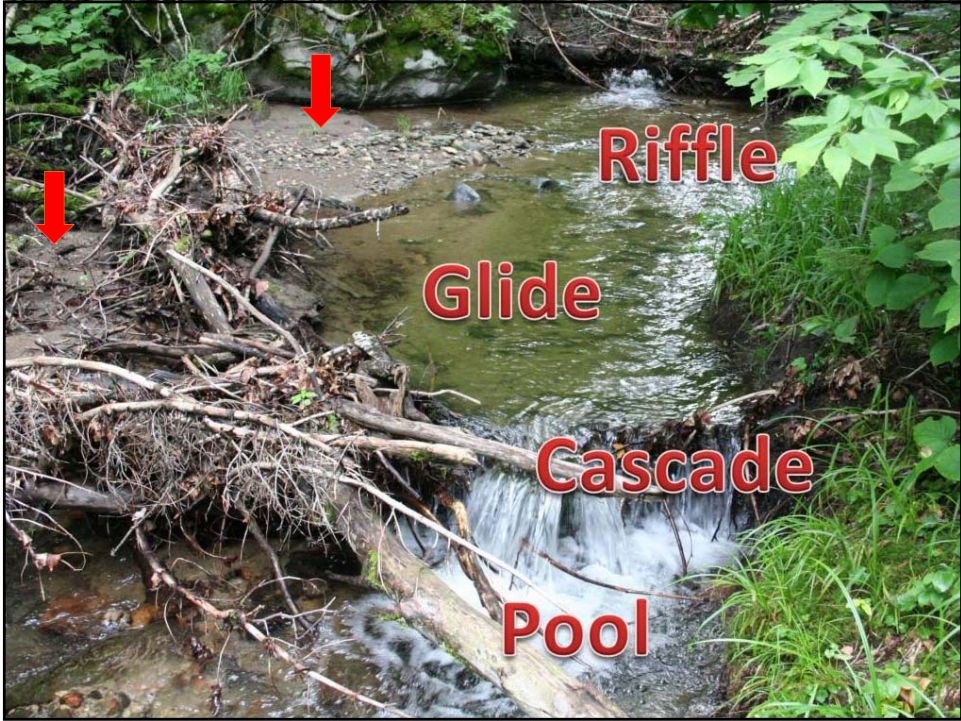


# Adding Wood to Streams in NH

Natural Resources Conservation Service  
Stream Habitat Improvement 395

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USDA-NRCS











What is downstream





## NRCS Guidance


### Ecology, stream evaluation, tips

USDA  
United States Department of Agriculture  
Natural Resources Conservation Service

**Guidelines for Wood Additions to First and Second Order Streams**

**Introduction**

A lack of woody biomass in Northeast streams is due primarily to the lack of old trees in riparian areas which die and fall into streams naturally. State laws prohibit loggers from leaving woody biomass in streams or on floodplains within 50 feet of perennial streams. Additionally, culverts and other infrastructure collect wood and are cleaned out seasonally further reducing the amount of wood in streams and on floodplains. Woody biomass in streams creates several key ecological feedbacks, which are important for the larger watershed. This guide presents an overview of the environmental benefits from adding woody biomass to first and second order streams, baselines for evaluating stream condition, site selection, permitting, risk assessment, and tips for successful installation.



**Above:** A section of stream which lacks woody material and as a result the stream lacks pools, riffles, and cascades.

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### Standalone step by step 'how to'

USDA  
United States Department of Agriculture  
Natural Resources Conservation Service

**Practical Guide to Adding Wood to Streams in NH**

The purpose of this guide is to provide easy to understand objectives, photos, and diagrams for adding wood to streams. The goal of this work is to restore a natural level of large wood to the channel without forcing the stream to cut a new channel. This will make fish habitat and improve water quality.

**How much wood to add?**

Existing wood in streams can make critical habitat of pools, riffles, glides and cascades. How much wood to add, depends on how much is already there. As a target benchmark, each 100 ft length should have at least 4 pieces of large wood that create 2-4 locations of these critical habitats. For example, if there is already one nice pool formed by secure wood, then you may add wood in 2-3 locations. If there are none, it makes sense to add more wood to eventually create these pools, riffles and cascades. Below are guidelines to help direct work. See the diagrams at the end of this guide.

