

The river Lincoln loved

The state's plan to make the Sangamon a destination

By Patrick Yeagle

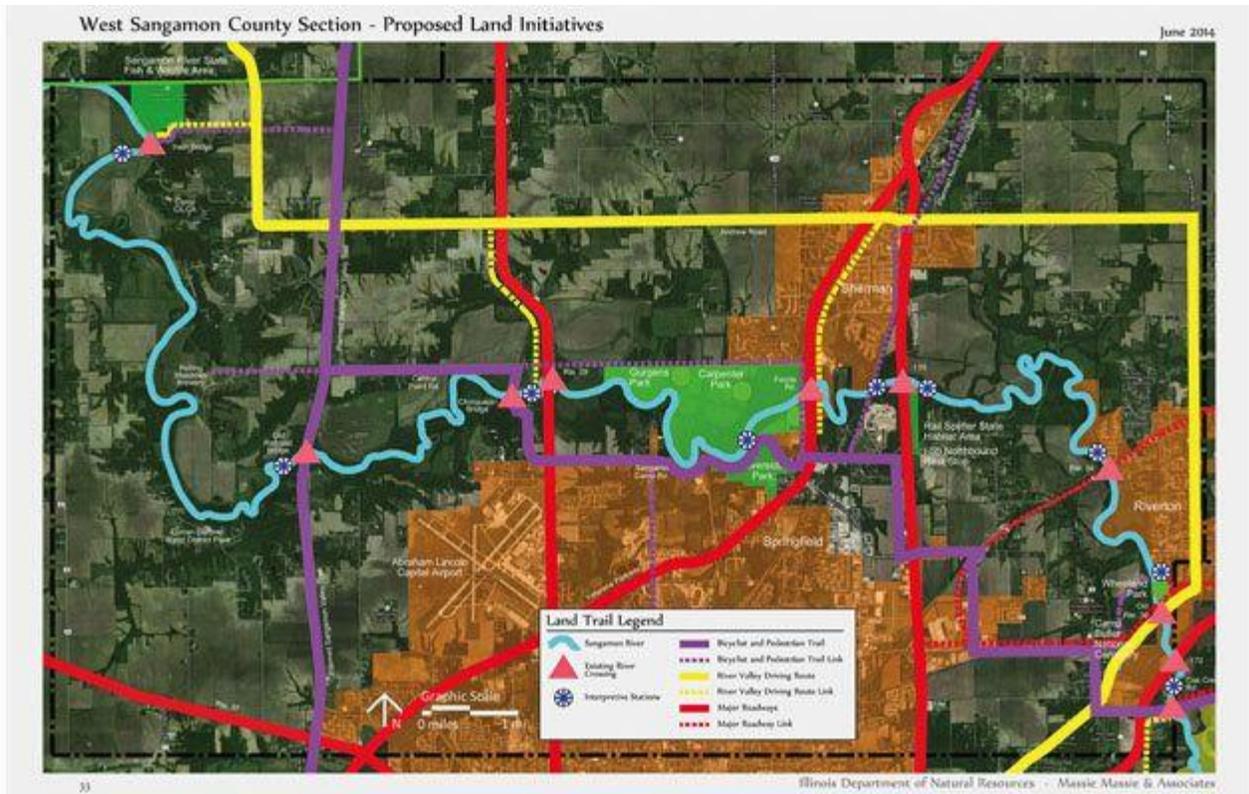


A handful of canoes and kayaks float down the Sangamon River near Petersburg.
PHOTO BY DAN WILLIAMS, TREETOP PRODUCTIONS, INC.

In the spring of 1831, when Abraham Lincoln was just 21, he and two other young men navigated a canoe down the Sangamon River. Lincoln grew to love the river, and his influence on it is still evident today.

The Sangamon River is a 264-mile tributary to the Illinois River, draining more than 3,000 square miles of land in central Illinois. It starts as little more than a drainage ditch near Bloomington-Normal and ends north of Beardstown as a strong but unhurried flow more than 200 feet wide in places. All but one of the 300 species of birds native to Illinois – including the revered bald eagle – live on the Sangamon River, and nearly half of the documented plant life in the state can be found there. Despite its rich history and biodiversity, the river is mostly undeveloped and overlooked. However, a movement is growing to make part of the river more accessible and, in the process, make it into a destination of its own.

The Lincoln Heritage Canoe Trail, which spans the section of the Sangamon River between Decatur and Petersburg, was designated in 1965 by then-Gov. Otto Kerner as the first water trail in Illinois. The Illinois Department of Natural Resources last year commissioned a study on potential tourism, recreation and stewardship of the river. The resulting plan, completed in time for next year's 50th anniversary of Kerner's declaration, presents an ambitious but realistic future for the river, with positive payoffs for Springfield and other cities along the trail.



The proposal calls for bike, pedestrian and car trails near the Sangamon River, along with historical markers and new river access points for public use.

MAP BY KENT MASSIE

Flowing with history

Abraham Lincoln was the only U.S. president to hold a patent, and it stemmed from his travels on the Sangamon River. The 16th president's patent is for a series of buoyancy chambers to raise a boat in shallow water, using essentially the same principle as a submarine. The patent application was filed in May of 1849, while Lincoln was a member of the U.S. House of Representatives, nearly two decades after his first documented trip down the Sangamon River. Lincoln's time on the river undoubtedly contributed to the development of his patent.

Lincoln's family moved from Indiana to just west of Decatur in 1830 and built a cabin near the Sangamon River. After his first trip on the river in 1831, the 21-year-old Lincoln was hired to build a flatboat and take supplies to New Orleans with two other men. Shortly after starting the trip, however, the boat got grounded on a dam constructed to power a mill near New Salem. With help from the locals, the boat was freed, and Lincoln eventually moved to New Salem, which is now Lincoln's New Salem State Historic Site.

Lincoln's appreciation for the Sangamon River was so great that in his first political announcement in March of 1832, he advocated improving and clearing the river to accommodate large boats for commerce.

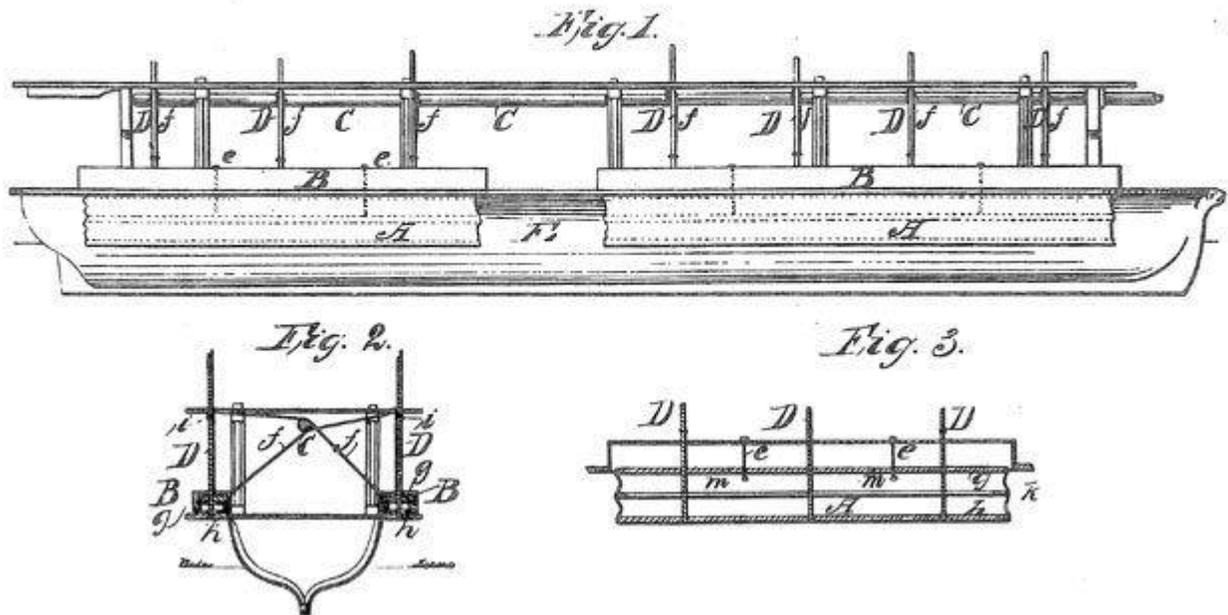
“I believe the improvement of the Sangamo river, to be vastly important and highly desirable to the people of this county,” Lincoln wrote in his announcement. “And if elected, any measure in the legislature having this for its object, which may appear judicious, will meet my approbation, and shall receive my support.”

