



Fish Condos **Window into Underwater World**

A clothes hamper, some PVC pipes and a brick don't seem to have much in common with fish, but if you combine them correctly they can make a perfect habitat and a window into the underwater world. The middle school students enrolled in our SeaQuest program combine those elements to make a fish condo that is submerged in local waters and then inspected on a regular basis to watch as fish, invertebrates, and plant life colonize the new habitat. This is a project that any class, scout troop, or environmental club can do with adult supervision if they have access to a nearby river or bay.



Some winter residents of our Sandy Hook based condo

Building Your Condo: Building a fish condo is simple. It can be done in about an hour, depending on how well organized your group is. You will use some power and cutting tools so adult supervision is **REQUIRED**. We have provided a materials list and directions at the end of this article.

Deploying Your Condo: The most important success factor is the location of your fish condo. Here are important things to consider that we have learned from our experiences:

1. Accessibility – you must have permission of the property owner to secure the fish condo to

their dock, landing, bridge or other structure. They must be willing to allow your group to come on the premises to monitor the condo on a periodic basis. It's best to get this permission in writing before you begin the project.

2. Stability – there must be a stable structure to which you can tether your fish condo. It must be stable enough to withstand stormy weather and changing tides. We lost one of our early condos to a storm.

3. Security – choose a spot that will be relatively safe from intruders. We had one condo stolen.

4. Depth of Water: The water must be deep enough so the condo will remain submerged at low tide lest some condo residents become trapped out of water at low tide and die.

5. Length of Rope: About 12-15 feet of rope should be enough to make sure you can tie it securely to a structure and then have the condo hang far enough under water to stay submerged at low tide. Make sure you use marine rope or it will deteriorate over time.

Monitoring Your Condo: Once the condo is in the water, you should set up a monitoring schedule and a way to document its progress. We generally pull the condo up on at least a monthly basis, weather permitting and photograph what we can. In our SeaQuest program, this is one activity among many, so our monitoring tends to be more informal and anecdotal. We want our students to experience the progress each time. It is amazing the difference in what moves into our condo and what grows on the outside. Results vary in different locations around the state and with different seasons. We have seen rapid colonization by mussels, tropical butterfly fish, sea squirts, eels, and many varieties of crabs and fish. Most recently, we had a sea star, waved whelk and a full 5-6 inches of small shrimp filling the bottom of the condo.

Sharing Your Results: Where ever you decide to place your condo, we'd love to post your results on our web page. Send photos and field notes to our education director, Jim Peck at jim@littoralsociety.org. Include the name of your group, dates, location, how frequently you monitored your condo and interesting finds.



Inside of condo with wire mesh installed

Materials List:

- Plastic clothes hamper (with a top) about three feet high. Best to find one with round holes on the sides. You don't want holes in the bottom or about 5-6 inches up on the sides as things will drain out when you lift it out of the water.
- Various sizes of PVC pipe to put in the bottom of the hamper for fish to live in.
- A brick or rock for weight.
- Marine rope to tie the condo to a structure.
- Plastic ties to hold the top in place.
- Wire mesh with $\frac{1}{4}$ inch openings (called wire cloth in hardware stores).
- Tools
 - Electric drill with about a $\frac{1}{4}$ inch bit
 - Tin snips to cut the wire mesh
 - Utility knife to cut holes in side of hamper

Assembly Instructions:

- Use the utility knife to cut a couple of holes in the sides of the hamper that are bigger than the ones it came with. This will allow larger marine life to enter.

- Use the tin snips to cut a strip of wire mesh about 7 inches wide and line the inside perimeter of the bottom of the condo with it. Hold it in place using the plastic ties that can either go through the existing holes in the hamper or use the drill to make some small new holes. Run the ties through the condo, around the mesh and then back out before hooking the tie. Do this all around the bottom perimeter.
- Put the lengths PVC pipe and brick inside the hamper. Pipe can be put in a random fashion.
- Drill a hole at the top of the hamper in each corner, and in the corners of the top so 4 plastic ties can be used to secure the top so it won't get lost in the water. These ties will be cut and replaced each time you pull the condo up to examine it.
- Tie a rope to the hamper near the top so it remains upright when lifted.



Outside of condo with pipes installed