

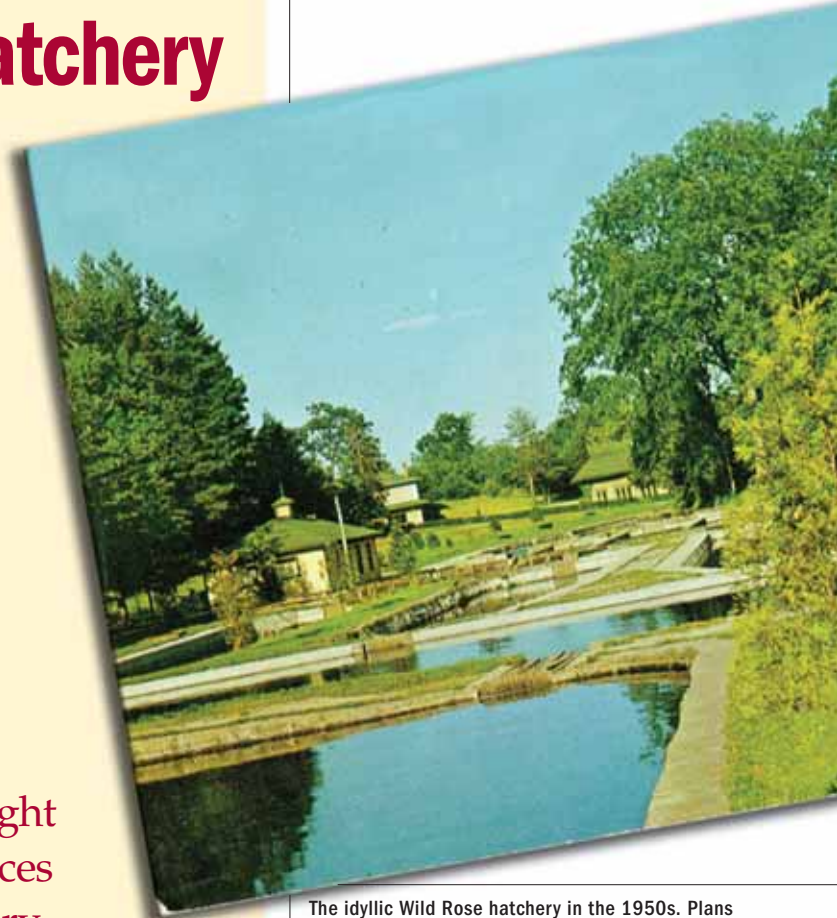
Rejuvenating a re

Wild Rose Fish Hatchery will continue to pump out great water and great fish.

Lisa Gaumnitz

Reeled in a big one lately? Odds are, if you're trolling Lake Michigan for trout or salmon, the fish came from Wild Rose State Fish Hatchery. A workhorse since the state bought it in 1908, Wild Rose now produces 2.2 million trout and salmon every year for stocking primarily in the "big pond," northern pike for stocking statewide, and all of the sturgeon being used to restore this ancient species to its native range in some of Wisconsin's major waters.

The hatchery also raises most of the spotted musky whose fast growth rates and fight delight anglers in Green Bay, as well as some of the walleye fueling the fantastic fishing in the Fox River and Green Bay.

