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Island of the Blue Dolphins

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Pesticide Damage to DNA Found 'Programmed' Into Future Generations

Live from World Water Week in Stockholm

[Island of the Blue Dolphins by Scott O'Dell - Goodreads](#)

<https://www.goodreads.com/book/show/41044096-island-of-the-blue-dolphins>

Rating: 3.8 - 258,152 votes

Island of the *Blue*

Dolphins has 258152

ratings and 7267

reviews. karen said:

this may be the best

book for kids ever

written. it teaches

young girls ev...

nytimes.com

[Nevada Water Chief](#)

[Rejects Big Vegas](#)

[Pipeline Pumping](#)

[Plan](#)

Long-sought plans for

Las Vegas to pump

and pipe drinking

water from arid

valleys just west of

the Utah state line

were dealt a severe

blow...



Zinke said he would never sell public land. But the Interior is considering it.

The Washington Post

The interior secretary told senators at his confirmation hearing that he would never transfer or sell federally owned land. But a bureau he controls is considering doing exactly that. [Read the full story](#)

“If everything holds true and the hydrology matches the models, then that’s probably where we’re going to be.” –Marlon Duke, a spokesman for the U.S. Bureau of Reclamation, in reference to **predicted water cutbacks along the Colorado River**. According to the U.S. Bureau of Reclamation, there is enough water in the Lake Mead reservoir to avoid water shortages in 2019, but cutbacks are possible by 2020. The Colorado River system provides water to seven U.S. states, as well as northwestern Mexico. [Colorado Public Radio](#)

In context: [Lake Mead Record Low Reflects Changing American West](#).

Victory for Clean Water: Court Reinstates Obama WOTUS Rule for 26 States
A federal judge invalidated the Trump administration's suspension of the Clean Water Rule, effectively reinstating the Obama-era regulation in 26 states.

The 2015 rule, also known as Waters of the United States (WOTUS) defines which [waters](#) can be protected from pollution and destruction under the Clean Water Act. It protects large water bodies such as lakes and [rivers](#), as well as small streams and wetlands.

But [last year](#), President Trump declared WOTUS "a horrible, horrible rule" and tasked then-U.S. Environmental Protection Agency (EPA) head [Scott Pruitt](#) to replace it. In February, Pruitt issued a "Suspension Rule" that delayed WOTUS until 2020 in order to craft a looser and more industry-friendly rule.

On Thursday, South Carolina District Judge David Norton sided with a coalition of conservation groups that challenged the delay, and placed a nationwide injunction on Pruitt's suspension rule. The decision does not apply to 24 other states where legal challenges are pending.

Norton said that the EPA violated rule-making procedures, specifically by failing to provide an adequate public notice and comment period required by the Administrative Procedure Act (APA).

"As administrations change, so do regulatory priorities. But the requirements of the APA remain the same. The court finds that the government failed to comply with these requirements in implementing the Suspension Rule," Norton [wrote](#).

The court also cited the affidavit of Bob Irvin, president and CEO of [American Rivers](#), which described the many different states where he has fished that would be affected by the suspension of the Clean Water Rule.