Much like his patented boat buoing system, Lincoln’s plan for the Sangamon River was never implemented.

Aside from transporting goods, the Sangamon River has been used for irrigation, as a source of ice in cold months and even as the setting of the Old Salem Chautauqua, a local iteration of the nationwide public education movement during the late 19th century. Created by the Cumberland Presbyterian Church and situated near Petersburg with the river as its western boundary, the Old Salem Chautauqua grew into a small town from 1898 to 1916 and hosted famous speakers like politician William Jennings Bryan.

ABRAHAM LINCOLN

MANNER OF BOUYING VESSELS • NO. 6,469 • PATENTED MAY 22, 1849



Abraham Lincoln’s patent application shows his idea for lifting boats over sandbars and other obstructions. His time on the Sangamon River undoubtedly helped him develop the idea.

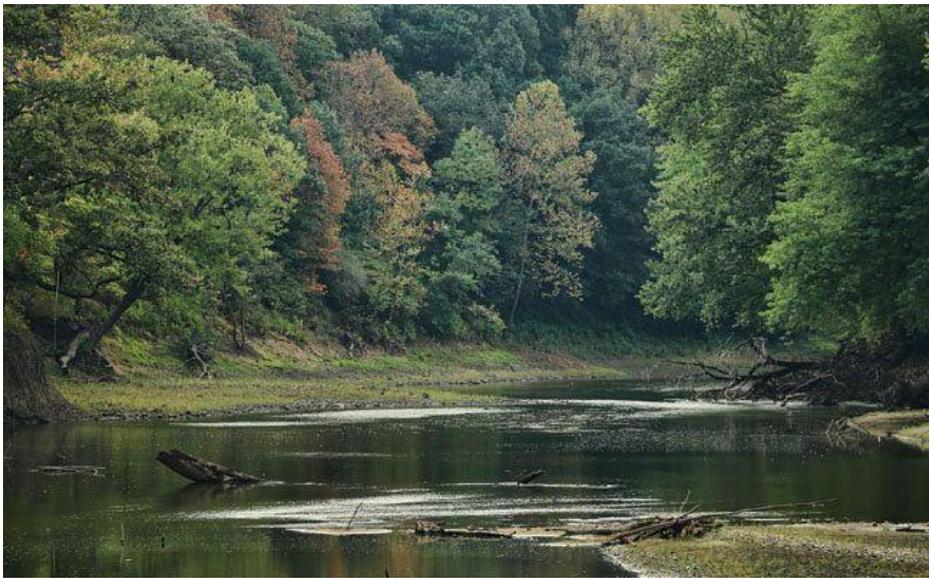
For thousands of years before white settlers even reached present-day Illinois, the Sangamon River offered native peoples a source of food, water, spiritual connection and more. According to one historical account, the name Sangamon supposedly comes from a Pottawatomie Indian word “sain-guee-mon,” meaning “where there is plenty to eat.” That account is the most charitable of many conflicting explanations.

Poet Edgar Lee Masters wrote in *The Sangamon*, part of “The Rivers of America” series, that the

origin of Sangamon may come from an Indian word “Sau-kie-min,” meaning “good earth” or perhaps from the Sauk tribe, or even from the word “sa-gie,” meaning a lake, and “mong,” meaning a loon.

Historian Virgil Vogel concluded in his “Indian Place Names of Illinois” that the most likely origin is an Indian word meaning “place of the outlet” or “river mouth.” Local historian Chris Patton bolstered Vogel’s explanation in the May 1982 issue of *Historico*, the journal of the Sangamon County Historical Society. Patton wrote that that Jesuit missionary Pierre Francois Charlevoix probably named the river inadvertently in 1721.

“As the party comes abreast of the mouth of the Sangamon, he points to it and inquires through his interpreter, ‘What is that?’,” Patton wrote. “The Indian guide to himself says, ‘Stupid white man, that’s the mouth of a river!’ , but aloud he speaks the Indian word for river mouth, ‘san-ge-nong’. Charlevoix, assuming he has been given the Indian name for the river, dutifully records in French orthography: ‘Saguimont.’ And thus, today, our beautiful stream bears the undignified name of ‘River-mouth River.’”



The river runs through private land, limiting public use.
PHOTO BY DAN WILLIAMS, TREETOP PRODUCTIONS, INC.

Natural beauty

Dan Williams of Petersburg says one of the things he loves most about the Sangamon River is its natural beauty and serenity. Williams is tourism director for Menard County, but he’s also a photographer and avid outdoorsman.

“Until I kayaked, I never had an appreciation for how pretty it is,” Williams said of the Sangamon River. “There’s essentially very little development. You can spend all day on the river

and see maybe a few houses, and that's about it.”

Williams is among those interested in seeing the river become more accessible. He points to Abe's River Race, one of a trio of events using the river as a race course near Petersburg.

“It's probably one of the few chances to see the river,” he said. “Other than a few vantage points, people can't get to the river, so they can't see that it's really pretty out there.”

The plan commissioned by the Illinois Department of Natural Resources for the Sangamon River would likely encourage the development of more events like Abe's River Race by cleaning up parts of the river, removing obstructions and increasing public access. Also included in the plan are a proposed bike and pedestrian trail and a driving trail – both of which loosely follow the river's path, mostly along existing roads.

DNR hired Massie Massie and Associates of Springfield to create plans for the 85-mile portion of the Sangamon River between Decatur and Petersburg. The state agency hopes to get that section of the river declared a national water trail in time for the 50th anniversary of its designation as a state water trail. Kent Massie, who led the study, says the plan incorporates input from landowners, governments and local groups with a stake in the river's future.



A clever Lincoln impersonator navigates his vessel down the Sangamon River during Abe's River Race 2014 near Petersburg.
PHOTO BY DAN WILLIAMS, TREETOP PRODUCTIONS, INC.

The plan divides the Lincoln Heritage Canoe Trail into five sections. Springfield is in the West Sangamon County section, which stretches from the east side of Riverton to the spot where the Sangamon River crosses from Sangamon County into Menard County, northwest of Abraham Lincoln Capital Airport.

In the report, Massie points out several concerns along this stretch of the river, including a lack of emergency access points, inadequate public trails, two potentially dangerous breached dams, trash dumping and more. One of the main concerns, however, is that much of the land through

which the river runs is private, so the public can't access the river in many areas. One such area is the site of the long-gone Sangamo Town, from which Lincoln launched his flatboat.

Massie's plan calls for public purchase of land along the river or obtaining easements on the land so the public can access the river. He suggests removing the breached dam near Riverside Park, a project he says is already under way thanks to DNR's efforts. Additionally, he points to several places where public access points could be added, like near the Interstate 55 rest areas north of Springfield. Such access points would come with restrooms, trails, picnic areas and more.

Near the river, Massie calls for a bike and pedestrian path from Camp Butler National Cemetery to Riverside Park, offering a link from the city to the river on existing roads. The path would cross the planned North Inter-Urban Trail between Williamsville and Springfield, then continue northwest to Athens. Under the plan, cars would be directed on a "river valley driving route" from Riverton to Athens, connecting the communities of Spaulding, Sherman and Andrew in the process.