**Break the stream into 100 ft lengths and create habitat with some combination of:**

- 1-2 locations with logs/tree in B orientation (perpendicular to stream channel) creating a cascade/pool. If needed, a log on top to secure it.
- 1-2 locations with criss-crossed logs with several branches to accumulate leaves and provide insect habitat; this also creates a pool.

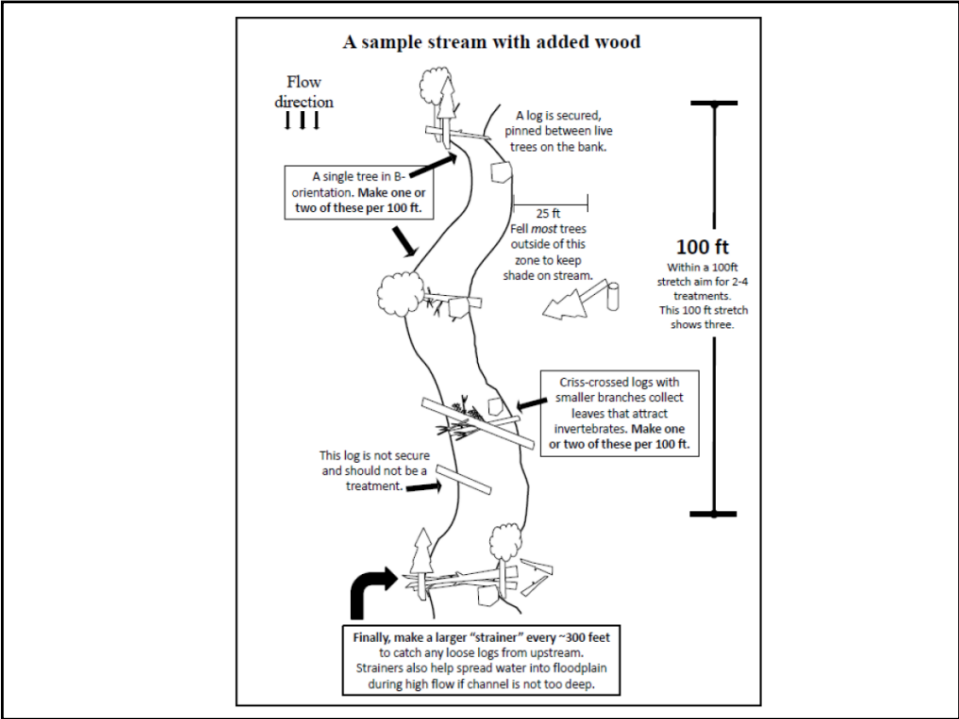
## So, how much wood to add?

Per 100 ft length at least 4 pieces of large wood that create 2-4 locations of these critical habitats.

For example, if there is already one nice pool formed by secure wood, then you may add wood in 2-3 locations. If there are none, it makes sense to add more wood to eventually create these pools, riffles and cascades.

