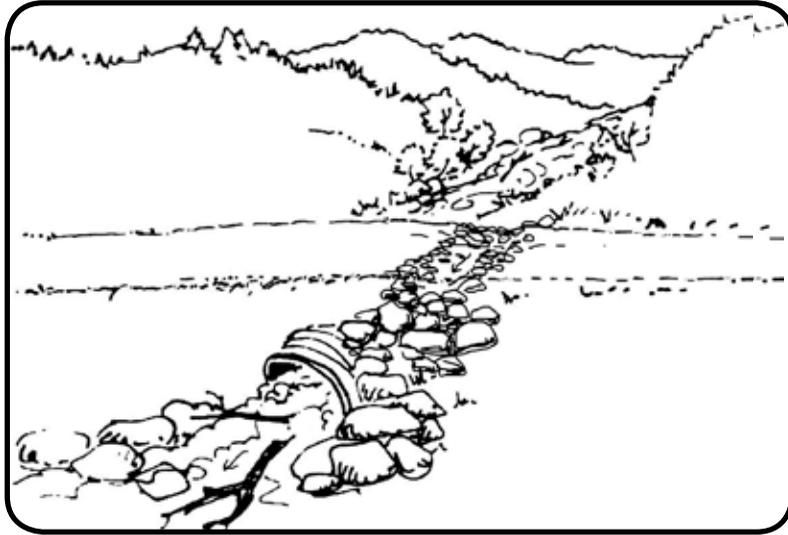
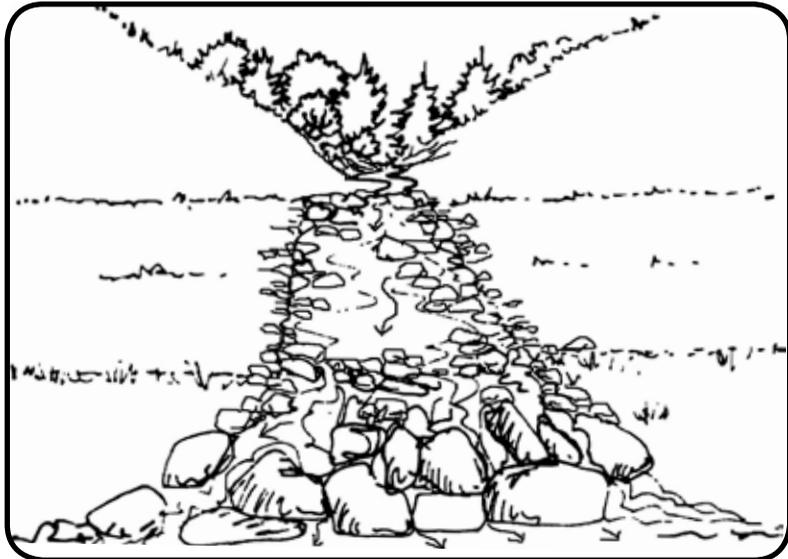


PROPERLY SIZE AND INSTALL CULVERTS



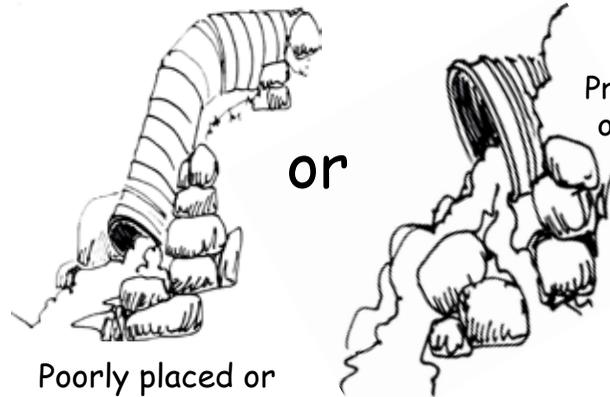
Size for the "Big one" (100 yr. event)!

A pipe must pass water, wood and sediment.
Install pipe at the bottom of and at the same slope
as the natural stream channel.
Keep inlet and channel above pipe cleared.



Consider using low-water, armored crossings and
rolling dips instead of culverts, when appropriate.

If your culverts have a drop or are above the
stream channel, they could be barriers to fish
passage. Consider redesigning problem culverts or
replace them completely with a bridge structure.
Well-designed culverts and bridge structures are
also less likely to blow out during floods.



or

Protect the outlet
of the pipe from
erosion by
armoring fill
or
extending it.

