

\$548
OF COUPONS
INSIDE



ON SALE
FOR ONLY
\$1.49

MINNESOTA
St.P's Lowertown
on the rise

BUSINESS
Finally - a better
hospital gown

SUNDAY

SPECIAL SECTION
Get the most
from museums

SCIENCE
Hubble opened
our eyes

May 3, 2015
startribune.com

StarTribune

81° ☀️ **51°**
Warm start and a strong,
stormy finish. **B14**

**Met Council
head shrugs
off critics,
sets agenda**

SW LRT fate in hands of young
fan of Dutch transit ideas.

By JANET MOORE
janet.moore@startribune.com

Not too long ago, a friend sent Adam Duinick a newspaper clipping. The story said the Metropolitan Council, the regional planning agency that Duinick chairs, is too big, too unwieldy and not accountable to the people it purports to serve. It was dated 1972.

Duinick laughs when he shows it to a visitor (on his phone, of course, he is a millennial). "This is the same conversation we've been having for 50 years."

That debate flared anew last week with the revelation that the price of the proposed 16-mile Southwest light-rail line from downtown Minneapolis to Eden Prairie had soared by \$341 million to almost \$2 billion. The news shocked the project's backers, including Gov. Mark Dayton, and provided fresh ammunition to critics of the Met Council, who have long faulted it for being unresponsive to local concerns on a range of issues, including transit and affordable housing.

Now, the fate of the Southwest light-rail project is largely in the hands of Duinick, a 34-year-old Willmar native who has never held elective office or run a state agency. Yet throughout all of it, the baby-faced Duinick has maintained an affable front — he seems positively unperturbed.

The debate eclipsing the body he now leads "doesn't really bother me," he said in a recent interview, during which he sported a natty plaid suit. "Most of it stems from not understanding what we do, how we work and the

See **DUINICK** on A5 ▶

**Hands-free
cars test long
arm of the law**

Regulators struggling to keep up
with release of self-piloting cars.

By AARON M. KESSLER
New York Times

A General Motors promotional film envisions the future: Drivers enter the highway, put their cars on "autopilot" and sit back as the vehicle takes over and heads for the horizon. The film's date? 1956.

