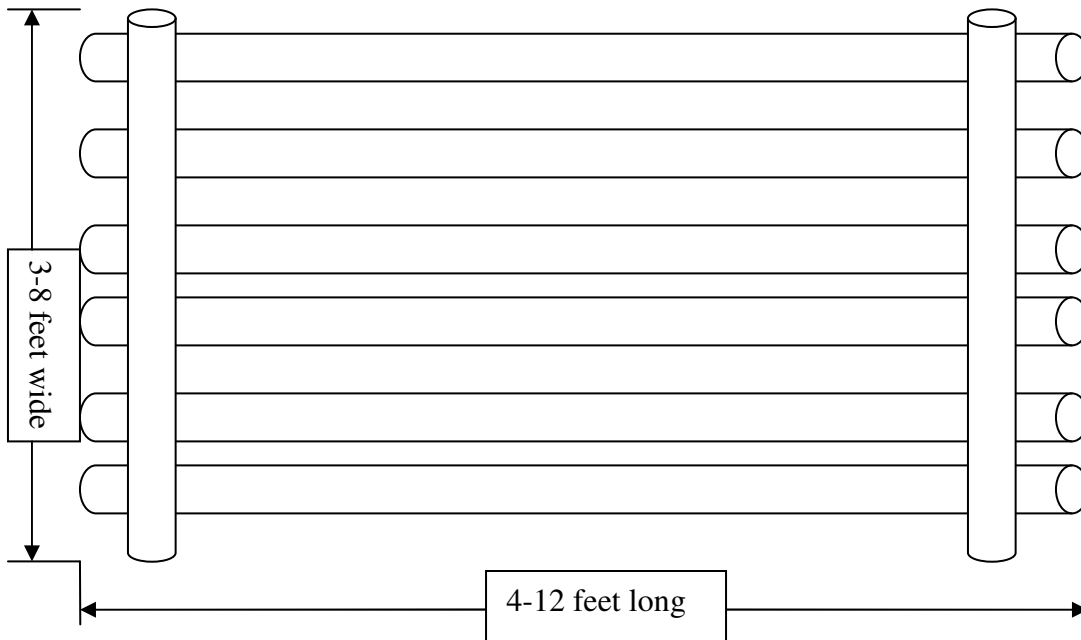


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“Log Cabin” Side View

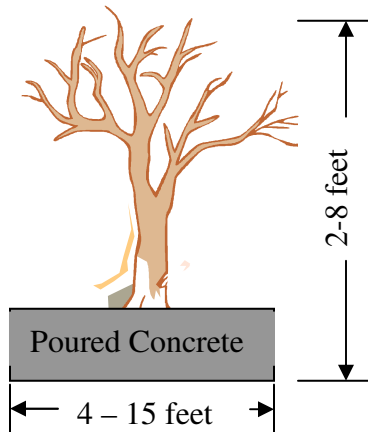


Top View



The “log cabin” will be made of logs, preferably cedar or hardwoods, stacked as shown and lashed together with natural hemp-based rope. The top layer, which forms the roof of the cabin, may be made of slab wood. Concrete blocks and/or bags of rocks can be placed on top of the cabin, slid over the ends of the logs or tied to the cabin with ropes. The interior of the cabin can be filled with brush to provide better cover for small fish.

Natural Trees and Tree Parts



Tree Tops, Poured in Concrete

Sections of whole trees can be cut out and the base poured into concrete. Cedar trees may work best for this as they often have more dense branches and will not decay as quickly as some others. Several hardwood limbs could also be used in this fashion.



Stumps

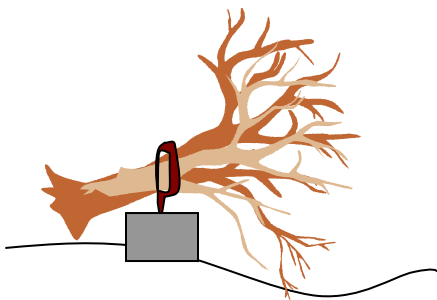
Natural stumps of varying sizes will be used when available. They will be weighted down with concrete and/or burlap bags filled with rocks. They will be secured to the weights with natural hemp-based rope.

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Log Piles

Hardwood logs can be piled so as to provide cover. They will be weighted down with concrete and rocks in bags and secured to each other and/or to the weights with natural hemp-based rope. Species, length and diameter of the logs, as well as the number of logs per pile will vary for each reef.



Trees, Likely Fruit Trees, Lying on Their Side

Especially if we have access to disposed fruit trees, this is an appealing option. Trees could be weighted with concrete or rocks in bags which are tied around the stem of the tree. Root systems will be intact whenever possible. Size will vary. Several trees will be placed in a group to create a reef.