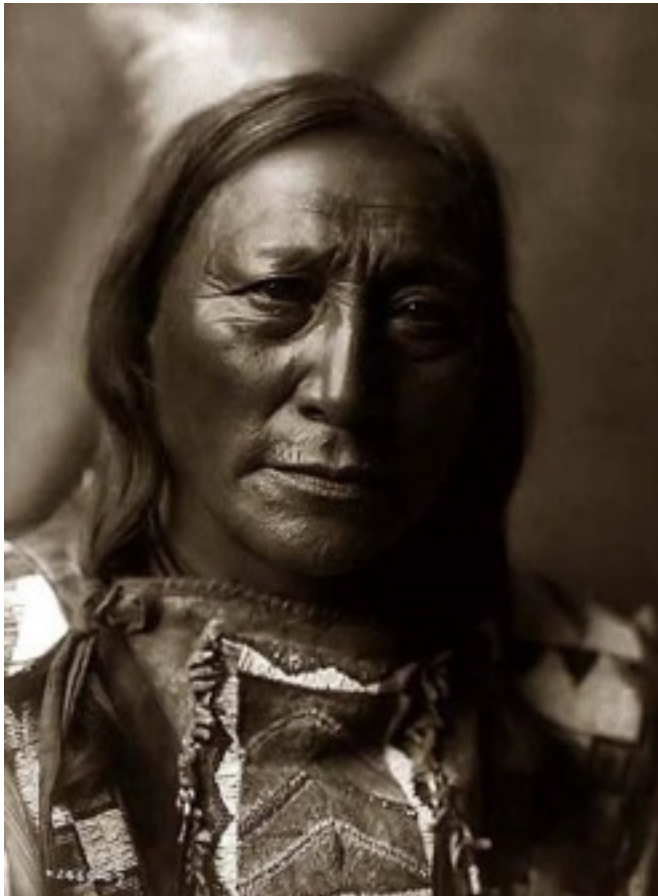
Irvin hailed the judgement as a "tremendous win."

"The court made clear that the Trump administration cannot ignore the law, science, or the views of the American people in its rush to undermine protection of rivers and clean water," Irvin said in a statement.

The [Southern Environmental Law Center](#) (SELC), which represented the conservation groups, celebrated the decision.

"This is a victory for families and communities across America who depend on clean water, and a rebuke to the polluting industries trying to gut this nation's bedrock health and environmental safeguards," said Geoff Gisler, senior attorney at SELC, in a statement. "Water is a way of life in the South, where clean water is the lifeblood of our economy. We are thrilled the court rejected this administration's blatant attempts to undermine safeguards that are critical to our nation's welfare without being accountable to the American people."

I think the time has come. I too weep .



[Matthew Hendrickson](#)

[August 14, 2015](#)

"Someday the earth will weep, she will beg for her life, she will cry with tears of blood. You will make a choice, if you will help her or let her die, and when she dies, you too will die."Hollow Horn Bear - Lakota 1850 – 1913

“Laziness led to extinction of Homo erectus: “This ‘laziness’ paired with an inability to adapt to a changing climate likely played a role in the species going extinct, according to lead researcher Dr. Ceri Shipton of the ANU School of Culture, History and Language.” We’re doomed. (Phys.org)

Children’s Cabinet Scholarships

The Reno City Council recently approved a contract with The Children's Cabinet to provide scholarships for children registered in before and after school programs and camps. Scholarships are based upon income and family size, and fees can be reduced 20-95% for qualifying families. To apply, visit Reno.gov/ParksandRec or call 775-334-2260.

Now Hiring! We are hiring for **several part-time positions within Parks, Recreation and Community Services**. Positions include:

- [Sierra Kids Site Attendant](#)
- [Park Facility Specialist](#)
- [Gym Supervisor](#)
- [Softball Umpire](#)
- [Swim Instructor](#)
- and more

Supersized solar farms are sprouting around the world (and maybe in space, too)

NBC News

A vast photovoltaic facility now being built in Egypt is part of a global trend. [Read the full story](#)



New Trump power plant plan would release hundreds of millions of tons of CO2 into the air

The Washington Post

The EPA proposal would let states set their own regulation standards, likely cutting a fraction of carbon dioxide emissions compared with the Obama-era plan. [Read the full story](#)

[Fracking Is Destroying US Water Supply, Warns Shocking New Study](#)

Joe Romm, ThinkProgress

Romm writes: "An alarming new study reveals fracking is quite simply destroying America's water supply." [READ MORE](#)

Environmentally-Caused Disease Crisis? Pesticide Damage to DNA Found 'Programmed' Into Future Generations

Incposterco / Getty Images

When Dr. Paul Winchester, a pediatrician, moved to Indiana from Colorado in 2002, he noticed something disturbing—a high number of birth defects.