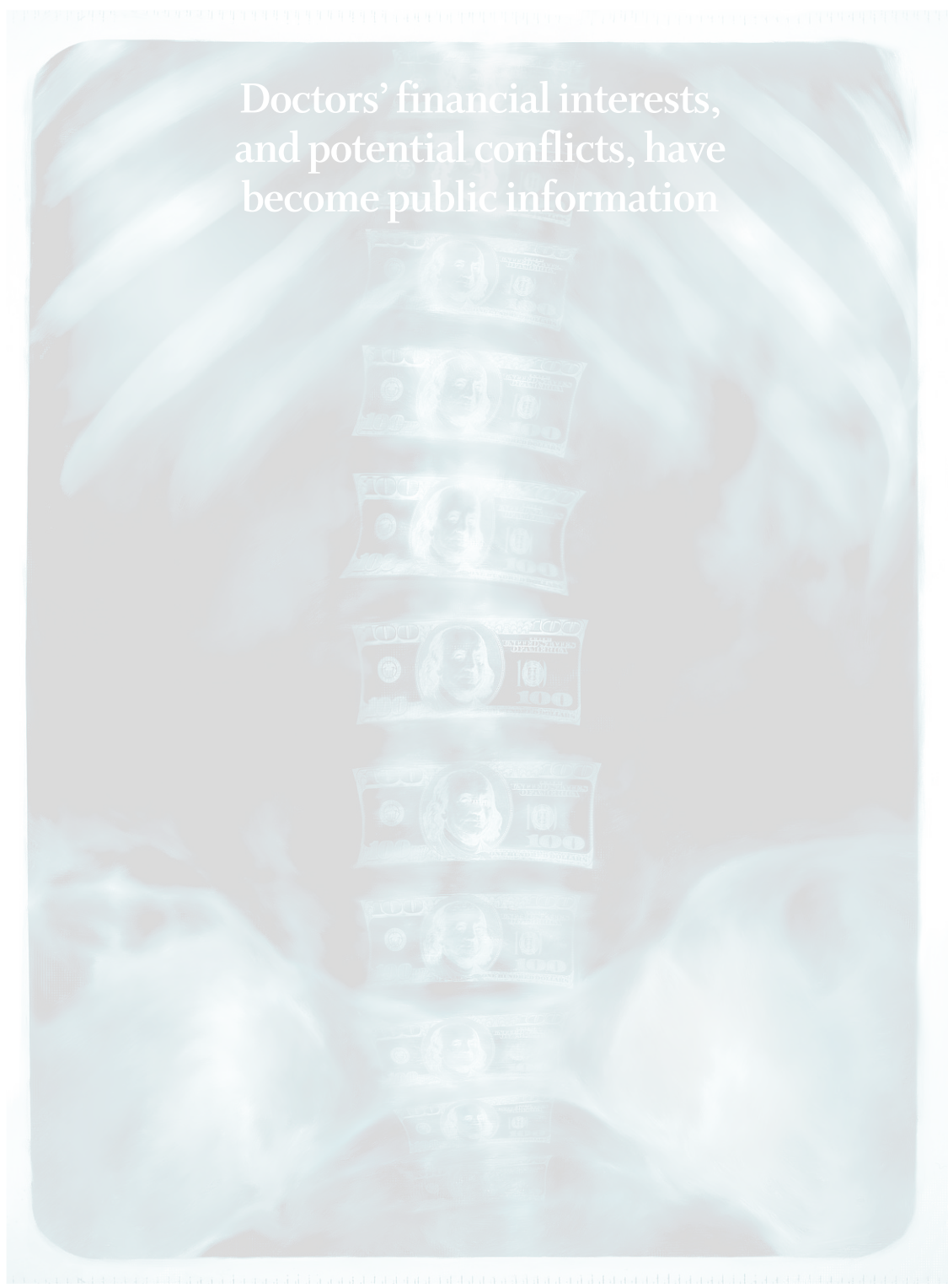
Nearly 60 years later, automakers are making that dream a reality.

But the technology has sprinted ahead so fast that lawmakers and regulators are scrambling to catch up with features like hands-free driving that are now months away, rather than years.

This summer, Tesla, the maker of high-end electric cars, is promising to equip its Model S sedan to take over highway driving under certain conditions. In January, Audi will introduce a vehicle that can pilot itself through traffic jams. And next year, Cadillac will offer no-hands highway driving with its "Super Cruise."

Limited forms of hands-free driving have already arrived. Luxury

See **CARS** on All ▶



Doctors' financial interests,
and potential conflicts, have
become public information

**NEW TRANSPARENCY
COMES TO MEDICINE**

Story by JOE CARLSON • Illustration by MICHAEL HOGUE for the Star Tribune

Dr. Hamid Abbasi performs a new kind of back surgery that he promotes as offering great results with minimal physical trauma.

The website for his busy neurosurgery practice in Alexandria, Minn., explains that the procedure requires only a small incision and leads to less blood loss than other approaches. Some patients go home the same day, Abbasi says in a video presentation.

There's another benefit for Abbasi: He has received some of the profits from some of his patients' devices, because he's an investor in the distributor that sells them to hospitals. Federal records show that during five months in 2013 the company distributed at least \$365,325 in physician payouts — one of the largest sums of its kind in the nation during that period.

This arrangement is among the thousands of financial relationships between doctors and health care companies coming to light through a new federal database that enables the public to see if a physician is profiting by using a certain product. Federal regulators have long been critical of these kinds of

THE SCOPE OF THE MONEY
Recent data shows that many doctors invest in — and benefit from — small medical device companies.

NATIONALLY

\$581 million Amount invested by doctors in medical device and drug firms	\$1.1 billion What those investments were worth at the end of 2013
---	--

MINNESOTA

\$5.8 million Investments by Minnesota doctors	\$9.5 million Investments' worth at the end of 2013
--	---

arrangements, and Sen. Chuck Grassley, R-Iowa, said he co-authored the bill to create the database partly so the public could scrutinize them.

