PRIMARY USE: Improve habitat for aquatic plants and animals.
ADDITIONAL USES: Increase channel depth and flow velocity.

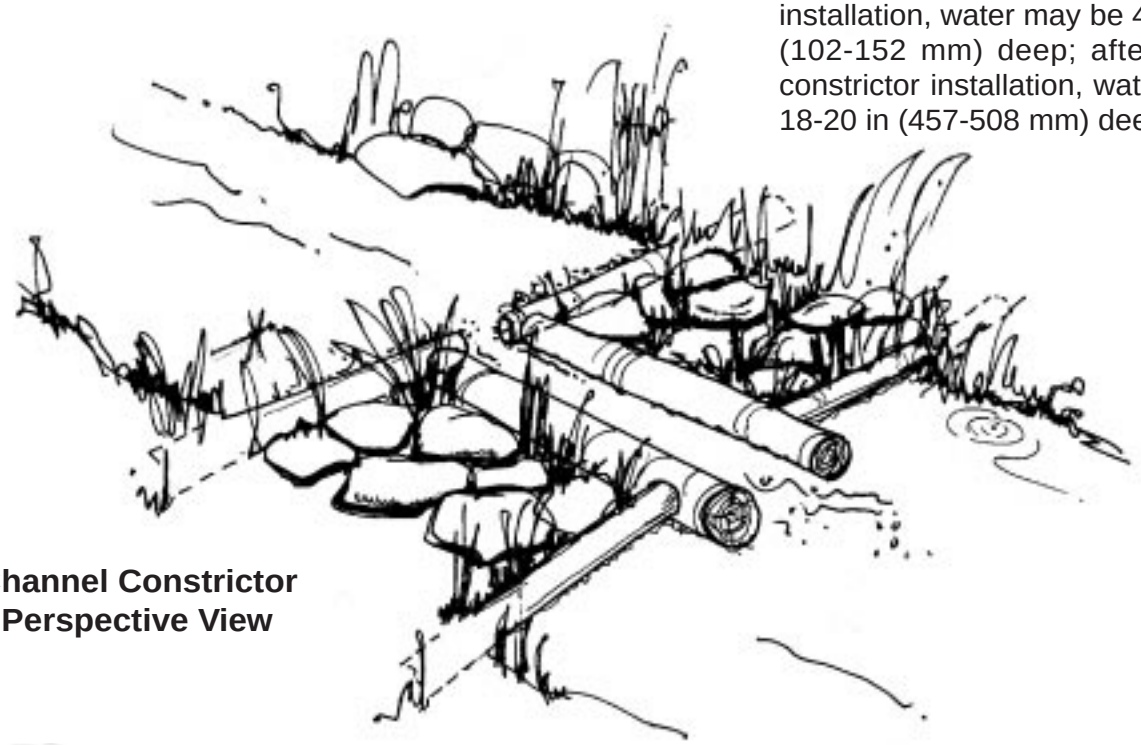
CHANNEL CONSTRICTOR

What is it? This is a means of narrowing a long, straight, low-gradient section of a stream; it can also be a modified deflector designed to add overhead cover.

Purpose

The force of the water is increased, sediment deposition is virtually eliminated, and the channel is deepened. Channel constrictors provide more extensive overhead cover than do conventional deflectors.

Note: Before channel constrictor installation, water may be 4-6 in (102-152 mm) deep; after channel constrictor installation, water may be 18-20 in (457-508 mm) deep.



Channel Constrictor Perspective View

Limitations

Considerable experience is needed to install these structures properly. In most cases, failure has resulted from being too conservative when constricting the stream channel, and from placing the channel constrictor in reaches that are too steep.

Materials

Rough, crooked logs from 10-30 ft (3-9 m) long (depending on the specific requirements of the project) with as large a diameter as possible. Additional logs to brace the main log and rebar are also necessary.