"I was used to the number of birth defects I should see in a community hospital, and I saw many more in Indiana," said Winchester, who is medical director of the Neonatal and Intensive Care Unit at St. Francis Hospital in Indianapolis.

Winchester decided to investigate the reason for the higher numbers of birth defects. His research zeroed in on the herbicide atrazine, one of the most widely used herbicides in the U.S. and the most commonly detected pesticide in U.S. drinking water.

Winchester and several other researchers including Michael Skinner, professor of biology at Washington State University's Center for Reproductive Biology, conducted [a study](#) to see if there was a link between atrazine in drinking water and birth defects.

Studies have found that atrazine is an endocrine disruptor, a substance that can alter the human hormonal system. Atrazine was banned by the European Union because of its persistent groundwater contamination.

In their study, Winchester and his team found that concentrations of atrazine in drinking water were highest in May and June when farmers sprayed their fields with the herbicide. They also found that birth defects peaked during the same months indicating a close correlation.

"We plotted water concentrations and birth defects, and they fit like a hat," Winchester said.

Their [study](#), which was funded by the Gerber Foundation, was published in 2017 on PLOS One.

Epigenetic Changes Programmed Into Future Generations

But the most disturbing finding was that atrazine had epigenetic effects. Epigenetics is the theory that environmental factors, such as diet, lifestyle choices and pesticides can impact the health of

people who are exposed to them and also their descendants. Human DNA, according to epigenetics, is not unchangeable; it can be altered by such environmental factors. Epigenetic changes can be imprinted on the DNA of a fetus during pregnancy according to Winchester.

"If it is fixed then, it becomes inheritable and it becomes a trait that you can pass on to the next generation and the next and next."

Epigenetics is a fairly new concept that is slowly gaining acceptance.

"This is a really important concept that is difficult to teach the public, and when I say the public I include my clinical colleagues," Winchester said.

For the atrazine study, Winchester's team used Skinner's advanced technology to detect epigenetic changes—and resulting negative health impacts—over several generations of rats whose mothers were exposed to atrazine.

Common sense would seem to dictate that fewer negative health outcomes would be seen with subsequent generations. But the study found the opposite: There were more abnormalities and diseases in later generations of rats. The first generation of rats whose mother was exposed to atrazine weighed less than a group of control rats. The second generation weighed less but also had incidences of testicular disease and breast cancer. The third generation suffered the most problems, according to Winchester.

"We waited until the third generation, where no direct exposure (to atrazine) occurred, to ask if these epigenetic effects could be inherited, because there is no mechanism, no exposure, no toxicity that could explain a change in disease rates in the third generation. We found that 50 percent of offspring had multiple diseases, emotional and physical problems, hyperactivity, abnormal sperm, and premature puberty."

In an earlier study, Skinner found that the fungicide vinclozolin also caused inheritable diseases in rats. In all, he tested nearly 20 chemicals and found that all produce epigenetic effects, said Winchester.

"The most alarming (finding) to me is that almost every chemical tested including atrazine reduced fertility in the third generation of offspring."

Winchester called the discovery of the link between chemicals like pesticides and epigenetic changes leading to disease "the most important next discovery in all of medicine."

"What we are learning is that virtually every adult disease we have is going to be linked to epigenetic origins as well," he said.

More research needs to be done on the link between epigenetic effects and disease but Winchester says limited funding is available for such research.

"This is a huge thing that is going to change how we understand the origin of disease. But a big part of that is that it will change our interpretation of what chemicals are safe. In medicine I can't give a drug to somebody unless it has gone through a huge amount of testing. But all these chemicals haven't gone through anything like that. We've been experimented on for the last 70 years, and there's not one study on multigenerational effects."

Glyphosate Levels in Mothers Linked to Shorter Pregnancies

Winchester also co-authored [a study published recently in Environmental Health](#) that found detectable levels of glyphosate in the urine of 93 percent of a group of pregnant women in Central Indiana. The levels of glyphosate detected correlated with shorter pregnancies.

Again, the study raises concerns of possible epigenetic effects leading to disease in later generations.