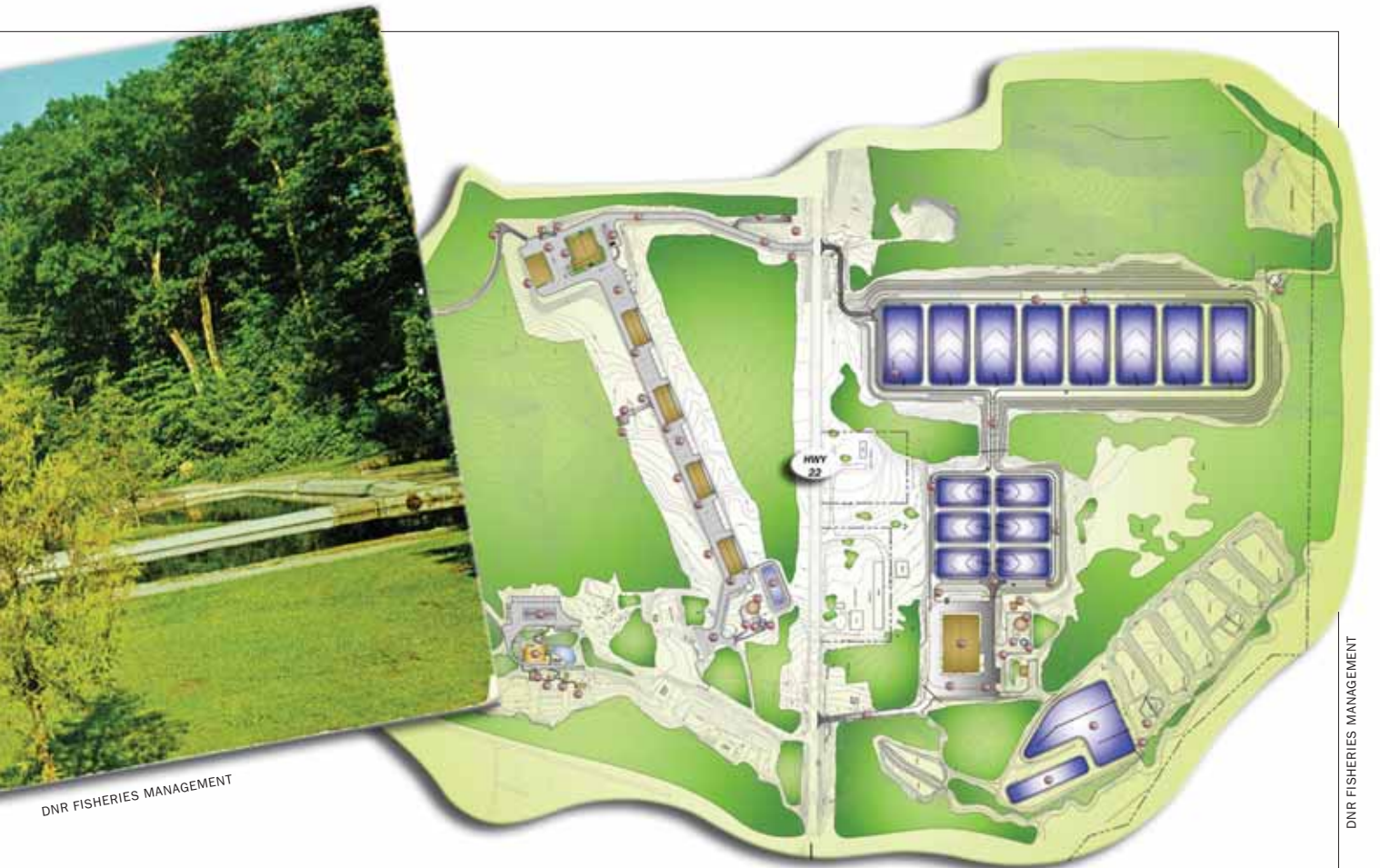


The idyllic Wild Rose hatchery in the 1950s. Plans include preserving some of the picturesque portions

That's 50 tons of fish a year. After carrying that load for 100 years, Wild Rose is showing its age. Its buildings are outdated. Its raceways are crumbling. Its water supply doesn't meet current environmental standards and the state is under orders to fix it. Correcting deficiencies will improve the health and survival of the robust fish raised here and it will also protect groundwater. So the Department of Natural Resources has launched an ambitious plan to renovate the century-old Wild Rose hatchery and bring this valued facility into the 21st century.

"The whole goal of raising fish in a

liable workhorse



built by the CCC in the 1930s and restoring springs and wetlands while building new facilities.

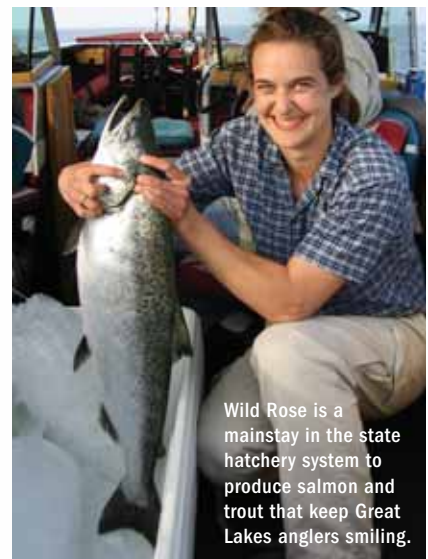
The new coldwater hatchery on the hilltop will bolster production of trout and salmon. Phase II construction will add a warmwater hatchery to raise northerns, muskies, walleyes and sturgeon.

hatchery is to get them to survive once they're stocked," says Steve Fajfer, Wild Rose superintendent. "The renovation will allow us to raise more robust fish that will survive better. It will allow us to increase coldwater production for trout and salmon by about 15 percent, and we should eventually be able to almost double production of coolwater fish like pike, musky, sturgeon and walleye."

