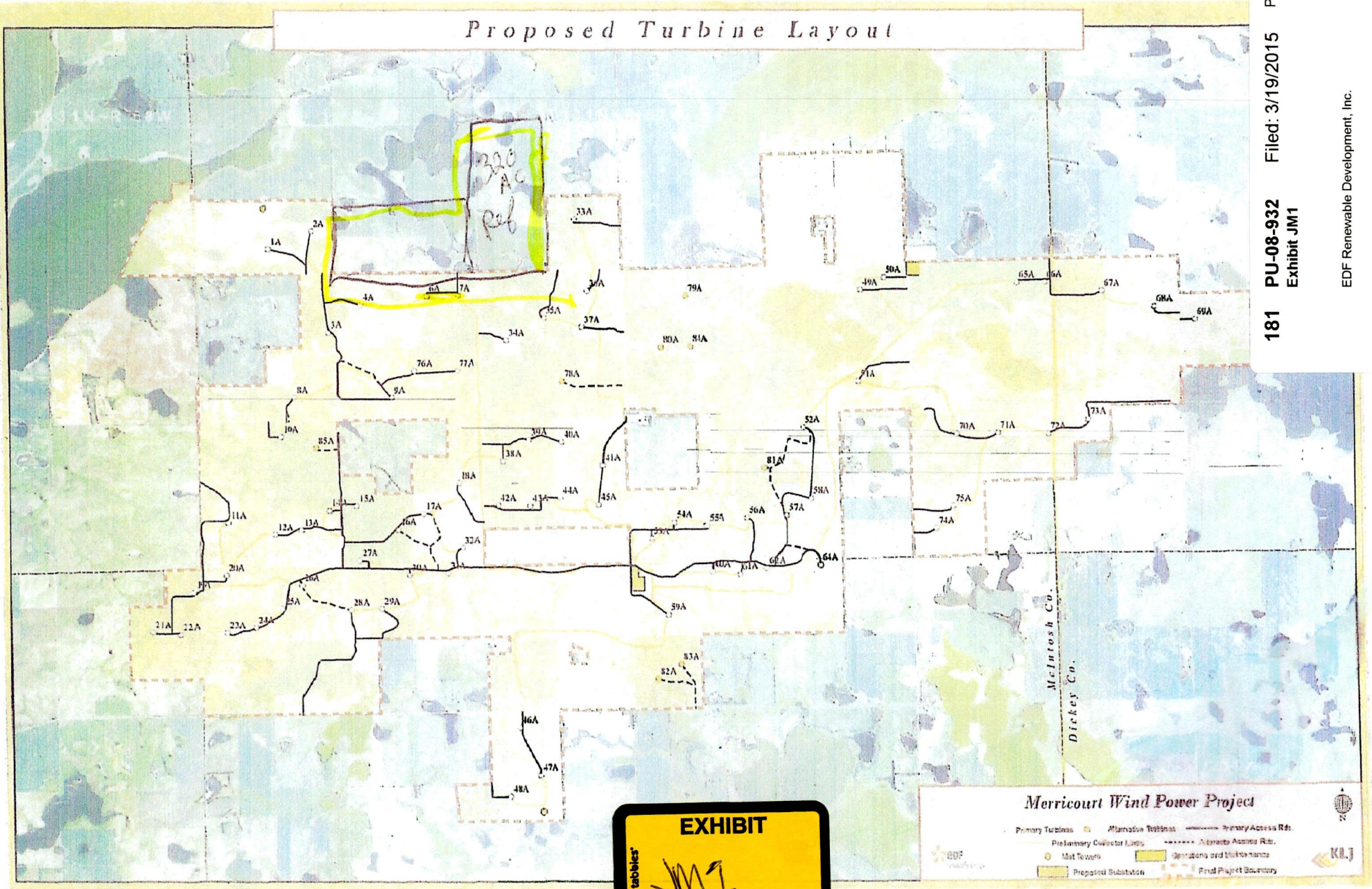


# Proposed Turbine Layout



**EXHIBIT**  
JM1

## Merricourt Wind Power Project

EDF Renewable Development, Inc. logo on the left and KLEJ logo on the right. The legend includes:  
Primary Turbines (circle with dot)  
Alternative Turbines (square with dot)  
Primary Access Rd. (solid line)  
Preliminary Collector Lines (dashed line)  
Access Access Rd. (dotted line)  
Mat Towers (circle with cross)  
Operations and Maintenance (yellow rectangle)  
Prepared Substation (yellow rectangle with border)  
Final Project Boundary (dashed line)