The DNR report contains similar suggestions for other areas of the river. For example, the Bolivia Road Bridge, located about 14 miles east of Springfield, would be restored and designated as a historic structure. Built in 1901, the bridge is one of two remaining in Illinois built with the "Parker through truss" design. It has fallen into disrepair and may be replaced with a concrete bridge if no effort is made to preserve it.



Bolivia Road Bridge, across the North Fork of the Sangamon River near Bolivia, is in need of restoration.
PHOTO BY Coalfather VIA WIKIPEDIA.ORG

Besides making the river more accessible and useable, the river plan calls for curtailing fly dumping of old tires and other trash, preserving habitat and soil along the river and its tributaries, promoting river-based activities like athletic events and emphasizing the river's historical significance with interpretive markers and public education.

Although DNR commissioned the study, the agency may not be the primary source of funding for projects that stem from it. Massie says funds may also come from local, state and federal grants, as well as private donations.

In the meantime, Massie says more historical research needs to be done to raise the Sangamon River's profile, especially in connection to Abraham Lincoln.

"There is a lot of history related to the river and its use, but it's not part of the Lincoln story much," he said. "It has kind of just disappeared."

Jim Reed, a board member of the Lincoln Heritage Water Trail Association, says the river offers a different kind of learning environment.

"On the river, you can explore the Lincoln story locally and up close, not by a walk through a museum or building," he said. "There are multiple stories that can be told that aren't told now. It can be compelling to a new audience."

Reed has high hopes for the project, but he also recognizes that it will take significant involvement from the communities along the river.

"Because of the overlapping interests – kayaking, hiking, biking, history – the potential for the project reaches beyond any one particular group," Reed said. "This is a battle on so many fronts. Even if you don't care about canoeing, you can find your interests. I can guarantee we can find you something to do with the project."

Reed first became interested in the Sangamon River more than a decade ago through his involvement in the Menard County Tourism Council. The council saw the river as a good way to capitalize on the building of the Abraham Lincoln Presidential Library and Museum at the time, but only a couple members had ever actually been on the river. They promptly organized a canoe trip, and Reed says he was hooked.

"I had such a good time," he said. "It happens every time. You get in a canoe or kayak and you kind of lose your sense of place and your sense of time. You just kind of get lost, and that's pretty cool."

Contact Patrick Yeagle at pyeagle@illinoistimes.com.

Bill to create bobcat hunting season heads to governor

The Illinois Senate on Thursday approved a plan to create a bobcat hunting season, and the measure now heads to Gov. Pat Quinn for his approval.

The Illinois Senate approved the measure by a 30-19 vote. The House had passed the bill 91-20 in March.

The Illinois Department of Natural Resources previously determined that the bobcat population had grown large enough in certain areas of the state that management through a public hunting season was needed.

Republican state Rep. Wayne Rosenthal of Morrisonville is the bill's sponsor. State Sen. John Sullivan, D-Rushville, cosponsored the bill.

“We have seen a large number of bobcats in western and southern Illinois due — in part — to the restoration of habitat,” Sullivan said in a statement. “Conservation practices and effectively managing our natural resources are at the heart of this proposal.”

Opponents of the measure, including Democratic state Sen. Linda Holmes, say it's "trophy hunting" and shouldn't be allowed.

If the bill (HB4226) receives Quinn's approval, the DNR would have the power to establish hunting seasons in the counties where the bobcat population has spiked. The department would also determine the number of permits issued.

Illinois banned hunting of the nocturnal animal in 1972. Bobcats were on the threatened species list from 1977 to 1999.

Lawmakers name state museum after Alan Dixon

Illinois lawmakers have named the state museum after a 40-year force in government.

The Senate adopted a resolution Thursday to name the museum on the state Capitol grounds in Springfield for former U.S. Sen. Alan Dixon. It was approved earlier by the House.

Sponsoring Sen. James Clayborne, an East St. Louis Democrat, explained Dixon was a Belleville Democrat who spent his entire working life in government.

Dixon was elected to the Illinois House of Representatives at age 22 in 1950. He later served in the Illinois Senate, as state treasurer, secretary of state, and two terms in the U.S. Senate beginning in 1981. He was defeated for re-election in 1992.

Dixon died July 6, one day short of his 87th birthday.

Camping is second nature in Southern Illinois



DECEMBER 04, 2014 5:00 AM • BY LES WINKELER

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Camping is nearly as popular as Christmas in Southern Illinois.

And, why not? Virtually the entire region is a campground.

There are no less than 15 state parks or wildlife areas south of Interstate 64 with campgrounds. The Shawnee National Forest, which covers most of the southern fourth of the state allows primitive camping as well as more manicured campgrounds.

There are federal campgrounds at Rend Lake and Crab Orchard National Wildlife Refuge. In addition, there are private campgrounds that cater specifically to equestrians.

Campers have nearly infinite choices of environments.

There are wonderfully secluded campsites on the shores of pristine lakes, perfect for tents at the Saline County State Fish and Wildlife Area, Horseshoe Lake or Lake Glendale in the Shawnee National Forest. Or campers can park their trailers in less secluded, but no less scenic, spots at Lake Murphysboro or Rend Lake.

If escaping deep into the woods is your desire, consider Ferne Clyffe State Park or perhaps the Washington County Conservation Area.

And, if big water is your thing, Cave-in-Rock and Fort Massac state parks offer camping on the banks of the Ohio River. And, the views from atop the bluffs at Cave-in-Rock State Park are unsurpassed in Southern Illinois.

Camping is also a popular activity at Giant City State Park, Hamilton County State Fish and Wildlife Area and Dixon Springs State Park.

Visitors to Giant City can pamper themselves with the world famous fried chicken dinners at the Giant City Lodge. Visitors to Hamilton County have access to Dolan Lake, one of the most productive fishing lakes in the region.

And, Dixon Springs State Park offers some of most spectacular scenery in the area.

Finally, if you just enjoy looking at recreational vehicles, visiting the World Shooting and Recreational Complex during the ATA's Grand American in early August is a must see.

The WSRC has 1,000 campsites. Nearly all of them will be occupied during this premier trap shooting events.

Reynolds retires after 35 years at Ferne Clyffe



6 HOURS AGO • BY LES WINKELER

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GOREVILLE – Bill Reynolds has been the Illinois Department of Natural Resources' site superintendent at Ferne Clyffe State Park, his dream job, for 35 years. Reynolds will retire Dec. 31.

"I'm very happy with what has been done and accomplished here," he said. "There is always more. I'm just at the point, it's easier for me to look back on what I was involved in and accomplished over the last 35 years than to think about what needs to be done in the next five.

“I could tell you in pretty short order what needs to be done. I’ve loved my job. I just think it’s a good time for me to move on and someone new to step in. They are going to have that same opportunity and the same challenges I had.”

While Reynolds is ready for the next chapter in his life, he’s not exactly bolting out the door either.

“I don’t know (how many days I have left), I haven’t looked,” he said. “If I hated my job, I could probably tell you. All I can think of right now, there are a few things I’d like to tie up, a few loose ends. All I know is Dec. 31 is my last day. At 4 p.m. on Dec. 31, I’ll walk out.”

While Reynolds has occupied the same desk for 35 years, the job he leaves behind is vastly different than the one he inherited in 1980. After graduating from Southern Illinois University with a degree in forestry, Reynolds eventually landed a job as an assistant to Don Coale, regional land manager, at the Department of Conservation’s Benton office.

“He liked to use me at that point to go fill vacant superintendent positions,” Reynolds said. “At one point, I had three vacant sites I was visiting and managing, including Ferne Clyffe. The superintendent here had died in the fall of 1980 in an automobile accident. The DOC was having some rough budget times, and Don said ‘If you’re interested in staying with us, you ought to look into this job at Ferne Clyffe because every time we have tough budget times they want to cut my assistant.’ Actually, it was a promotion to come down here from Benton.”

Reynolds said Ferne Clyffe was a perfect fit for him from the beginning.