The current renovation will build a new coldwater hatchery and build support for new coolwater rearing facilities on a hilltop looking over the existing runways and ponds. It will restore and incorporate parts of the historic hatch-

ery built by the Civilian Conservation Corps (CCC) that local citizens and visitors have treasured for generations; it will go beyond current environmental protection standards for groundwater and wastewater, and it will restore wetlands, springs and streams damaged more than a century ago when the hatchery was built.

"We're really trying to do the best with every situation that we can," Fajfer says. "We're restoring wetlands, we're trying to preserve history, and our main goal all along is to raise fish in a facility that will continue to protect groundwater while allowing us to do an even better job."



Wild Rose is a mainstay in the state hatchery system to produce salmon and trout that keep Great Lakes anglers smiling.

DNR FISHERIES MANAGEMENT

PAUL PEETERS

Wild Rose State Fish Hatchery Renovation Project

PHASE 1 - Total Initial Cost = 15.9 million*



ROBERT QUEEN

At the dedication for the new hatchery, DNR Secretary Scott Hassett explained that renovations are being financed by Fox River environmental restoration fees, bonds from current and future trout and salmon stamp sales, and excise taxes on sporting goods.

A proud history

Wild Rose started producing brook and brown trout in 1909, the year after the state bought it from a private fish farmer. The hatchery quickly became an important part of the state's stocking program and the local community.

Water, the lifeblood of any hatchery, was literally everywhere and made the hatchery extremely economical to operate. Groundwater bubbled out of the hillsides of the valley where the hatchery was nestled. Artesian wells supplied hatchery tanks and raceways with the cold, clean water they needed without pumping.

The picturesque setting made the hatchery a favorite destination for local citizens and visitors alike; photos and post cards from its earliest years show ladies with parasols strolling the grounds and picnickers enjoying a lunch under towering pine trees.

During the 1930s, the Civilian Conservation Corps laid fieldstone and mortar walls to shape the rearing ponds that are still used today. In the 1960s, DNR developed shallow and high capacity wells to augment the natural flow and direct spring water into various buildings. Additions or improvements to coolwater facilities in subse-

quent decades allowed Wild Rose to help meet growing demands for northern pike and walleye, and later, for restoring lake sturgeon to river systems and Lake Michigan. Spotted musky, also known as Great Lakes strain musky, are raised here for stocking in Green Bay, the Winnebago system and the Fox, Peshtigo and Menominee rivers.

Wild Rose was in the forefront in the late 1960s when DNR started stocking Pacific strain salmon to help control populations of alewives. A member of the herring family native to the Atlantic coast, alewives started invading the Great Lakes in the 1950s, contributing to the demise of native fish populations. The oily alewives washed up on the shore in rotting, stinking masses.

The steady flow of salmon and trout helped control the alewives and create an exciting fishery that today lures 200,000 anglers to Lake Michigan annually.

"When I left Wisconsin in the early 50s, we looked at Lake Michigan and we called it the 'Dead Sea,' " says Chuck Weier, president of the Wisconsin Federation of Great Lakes Sport Fishing Clubs.

"Now it's part of Wisconsin's \$2.3 billion sport fishing industry and the

fishing is absolutely phenomenal. It starts here (at Wild Rose). With the new facilities, it's going to be even better."

Showing its age

Careful maintenance, repairs, and a veteran, expert staff stretched the useful lifetime of Wild Rose's raceways, rearing ponds and buildings into their second century, well beyond what anyone expected.

Certainly beyond what Steve Fajfer expected. Some of the facilities were deteriorating and antiquated when he began his DNR career at Wild Rose as a fisheries technician in 1981. By the time he returned in 1987 as hatchery superintendent, the problems and shortcomings couldn't be ignored nor fixed with small repairs.