"We are the first researchers in the U.S. to report that virtually every pregnant mother has glyphosate in her body at the time that she is creating fetal (epigenetic) imprints in her baby," Winchester said.

Winchester and his team focused on atrazine and glyphosate because they are the most heavily used pesticides in the U.S.

"That's the only reason they were chosen. We looked to see how commonly they are found in pregnant women, and we were mortified."

Winchester has been surprised by the lack of reaction to the glyphosate study.

"A chemical (glyphosate) that didn't come onto the scene until the 1970s has now managed to find its way into every single pregnant woman in the U.S, except seven percent of them. We thought that should be news. But in the current paradigm, which is definitely pro-business, the only thing companies have to prove is that it doesn't kill you if you drink it or take a big dose of it."

He sees a potentially catastrophic outcome resulting from the epigenetic damage caused by pesticides.

"Every one of the chemicals tested so far produces infertility, and the industrial world has reached the lowest level of fertility on record. We are below replacement levels in most industrialized countries including the U.S. This is looking at your own species extinction."

Winchester lays the blame at the feet of the U.S. Environmental Protection Agency, which doesn't consider epigenetic or generational effects of chemicals, and the pesticide and chemical manufacturers like Monsanto.

"They can sell all the Roundup they want, but if it's in me they are going to have to pay for that. Every molecule that I find is on them ... What I want to know is: has my fetus had altered DNA imprinting because of this chemical? I have a right to know that. If we are going to have to wait

75 years to find out if my grandchildren are going to be affected by it, I think somebody has to pay. They better put a fund together. I want somebody's head to roll. I don't think that the EPA and Monsanto get to walk away."

Winchester connects an ancient expression to a modern health crisis.

"Even in the Bible, there is the saying, 'the sins of the father are visited upon his offspring.' Well, it turns out that they are."

"Treat all human beings with respect. A modern man walked out of East Africa 140,000 years ago and populated the planet. There really are no races, we are all human, and we all need to get along." -Mark Gunderson, MC

**Polluted and depleted,
many of the world's aquifers
are grievously wounded**
How do we respond to a crisis
that is so hard to see?

catalyst
defining water's future.

**Interactive Broadcast
Live From World Water
Week in Stockholm
Making Groundwater
Crises Visible**

Participate from anywhere
in the world.
August 28, 2018
10:00am ET
16:00 Stockholm

Free registration: circleofblue.org/catalyst

 circle of blue

On August 28, Circle of Blue continues the H2O Catalyst series live from World Water Week in Stockholm. This broadcast explores the world's groundwater crises. Global experts and journalists will define and debate responses to pollution and scarcity challenges that are disrupting the lives of millions.

H2O Catalyst: Making Groundwater Crises Visible

Where:

Live from World Water Week in Stockholm

When:

Tuesday, August 28, 2017

16:00-17:00 Stockholm

10:00a-11:00a ET

Polluted and depleted, many of the world's aquifers are grievously wounded.

Further deterioration puts economic and political stability and human health at risk, from India and Bangladesh to Michigan and California. Learn how scientists and activists are bringing these hidden crises to light and pressuring leaders to act. Participate in this interactive live broadcast from anywhere in the world.

Join global experts and journalists in virtual breakout groups to debate:

- Current hotspots for groundwater pollution and scarcity
- How to rally political and public support for action
- Tools for understanding the dimensions of local and global groundwater challenges
- Avenues for new research and collaboration

What is H2O Catalyst?

The H2O Catalyst is an interactive broadcast that enables participants from all backgrounds to interact and share their voice with leaders in fields such as security, finance, research, and journalism, as they discuss the world's water challenges. Catalyst's unique broadcast interface allows people from anywhere in the world to participate in World Water Week via Circle of Blue's online portal.

[Register](#)

Share. Participate.

Invite colleagues, friends, followers, and students to take part in one of the most important ongoing conversations of the era.

You can interact during the broadcast by using the hashtag #KnowWater. You can also participate with World Water Week from anywhere in the world using the hashtag #WWWeek.