"These are very significant financial relationships," said Dr. Michael Carome, a former federal health care safety regulator who now directs health

See **INVESTMENTS** on All ▶

**Climate a
culprit in
walleye's
decline**

As state's lakes warm, walleye's cold water prey fish lose ground, and resort owners pay price.

By JOSEPHINE MARCOTTY
josephine.marcotty@startribune.com

Lake Mille Lacs resort owners are angry, anglers are frustrated, and they all have an opinion on what's to blame for the shocking decline in walleye in Minnesota's favorite fishing destination.

But there's one culprit that gets scant attention: global warming.

Tullibee, a cold-water loving fish that is a critical prey for walleye, is largely gone from Mille Lacs. In fact, tullibee is in trouble across the state — a clear sign that Minnesota's lakes are changing as fast as the climate and creating an uncertain future for the state's prized fishing industry.

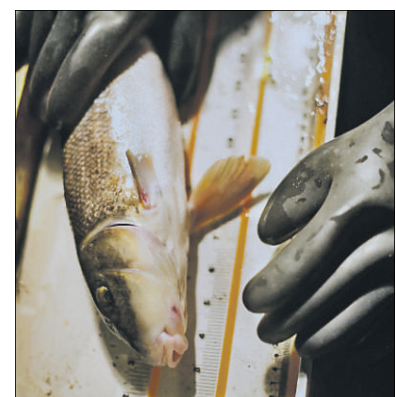
By the end of this century, tullibee will be gone or drastically reduced in two-thirds of the lakes where it lives now, according to a sophisticated climate prediction model by state and University of Minnesota scientists. Other coldwater fish like yellow perch, burbot and lake trout are also declining, while warmwater fish like bluegill and crappies are on the rise.

"It's a pretty striking story," said Peter Jacobson, a fish biologist with the state Department of Natural Resources. He's been studying tullibee since heat-related fish kills first got his attention in the hot summer of 2006. "The recent declines have been mostly from climate."

The shift is dramatic enough to inspire an unusual effort to create refuges for the vulnerable fish species by permanently protecting some of Minnesota's cleanest, coldest lakes that are scattered like jewels across the northern forest. Before it's too late.

"It's such a daunting issue," Jacobson said.

In Mille Lacs, there's a lot more
See **LAKES** on A10 ▶



AARON LAVINSKY • StarTribune
A stunned white suckerfish had its pectoral fin ray clipped on Tuesday night as part of a study.

How Iowa town snared 16,000 Minnesota speeders

CAUGHT ON CAMERA

From Jan. 2013 to Aug. 2014, 160,000 tickets were issued from the I-380 speed cameras.

Rank/State	Violations
1. Iowa	92,719
2. Illinois	17,122
3. Minnesota	16,410
4. Missouri	4,897
5. Oklahoma	4,157

By ADAM BELZ
adam.belz@startribune.com

Cedar Rapids has become the ultimate speed trap in the Midwest.

Ever since installing hidden cameras on the interstate that runs through it, Iowa's second-largest city has been sending out tickets at an unprecedented rate, including to thousands of Minnesotans.

Darrell Peterson, of Savage, got

nailed twice in one day last August, when he and his wife dropped their kids off with grandparents.

"It was literally a half-hour apart," Peterson said. "If there were signs saying the technology was in place, I certainly didn't see them."

Peterson received two letters from the city of Cedar Rapids on the same day. Inside each was a photo his Hyundai Sonata and an order to pay a civil fine of \$75. He thought at first the city

had mistakenly sent an extra citation, but when he looked closer he saw that in one photo his kids were in the car and in the other they were not.

"They got us going both ways!" Peterson said. "I've got no issue with the violations. If we were speeding, we were speeding. My issue is with the enforcement methodology."

