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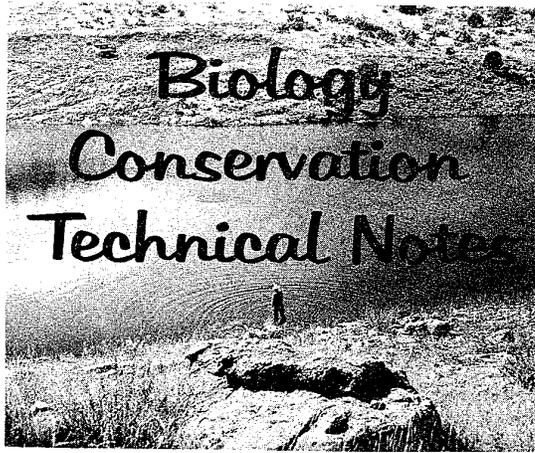


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U. S. DEPARTMENT OF AGRICULTURE NEW MEXICO SOIL CONSERVATION SERVICE

BIOLOGY NOTE NO. 16

April 23, 1971

SUBJECT: ANIMAL GUIDES

Attached is a supply of new issue in the Animal Guide Series entitled "Circular Pool Raceway for Catfish Production."

This animal guide is intended as a technical reference for work units as well as for distribution to landowners planning Practice No. 398 Fish Raceway.

This type of raceway is currently in use for catfish production in Area 3. Continuing refinements of the basic design are anticipated.

The circular pool raceway has also been used with cold water sources to grow fingerling trout to marketable size.

Additional copies may be ordered from the state office supply room, using Form AD-14.

Attachment

Distribution:

- AC's & DC's Areas 1 & 2, w/5 copies att.
- AC's & DC's Areas 3 & 4, w/10 copies att.
- Bill Slone - 50 copies att.
- John York - 50 copies att.
- Regional Biologist
- State Biologists in ) Arizona, California, Colorado, Idaho, Montana,
- W.RTSC ) Nevada, Oregon, Washington, Wyoming, Utah
- PS Section - 5 copies



Animal Guide -

## CIRCULAR POOL RACEWAY FOR CATFISH PRODUCTION

One type of inexpensive catfish growing pool can be constructed by unskilled labor using sections of sheet steel and poured concrete.

With a pumped flow of at least 20 gallons per minute, a single 20 foot diameter pool can produce over a thousand pounds of catfish in one year. A series of three pools can be supplied with 50 gallons of water per minute.

When cropfields are being irrigated, a portion of the flow is diverted through the pools. When irrigation stops a small auxiliary pump may be used to recirculate the pool water back through the series. During lengthy periods of water recirculation it will be necessary to add a small flow of unused water, or replace the water periodically.

A series of pools which will depend largely on recirculated water will require the installation of water treatment facilities. These treatment facilities will need to be of special design as required to handle the anticipated poundage of fish to be produced.

The pools require little maintenance. A circular water pattern is established which removes most solid wastes through the center flush drain. Wastes accumulate in the sumps between pools. The sumps are periodically flushed through a waste line and disposed of into lagoons or irrigation systems.

Seining of catfish for sampling or harvesting is simple since the flush drain presents no obstruction. Water levels in individual pools may be easily controlled to desired depth by adjusting an elbow on the supply pipe to the next pool.

### C O N S T R U C T I O N

The pools may be constructed on leveled pads so as to be above ground or the area around the pools may be backfilled. Gravity flow between a series of pools will require at least an 18 inch drop in elevation between the pools.

Pipeline construction should be with plastic, fiber or asbestos-cement pipe for all lines carrying water to the ponds. Fish may be poisoned by minute amounts of toxic metals that may be introduced by metal pipe. Paint all metal surfaces in contact with the water with an asphalt base compound.

Pools may require a temporary cover to provide shade until the waters develop a dense algae bloom.

