" techniques to multiply the benefits of a natural flowing channel.
- ▶ Use natural materials for bank stabilization structures, such as root wads or logs (permit required).
- ▶ Consult a qualified professional listed in the back of this booklet about permit requirements or stream care assistance.



## THE UGLY TRUTH ABOUT RIP-RAP

**A** common response to erosion problems is to armor a streambank with large rock or concrete debris—known as rip-rap. **This is a mistake!** Locking the channel in place with rip-rap only transfers the erosive power of the river—and the problem—to your neighbors downstream.



# STREAM FRIENDLY

## PROTECTING RIPARIAN VALUES FOR PEOPLE, PROPERTY, AND WILDLIFE

If you live along one of Idaho's waterways, your property is likely already home to birds, shrubs, flowers, trees, waterfowl, and other creatures that rely on the land along a stream's edge. These riparian communities are part of a healthy, functioning waterway. Plus, they enhance the aesthetics of your site, increase the value of your property, and save you money on landscaping. Here are some tips on how to protect your investment and these vital streamside lands.

### LEFT:

Riparian areas offer prime habitat for elk and other wildlife.

### RIGHT:

A streambank covered in non-native lawn crumbles into the river.

## RIPARIAN VEGETATION:

Riparian buffers are biological treasure troves. In fact, just about everything you like about these areas - from songbirds to butterflies to big game - depends on leaving them in their natural state.

- ▶ Keep native riparian vegetation in place, particularly along the stream's edge and maintain overhanging streamside shrubs and grasses.
- ▶ Restore riparian areas that were previously cleared by planting natives.
- ▶ Control or eradicate invasive non-native species and weeds.
- ▶ Keep livestock off streambanks with fences.
- ▶ Avoid removing natural debris from riparian areas—the leaves and woody material from native trees and shrubs are the foundation of the food chain.

# LANDSCAPING

## REDUCING EROSION:

When flowing water hits barren streambanks, you'll almost always see erosion. But too much sediment entering the stream can impair water quality, clog up fish spawning gravels, and reduce the volume of pools essential for fish rearing.

- ▶ Keep an eye on lower parts of the streambank. A bank knit together with deep, dense roots and fallen logs is the best defense against excessive undercutting and slumping banks.
- ▶ Replant barren banks or disturbed soils as quickly as possible.
- ▶ Choose a diversity of species for streambank planting and place your plants appropriately by wet and dry sites.



# WHY GREEN ISN'T SO "GREEN"

A blanket of green lawn may look friendly and inviting, but planting traditional suburban grass down to the stream's edge can create a domino effect of problems for your property and your backyard stream.

- ▶ Non-native grasses have shallow roots and can't hold stream banks together as effectively as natives, leading to faster erosion and potential property loss.
- ▶ Lawn-care products typically used on grasses can work their way into your stream, leading to nutrient or pesticide pollution that harms water quality.
- ▶ In the arid Intermountain West, growing a lawn can take a lot of water during the short-but-hot summer months, leaving property owners with a big water bill and potentially leaving nearby streams thirstier.
- ▶ Replacing native vegetation, like willows and cottonwoods, with lawns means less shade for the stream, which leads to higher water temperature that is tough on fish and other aquatic life.
- ▶ Lawns are poor habitat for birds and wildlife, so converting native plants to traditional grass also means a loss of the treasured amenities of streamside living.





# STREAM FRIENDLY LANDSCAPING

## YARD AND PASTURE MAINTENANCE:

**W**hatever you apply to your plants, crops, and soils can work its way into groundwater and seep into streams.

- ▶ Use compost and organic soil amendments.
- ▶ Choose “least-toxic option” pest management materials and approaches. These methods—which integrate biological, mechanical, physical, and chemical methods—are less toxic to aquatic life, humans, pets, wildlife, and beneficial insects.
- ▶ Avoid streamside applications of pesticides, herbicides, and chemical fertilizers and only spot-treat elsewhere.
- ▶ Consult your county weed control office for help treating insect, disease, or weed infestations.
- ▶ Place pruning debris, leaves, and lawn clippings in your compost pile or dispose with a composting program to keep from drifting into streams or storm drains. These materials, even though they are organic, can smother aquatic habitat if dumped into streams.



dale ford

# LANDSCAPING

## COMMON NAME | LATIN NAME

### GRASSES/SEDGES/RUSHES

Baltic rush	<i>Juncus balticus</i>
Beaked sedge	<i>Carex utriculata</i>
Bluejoint	<i>Calamagrostis canadensis</i>
Great Basin wildrye	<i>Leymus cinerius</i>
Tufted hairgrass	<i>Deschampsia caespitosa</i>

### GROUNDCOVER

Creeping Oregon grape	<i>Mahonia repens</i>
Field horsetail	<i>Equisetum arvense</i>
Common monkeyflower	<i>Mimulus guttatus</i>
Virginia strawberry	<i>Fragaria virginiana</i>
Western columbine	<i>Aquilegia formosa</i>
Western yarrow	<i>Achillea millefolium</i>