Iowa is the only state where cities post speed cameras on inter-

See **SPEED TRAP** on A5 ▶

Climate change is a culprit in decline of state's walleye

◀ **LAKES** from A1 going on in the predatory life of fish than just climate change. Young walleye are getting eaten before they grow up by a rising population of northern pike and cannibalistic larger walleye. Thanks to invasive zebra mussels and laws that shut down leaky septic systems and animal feedlots, the water is cleaner and clearer, making the little walleye easier to see. The population of smallmouth bass, a fish happy in warmer waters, has exploded in recent years—but walleye don't eat them. Meanwhile, tullibee and the yellow perch that walleye do relish are disappearing, and other well established invasives like spiny water flea and milfoil are changing the ecosystem in unpredictable ways.

Resort owners pay price

This year, the DNR set a walleye harvest target for the lake at 40,000 pounds — a third less than last year and down a stunning 84 percent from 2013. That, they hope, will help give the walleye a chance to recover.

For now, Mille Lacs resort owners will pay the price.

"For the first time in years I am not sold out at the opener," said Linda Eno, who, with her husband, owns the Twin Pines resort. She blames the DNR for years of mismanagement and overnetting by Indian tribes, long a sore point with resort owners.

"You cannot blame spiny water flea, zebra mussels and global warming," she said. "That drastic of a change does not come from those minor things."

But fish biologists and climate scientists say that global warming's impact on Minnesota's lakes is anything but minor.

State wildlife managers first became alarmed in 2006, when they noted tullibee kills in 18 lakes during temperature spikes in July, Jacobson said. That's when they decided to launch a long-term project to use tullibee, also known as cisco and lake herring, as a barometer for climate change. "Cisco is the most tolerant cold water fish species," said Heinz Stefan, an engineer at the University of Minnesota's St. Anthony Falls Laboratory, who led the design of the lake climate change model. "They can handle higher temps and are a very important as a food source for predator fish like pike and walleye."

In other words, if they



Photos by AARON LAVINSKY • alavinsky@startribune.com

MEASURING CHANGE: DNR biologists and volunteers tagged suckerfish on Pearl Lake Tuesday night. The state has begun an effort to create refuge lakes for cold water fish.

can't survive, then other fish won't either. But they won't be alone. A major study published last week in the journal *Science* found that if greenhouse gases and average temperatures continue to rise at current rates, the world will see a major loss in diversity. One in six species around the globe could disappear because they can't move or adapt fast enough to changing habitat.

Two-thirds of lakes at risk

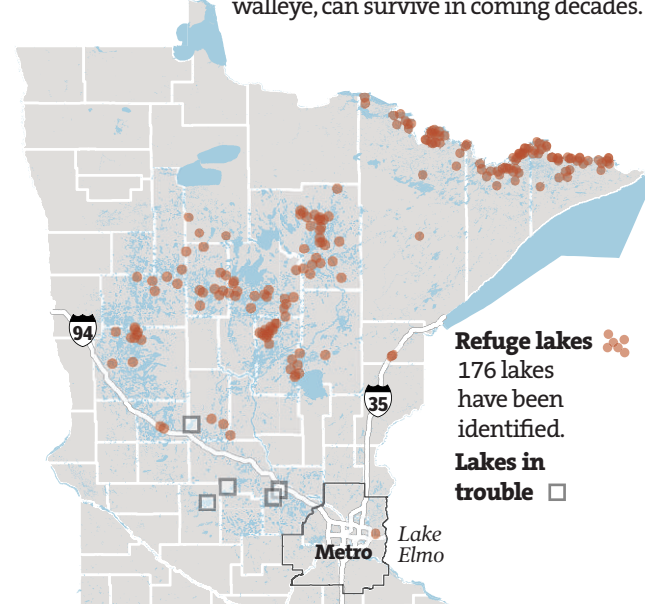
In the 620 Minnesota lakes that are home to tullibee, it plays out like this. In deeper lakes, the water stratifies into layers of increasingly cold temperatures. When a lake gets hot at the surface, the tullibee go deeper. But they also need good supplies of oxygen, which can be scarce at the bottom. So they try to find that sweet spot that is cold enough and has enough oxygen.