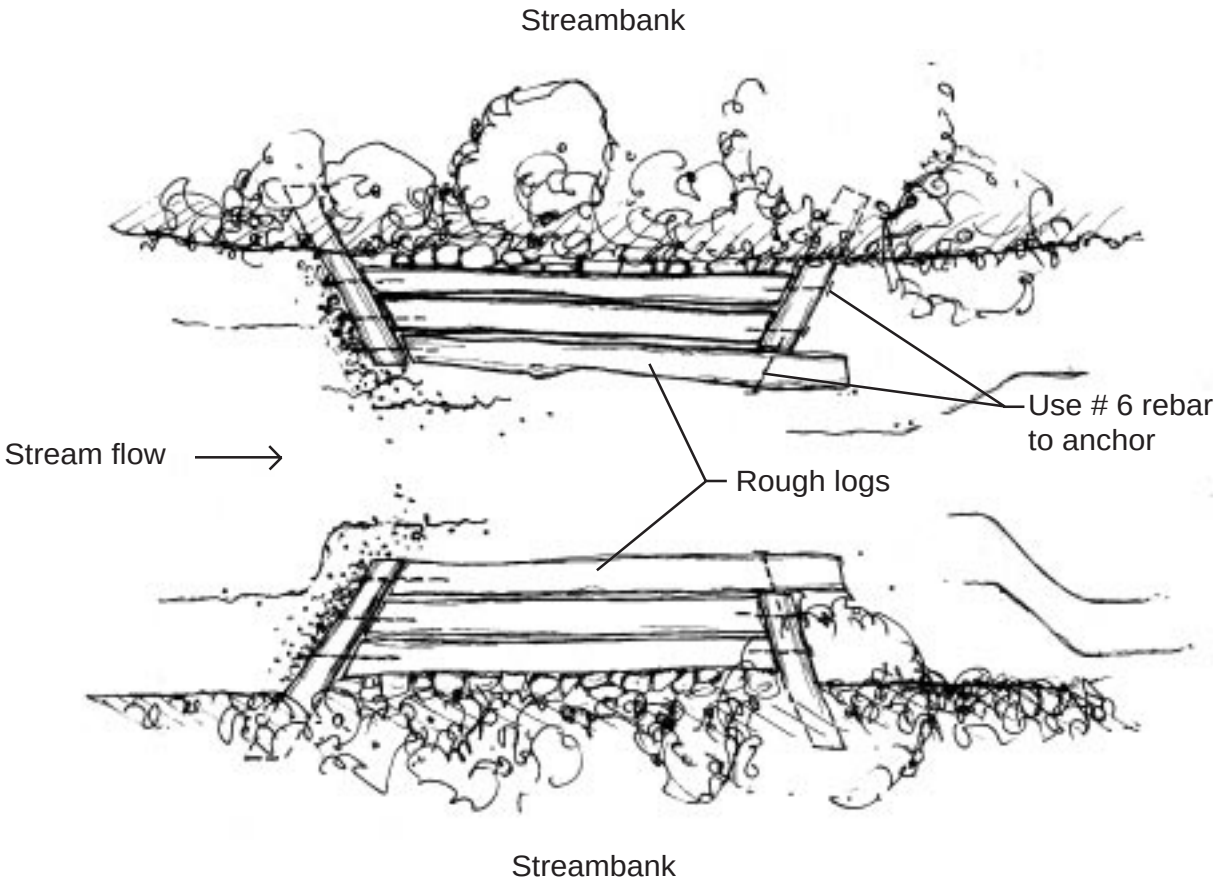
Installation

Install channel constrictors alone or in pairs. Each structure consists of a main channel log and two brace logs. Place the main log at a slight angle to flow. Pin at least two brace logs to it at a 45 degree angle. Reduce channel width by 70 to 80% between the two main logs (where two structures are paired opposite). Allow slightly less distance between the lower ends than the upper ends. Where banks are unstable, it is critical to keep structure profiles as low as possible.

Source: Stream Habitat Improvement Handbook, USFS.

CHANNEL CONSTRICTOR

Additional Drawings:



Channel Constrictor
Plan View