“What’s so neat about this site, I went to SIU and studied forestry and that’s a terrific curriculum,” he said. “Some of the classes are how if you started from scratch how you would design and lay out a recreation area, a state park, and Ferne Clyffe is like a textbook example of how you lay out a state recreation area. I had the opportunity to come down here, so I was already familiar with the site. I could see this was just a textbook example. So what it was at that point was just falling in and following up on the things that were suggested in the master management plan. I’ve just been following that pretty much ever since.”

And, over the years, Reynolds was given more and more responsibility.

Currently, he is the site superintendent for Ferne Clyffe, the Tunnel Hill State Trail and the Cache River State Natural Area.

“I’m up to 20,000 acres or more over five counties,” Reynolds said. “It’s all so diverse. It’s recreation, but it’s also natural resource management. It’s the bike trail, a 45-mile bike trail from Harrisburg to the Wetlands Center. It’s such a neat site (Tunnel Hill State Trail), but people thought early on ‘Who is going to come use this?’. I think we’re up to 80,000 visitors a year.”

He was also instrumental in the development of the Cache River facilities.

“We’ve put in boardwalks, boat ramps and trails and a \$4 million Wetlands Center,” Reynolds said. “This is another one of those outstanding examples of conservation work where things just came together. Timing was right for so many things, including the Wetlands Center. For the state, that kind of let us put a footprint down there. It gave us a hub for people to come to and learn about the area.”

Another highlight was the timberland restoration accomplished in the Cache River area through the Conservation 2000 program.

Without question, the toughest part of his tenure was the budget cutbacks the department endured in the past decade.

“During these low budget times, you can’t do as much as you used to do,” Reynolds said. “It’s hard to sit back and watch your staff try to accept that. They want to try to continue to do what they used to do. That’s why I told them many times, ‘We can do anything, but we can’t do everything.’”

When Reynolds finally steps aside Dec. 31, there will be no regrets.

“When I finally landed here in 1981, it was kind of like the end of the road,” he said. “On the other hand, it was like a new path I was starting. I thought if I stay here the rest of my career I’ll be a happy camper because it is going to offer me a lot of opportunity.”

A handful of countries contributes most to climate



4 HOURS AGO • BY DINA CAPPIELLO

WASHINGTON (AP) — Six countries produce nearly 60 percent of global carbon dioxide emissions. China and the United States combine for more than two-fifths. The planet's future will be shaped by what these top carbon polluters do about the heat-trapping gases blamed for global warming.

How they rank, what they're doing:

CHINA

It emits nearly twice the amount of greenhouse gases as the United States, which it surpassed in 2006 as the top emitter of carbon dioxide. China accounts for about 30 percent of global emissions. U.S. government estimates show China doubling its emissions by 2040, barring major changes. Hugely reliant on fossil fuels for electricity and steel production, China until recently was reluctant to set firm targets for emissions, which continue to rise, although at a slower rate. That changed when Beijing announced last month in a deal with Washington that it would stem greenhouse gas emission growth by 2030. About a week later, China's Cabinet announced a coal consumption cap by 2020 at about 62 percent of the energy mix. While politically significant, the U.S.-China deal alone is expected to have little effect on the global thermostat.

2013 CO2 emissions: 11 billion tons

2013 Population: 1.36 billion

UNITED STATES

It has never entered into a binding treaty to curb greenhouse gases. Nevertheless, it has cut more carbon pollution than any other nation. It is on pace to meet a 2009 Obama administration pledge to reduce emissions 17 percent from 2005 levels by 2020.

Carbon emissions are up, though, as the U.S. rebounds from recession. President Barack Obama has largely leaned on existing laws, not Congress, to make progress — boosting automobile fuel economy and proposing to reduce carbon pollution from new and existing power plants. The White House vowed in the China deal to double the pace of emissions reductions, lowering carbon pollution 26 percent to 28 percent from 2005 levels by 2025. Expect resistance when Republicans control Congress in January.

2013 CO2 emissions: 5.8 billion tons

2013 Population: 316 million

INDIA

The U.S.-China agreement puts pressure on the Indian government, which could announce new targets during a planned Obama visit in January. Meantime, India plans to double coal production to feed a power grid still suffering blackouts. Its challenge: to curb greenhouse gases as its population and economy grow. In 2010, India voluntarily committed to a 20 percent to 25 percent cut in carbon emissions relative to economic output by 2020 against 2005 levels. It has made recent strides installing solar power, which it is expected to increase fivefold to 100 gigawatts by 2030. Under current policies, its carbon dioxide emissions will double by then, according to the International Energy Agency.

2013 CO2 emissions: 2.6 billion tons

2013 population: 1.2 billion

RUSSIA

It never faced mandatory cuts under the 1997 Kyoto Protocol because its emissions fell so much after the Soviet Union collapsed. A major oil and gas producer, Russia in 2013 adopted a domestic greenhouse gas target that would trim emissions 25 percent from 1990 levels by 2020. Russia's carbon dioxide emissions today average 35 percent lower than 1990 levels. To meet its goal, Russia has set a goal for 2020 of boosting energy efficiency 40 percent and expanding renewable energy 4.5 percent. The state-owned gas company Gazprom has energy conservation plans, as has the federal housing program. But in 2006, Russia announced a move to more coal- and nuclear-fired electricity to export more oil and natural gas.

2013 CO2 emissions: 2 billion tons

2013 population: 143.5 million

JAPAN

The shuttering of its nuclear power plants after the 2011 Fukushima nuclear disaster forced a drastic change in plans to curb carbon pollution. In November, Japanese officials said they would now reduce greenhouse gases 3.8 percent from 2005 levels by 2020. With more fossil fuels in the mix, Japan's emissions will be up 3 percent from 1990 levels, its benchmark for its pledge at a 2009 United Nations summit in Copenhagen to reduce emissions 25 percent. Beginning in 2012, Japan placed a carbon tax based on emissions of fossil fuels, with the proceeds going to renewable energy and energy-saving projects.

2013 CO2 emissions: 1.4 billion tons

2013 population: 127 million

GERMANY

It has outperformed the 21 percent reduction in greenhouse gases it agreed to in 1997. Emissions are down 25 percent against 1990 levels. To comply with 2020 European Union-set goals, Germany must reduce greenhouse gases 40 percent by 2020. On Wednesday, it boosted subsidies for energy efficiency to help it get there. Germany has in recent years seen back-to-back emissions increases due to higher demand for electricity and a switch to coal after Fukushima, which prompted a nuclear power phase-out. Coal use is down this year and renewables continue to gain electricity market share. Renewables already account for a quarter of Germany's electrical production. The country plans to boost that share to 80 percent by 2050 — and put a million electric cars on the road by 2020.

2013 CO2 emissions: 836 million tons

2013 population: 80.6 million

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Sources: World Bank, Global Carbon Project, AP Research

EPA close to approving tightened permit for Sauget hazardous waste incinerator



7 HOURS AGO • BY JACOB BARKER JBARKER@POST-DISPATCH.COM 314-340-8291

The Environmental Protection Agency is close to renewing a permit for Veolia Environmental Services' hazardous waste incinerator in Sauget, this time with more restrictions on the facility.

The Sauget facility, with three incinerators that burn toxic chemical, medical and hazardous waste, is one of about 20 such disposal complexes in the country. Formerly operated by Onyx Environmental Services, the incinerator has long been a target of environmental groups.

Its emissions, which include mercury, dioxins, hydrogen chloride and volatile organic compounds, are regulated by the EPA to make sure they fall within safe limits.

In addition to existing emission limits, Veolia's new permit would limit how much arsenic, lead, mercury and other metals Veolia can put into its incinerator.

The agency would also require the company to install special monitors to continuously measure its emissions for the next year. New emergency generator rules and monitoring requirements would also be added.

Kathy Andria, president of the American Bottom Conservancy, a Metro East-based environmental group, said the new requirements are an improvement.