Using decades of weather data on Minnesota's tullibee lakes, plus sophisticated predictions of how rising average temperatures will affect ice-out, lake mixing and plant growth, researchers came up with a prediction: By the mid to late part of this century, two-thirds of those lakes will be inhospitable for tullibee. And not just because they are heating up. Longer summers result in less mixing of lake water layers, which means less oxygen makes it to the bottom. The tullibee, Stefan said, "get squeezed upward by low oxygen and then they encounter warm temperatures."

It's not just the gradual

PROTECTING DEEP, COLD LAKES

As climate change causes Minnesota lakes to grow warmer, DNR scientists have identified dozens of cool, deep lakes where cold-water fish such as tullibee, a critical prey for walleye, can survive in coming decades.



Source: Minnesota Department of Natural Resources

RAY GRUMNEY • Star Tribune

warming — it's also the sudden hot summer spikes, especially in shallower lakes like Mille Lacs. "With a really serious bounce in temperature you'll see fish rolling over pretty good," said Eric Jensen, a Lake Mille Lacs specialist for the DNR.

This doesn't mean walleye will disappear. They are doing fine, if only because the DNR stocks them in 500 to 600 lakes where they don't always reproduce naturally.

But in the lakes they share with tullibee, walleye will likely be smaller, Jacobson said. "We are not going to lose walleye because we are losing [tullibee]," Jacobson said, "We are just going to lose trophy walleye."

Now the DNR is starting to see declines in other cold water fish such as lake trout as well.

Meanwhile, warm water largemouth bass are suddenly appearing in lakes around

Duluth where they've never been seen before, said Bethany Bethke, a DNR fish biologist who's studying long-term trends in Minnesota fish.

'Refuge lakes'

The tullibee climate prediction includes a more optimistic scenario as well. Minnesota has lakes where cold water fish may be able to survive the global heat wave that's coming — 176 that are already considered state treasures. They are all deep, exceptionally clean, and primarily in the north — and they've already proven their value. When tullibee floated belly up in other lakes after recent heat waves, they had no problem riding out the heat in these cold northern lakes.

The state has launched an ambitious plan to make all of them "refuge lakes" for cold water fish like tullibee. Most hug the border with Canada and are protected by the Boundary Waters Canoe Area

The DNR has found shrinking populations of tullibee, an important cold-water fish, in many Minnesota lakes. Among them:

- Clearwater Lake, near Annandale
- Lake Koronis, near Paynesville
- Green Lake, near Spicer
- Cedar Lake, near Annandale
- Lake Osakis, near Osakis

Wilderness. Thirty-eight lie in four counties around Leech Lake in north-central Minnesota, including popular cabin lakes such as Roosevelt and Ten Mile. If 75 percent of the watershed around each refuge lake can remain in forest or in its natural state, that should keep the lakes sufficiently clean and well-oxygenated at their depths to preserve cold water species, Jacobson said.

But that will cost money. The DNR has received about \$6 million from the state's Legacy Clean Water Fund to pay property owners around some of those lakes to keep their land undisturbed through permanent conservation easements and outright purchases. But the project will require much more in future decades — about \$180 million — and for now there are more willing property owners than money.

Candace Gouze and her husband have been slowly buying up land around their lake home on Roosevelt Lake, and now own 160 acres. They hope to put easements on some of the land to protect the lake and the loons that nest nearby along the shore, even though it reduces the dollar value of the land.

"I have this feeling that if we all do something, then we can affect climate change," Gouze said. "To not do anything is not an answer."

Josephine Marcotty • 612-673-7394

Spring DIAMOND SALE!

STOREWIDE SAVINGS! 40-50%

LEVIAN BUY ANY ONE LEVIAN ITEM NOW \$2999

AND RECEIVE MICHAEL KORS PURSE ON MATCH FREE!

GREAT GIFTS FOR MOM! NOW \$149

NOFF Diamonds

Burnsville Center 1178 Burnsville Center Burnsville, MN 55306 952-204-9349

Maplewood Mall 3001 White Bear Maplewood, MN 55109 651-773-3464

Frank Hoff Founded Hoff in 1938 Still family owned.

SPRING INSTALL Special!

