

Oak Glen Pipeline
Release Incident

APPENDIX

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Salamander Larvae Monitoring Trap
Design

Appendix A: Artificial Habitat Method for Salamander Sampling:

Building the Artificial Habitat:

Materials:

1. Dishwashing rack (Ensure that it is made of inert materials and recommended size is a length of 30cm, width of 20cm, and a height of 9cm)
2. Window mesh (Charcoal fiberglass screen mesh, 20 feet)
3. 1 Tempered Hardboard (3/16 inches, 8 feet by 8 feet)
4. PVC Pegs *Optional* (3/4 inch)
5. Inert 12 inch stakes (4 per hotel)
6. Zip-ties
7. 1ft by 2 ft by 0.5 inch Rubber-made container

Procedure (15 minutes per hotel):

1. Cut window mesh to cover the inside of the dishwashing rack completely.
2. Zip-tie window mesh to the inside of the dishwashing rack and ensure that no holes are present.
3. Cut tempered hardboard to fit as shelving units in the inside of the dishwashing rack. Each hotel should have between 2-3 shelving units.
4. *Optional:* Glue PVC pegs on each corner of the tempered hardboard to help the shelving stay upright.

Sampling the Artificial Habitat:

Setting Up the Hotel (5-10 minutes per hotel):

Description: When sampling a headwater stream, look for areas with cobble and gravel present.

These areas will usually have higher populations of salamanders present. While salamanders

will colonize hotels after 24 hours, it is recommended that the hotels remain in the water for 3-5 days before sampling.

1. Place 300 mL of gravel from the stream bed onto 2-3 shelves. Place one shelf with no gravel on top of the shelves.
2. Stack the shelves within the hotel.
3. Place the hotel apparatus facing upstream so water flows through the hotel.
4. Bury the bottom of the hotel slightly into the bottom of the stream to avoid salamanders swimming underneath the hotel.
5. If needed, stake the hotel down into the stream bed using an inert stakes and zip-ties.
6. Add rocks and leaf litter atop the hotel to help hotel blend into the natural environment.

Sampling the Hotel Apparatus (10-15 minutes per hotel)

1. Start at the most downstream hotel to ensure the habitat is not disturbed. Approach the hotel and tip it backwards so that the contents/organisms fall to the back.
2. Immediately place the hotel in clear plastic rubber-made bin to help no salamander escape.
3. Slowly take out each shelving unit and sort through the gravel carefully.
4. Examine the leftover contents in the hotel. Most likely the salamanders have fallen backwards and are sitting on the window mesh hidden beneath rocks that have fallen off the shelves.
5. Drain excess water through a small sieve to ensure no salamanders are missed.
6. Record the species and life stage of every salamander found.
7. Repeat the process with the next downstream hotel.

Pictures for Reference





