This area was seded and covered with straw following placement of the sewer project. Contractors followed standerd seeding specifications to restore site to the original state.

$400 MILLION FOR WATER

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blower was sometimes used to apply mulch. However, the Division of Pure Waters would not allow machines which cut mulch into short pieces to be used.

In regards to liming, fertilizing and seeding for grass and planted areas torn up by the sewer project and replaced with topsoil, landscape contractors found that all areas to be seeded had to be disced or otherwise loosened to a depth of two-inches and raked to true lines, free of all unsightly variations.

Topsoiled areas were rolled with lawn roller and all low spots leveled up. Based on a minimum of three representative soil samples, raw ground agricultural limestone was applied. Limestone was worked lightly into the top 2 inches of the soil. Commercial fertilizer, 10-6-4 was applied at the rate of 25 pounds per thousand square feet, again worked lightly into the top 2 inches of the soil.

Seed used for grass and planted areas was:

Species

50% Creeping Red Fescue (Illahee Strain)
30% Kentucky Blue Grass
10% Redtop (Fancy re-cleaned)
10% English Perennial Rye

A mulch of clean new crop wheat straw was placed uniformly in a continuous blanket to provide a cover of 3-inches, loose depth.

Any damage to existing stream or channel beds and banks and any distruptions to flow had to be repaired and restored. Rip-rap paving on some creek crossings were constructed of durable field or quarry stone, each shaped as nearly as possible in the form of right rectangular prism. The stones had to be laid perpendicular to the rip-rap bed.

The length of a trench opened through most areas, including residential property, couldn't be longer than 3 structure-to-structure runs or 500 feet, whichever was less.

In regards to pavements torn up during the course of construction activity, contractors were required, as part of "restoration", to replace the pavement with the same quality, thickness, bearing capacity and surface finish.

Sidewalks being replaced by contractors had to extend to the nearest contraction joints or expansion joints, with all sidewalks provided with a minimum 6 inch base course of approved granular material.□

Wider Use Of White Amur Sought By Two Fla. Solons

Two Florida legislators say the time has come to stop testing an Oriental weed-eating fish in isolated ponds and start using it to help clear vegetation that's clogging state waterways.

Representatives Bill Fulford, Orlando, and William J. Rish, Port St. Joe, called for the release of the white amur — a fish from the icy waters of Siberia — after viewing the results this week of a University of Florida research project in Orange county.

The tests are being conducted by the UF's Institute of Food and Agricultural Sciences in cooperation with the U. S. Department of Agriculture and the Florida Department of Natural Resources.

Fulford, who is chairman of the House resources committee, charged there has been too much "official foot-dragging" over when the fish should be released to control submersed hydrilla vegetation in lakes and waterways.

"Some biologists have expressed concern that the amur will get out of hand and end up being more of a nuisance than the waterweeds themselves. But research indicates the amur will control hydrilla without affecting desirable underwater plants like vallisneria (commonly called eelgrass)," he said.

Rish, accompanied by a group of commissioners from Bay county, said he wants the fish released in Deerpoint Lake near Panama City to control the rapid growth of hydrilla "which has just about ruined this lake for recreational purposes."

He said conventional mechanical control methods have been ineffective, and chemical controls will not control submersed weeds either. Even if chemical controls did the job, they can't be used because the 3,000-acre lake is a source of drinking water for Panama City, he said.

Dr. Al P. Burkhalter, coordinator of the Department of Natural Resources' aquatic plant research program, Tallahassee, agreed with the legislators. "The amur has more potential as a control for aquatic weeds than anything we've seen in the last 15 or 20 years. It's time now to get it out of our experimental ponds into more natural situations to find out what we can do with it," he said.

Dr. David L. Sutton, assistant professor with UF's Agricultural Research Center, Ft. Lauderdale, said the fish is already being used in Arkansas to control submersed waterweeds without any undesirable or unforeseen side effects on other fish and plants.

His research, suported by $75,000 in grants from the Rockefeller Foundation and the Department of Natural Resources, has convinced him that a trial release of the fish into a few land-locked lakes in Florida "will not be something we regret later on."

We've tested the amur on all sorts of aquatic plants, with many different types of fish, and we're almost certain the amur will have no adverse effects on sport fishing or the overall aquatic environment," Sutton said.

He pointed out that the fish is native to Siberia and requires swiftly moving cold waters to reproduce. He doubts the amur will ever be able to reproduce in Florida's warm waters, which makes it more attractive as a natural or biological control agent for hydrilla.

The floating water hyacinth is not a part of its preferred diet, but the fish will consume this weed as a last resort, he said.

Sutton explained the UF research project near Orlando involves four ponds which are planted with several types of desirable and undesirable plants, including the troublesome hydrilla. In the control pond (with no amur), hydrilla grew rapidly to problem proportions, crowding out desirable plants. But in the three ponds stocked with amur, the hydrilla has been controlled proportionately to the number of amur they contained.

He estimates 25 to 50 amur would be needed to control each acre of submersed vegetation, but the actual number would depend on the amount of waterweeds and the size of the fish.

Sutton's research indicates the amur will consume about two and one half times its body weight daily, gaining from three to twelve pounds a year. It can reach weights of sixty to one hundred pounds before dying of natural causes.

He added that the fish is a welcome source of food in China and southeast Asia, and it's being introduced as a fish for aquaculture in Europe.

"It resembles Florida's mullet, tastes a lot like catfish, and will strike artificial lures, offering some possibilities for sport fishing," Sutton stated.

Shipping Infected Nursery Stock Injures Credibility

Incidents of disease and insect infected nursery stock being shipped across state lines even though a state inspection certificate has been issued have been reported by the American Association of Nurserymen.

In a recent speech to the National Plant Board, Dean F. Lovitt, chief of the plant industry division of the Michigan Department of Agriculture, attributes blame for this situation not only to state regulatory officials but to the nursery industry as well.

"In recent years," says Lovitt, "we as regulatory officials have become distracted and preoccupied by such national issues as USDA reorganization, the APHIS budget, the pesticide flap, pesticide control, FEPCA, OSHA, Federal quarantine rescissions and other such problems that the discharge of our responsibility to the nursery industry and to its customers has continued on its own momentum with only an occasional nudge from us.

"Likewise," he continued "I submit that the industry has been distracted and preoccupied by some of those same developments and by the need to supply an expanding market in the face of such problems as escalating costs, transportation and marketing complications, taxes and associated situations."

He cited several incidents of infested nursery stock being shipped into Michigan. He indicated that these infestations were clearly obvious, and should have been readily seen by any inspector or nurseryman . . . if he had looked at the plants.

Although there is clearly a problem, Lovitt indicated that it is not yet widespread. "We seldom have problems with shipments of stock from many states and many nurseries. It is interesting that in those states where there apparently is a lack of regulatory capacity, certain nursery firms can always be counted on to deliver stock that lives up to the inspection certificate. Those are not the nurseries that regulations were created for," states Lovitt.

To better understand this problem and help find practical solutions, Mr. Lovitt suggests nurserymen give serious attention to "credibility of inspection certificates."

"The American Association of Nurserymen believes the problem of improper certification of nursery stock needs review," says Ray Brush, AAN administrator, "and Mr. Lovitt's suggestion is appreciated. We plan to explore it further with the AAN Quarantine Committee when it meets in January. At that time we will review the various points to be made on the subject and consider a nursery industry panel to meet with the National Plant Board at its next meeting."