

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE SPECIFICATION**

FISH RACEWAY OR TANK

CODE 398

SPECIFICATIONS

CLEARING

All trees, brush, other woody material, loose boulders, and other debris shall be cleared from the areas where the raceway or tank is to be constructed as well as all areas where fill is to be placed for dikes and levees. If needed to establish vegetation, the sod and topsoil shall be stockpiled and later spread over the completed surfaces.

EXCAVATION

All excavation necessary for the construction of raceways, bulkheads, or tank foundations and footings shall be performed in a workmanlike manner to the lines and grades shown on the drawings or as staked in the field.

FILL PLACEMENT

The material placed in the dikes or levees shall be free of sod, roots, boulders larger than 6 inches in diameter, frozen soil, and other objectionable material. The placing and spreading of fill material shall be started at the lowest point of the foundation and the fill shall be brought up in approximately horizontal layers of such thickness that the required compaction can be obtained with the equipment used.

COMPACTION

The moisture content of the fill material shall be adequate for obtaining the required compaction. Construction equipment shall be operated over each layer of fill to ensure that the required compaction is achieved. Earth fill placed in close proximity to structures and pipelines shall be compacted using hand tampers or manually directed power tampers and vibrators.

CONCRETE

Concrete mix design and testing shall be consistent with the size and requirements of the job. Minimum compressive strength requirements shall be specified as should the type of cement to be used, air entrainment, slump, aggregate and other properties.

All concrete is to be mixed, placed, finished, and cured in an acceptable manner. Reinforcing steel will be placed as indicated on the plans and held securely in place during concrete placement. Subgrades and forms will be installed to line and grade as shown in the drawings. The forms will be mortar tight and unyielding.

Concrete tanks shall have a minimum thickness of 6 inches and shall be steel reinforced. The bottoms shall be of concrete and all interior surfaces shall be smooth and treated with epoxy sealer or other suitable material to

permit sterilization. The washing of new concrete tanks with acetic acid is recommended.

WOOD CONSTRUCTION AND METAL FABRICATION

All untreated wood construction, metal fabrication, and other miscellaneous materials, such as screens, flashboards, splashboards, and inlet structures that are used in small quantities and are readily replaceable, shall be of durable quality. All fabrication of materials will have a good workmanlike appearance.

Metal tanks will be assembled or installed according to manufacturer's recommendations. The interior surface will be painted or treated with an epoxy coating or other material that will preserve the metal and be compatible with fish culture. When the tank's interior surface is rough or contains fiberglass matting, it must be covered or sealed with an approved resin or sealer.

OVERALL QUALITY AND WORKMANSHIP

Construction operations shall be carried out in such a manner and sequence that erosion and air and water pollution are minimized and held within legal limits. All work will be conducted in a skillful and workmanlike manner.

Any structure that is constructed of wood, concrete, or metal shall be of adequate length and width to tie into the adjacent earth in a manner to prevent erosion.

The completed job shall present a workmanlike appearance. Fencing and vegetation to control erosion and pollution shall be established as needed.

Appropriate safety measures, such as fencing, warning signs, and guardrails shall be provided.