Most significantly, the amount of water flowing from the wells was decreasing and its quality declining, affecting the health of the fish produced and at times, causing large numbers of them to die. The hatchery had been under an order to fix the wells and to meet well construction codes set in the 1980s, but the way the old hatchery was built, the wells couldn't be fixed without disrupting water flow to the entire hatchery and shutting down production.

Fajfer drafted a report detailing the hatchery's problems but also its promise: the skilled, dedicated staff continue to produce millions of fish for stocking year in and year out despite the many challenges, Wild Rose was centrally located for stocking fish in Lake Michigan's far flung harbors, and the areas had ample groundwater.

His 1989 report got the attention of top fisheries brass, but tight state budgets and a laundry list of needs at other aging fish hatcheries were also concerns. In the mid-1990s, a legislative audit of DNR's stocking program directed fisheries officials to assess state stocking needs and capabilities over the long-term. The conclusion of that comprehensive examination was that Wisconsin's existing hatcheries, many of which were 50 to 100 years old, could not meet the demand for more hatchery fish.

The reports outlined strategies to remedy the situation: renovate existing

facilities, with Wild Rose the highest priority; fully staff and fund existing facilities; increase efficiency within the system; expand use of cooperative agreements with sports clubs and others to raise some of the fish hatched at state facilities, and consider contracting with private hatcheries to produce some fish.

The Wild Rose renovation was the first item on Al Kaas' plate when he was hired as statewide propagation coordinator in 2000. It has swallowed up much of his time since and caused a lifetime of stress, but he's not complaining.

He shares the conviction of Mike Staggs, fisheries director since 1995, that Wild Rose can't continue as it has without improvements. Closing the site would cripple the state's hatchery system, but substantial renovations would provide fishing opportunities, an economic boost and tax revenues that sportfishing brings in for local and state economies. Kaas credits Staggs with persevering through the funding dead-ends, design challenges, and bureaucratic hurdles involved in launching a project estimated to cost \$34 million.

"Mike had a steadfast commitment that this project had to happen for the good of anglers enjoying Wisconsin

waters," Kaas says. "We can't let our biggest hatchery dwindle away. Doing nothing was not an option."

Staggs also let the production goals for the hatchery guide its new design. Together, Staggs, Kaas, Fajfer and other fisheries officials embarked on a collaborative process to involve people who had worked at Wild Rose or would be affected by it in the renovation.

"All of the staff at the hatchery were involved with the design decisions. We went to them and said, 'What do you need to do the job most effectively?'" Kaas recalls.

They also visited recently renovated hatcheries in Michigan; collaborated with DNR regulatory staff for groundwater, wastewater and other environmental programs; and enlisted the services of Madison-based Liesch Environmental Services and FishPro, a national firm with 20 years experience designing fish facilities across North America.

Underlying the design team's work was a commitment to improve the hatchery's environmental performance and make it part of the design, not an afterthought, Kaas says. We are following international standards (ISO 14001) for assessing and addressing the poten-

tial environmental and social aspects associated with the hatchery's design, construction and operation.

At the same time, Staggs and other fisheries officials were working with administrators, lawmakers, sport fishing groups and others to find funding. Sport groups agreed to a \$2.50 increase in the Great Lakes trout and salmon stamps anglers must buy to fish Lake Michigan and Lake Superior, if that money were banked for the hatchery. Officials tapped other sources to help share the load, ultimately pulling together a funding package that uses no state tax dollars, pays cash upfront for most of the construction and floats bonds for the rest, a huge savings over time.

Significantly, nearly 40 percent of the \$15.9 million price tag for the coldwater hatchery will be covered by money from the environmental restoration agreements reached with paper companies on the Fox River.

The result of the finance and design work is rising on a hilltop above the existing raceways and facilities on the west side of Highway 22. This first phase of construction, which started this summer and is expected to be done in early 2008, will include a new building to house the broodstock, or parent fish of some species, start young fish on specially prepared diets, and provide four pavilions each with four raceways to incubate eggs and raise them to stocking size.

The old, failing artesian wells will be sealed, protecting the groundwater from contamination. New, deeper, larger wells will be drilled and groundwater pumped to supply the broodstock and incubation buildings with water that will be filtered and re-circulated through the pavilions, making more efficient use of groundwater.