\$500 off Installation of 5 MARVIN Window Openings*

FREE in-home estimate

CALL 952-277-1600 or email: windowinfo@schererbros.com

INFINITY MARVIN

Scherer Window & Door Consultants

www.schererwindowconsultants.com Your Marvin Authorized Installing Retailer

*No other discounts apply. Does not apply to previously sold projects. Minimum 5 openings. MN license BC 239369

You're invited to join us at a Novartis MS Education Link Event

Hear Gary Beaver, DO share information about multiple sclerosis (MS), learn about a prescription treatment option, and connect with people in your community living with MS.

5/13/15 at 6:30PM Vivo

15435 Founders Lane Apple Valley, MN 55124

Tell or bring a friend! Accessible to people with disabilities. Light meal served. Parking will be validated.

Space is limited. Please RSVP by calling 1-866-682-7491

NOVARTIS

Novartis Pharmaceuticals Corporation East Hanover, New Jersey 07936-1080 © 2013 Novartis 1/13 T-XMG-1234308

Sign up for daily offers **Steals** from StarTribune.com/steals

This week's deal: **Save 50% or more every day.**

May 4, 2015

IZATYS RESORT

www.izatys.com

Izatys Resort will be opening the 2015 season on May 7th, 2015. 40005 85th Ave., Onamia, MN, 320-532-4574

March 3, 2015



Climate a culprit in walleye's decline

As state's lakes warm, walleye's cold water prey fish lose ground, and resort owners pay price.

By JOSEPHINE MARCOTTY

Lake Mille Lacs resort owners are angry, anglers are frustrated, and they all have an opinion on what's to blame for the shocking decline in walleye in Minnesota's favorite fishing destination.

But there's one culprit that gets scant attention: global warming.

Tullibee, a cold-water loving fish that is a critical prey for walleye, is largely gone from Mille Lacs. In fact, tullibee is in trouble across the state — a clear sign that Minnesota's lakes are changing as fast as the climate and creating an uncertain future for the state's prized fishing industry.

By the end of this century, tullibee will be gone or drastically reduced in two-thirds of the lakes where it lives now, according to a sophisticated climate prediction model by state and University of Minnesota scientists. Other coldwater fish like yellow perch, burbot and lake trout are also declining, while warmwater fish like bluegill and crappies are on the rise.

"It's a pretty striking story," said Peter Jacobson, a fish biologist with the state Department of Natural Resources. He's been studying tullibee since heat-related fish kills first got his attention in the hot summer of 2006. "The recent declines have been mostly from climate."

The shift is dramatic enough to inspire an unusual effort to create refuges for the vulnerable fish species by permanently protecting some of Minnesota's cleanest, coldest lakes that are scattered like jewels across the northern forest. Before it's too late.

"It's such a daunting issue," Jacobson said.

In Mille Lacs, there's a lot more going on in the predatory life of fish than just climate change. Young walleye are getting eaten before they grow up by a rising population of northern pike and cannibalistic larger walleye. Thanks to invasive zebra mussels and laws that shut down leaky septic systems and animal feedlots, the water is cleaner and clearer, making the little walleye easier to see. The population of smallmouth bass, a fish happy in warmer waters, has exploded in recent years — but walleye don't eat them. Meanwhile, tullibee and the yellow perch that walleye do relish are disappearing, and other well established invasives like spiny water flea and milfoil are changing the ecosystem in unpredictable ways.

Resort owners pay price

This year, the DNR set a walleye harvest target for the lake at 40,000 pounds — a third less than last year and down a stunning 84 percent from 2013. That, they hope, will help give the walleye a chance to recover.

For now, Mille Lacs resort owners will pay the price.

"For the first time in years I am not sold out at the opener," said Linda Eno, who, with her husband, owns the Twin Pines resort. She blames the DNR for years of mismanagement and overnetting by Indian tribes, long a sore point with resort owners.

"You cannot blame spiny water flea, zebra mussels and global warming," she said. "That drastic of a change does not come from those minor things."

But fish biologists and climate scientists say that global warming's impact on Minnesota's lakes is anything but minor.