### SHRUBS

Bebb willow	<i>Salix bebbiana</i>
Blue elderberry	<i>Sambucus cerulia</i>
Booth's willow	<i>Salix boothii</i>
Chokecherry	<i>Prunus virginiana</i>
Coyote willow	<i>Salix exigua</i>
Currant	<i>Ribes species</i>
Red-osier dogwood	<i>Cornus stolonifera</i>
Serviceberry	<i>Amelanchier alnifolia</i>
Snowberry	<i>Symphoricarpos albus</i>
Wood's rose	<i>Rosa woodsii</i>

### TREES

Black cottonwood	<i>Populus balsamifera ssp. trichocarpa</i>
Quaking aspen	<i>Populus tremuloides</i>
Thinleaf alder	<i>Alnus incana</i>
Water birch	<i>Betula occidentalis</i>

Find more on native landscaping at [www.idahonativeplants.com](http://www.idahonativeplants.com)

## NATIVE PLANTS

**T**he native riparian vegetation growing within the Salmon River corridor is adapted to survive the flood conditions and temperature extremes unique to the area. Native plants protect against erosion, recover quickly when waters subside, provide food and shelter for pest-controlling songbirds and insects, and keep soil healthy.

Unlike their exotic counterparts, natives generally need less long-term maintenance to grow healthy and strong. Before planting natives, check with your local county extension service to be sure you're selecting plants appropriate for your specific property.



greg pointer

# ONGOING CARE

## DUMPED DEBRIS:

Some people still view waterways as dumping grounds. Old tires, car parts, and plastic litter inevitably turn up after spring runoff. If left to sit in a stream, this garbage can threaten water quality and create hazards during high water.

- ▶ Remove dumped debris from the stream, and make sure any temporary storage areas are out of the floodplain.
- ▶ Compost your yard clippings and other organic debris. Do not deposit them along streambanks or within floodplains.



## AUTOMOTIVE FLUIDS:

Even in low concentrations, automotive products—such as gasoline, motor oil, antifreeze, battery acid, or other automotive fluids—are extremely toxic to aquatic life.

- ▶ Even “biodegradable” soaps are toxic to fish and wildlife, so car cleaning is best done at commercial car washes.
- ▶ Put used motor oil and antifreeze in sturdy, sealed containers, caps taped down, and recycle through your local collection program or recycling depot. Never dump automotive fluids into a waterway or a storm drain that sends waste directly into the groundwater or stream.
- ▶ Use absorbent materials, such as cat litter, to clean driveway spills. Avoid spraying off spills on paved surfaces where wastewater could run into a storm drain or a stream. Depending on the substance spilled, dispose of absorbent materials in the garbage can or at a hazardous waste collection site.

## LIVESTOCK:

Animal waste adds excessive nutrients and bacterial pollution to water, which decreases water quality and can cause human health problems too.

- ▶ Keep livestock from streambanks by creating wildlife-friendly fencing and providing off-stream watering troughs.
- ▶ Plant and maintain riparian vegetation between pastures and waterways to help filter and minimize high-nutrient runoff.
- ▶ Manage manure by collecting and composting it at least 100 feet away from streams or waterways. Check with your local extension service for advice on composting manure.



## HOUSEHOLD CHEMICALS:

- ▶ Paints, thinners, and other solvents are dangerous to fish, wildlife, pets, and people. Dispose of these products during the annual Hazardous Waste Cleanup Day at the Lemhi County Landfill or Custer County Transfer Station.
- ▶ Use water-based latex paints whenever possible because they are less toxic than oil-based paints, turpentine, and thinners. Clean paint brushes away from gutters, storm drains, or waterways. Air-dry small amounts of leftover latex paints in cans and discard in the garbage.
- ▶ Many soaps and cleaners contain algae-producing phosphates. Check labels and use products with no phosphorus or less than 0.5%.
- ▶ Carpet cleaning chemicals are detrimental to streams. If you use the services of a carpet cleaning company, make sure they dispose of wastewater in an environmentally sound manner.
- ▶ Don't flush prescription medications down the drain or toilet. Dispose of them by placing in a sturdy container, wrap tightly with tape, then place in a trash can where children and pets can't reach them.



# FOR HELP & INFORMATION

You can't put a dollar figure on the value of Idaho's rivers, lakes, and streams. They're priceless. And for that reason, there are numerous resources and experts devoted to helping landowners protect healthy waterways and restore ailing ones. So right from the planning stages of your work, tap into this network of experts. Here are a few contacts to get you started:



## STREAM CARE HELP, PERMITS & RESOURCES

### HOMESITE PLANNING

Custer County Planning & Zoning	879-6894
Eastern Idaho Public Health District – Custer County septic systems	879-2504
Lemhi County Building Dept.	756-2815
Eastern Idaho Public Health District – Lemhi County septic systems	756-2122

### STREAM, WETLAND & FLOODPLAIN PERMITTING

U.S. Army Corps of Engineers – Idaho Falls Field Office	522-1676
Idaho Dept. of Water Resources – Eastern Regional Office	525-7161
Idaho Dept. of Environmental Quality – Idaho Falls Region	528-2650
Idaho Dept. of Lands – Eastern Idaho Area	525-7167
Custer County Planning & Zoning	879-6894