A \$1.5 million visitors center will incorporate four historic buildings from the hatchery and use live aquariums, video and other displays to help tell the story of Wild Rose then and now.

With financial support, a second phase will get underway in 2007 on the hatchery property east of Highway 22. That phase will build new coolwater facilities for raising pike, sturgeon, walleye and musky. Water first used to



Visitors will still have the chance to visit some of the prettiest parts of the old Civilian Conservation Corps work at Wild Rose like the old visitors kiosk and a few raceways.



ROBERT QUEEN

Harsh summer light stresses young salmon and they are moving targets for mink, herons and other predators. The new enclosed hatchery with controlled lighting should cut those losses and help grow even stronger, healthier stock.

supply the coldwater hatchery operations will be filtered, disinfected with UV light and piped under Highway 22 to supply the coolwater facilities including 14 modern rearing ponds. A new wastewater system will clean water leaving the hatchery to the highest level before releasing it to the Pine River, a Class 1 trout stream.

A third phase will restore the wetlands, springs and headwaters of a stream that were harmed when the hatchery was originally built. Kaas hopes the work can eventually re-establish an important trout spawning area.

“Bringing this project to construction is a step toward improving our fish production capabilities in a very responsible, respectful way,” Kaas says.

FishPro’s Tom Johnson says Wild Rose’s renovation will cement the hatchery’s unique position in the Wisconsin hatchery system, and among hatcheries nationwide. “This facility, when it’s complete, will be one of the most modern in the country and unique in providing both cool and coldwater rearing on one site,” he says.

“It also will give the state fisheries program more flexibility. If someone wants to come in on the east side (coolwater side) and raise other fish species, they’ll be able to do that.”

Better for fish, workers, anglers and the environment

At a time when some with 30 years of state service might be counting the days to retirement, Tom Van Effen is eager for the challenge of learning how to master new technologies and new techniques in a renovated Wild Rose.

“I love my job,” says Van Effen, who started at Wild Rose when he was 19 years old and is now the lead worker for trout and salmon. “I work with great people, I get to work outside, and most importantly, I get to help provide great fishing opportunities to the anglers of Wisconsin.”

The renovation will mean significant changes in not only what he does, but where he does it. He will spend most of his days inside; the coldwater facilities will be fully enclosed. But he’s happy to make the adjustment if that will improve the fish and fishing opportunities for anglers.

Right now, the open-air raceways that are so picturesque leave the fish vulnerable to predation, and subject them to bright light and other stressful environmental conditions. He estimates that the hatchery can lose as many as 15 percent of fish a year to predators such as great blue herons and mink.

Salmon have no eyelids, and their favored habitats are darker; the harsh summer light is a stressor, as are the curious, well-intentioned human visitors who walk along the raceways and accidentally kick in rocks that the fish can swallow and suffocate on.

The enclosed pavilions and controlled lighting will make a big difference on both counts.

So will the increased control over the water flow, Van Effen says. Right now, water in some of the raceways is flowing out at a rate of 100 to 150 gallons per minute. That means the entire volume of water in raceways is replaced only once every six to eight hours instead of four times per hour, as the new water supply system will allow.

The decreased water flow at the existing raceways doesn’t give the fish the current they like. Van Effen and his crew must keep the number of fish in each raceway low enough so the fish can get the oxygen they need. Staff have to clean out the raceways frequently to remove the excess food, fish wastes, and other materials that build up in the bottom.

He’ll also be able to control water quality. Now, the old wells are sending out water with high levels of nitrogen that must be treated to reduce dissolved gas. As nitrogen gets forced into the fish gills, the tiny bubbles potentially rupture the delicate membranes, causing the fish to get sick, like a person suffering from the bends. Back in the early 1990s, water supersaturated with nitrogen gas decimated the hatchery’s crop of Chinook salmon one year.

After renovation, variable water flow and dissolved nitrogen shouldn’t be an issue, Van Effen said. “I expect we’ll spend less time on cleaning the raceways and fixing problems, and more time fine-tuning our product to produce more fish that will be healthier and survive better once we stock them in the wild.”

And that, as Van Effen says, is what it’s all about. 

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