Every 300 feet place a larger 'strainer' to catch loose pieces









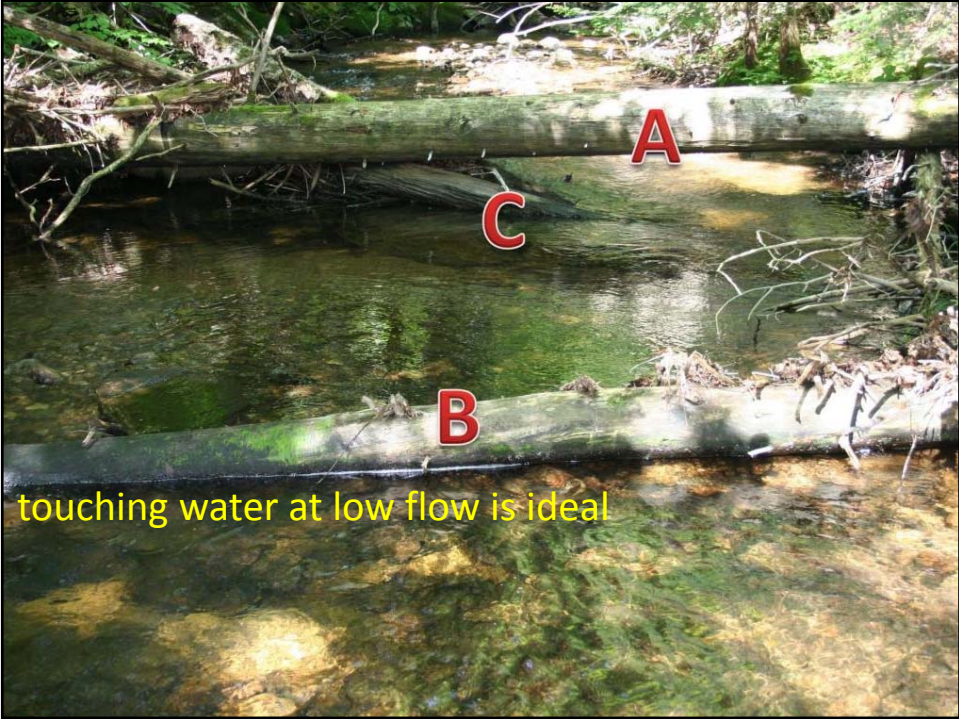
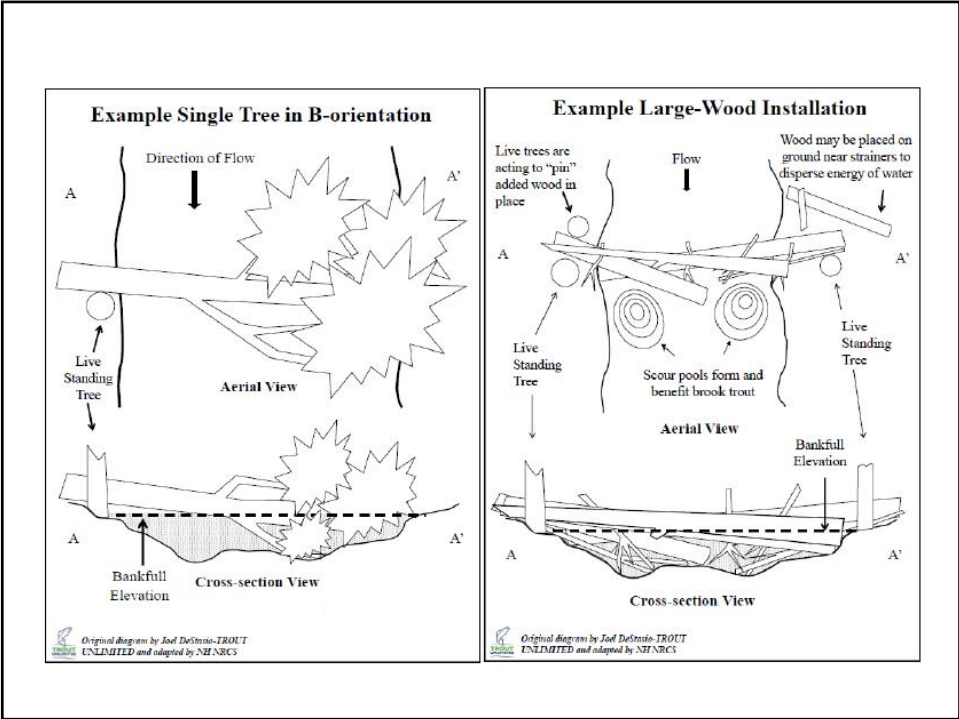





Photo of winching log into B orientation- perpendicular to channel and at a natural bend



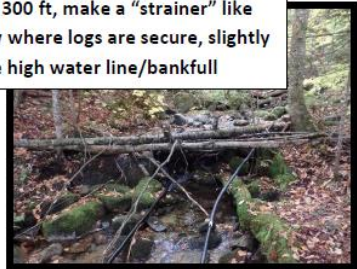
A treatment location with 2 logs and some branches will accumulate leaves and attract invertebrates



Here, a pool has formed and a cascade has developed over the log, oxygenating the water



Every 300 ft, make a "strainer" like below where logs are secure, slightly above high water line/bankfull



## Important to consider

**Secure the wood**

**Consider downstream**

**Pick suitable trees**

**Protect buffer**

**Protect habitat (timing)**