

or at right angles to the shore, off peninsulas, or in shallow bays where small fish gather. Support traps and wings with poles or iron reinforcing rods driven into the bed. Up to 10 traps per acre (25 per hectare) may be needed.

For panfish thinning, remove the same amounts and sizes of fish as described in the section on seining. Take fish out of traps daily. Otherwise, turtles may be attracted and eat the desirable fish.

Gauze bags of bait, such as bread, oatmeal, soybean cake, or cottage cheese, can be hung in traps to increase catch, but aren't necessary.

Fish Toxicants

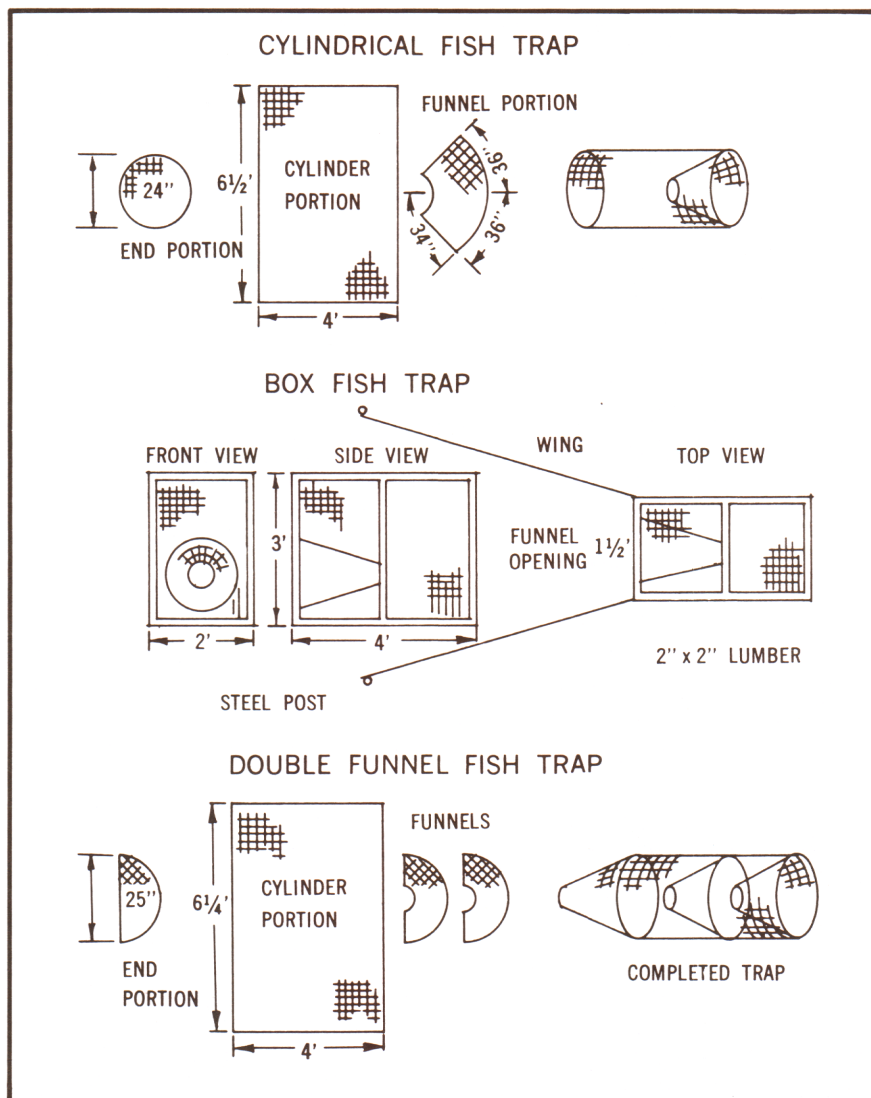
Perhaps the best method of "reclaiming" ponds from panfish overpopulation or presence of undesirable fishes is to kill all fish with a chemical especially formulated to be a fish toxicant* or "piscicide." Then start anew by stocking a suitable population after the water has detoxified.

"Partial treatments" to remove only certain species or sizes of fish, or to merely reduce rather than eradicate the population, can be done by applying special dosages or by treating only small parts of a large pond at one time. Partial treatments are usually very difficult.

Only two chemicals, **rotenone** and **antimycin**, are now legally registered for use as fish toxicants. Federal law requires that only legally registered fish toxicants be used—and that they be applied strictly in accordance with instructions on the product label. Only certified aquatic pesticide applicators can apply piscicides in Michigan. Lists of certified aquatic pesticide applicators can be obtained from the Michigan Department of Agriculture, Pesticide and Plant Management Division, P.O. Box 30017, Lansing, MI 48909.

The amount of toxicant needed for total removal of fish may depend on several factors, including the kind(s) of fish to be killed, pond

*The chemical is absorbed into the fish's gills and kills by interfering with respiration. This does *not* mean that the pond is made poisonous for humans, for any vertebrate animals other than fish, or for more invertebrates when used at the dosages prescribed for killing fish.



Fish trap construction.

volume water temperature, water hardness, light conditions, abundance of aquatic plants, and amount of other organic matter present. Correct application of fish toxicants is difficult.

A **special permit** is required before applying a fish toxicant to any pond. Contact the DNR District Fisheries biologist to learn how to obtain the permit. If the pond has an outlet, special care must be taken to insure that fish aren't killed downstream. The person who applies the toxicant is legally and financially responsible for fish killed beyond

the limits of the pond. For more information, contact the Michigan DNR District Fisheries Biologist.