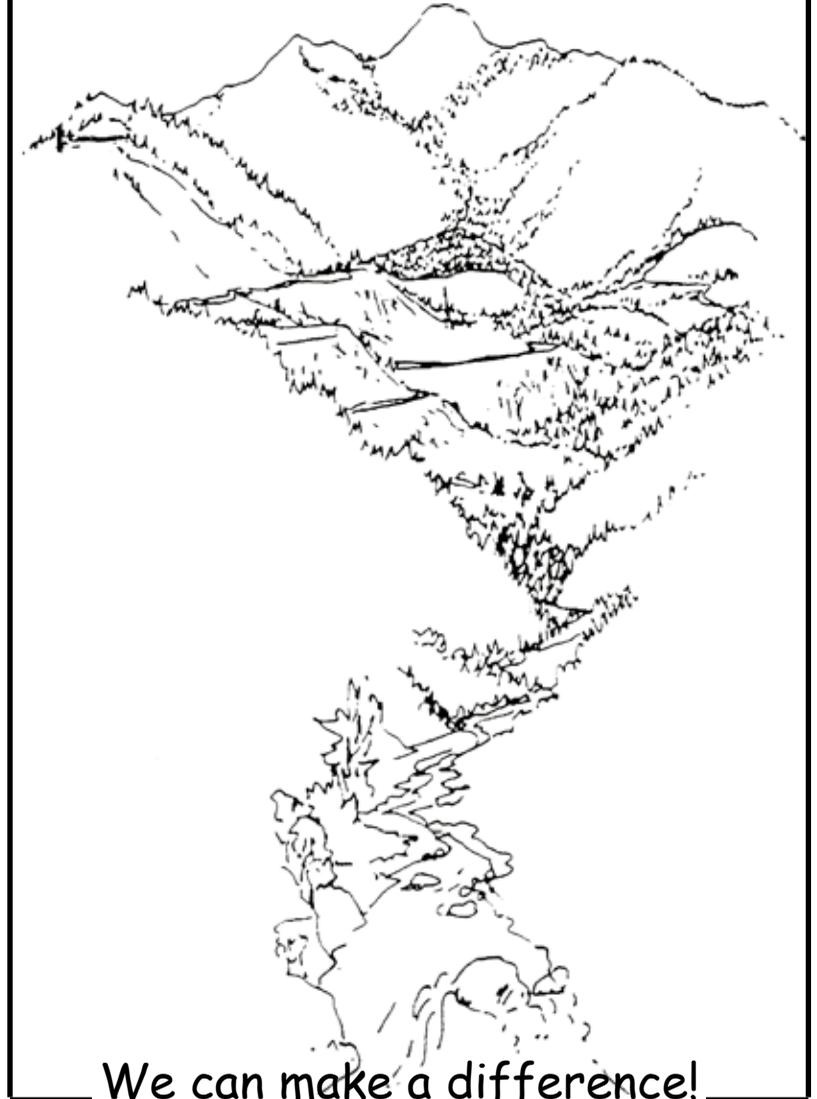
Poorly placed or
maintained forest roads can be a major source of
sediment. Mud from runoff or washouts can destroy
spawning beds and kill older fish as well. Make sure
your road drainage systems are working properly. If
you don't really need that road anymore, consider
putting it "to bed."

Stay on Top of it!
Get to know your road.
Walk it in a storm event
with your shovel.
Nip problems in the bud.



Safe for aquatic life="Hydrologically Invisible"=
Storm-proofed + Safe for humans

SAFE ROADS



We can make a difference!

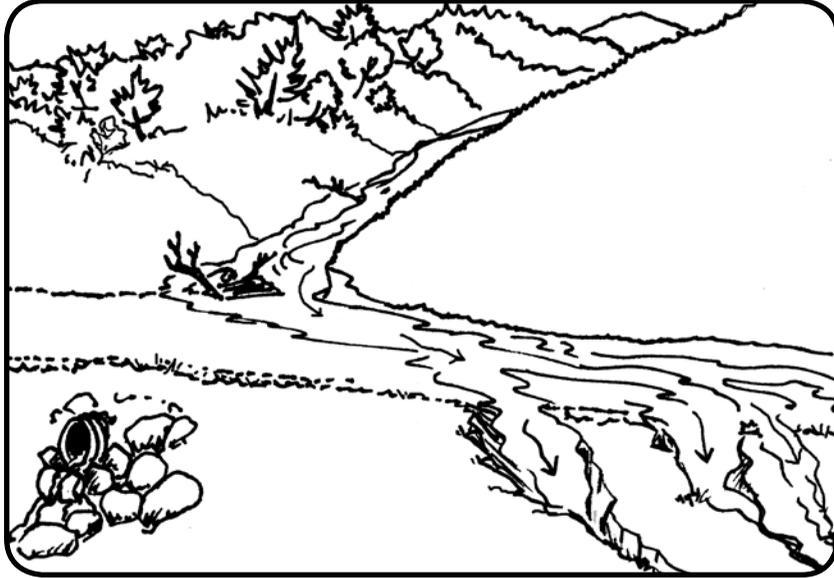


Salmon River Restoration Council
PO Box 1089 • 25631 Sawyers Bar RD
Sawyers Bar, California 96027
530-462-4665 Fax 530-462-4664
e-mail: Info@srrc.org
website: www.srrc.org