"ABC members feel that a hazardous waste incinerator should never have been permitted to operate near an urban center in St. Louis and East St. Louis in the first place," she said. But "the draft permit the EPA is proposing would be a significant improvement over the current operating permit."

At a public hearing Wednesday, few people showed up. Students with the Washington University Environmental Law Clinic, on behalf of the American Bottom Conservancy, spoke in support of the new requirements. No one else from the public spoke during the early evening.

Veolia officials did not return repeated calls and or reply to emails. A lawyer representing the company at the public hearing said only that Veolia would submit written comments on the permit before the Dec. 19 deadline.

Penni Livingston, a Metro East environmental lawyer who often represents clients fighting for more environmental controls, said the incinerator “actually is a top-notch operation.” As a former lawyer in the St. Clair County State’s Attorney’s office, she toured the facility multiple times to make sure it complied with various environmental rules.

While the incinerators do emit hazardous substances, “for the most part they’re burning so hot” they destroy the worst chemicals and keep them from reaching dangerous levels, she said.

“Whether or not you think we should be incinerating waste is a different issue than if they do it well,” Livingston said.

The Sauget incinerator is one of two special disposal incinerators operated by the North American subsidiary of multinational firm Veolia Environnement, based in Paris, France. The other North American incinerator is in Port Arthur, Texas, and the two take special hazardous waste from across the country.

The EPA took over permitting from the Illinois EPA after a lawsuit from environmental groups. The state had issued a permit in 2003, which environmentalists decried at the time for being too lenient.

In 2008, the federal agency granted an operating permit, but it didn’t include hourly limits on mercury and other heavy metals fed into the incinerators that are proposed in EPA’s new permit. The plant was cited in 2006 for exceeding benzene and arsenic limits.

Feeding the soil what it needs



2 HOURS AGO • CHRIS LUSVARDI H&R STAFF WRITER

DALTON CITY — Roger Windhorn stood Thursday in holes dug in the middle of farm fields near Maroa and Dalton City.

He wanted to explain to a group of farmers the importance of knowing what the soil is like not just on the surface but also another couple of feet underground.

“You’ve got to know what you’ve got in the pit,” said Windhorn, a Natural Resources Conservation Service soil specialist from Champaign. “That can have a tremendous difference in what you want to do.”

Windhorn spoke during a cover crop workshop organized by the Macon County Soil and Water Conservation District. Farmers from Macon, Shelby, Piatt, DeWitt and Logan counties attended the event held at Jim Stoutenborough’s farm near Maroa and Jeff Stocks’ farm outside Dalton City.

The soils showed what cover crops could be grown in each location, Windhorn said. Growing cover crops can be beneficial to change soil, Windhorn said while comparing the soil to an old man.

“Old men don’t want to change,” Windhorn said. “They like meat and potatoes as it’s gotten them this far.”

Adding an extra salad and fruit can help, though, he said.

“That’s exactly what the soil is doing when we plant cover crops,” Windhorn said. “We sustain the life of the soil and it’s really a good thing.”

Stoutenborough said he had success this year in growing turnips and cereal rye. He has been planting cover crops for the past 20-25 years, mainly as pasture for cattle.

“I got my money back this year,” Stoutenborough said. “This year looked good.”

The timing of planting can make a difference, with Stoutenborough saying to get planted as early as possible.

Stocks said sufficient moisture has been a problem for some farmers but he has found another weather-related issue.

“It's the cold that is hurting us,” said Stocks, who has been using cover crops for 15 years, growing oats and radishes this year. “It's been too cold early on to get growth.”

What works on each farm is going to be different, said Dan Towery, a cover crop specialist from Indiana.

“The guys who are most successful don't have any one system,” Towery said. “They have diversified techniques.”

Many farmers are voluntarily looking at cover crops to improve soil health and reduce nutrient runoff into waterways. Meanwhile, government agencies are examining ways to improve water quality in Illinois and the Gulf of Mexico.

The Illinois Environmental Protection Agency and Department of Agriculture are accepting comments through Jan. 24 about the Illinois Nutrient Loss Reduction Strategy launched last week with more information found at www.epa.state.il.us/water/nutrient/nlrs.html.

Cover crops can lead to better yields and make up some of the difference in bad growing years, said Doug Gucker, a University of Illinois farm educator.

“It's another insurance policy,” Gucker said.

He said farmers are adding a starter fertilizer if they have an over-winter cover crop.

GOP caucus puts hold on \$750,000 parks grant

42 MINUTES AGO • MARIA NAGLE MNAGLE@PANTAGRAPH.COM

BLOOMINGTON — Senate Republicans have put a hold on a \$750,000 state grant after they learned it would not be used to expand McGraw Park for a Central Catholic High School practice field.

Despite the hold, the Bloomington City Council on Monday intends to discuss and possibly approve using the money on other parks and trails projects, Mayor Tari Renner said.

Renner said he learned Thursday that "apparently there has been a hold put on the city of Bloomington's money by the Senate Republican Caucus, as of Tuesday."

State Sen. Bill Brady, R-Bloomington, who sponsored the earmark when it was budgeted five years ago, told The Pantagraph the caucus "just did it (placed the hold) when they found out the council had rejected the grant for McGraw Park."

"As far as I knew this wasn't possible," Renner said. "Again, this was a grant that was over five years old. It said, 'City of Bloomington parks and trails,' and it's for capital projects. Nowhere does Senator Brady's name appear on that law. I don't know why anybody would play partisan politics with this."

Renner said he is waiting to hear from the Department of Commerce and Economic Opportunity, which is administering the legislative appropriation from the Build Illinois Bond Fund, "to see what this means."

The city did not reject the money, only the use for McGraw Park, Renner added.

Brady, a CCHS alumnus, said that once people heard the city "had rejected (the plan), we got a whole lot of requests for that money."

Brady said he has asked former Bloomington Mayor Jesse Smart to head an advisory committee to determine how to use the grant.

"I don't know why we need another committee studying something. We already have a parks master plan that was developed over a number of years by the council and citizen input," Renner said.

"I think it would be ill-advised to try and trump the actions of the citizens of Bloomington and their elected authorities," he added. "It's really troubling when once again we have Springfield politicians telling local government and their citizens what to do."

Last month, the council approved the proposal but then rejected it because of a possible conflict of interest involving Ward 9 Alderman Jim Fruin, a CCHS trustee. It called for expanding McGraw Park by using the grant to buy four acres adjacent to the school, which then would have leased it.

Brady said he told Renner on Monday about the committee led by Smart, "and he was fine with that." Renner said he doesn't recall Brady saying anything about it.

"I did tell him the council was going to consider other priorities in light of the rejection of the Central Catholic proposal," Renner said. "He didn't say anything about putting this on hold."

The city staff recommends the council on Monday approve using \$300,000 to improve and expand Constitution Trail, \$250,000 to resurface cart paths at the city-owned Prairie Vista golf course and \$200,000 to renovate Sunnyside Park.

"(Brady) might be able to appeal to (Governor-elect Bruce) Rauner so that's why we are acting quickly on it," Renner said.

Rotary pays for trees cut down at Savoy school

Thu, 12/04/2014 - 6:33pm | Christine Walsh



Photo by: Christine Walsh/The County Star

Savoy Rotary Club President Mike Kessel, front right, presents a check to Carrie Busey Elementary School Principal Jeff Scott on Thursday for the replacement of two stolen trees as Rotarians, left to right, Justin Gensler, Karen Sharp, Bill Sharp and Jeff Henderson look on.

SAVOY – The Savoy Rotary Club’s unofficial motto is “When it’s time for action, we say, ‘Yes!’”

The club proved its point when two tall evergreen trees were cut down and stolen from the grounds of Carrie Busey Elementary School last Tuesday. When a story about the incident appeared in The News-Gazette the next day, the club’s board quickly decided to take on paying to replace the trees as a project.