### CONSERVATION RESOURCES

Lemhi Regional Land Trust	940-1425
The Nature Conservancy	788-8988
Salmon Valley Stewardship	756-1686
Trout Unlimited	394-2111

ALL NUMBERS IN THE 208 AREA CODE

### WASTE DISPOSAL

Lemhi County Solid Waste Management	756-6441
Custer County Transfer Station	879-2110

### TECHNICAL & FINANCIAL ASSISTANCE

Bureau of Reclamation	756-6052
Custer Soil & Water Conservation District	879-4428
Custer County Dept. of Noxious Weeds	879-5229
Idaho Dept. of Environmental Quality	528-2650
Idaho Dept. of Fish and Game	756-2271
Idaho Dept. of Water Resources	756-6644
Idaho Governor's Office of Species Conservation	334-2189
Lemhi Soil & Water Conservation District	756-3211
National Marine Fisheries Service – South Idaho Habitat Branch	756-5180
National Marine Fisheries Service:	756-5180 or 756-5105
Natural Resources Conservation Service – Salmon Service Center	756-3211
U.S. Fish & Wildlife Service	756-5162
University of Idaho Extension – Custer County Office	879-2344
University of Idaho Extension - Lemhi County Office	756-2815
Upper Salmon Basin Watershed Program	756-6322

## CONTACTS



# STREAM BASICS

## THE GOAL: A CLEAN AND HEALTHY WATERSHED

Following the basic steps in this guide will lead to clear rewards for your stream and your property. Keeping visual tabs on your stream's health, strategically planning where you place your home, protecting riparian plants, and paying attention to how daily activities impact your stream will benefit the entire Upper Salmon River Watershed.



RIFFLE

STREAMBED

GROUNDWATER

# GLOSSARY

**AQUATIC INVERTEBRATES (macro-invertebrates)** – insects found in the bed of streams and rivers. They are an important food for fish and birds. A diverse abundance of aquatic invertebrates in the stream bed is an indication of good water quality and a healthy stream.

**EROSION** – wearing away of soil or sediment by water, wind, or ice.

**FLOODPLAIN** – land that is covered by flood waters from any source. The 100-year floodplain is land that would be inundated by a "100-year flood," which has a 1% probability of occurring in any given year.

**GROUNDWATER** – underground water found in the spaces and cracks in soil and rocks. It is hydraulically connected to surface water, which means that in many areas, groundwater flows into streams, ponds, and lakes. In certain areas, or during certain seasons, surface water may replenish groundwater, instead of vice versa.

**NUTRIENTS** – nitrogen and phosphorus are nutrients required for aquatic plants like algae to grow. Nutrients come from the decomposition of organic debris. Our Idaho trout streams thrive with very low levels of nutrients and algae. Too much nutrient-rich human and animal waste causes rampant algal growth, which chokes out other forms of aquatic life, like fish.

**ORDINARY HIGH WATER MARK** – this is the highest the water reaches up the stream bank on a typical year, usually during spring run-off. The mark can sometimes be identified by the lack of terrestrial vegetation beneath it.

**PERENNIAL STREAM** – a stream with a distinct channel that flows year-round (or at least 90% of the time). An intermittent stream typically flows part of the year, but may naturally go dry in some reaches during certain times of the year. An ephemeral stream is an indistinct watercourse that flows only after extreme storms or in wet years.

**RIPARIAN AREA** – the green zone adjacent to streams, springs, rivers and wetlands, ponds and lakes where plant communities depend on the presence of water, either continually or during periodic floods. It's the transition zone between the water's edge and the dryer uplands.

**SEDIMENT** – minerals and organic particles (dirt, sand, gravel, decomposed vegetation). In streams, eroded sediment is suspended in water until it is deposited on the bed or banks.

**SURFACE WATER** – water that flows or collects in streams, lakes, and ponds above ground.

**WATERSHED** – the entire drainage area, from ridge-top to ridge-top, of a river or stream, including all its tributaries.



# STREAM BASICS

## THE GOAL: A CLEAN AND HEALTHY WATERSHED

Following the basic steps in this guide will lead to clear rewards for your stream and your property. Keeping visual tabs on your stream's health, strategically planning where you place your home, protecting riparian plants, and paying attention to how daily activities impact your stream will benefit the entire Upper Salmon River Watershed.



## HEALTHY RIPARIAN AREA

Maintaining a healthy riparian area is the key to a healthy stream system. It's also the best investment you can make in your property. That's because lush riparian and wetland vegetation along the water's edge performs all sorts of invaluable services. It slows flood flows, anchors streambanks, and reduces erosion and property loss. It filters out sediments, chemicals, and nutrients from runoff. It provides food and cover for fish, birds, and other wildlife. Plus, it absorbs flows during high water, recharging groundwater and slowly releasing water all year as streamflow.

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**A GUIDE FOR PROPERTY OWNERS OF THE  
UPPER SALMON RIVER WATERSHED**

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