The Slab-Wood Tree



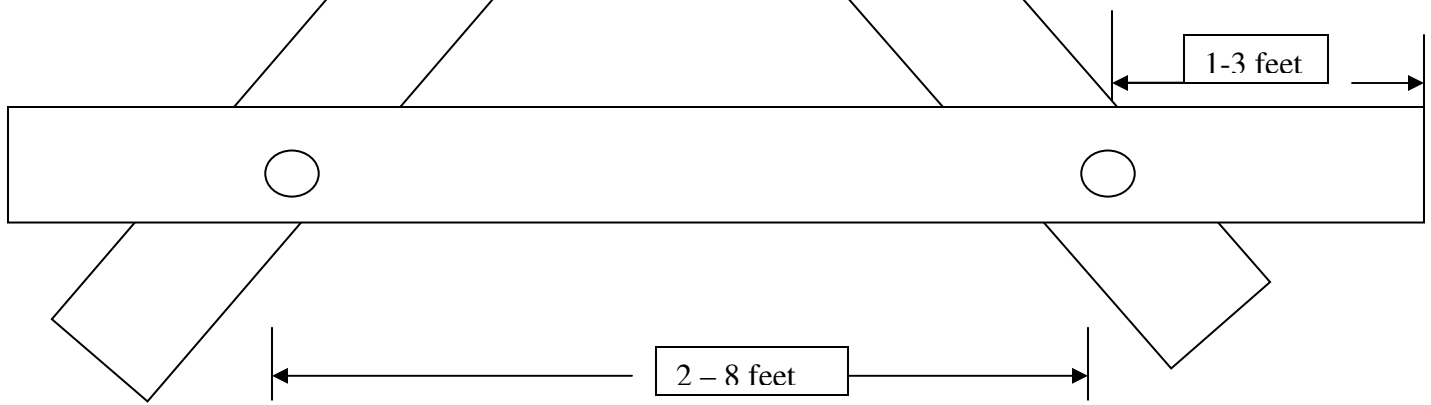
The Slab-Wood “Tree” is made by drilling a 3” hole in several pieces of slab-wood that have been cut to a length of 3 – 6 feet. These individual pieces are then placed over a 20 – 48 inch section of cedar post which has been poured into a concrete slab. After all of the pieces have been placed onto the post a dowel or piece of rope is placed through the hole in the top of the post to secure the slabs in place. The tree can be assembled on location on the deck of a pontoon boat or other vessel, tipped over the side and gently lowered into place with a rope from the boat to install. These “trees” could also be used in shallower water, down to about 8 feet and still maintain a minimum of 5 feet of clear water above them. Fish Habitat Improvement

The Triangle Stack

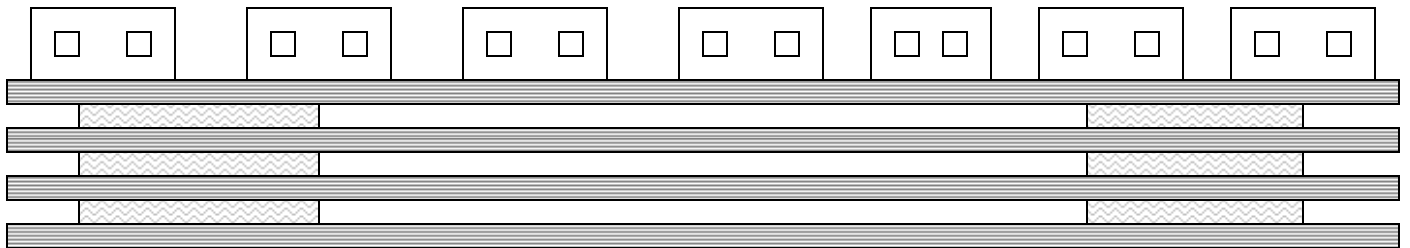
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Plan or Top View

3/4" or 1" holes,
typical



Side Elevation



6-12' long pieces of slab wood, 1" or 3/4" holes drilled approx. 1/4 of the length of a board in from each end, leaving a length of approx. 1/2 the length of the board between the holes. The distance between all holes for a given structure must be consistent. Natural, hemp-based rope will be threaded up through the holes at each intersection to secure the pieces together. These can be assembled in shallow water and towed to the site. At the site, enough weights can be added to sink it. It can then be lowered to the bottom with ropes held by people in the boat. This design will be very stable and creates many hiding spaces. It is suggested that the top row of slabs be placed with the flat side up so concrete blocks can more easily be lashed on top of them. This way the pile is more likely to remain intact even after the ropes decay. This will require care while lowering the unit to keep it oriented with the blocks on the top.