“The Savoy Rotary Club has been an active part of the Savoy community for 25 years,” Rotary President Mike Kessel said. “Supporting education is one of the areas of focus for Rotary. So when we saw that someone had damaged our school, we felt it was a natural extension for us to help in replacing the trees.”

For the last few years the club has provided backpacks full of school supplies for the school’s needy students.

“It’s just another example of the community of Savoy being supportive of this school being in this community, and especially the Rotary Club,” Carrie Busey Principal Jeff Scott said. “Any time there’s any kind of need, they meet the needs of both our kids and the school in general. It’s pretty neat having a school in a community like this.”

Scott was pleasantly surprised to hear from the Rotary so soon after the thefts occurred.

“It was nice,” he said. “They did a great job.”

Fir tree chopped down, taken from Ridgeview Elementary School

PEORIA — A fir tree was chopped down and stolen from Ridgeview Elementary School sometime Wednesday.

According to a police report, the 20-foot-tall fir tree was described as resembling a Colorado Blue Spruce, which is commonly used as a Christmas tree.

Principal Todd Jefferson called police Thursday morning to report that the tree on the school's property had been stolen. The tree stood in a fenced area of the northwest corner of the school's lot.

The report stated the tree was cut down with an ax, pulled across the school's field and then placed in a vehicle.

Illinois boasts big potential for wind energy



PHOTO / LESLIE RENKEN / JOURNAL STAR

Wind turbines at the Rail Splitter Wind Farm near Emden provide some of the wind power that enables Illinois to be the fourth largest state in the development of wind energy in the country.

PEORIA — Chicago may be known as the Windy City, but Illinois might qualify as the Wind State.

Not because Illinois breezes surpass the gusts that blow through Texas or western Iowa but because of wind infrastructure that's been developed here in the Land of Lincoln.

“We rate fourth (behind only Texas, Iowa and California) among the states in energy that's developed by wind,” said Kevin Borgia, manager of the Wind on the Wires, a Chicago-based trade group.

With more than 2,200 wind turbines in the state — and many more in the planning stages — Illinois has harnessed the wind to power an economic engine with jobs — not just for construction of turbines — but with the many wind energy manufacturers that have located in the Chicago area, he said.

Known as a transportation hub, Illinois also transports the electricity that results from wind energy. “Illinois is part of a huge regional power grid — the PJM Grid — that connects with 12 other states to the east,” said Borgia.

“Of those states, Illinois has the biggest wind production,” he said.

But for Illinois to fully develop its wind potential, federal help is needed, said Borgia. “Wind will beat any fuel (on price) except for natural gas. Right now there's an unequal playing field for wind compared to oil or nuclear power,” he said.

While wind struggles to secure even temporary assistance, the fossil fuel industry continues to enjoy billions in subsidies that are permanent parts of the U.S. tax code, said Borgia.

Earlier this week, the House passed HR 5771, the Tax Increase Prevention Act of 2014, by a vote of 378-46. The bill retroactively renews a package of more than 50 expired tax breaks including the production tax credit for wind but only for the 2014 tax year,

The bill passed by the House, now on its way for a vote in the U.S. Senate, has received a less-than-enthusiastic response from renewable energy advocates.

“This is an unacceptable half-measure that the climate cannot afford,” said Lukas Ross of the Friends of the Earth. “Wind farms do not sprout overnight. Planning and funding these projects requires a level of long-term certainty that a one year retroactive extension simply does not provide,” he said.

The Sierra Club’s Kady McFadden pointed to the fact that almost 30 percent of the wind production in the state comes out of the 18th Congressional District, a stretch of land that sprawls across central and western Illinois (including both Peoria and Springfield).

“(18th District representative) Aaron Schock should be out there strong to extend the production tax credit. He needs to be a leader on this,” she said.

“The production tax credit is so crucial to the wind industry. We want to retire those dirty coal plants,” said McFadden.

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FEMA reconsiders helping East Peoria homeowners affected by 2013 landslide



PHOTO/ DAVID ZALAZNIK/JOURNAL STAR

The deck at the home at 120 Kaitlin Court in East Peoria remains hanging Thursday above what remains of the hillside following the April 2013 landslide.

EAST PEORIA — The Federal Emergency Management Agency is reconsidering its 2013 decision to deny assistance to the Pinecrest Hills homeowners most affected by the landslides of April, 2013.

The federal agency invited the city to reapply for a grant to purchase and demolish seven houses on Kaitlin Court and Sunnybrook Avenue and then be reimbursed by FEMA at 75 percent of the cost. The city submitted its application in the middle of November. It's not known how long it would take FEMA to make a decision.

“I think the impression is that the city has been sitting back and doing nothing to help out these victims of the landslides,” said public works director Steve Ferguson, who filled out and submitted the application to FEMA. “That is not the case.”

And, while it's far from a done deal, the second chance at a grant is the best news for homeowners in the subdivision in the 18 months since the landslides.

“I was very surprised to hear that FEMA invited the city to ask us to apply for a buyout. It is encouraging to hear that this entire situation could soon be behind us all,” said Joshua Allen, the owner of one of the four homes declared uninhabitable. “This should be an obvious sign to all of the need for swift remediation and rehabilitation of an obviously deteriorating subdivision.”

The application includes the four properties — three on Kaitlin Court, one on Sunnybrook Avenue — that have been unoccupied since the day of the landslide and three other houses that are in proximity, but were never evacuated. Those properties are 124 Katilin Court, next door to the former Allen residence on Kaitlin, and 224 and 216 Sunnybrook, the houses on either side of the unoccupied house at 220 Sunnybrook.

While those homes aren't dangerous to occupy, Ferguson said, there is evidence of subsequent erosion of the slopes behind them. The three homeowners signed notices of voluntary interest of being included in the grant and agree to have their homes purchased and demolished.

The application is for a \$2 million grant to buy and demolish the seven houses, although Ferguson said the actual value would likely change. The amount includes the full market value of the properties before the landslide.

Twenty-nine homeowners, who are all victims, to varying degrees, of the landslides in the Pinecrest Hills subdivision have joined a lawsuit in U.S. District Court against the city and other defendants.

If approved, the grant would cover only 75 percent of the cost to buy and demolish the homes. It's currently unknown how the remaining 25 percent would be funded. The grant does not include money to make necessary repairs to the slopes in the area. The city has also recently submitted a second request to the state Department of Commerce and Economic Opportunity, the agency that denied a request last summer.

Allen said he was pleased that efforts continue towards resolving the situation in his former neighborhood.

“ If the city was to get the credit for helping us, I say good for all of us,” he said. “I think all of those affected and those involved would like to see a resolution where everyone is made whole. I am not surprised that things are taking as long as they are. I am hopeful and confident that we will all find a good and reasonable resolve. It will not be tomorrow but, I believe it will be soon.”

Senate wraps by approving eavesdrop fix, bobcat hunts

Burge-inspired bill would give court access to attorney general in some pension cases

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BY MONIQUE GARCIA AND RAY LONG Tribune reporters

SPRINGFIELD — The Illinois Senate on Thursday wrapped up its work for the year, leaving the Capitol after sending Gov. Pat Quinn measures that would create a bobcat hunting season in Illinois and put in place new rules regarding eavesdropping.

The Senate's departure comes after the House went home a day earlier without voting on a measure to raise the state's minimum wage, though the Democratic governor says he'll keep pushing in the hope he can force a vote before Republican Bruce Rauner succeeds him Jan. 12. Having passed a proposal Wednesday to raise the state's \$8.25-an-hour minimum wage to \$11 by 2019, senators spent the bulk of Thursday debating a measure that would allow bobcats to be hunted in Illinois.

Bobcats had been on the state's list of threatened species but were removed in 1999 as their population grew.

Sponsoring Sen. Sam McCann, R-Carlinville, argued that a bobcat hunting season was needed in order to help control the animal's growing numbers in Illinois.

Under the measure, which passed the House last spring, bobcats could be hunted Nov. 1 to Feb. 15. Hunters would be limited to one bobcat per year.