State wildlife managers first became alarmed in 2006, when they noted tullibee kills in 18 lakes during temperature spikes in July, Jacobson said. That's when they decided to launch a long-term project to use tullibee, also known as cisco and lake herring, as a barometer for climate change.

"Cisco is the most tolerant cold water fish species," said Heinz Stefan, an engineer at the University of Minnesota's St. Anthony Falls Laboratory, who led the design of the lake climate change model. "They can handle higher temps and are very important as a food source for predator fish like pike and walleye."

In other words, if they can't survive, then other fish won't either. But they won't be alone. A major study published last week in the journal *Science* found that if greenhouse gases and average temperatures continue to rise at current rates, the world will see a major loss in diversity. One in six species around the globe could disappear because they can't move or adapt fast enough to changing habitat.

Two-thirds of lakes at risk

In the 620 Minnesota lakes that are home to tullibee, it plays out like this. In deeper lakes, the water stratifies into layers of increasingly cold temperatures. When a lake gets hot at the surface, the tullibee go deeper. But they also need good supplies of oxygen, which can be scarce at the bottom. So they try to find that sweet spot that is cold enough and has enough oxygen.

Using decades of weather data on Minnesota's tullibee lakes, plus sophisticated predictions of how rising average temperatures will affect ice-out, lake mixing and plant growth, researchers came up with a prediction: By the mid to late part of this century, two-thirds of those lakes will be inhospitable for tullibee. And not just because they are heating up.

Longer summers result in less mixing of lake water layers, which means less oxygen makes it to the bottom. The tullibee, Stefan said, "get squeezed upward by low oxygen and then they encounter warm temperatures."

It's not just the gradual warming — it's also the sudden hot summer spikes, especially in shallower lakes like Mille Lacs. "With a really serious bounce in temperature you'll see fish rolling over pretty good," said Eric Jensen, a Lake Mille Lacs specialist for the DNR.

This doesn't mean walleye will disappear. They are doing fine, if only because the DNR stocks them in 500 to 600 lakes where they don't always reproduce naturally.

But in the lakes they share with tullibee, walleye will likely be smaller, Jacobson said. "We are not going to lose walleye because we are losing [tullibee]," Jacobson said, "We are just going to lose trophy walleye."

Now the DNR is starting to see declines in other cold water fish such as lake trout as well.

Meanwhile, warm water largemouth bass are suddenly appearing in lakes around Duluth where they've never been seen before, said Bethany Bethke, a DNR fish biologist who's studying long-term trends in Minnesota fish.

'Refuge lakes'

The tullibee climate prediction includes a more optimistic scenario as well. Minnesota has lakes where cold water fish may be able to survive the global heat wave that's coming — 176 that are already considered state treasures. They are all deep, exceptionally clean, and primarily in the north — and they've already proven their value. When tullibee floated belly up in other lakes after recent heat waves, they had no problem riding out the heat in these cold northern lakes.

The state has launched an ambitious plan to make all of them "refuge lakes" for cold water fish like tullibee. Most hug the border with Canada and are protected by the Boundary Waters Canoe Area Wilderness. Thirty-eight lie in four counties around Leech Lake in north-central Minnesota, including popular cabin lakes such as Roosevelt and Ten Mile. If 75 percent of the watershed around each refuge lake can remain in forest or in its natural state, that should keep the lakes sufficiently clean and well-oxygenated at their depths to preserve cold water species, Jacobson said.

But that will cost money. The DNR has received about \$6 million from the state's Legacy Clean Water Fund to pay property owners around some of those lakes to keep their land undisturbed through permanent conservation easements and outright purchases. But the project will require much more in future decades — about \$180 million — and for now there are more willing property owners than money.

Candace Gouze and her husband have been slowly buying up land around their lake home on Roosevelt Lake, and now own 160 acres. They hope to put easements on some of the land to protect the lake and the loons that nest nearby along the shore, even though it reduces the dollar value of the land.

"I have this feeling that if we all do something, then we can affect climate change," Gouze said. "To not do anything is not an answer."