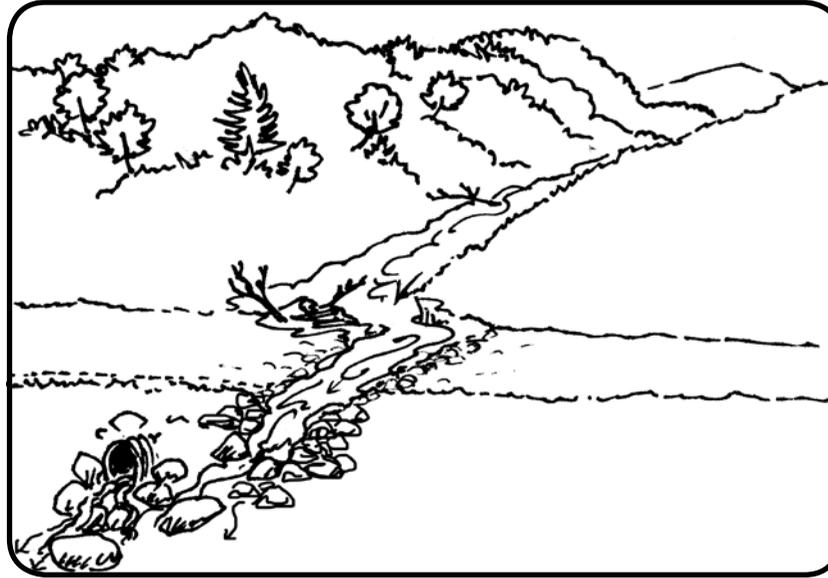
with support from CA Dept of Fish & Game and
US Dept of Fish & Wildlife



KEEP WATER FLOWING IN ITS NATURAL COURSE

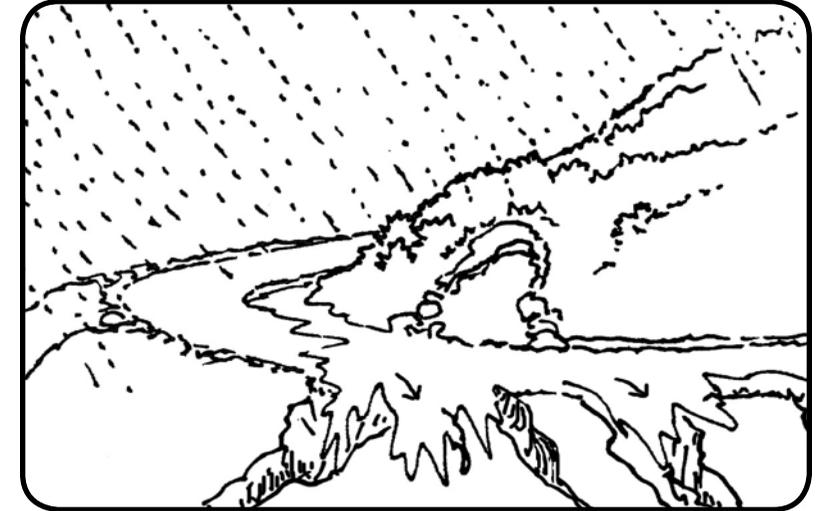


If the culvert plugs at a stream crossing without a critical dip, water diverts down the road.



Prevent diversion potential at all crossings with a critical dip.

Outslope road whenever possible

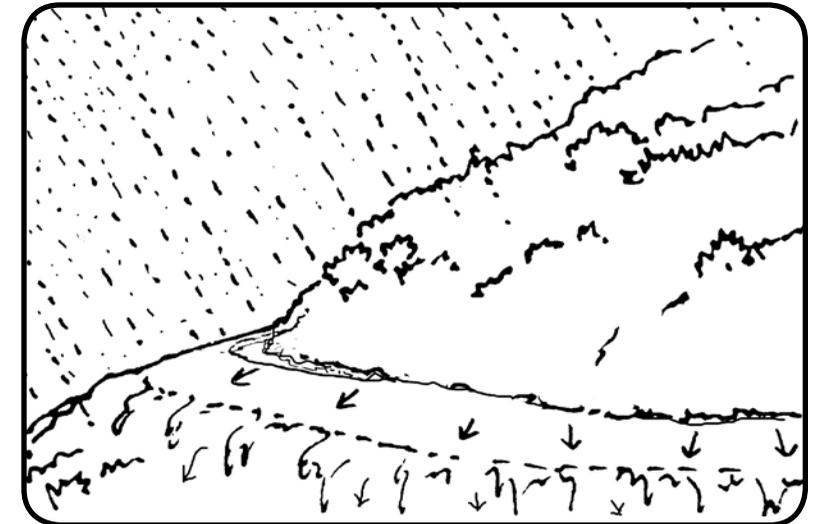


Plugged inboard ditch creates problems.

BREAK UP COLLECTION POTENTIAL



Provide frequent ditch relief with x-drains or rolling dips. Place outlets in natural drainages if possible. Road building or other construction near a stream, river or estuary can create serious fish habitat damage if the work is not done properly.



Outsloped road provides natural drainage. Avoid operating heavy equipment in streams. Bulldozers or heavy trucks can ruin spawning beds, create sediment problems, and cause long-term damage to a stream.