Opponents argued that the move could undermine the work to restore the bobcat population.

Bobcats live throughout Illinois but are more common in forested areas in southern parts of the state.

The Senate also sent Quinn legislation that would establish new regulations on how private conversations could be recorded after the Illinois Supreme Court struck down the state's eavesdropping law this year because it was too broad.

The proposal would require that all the parties would consent to being recorded.

Law enforcement officials could seek approval from a state's attorney for an exemption when investigating cases including drug crimes, assault, abduction, murder and gunrunning.

Opponents raised concerns about a provision that would make it a crime for someone to forward an email or other electronic communication that was intended to be private by the sender, saying that such a restriction was sure to be challenged in court.

The measure does not address the issue of body cameras for police, though sponsors say they'll be prepared to tackle that when they return to Springfield in January.

The idea of requiring police to wear cameras to record their interactions with the public has seen renewed focus after Ferguson, Mo., police officer Darren Wilson fatally shot 18-year-old Michael Brown, sparking riots and launching a nationwide outcry about race relations among police and the communities they oversee.

President Barack Obama has asked Congress for a more than \$260 million package that would include funding for body cameras for officers.

State Sen. Kwame Raoul, who holds the seat that once belonged to Obama, said that lawmakers are negotiating rules that would determine when a camera must be rolling and when an officer could turn it off, as well as how that data must be stored and processed.

"We want to leave some discretion, but there should be some minimal protocol by the state," said Raoul, who noted he wants to get something passed sooner rather than later, given the possibility that federal funds to buy cameras are in play.

Meanwhile, the Senate also approved a measure that would give the attorney general the ability to go to court to stop future cases in which a state retirement board approves pension payments to a public official who had been convicted of a crime.

The bill was inspired by disgraced former Chicago police Cmdr. Jon Burge, who did not lose his \$4,000-a-month pension despite costing the city tens of millions in legal costs because of police torture and abuse in the 1970s and 1980s.

The measure sent to Quinn would not affect Burge's pension.

Burge was sentenced to 4¹/₂ years in federal prison for his 2010 conviction on perjury and obstruction of justice charges.

Burge is in home confinement, having moved from a halfway house after time in prison, a federal prison spokesman said.

After his conviction, the police pension board deadlocked 4-4 on a motion to strip Burge of his pension.

The key issue before the board was whether Burge's conviction was related to his police work. Illinois Attorney General Lisa Madigan sued to challenge the decision, but the state Supreme Court ruled that she did not have the standing to take up the matter. mcgarcia@tribpub.com
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Research casts alarming light on decline of West Antarctic glaciers

A new study by researchers at NASA and the University of California at Irvine finds a rapidly melting section of the West Antarctic ice sheet appears to be in an irreversible state of decline, with nothing to stop the glaciers in this area from melting into the sea. (NASA)

By Chris Mooney and Joby Warrick December 4 at 3:21 PM

For two decades, scientists have kept a close watch on a vast, icebound corner of West Antarctica that is undergoing a historic thaw. Climate experts have predicted that, centuries from now, the region's mile-thick ice sheet could collapse and raise sea levels as much as 11 feet.

Now, new evidence is causing concern that the collapse could happen faster than anyone thought. New scientific studies this week have shed light on the speed and the mechanics of West Antarctic melting, documenting an acceleration that, if it continues, could have major effects on coastal cities worldwide.

Twin papers this week show that the rate of ice loss from West Antarctica is increasing — with the acceleration particularly pronounced in the past decade — and also why this is happening: Warmer ocean waters are pushing up from below and bathing the base of the ice sheet.

The findings add to a growing body of evidence suggesting that the effects of climate change are outpacing scientific predictions, driven in part, scientists say, by soaring levels of greenhouse gases in the atmosphere.

It often has been speculated that West Antarctica may be the most unstable of the world's great ice sheets, a group that also includes the still-larger Greenland and the massive East Antarctica. And research published in May suggested that for the oceanfront glaciers of West Antarctica, held in place by moorings at the seafloor, a point of no return already may have been reached.



[View Graphic](#)

Warm sea currents are undermining glaciers in Antarctica.

Now, researchers at the University of California at Irvine, NASA's Jet Propulsion Laboratory and three other institutions have reconciled several measuring methods, including those based on satellite and radar measurements, to determine just how much ice mass West Antarctica has lost to the oceans in the past two decades.

The researchers found that the ice sheet contributed about 4.5 millimeters, or 0.18 inches, to global sea-level rise from 1992 to 2013, with more than 70 percent of the loss occurring in the second half of that time period — meaning the rate of loss is accelerating.

“For long-term stability and small sea-level rise, accelerating mass loss is not reassuring,” said Pennsylvania State University glaciologist Richard Alley, commenting on the paper, which was published Tuesday in *Geophysical Research Letters*.

A second study, published Thursday in the journal *Science*, explains why this is occurring. It turns out that in the Amundsen Sea off the West Antarctica glaciers, warmer deep ocean water is “shoaling,” or rising from below, and lapping at the base of the glaciers. The surface ocean waters around Antarctica are generally quite cold because of snow and runoff from the glaciers, but these warmer waters are managing to push up to the ice shelf.

“We now show that the ocean is the major contributor of heat” to West Antarctica, said lead study author and oceanographer Sunke Schmidtke of the University of East Anglia in Britain. “And it’s not just the shelf itself — it’s something that happens offshore in the global ocean.”

This could ultimately prove to be one of the most important geophysical processes on the planet, for the simple reason that the ice sheet of West Antarctica would, if it

collapsed entirely, contribute about 3.3 meters, or nearly 11 feet, to global sea-level rise, Alley said.

“There are strong reasons to believe that if the thinning goes too far, it might cross a threshold and then accelerate much more rapidly,” he said.

The great ice sheets of the world, like West Antarctica, are so massive that, at present, they exert a gravitational pull on the surrounding ocean, which slopes upward toward them. However, the loss of West Antarctica would lead to less gravitational pull and more water spreading out across the ocean — a secondary effect that would further contribute to sea-level rise worldwide. And the Northern Hemisphere — including the United States, a nation that has contributed more than most to the current global-warming trend — could get a bit extra, Alley said.

The research is just the latest suggestion of the possibly worsening effects of climate change. On Wednesday, the World Meteorological Organization said that [2014 is on track to be one of the warmest years](#) — and perhaps the warmest — on record. Ocean surface temperatures have been unusually warm, particularly in a year in which the El Niño weather phenomenon did not materialize.

The findings from West Antarctica could call into question one principal finding from the latest report of the United Nations’ Intergovernmental Panel on Climate Change (IPCC), considered to be the world authority on global warming. In 2013, the panel put its high-end projection for likely global sea-level rise, by the year 2100, at a little more than three feet.

But the researchers studying West Antarctica are not so sure. “The upper bound defined by the IPCC, they may underestimate some of the components, particularly the ice sheets,” said UC-Irvine’s Isabella Velicogna, an author of the paper estimating the rate of ice loss from West Antarctica’s glaciers.

So how fast could the loss of West Antarctica unfold? Velicogna’s co-author, Eric Rignot of UC-Irvine, suggested that in his view, within 100 to 200 years, one-third of West Antarctica could be gone.

Rignot noted that the scientific community “still balks at this” — particularly the 100-year projection — but said he thinks observational studies are showing that ice sheets can melt at a faster pace than model-based projections take into account.

The consequences of such an amount of sea-level rise for the United States — or for any other coastal region — are staggering to contemplate.

Benjamin Strauss of Climate Central, whose Surging Seas project tracks the possible effects of sea-level rise and who was not involved in either study, said he estimates that “12.8 million Americans live on land less than 10 feet above their local high-tide line.” Of course, by the time West Antarctica may have begun contributing more significantly to sea-level rise, these numbers will presumably have increased.

