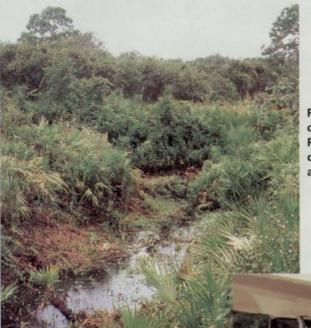
Past merges with modern day at Collier's Reserve



Find the fairway: much of the Collier's Reserve landscape consists of waterways and native vegetation.

This Audubon Signature Course achieves a balance between a man's playground and an animal's refuge, thanks to good planning.

■ Play a round at the Collier's Reserve golf course and you might feel like you're at play in both the past and the present.

Man's handiwork is evident all around the course: concrete and asphalt, golf cars and gas pumps. But thanks to a successful program of habitat protection, most of the course remains as it was in centuries past: lush, wild, and untouched by man.

In 1994, Collier's Reserve in Naples, Fla.—designed by Arthur Hills and managed by superintendent Tim Hiers—became the first Audubon Cooperative Sanctuary Signature Golf Course in the U.S.

The distinction signifies that a golf course designer and superintendent have succeeded in reaching five main objectives: water conservation; wildlife conservation; habitat enhancement; energy efficiency; waste man-

Superintendent Tim Hiers: Predicts more wildlife population Collier's.

agement.

It starts off the course—Energy and water conservation begin in the clubhouse, maintenance shop and offices. Water in restrooms is on automatic shut-off; hand dryers are used instead of paper towels; toilets have one-and-a-half gallon capacity bowls; office windows are tinted for better insulation.

Recycled plastic is used for parking bumpers, benches and birdhouses, and double-vaulted tanks store gasoline and oil at the maintenance shop.

"Everything that could leak out here has containment," Hiers explains. "And even if containment weren't mandatory, it would at least be plain common sense. We want to set a standard here."

As part of the habitat enhancement, more than 500,000 native plants were placed by hand in areas that could have been planted with turf. "We don't use any (extraordinary) resources or labor to maintain them," Hiers says.

Irrigation innovations—Each irrigation head is placed according to the configuration of turf, down to the last leaf blade. The system distributes water exactly where it's needed, and all runoff water from turf areas flows away from native vegetation, as the bermudagrass needs a pH higher than that of the pines, and thus more frequent watering.

A computerized weather station suggests an irrigation schedule based on the daily evapo-transpiration rate. "The weather station automatically adjusts output based on current rainfall," says Hiers. "Proper program management of the weather station eliminates overwatering."

With the low pressure irrigation system uses less water, and there is less water wasted by misting or drift. Energy use is greatly reduced, and there are fewer pressure breaks in the system.

Control products—Weed control, which Hiers says is minimal, is done by hand. Chemical control products are used to control turf disease—the bane of the southern golf course. The bacterial product *Bacillus thuringiensis* is used for insect control. Nematodes are used to help control mole crickets.

Bio-stimulants are used to improve the health of the soil, increase microbial activity and improve cation exchange capacity.

Slow-release fertilizers reduce large flushes of growth, extend the feeding cycle and reduce the frequency and cost of fertilizer application.

The wildlife at Collier's Reserve includes eagles, woodpeckers, ospreys, snakes, otters, owls, bobcats and crocodiles.

"I believe—and I think I can prove it that there will be more wildlife activity created when this project is completed than before the first spade hit the ground, just because of the diversity out here," says Hiers.,

"What's important is that, even if you don't play golf or care about golf, golf is good for your community," says Hiers, "not only because it provides oxygen and a habitat for animals, but because it's a safe space."

Hiers has been selected to receive the 1995 President's Award for Environmental Leadership from the Golf Course Superintendents Association of America.

-Terry McIver