# Killing Them Softly

Earth friendly may not be fowl friendly. While wind farms near breeding grounds don't kill ducks directly, they do affect nesting success. By David Hart

GREEN ENERGY MAY be good for the environment, but a growing number of scientists are concerned it may not be for waterfowl. A recent study in the Dakotas is adding fuel to those concerns. It found breeding duck densities were considerably lower around large-scale wind farms compared to wetlands with no turbines in sight.

"We don't know if the decline is a result of the towers themselves, the motion, noise of the blades, or the increased traffic from maintenance workers," says USFWS biologist Dr. Chuck Loesch.

"It could be a combination of all those or something else, but that really wasn't the focus of the study. We wanted to determine if the presence of wind energy development had an impact on duck breeding densities."

One nesting site had a 56 percent lower breeding pair density than a similar site with no wind turbines. Overall, the number of breeding ducks using wetlands near the wind farms was 20 percent lower than in wetlands with no wind development nearby.

Ducks are avoiding wind projects, but they may not have many options in the future. Loesch says the push for renewable energy will likely lead to a huge number of large-scale projects in the wind-rich Prairie Pothole Region. The projected footprint of future wind farms will cover more than 15,000-square miles by 2030 if the federal government meets its goal. The Department of Energy wants 20 percent of the country's energy to come from renewable sources. It's impossible to say where those new turbines will pop up, but Loesch says it's inevitable many will be near critical areas.

"We are losing quality wetlands in the Prairie Pothole Region at an alarming rate already," he says. "Wind energy might have a compound effect."

#### FEMALE-FOCUSED

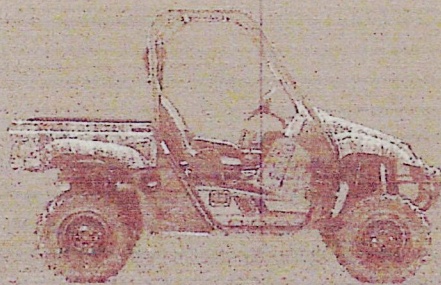
Another study determined windmills don't kill many breeding female ducks. Tanner Gue, a Ducks Unlimited conservation specialist, fitted radio transmitters on 77 hen mallards and 88 female blue-winged teal near a

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large wind energy project on the North Dakota-South Dakota border in 2009 and 2010 to determine mortality rates near a wind farm.

"Females get involved in some pretty territorial courtship flights and we hypothesized that they tend to be less aware of their surroundings during this period. Basically, we wanted to know if they were vulnerable to flying into the path of a turbine blade," says Gue. "Because female survival during the breeding season is a strong population driver, we focused on females."

Of the 165 birds marked, just one mallard died after being struck by a blade. Gue and fellow researchers also monitored 145 teal and mallards on a nearby site that did not have windmills.

"We wanted to compare overall mortality rates to see if wind development might lead to higher rates of predation. It turned out mortality rates were pretty similar," he says. "That wasn't the primary focus of our study though, and I think it's something that warrants further research. Predation can increase when habitat is fragmented, but we don't know how wind energy plays into that."

#### TURBINE BOOM

Researchers don't know the long-term impact on waterfowl staging and feeding areas and migratory paths, either. That's why Long Point Waterfowl executive director Dr. Scott Petrie is frustrated with the lack of cooperation from wind energy companies. He works on the Canadian side of lakes Ontario, Erie and St. Clair, an important staging and wintering region for waterfowl in the midst of a wind energy boom.