Strauss also estimated that \$2.4 trillion worth of property is occupying this land (excluding Alaska and Hawaii). The cities that would be most affected include Miami, New Orleans and New York. The amount of sea-level rise contemplated here is quite similar to the storm surge seen in New York during Hurricane Sandy — a surge of 9.4 feet over the normal tide level was recorded at the Battery — only it would be permanent.

Other scientists urged caution in interpreting the findings, saying it is not clear whether the recent accelerated melting is an anomaly or a persistent phenomenon that will continue into the future. Ocean circulation patterns in the south polar region are still not fully understood, and it is possible that the migration of warmer water into the Amundsen Sea is unrelated to the overall climate warming trend, said [Olga Sergienko](#), a [glaciologist](#) at Princeton University's Cooperative Institute for Climate Science who was not involved in the studies.

"This represents only about 20 years of observation, and on the time scale of ice sheets that's just a blink," said Sergienko, who also is with the National Oceanic and Atmospheric Administration's Geophysical Fluid Dynamics Laboratory in Princeton, N.J.

Understanding the role ocean currents play is important because air temperatures in this region of Antarctica are too low to contribute significantly to the loss of surface ice, said [Michael Oppenheimer](#), a geosciences professor at Princeton who was not part of the new studies. But he added that the rate of melting in the future depends on complex interactions that require additional study to fully comprehend.

"The warm water appears to be gradually melting away the ice shelves and interacting with ice on land," Oppenheimer said. "One of the things we don't know is how much of that warm water is sitting there because of global warming and how much is sitting there because of some natural process.

"It is suspicious," he added, "that we're seeing this acceleration at the same time that the world is warming."

The Antarctic, isolated from Earth's other land masses and influenced by patterns of wind and ocean circulation that are unique to the South Pole, has been slower to show signs of warming than other parts of the planet.

Many climate-change skeptics have noted that winter sea ice around the continent has expanded and thickened in recent seasons, even as the Arctic continues to lose ice cover. But climate scientists say seasonal changes in Antarctica sea ice do not contradict the overall warming pattern seen in the rest of the world.

"The land ice is clearly losing mass," Oppenheimer said. "Counterintuitively, as ice is being lost from Antarctica in various places, there is additional fresh water coming to the surface of the ocean. And fresher surface water freezes more easily."

Terrence McCoy contributed to this report.

Bobcat season approved for Illinois

Now awaiting the governor's signature, the measure would establish a hunting season for bobcats in November 2015

Illinois hunters will have the opportunity to hunt bobcats under a plan approved by the Senate on Thursday. The Illinois Department of Natural Resources recently determined that bobcat populations had reached a level where the number of animals should be managed through public hunting.

HB 4226 creates a bobcat season from Nov. 1 through Feb. 15 starting in 2015 and now awaits the governor's signature.

"We have seen a large number of bobcats in western and southern Illinois due—in part— to the restoration of habitat. Conservation practices and effectively managing our natural resources are at the heart of this proposal," State Sen. John Sullivan of Rushville said.



Researchers studying Illinois' river otters

by Andrea Hahn



CARBONDALE, Ill. -- Every species of animal presents its own challenge for researchers. For a team at Southern Illinois University Carbondale, the river otter poses several, including: How do you monitor an animal too sleek to wear a tracking collar?

A team of researchers is at the beginning of a four-year project, funded by the Illinois Department of Natural Resources, to investigate the status of the river otter in Illinois. They hope to include at least 60 otters in a study that will help determine future management practices for the species. They'll do this by radio tracking the animals to learn more about their individual home ranges, their role as the newly re-introduced top predator in aquatic ecosystems, causes of death, and the impact of a sanctioned trapping season.

But first the research team has to catch the otters. And outfit them with radio transmitters.

“An otter is not the easiest animal to capture,” Clay Nielsen, professor of wildlife ecology and conservation with the Department of Forestry and the Cooperative Wildlife Research Laboratory at SIU, said. “They are clever, and they are mobile and they can travel a long way in a short time.”

Eric Schauber, wildlife ecologist with the Cooperative Wildlife Research Laboratory and associate professor of zoology, concurred. He and Nielsen are the principal investigators of the research team.

“Otters cannot carry a powerful radio transmitter because it would be too heavy for them; they are low to the ground and often underwater so the signal does not carry very far; and they move long distances for their size,” Schauber said.

For the capturing part of the problem, Nielsen and Schauber recruited graduate student Andrew Rutter, an experienced trapper from Chanute, Kan. Rutter graduated from Emporia State University with a bachelor’s degree in biology and some experience with field research. On this project, he’s had good success already. Rutter’s field research team caught 10 otters in the first five weeks of the research project and hope to double that number before the end of this year.

Rutter explained that one of the challenges to capturing otters is their unpredictable and independent nature.

“They don’t really respond to bait,” he said. “They catch their own fish, and they are very good at it. They really do their own thing. You have to guess where they will be and where they will go. Because they have such large home ranges, they may pass by our traps only rarely.”

The only sure thing about otter behavior, he said, is that they will always swim when given the option. When water levels are lower, that can be an aid to the research team. Higher water levels that temporarily change water courses can wreak havoc on even the best-laid plans.

And then there is the problem of tracking. The team is using a field-tested, minimally invasive technique to insert a small transmitter under the animals’ skin. At the same time, they record measurements and take tissue and DNA samples.

The team expects to do most of its tracking from the ground, but Nielsen said they may enlist the aid of the SIU aviation program for some aerial tracking, owing to the otters’ mobility and adaptability.

The main purpose for all this capturing and tracking is to assess otter ecology and response to harvest. The winter of 2012-2013 marked the first Illinois trapping season for river otters since 1929, when the animals were first protected by law. River otters had been abundant in the state, but beginning in the early 1900s, their numbers here began to decline due to a combination of fur harvest and habitat loss. They didn’t rebound, even with legal protection. In 1977, the State of Illinois listed the river otter as a “state threatened” species, and then as “state endangered” in 1989.

Even with such protections, the river otter did not recover as ecologists had hoped. Finally, the IDNR brought in 346 otters from Louisiana, releasing them at sites in central Illinois from 1994 to 1997. That did the trick. By 2004, the population was well on its way to recovery and Illinois removed the otter from state lists of endangered and threatened animals.

“I think 20 years ago, no one would have thought otters would take off as they have,” Nielsen said. “We are studying otter survivability and causes of mortality – this is the first time otters have been studied in this way in Illinois. It’s an opportunity for us to study the re-introduction of a top predator into an ecosystem.”

Nielsen noted that SIU’s partnership with the IDNR on this and other research projects statewide provides enhanced research and mentoring opportunities for graduate students, introduces undergraduate students to field research and provides the agency with the data it needs for informed wildlife management. He regularly involves students in his research projects to help them gain the field experience research teams seek.

“The IDNR relies on us to be able to work statewide, and we’re proud of that,” Nielsen said.

“This is another avenue for SIU to burnish its already well-established position as a leader in research on river ecosystems,” Schauber said.

The team is already looking at opportunities for spin-off research.

“I am very interested learning more about how interactions between otters may change as the environment fills in,” Schauber said. “River otters are essentially the top of the aquatic food chain here, and I am interested in finding out what, if any, level of control they have on populations of their prey. We are currently investigating how much otters eat invasive silver carp. This is an enormous potential prey base for otters that was not present in the past when otters were abundant.”

The team will catch otters this year and the next two years. While they will analyze data as they receive it, the major analysis comes in the year following the three catch and tag years.

The river otter is a member of the weasel family. Adult otters are 35 to 53 inches long tip to tip; approximately 30 to 40 percent of that length is tail. They weigh 10 to 25 pounds, with the males about a third bigger than the females on average. Their sleek bodies are perfect for agile swimming; they use their tails as rudders to help them navigate. Known for their cleverness and playful personalities, otters are also voracious predators. Their thick, water-repellent fur is dark brown to reddish brown, silvery or tan on the throat and belly.