River Safety Council

The River Safety Council is comprised of recreational river users who spend a great deal of time on a number of rivers and are aware of the dangers. Many river users, however, are inexperienced and lack the judgment to know and avoid the hazards. Many of these inexperienced river users are juveniles on flimsy craft. It is for that reason that we believe that construction and projects in our rivers must take public safety into account.

We urge you to consider the following:

Placement of large woody debris, and LWD construction for fish habitat restoration can and should be required to be constructed so as not to endanger the public. Nor should dangerous public construction result in depriving river users of the recreational opportunities afforded by our many fine rivers and streams.

Make instream construction safer

We believe it is not only possible, but relatively straightforward to build projects in rivers that protect banks, provide wood complexity to enhance fisheries, and ensure public safety. This may entail using rock for the structure and wood for the fish enhancement in another, safer location.

In many or most cases, mitigation in rivers for fish can be placed directly across the river from the structures that are being built to prevent or repair damage to levees on the outside bend of a river.

Identify the hazards

Hazardous types of construction

Use of LWD should not include:

- Structures that have openings large enough to entrap hands or feet
- Rootwads and brush in places that the current allows them to function as a sieve or strainer, or close enough to the main current that they snare people and objects
- Wood set adrift by unsecured dumping. It should be placed and anchored where it is desired so it doesn't endanger river users, levees and other construction.

Hazardous locations

Placement of rough, sharp or porous LWD or other construction material should be specifically excluded from:

- Outside of bends where the river current may push users into structures
- Projects in or immediately adjacent to the main current of straight stretches, or other locations in the current where river users may be swept into the project
- In restricted channels
- In canyons or other areas where egress is difficult or impossible
- Overhanging a stream or at a level that would pose a threat to river users swept under it
- Projects that impact a significant portion of the river channel

- Sequential projects where the combined effect exceeds the individual risk

Safer locations for LWD placement:

- The inside of river bends where the current is slow
- In eddies and slack water where the current is slow
- Behind large obstacles that deflect the current
- In shallow side channels

Safer techniques:

- Shield LWD with deflector rock or smooth wood in front of entangling wood.
- Pull the ends of the rootwads and LWD significantly closer to the bank behind the deflector so tendrils don't snare anyone or anything in the current
- Deflector rocks or wood should be high enough to break the surface of the water to prevent inadvertent public exposure to the project

Rivers and streams affected

Safety measures should apply to any stream or creek with an appreciable current flow without regard to known use by river users. The extent of river usage can never be fully known. However, often inexperienced youth on inner tubes and other minimal floatation devices are frequent users of our streams throughout the state.

Design requirements

Projects should be designed, and installed under the supervision of licensed engineers who have a professional requirement for public safety.

Furthermore, a project designed by licensed engineers should not be modified by non-engineering licensed individuals who have no legal requirement for public safety. All modifications to a project should be approved by the responsible design engineer or another licensed engineer with competency specific to the type of project.

Monitor regularly and modify existing projects as necessary

A large number of existing projects in rivers, both with and without LWD, were constructed in rivers in prior years and remain a risk significant risk to river users. Some of these projects were constructed in dangerous locations, and with dangerous characteristics. Others became dangerous over time as water shifted the channel or the wood. Cabled logs are particularly hazardous as cables can break, or partially break, setting adrift entire log structures and entangling cables.

Adopt best practices

Adopt appropriate standards, such as the Natural Resource Conservation Service, National Engineering Handbook, Part 654, Stream Restoration Design, Technical Supplement 14J, which recommends limits on wood structures in streams with gradient similar to many of those in Western Washington.

Require all construction within the jurisdiction to the meet the same standards

A protocol for construction in rivers that does not pose a threat to the public should be developed, and applied to all projects, by all entities, within the jurisdiction. Existing projects should be brought up to the same standard.

We appreciate your attention to these considerations.

Judith Fillips, Chair
River Safety Council