An outspoken critic of the poorly-regulated rush to build towers, Petrie thinks the Ontario government and private companies need to step back and evaluate the potential effects of wind projects. Ontario has lost upwards of 85 percent of its coastal wetlands and is at risk of losing more. Right now, 2 percent of the province's energy comes from wind. However, a push by the provincial government aims to increase the output to 20 percent. The

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best wind resources are located along the marshes and farmland adjacent to the Great Lakes, the same areas used by migrating waterfowl.

"There are 4,000-6,000 turbines planned for onshore development and thousands more could be built offshore in the near future," says Petrie. "One proposed offshore project will have as many as 800 turbines. Those offshore turbines will be placed in shallow water, which is diving duck habitat."

Petrie doesn't know for sure how significant the overall impact of large-scale wind development will be, but doesn't want to find out after it's too late.

"Putting up a wind tower next to a marsh is like putting up a skyscraper next to a marsh," he says, adding a number of studies have examined the impact of tall structures like drilling rigs and cell towers on other types of wildlife. Sage grouse, for instance, will abandon favored breeding and nesting areas when tall structures are erected nearby. Waterfowl will shy away from wind turbines, especially those built in the middle of important feeding areas like coastal agricultural fields.

"We just need to evaluate all the consequences before we rush in," he said.

Petrie jokes that many energy companies, "have my picture on a dart board." He initially managed to convince one wind developer to move a project away from an important wetland, but has been unable to convince others to avoid sensitive areas.

Loesch is more optimistic. He says energy companies do seem willing to at least listen to wildlife biologists, even though they aren't required to follow any siting guidelines. The ground-breaking study he was involved in was actually funded in part by an alternative energy company, which funded other studies that examined the impact of wind energy, as well.

"I do believe many of these companies are interested in understanding the impacts," he says.

With such a frantic push to "go green," showing concern may not be enough to prevent or reduce the impact of so many large wind projects. \*

## BUCKEYE DUMP

Some derelicts in Ohio held their own version of a buffalo jump this year; only they replaced the sacred Native American custom with a dead waterfowl toss. Authorities found over two-dozen Canada geese and mallards at the bottom of a cliff next to the Chagrin River in January, just a quarter-mile from a local police station. Nothing gives more credence to antics than acts such as these, and we think it's despicable when any "hunter" dumps his kill. If you're not a fan of goose kabobs, Peking duck or are too stinking lazy to pluck feathers, gift the birds to a food bank. If you can't respect the resource, you're not a sportsman.

## GOOSE FOOTAGE

Trail cameras are as vital to chasing whitetails as a well-set decoy rig is to sucking in flocks of fat cans. But what if video feeds become the new must-have piece of technology for waterfowlers? We think it's possible. BBC filmmakers built robotic, remote-controlled periguns equipped with cameras and placed them among live birds for documentary footage. Can you image Big Foot or Hard Core Decoys putting goose cams in their fakes? It would be excellent, especially if you hunt multiple spots. Just leave a few blocks in each field (one with video equipment) and live stream the fall migration to your laptop!

## FULL OF SKEET

You remember Marsha Blackburn, the Republican from Tennessee who challenged the president of the United States to a skeet shooting competition. Blackburn basically accused Obama of lying about his clay-breaking hobby. "If he is a skeet shooter, why have we not heard of this? Why have we not seen photos?" Blackburn bumbled. Day's later, BOOM, the White House released a photo of Barry pulling the trigger on an over/under at Camp David. And go figure, he even shoots lefty.

## PRE-HEATED PISTOL

Aalaya Walker just wanted a stack of hot waffles. Instead, the 18-year-old was peppered with shell casing fragments just after pre-heating the oven of a friend, according to a story in the Tampa (Fla.) Tribune. Jarvaski Sandy left his Glock 21 .45-caliber pistol in the oven drawer and the magazine (with four rounds) in the oven. Walker only sustained a few

Continued on page 12