

REZ RECYCLER



Prairie Band Potawatomi Nation Division of Planning and Environmental Protection

Summer 2014

The Tallgrass Prairie

To the unaware, the Kansas prairie appears to be just an endless stretch of grass. In reality it is an extremely complicated, diverse, old and rare ecosystem. While indeed, 80% of the prairie is covered in grass (over 60 different species), the other 20% of prairie is made up of over 300 species of flowers. The soils are also varied in type, depth, moisture and slope, lending to the diversity of plant communities. Over the course of hundreds of years, plants have evolved and adapted to the harsh prairie landscape and a climate that ranges from extreme heat and drought to frigid winters with bitter winds.

The tallgrass prairie once expanded 170 million acres across the North American continent. Valued for its fertility, much of it has been plowed and lost to agriculture and urban development. Today less than 4% remains, primarily in the Flint Hills of Kansas. Within a portion of the flint hills, lies the Tallgrass Prairie National Preserve. This 10,894 acre unit was established in 1996 as a joint partnership between the National Park Service and The Nature Conservancy. It is the only unit within the National Park system that is dedicated to the abundant tallgrass prairie culture and history. Also located in the flint hills, is the Konza Prairie Biological Station (KPBS). KPBS is operated as a field research station by the KSU Division of Biology. It is dedicated to ecological research, education, and prairie conservation. It is a unique outdoor laboratory that provides opportunities for the study of tallgrass prairie ecosystems and for basic biological research. The station is open to scientists and students from throughout the world.

Both the Tallgrass Prairie National Preserve and the Konza Prairie Biological Station offer opportunities for visitors to experience the rich culture, beauty, and amazing science of the endangered prairie. Guided tours are available or visitors can independently take advantage of the trail systems.

Source: <http://kpbs.konza.ksu.edu/index.html>
<http://www.nps.gov/tapr/index.htm>



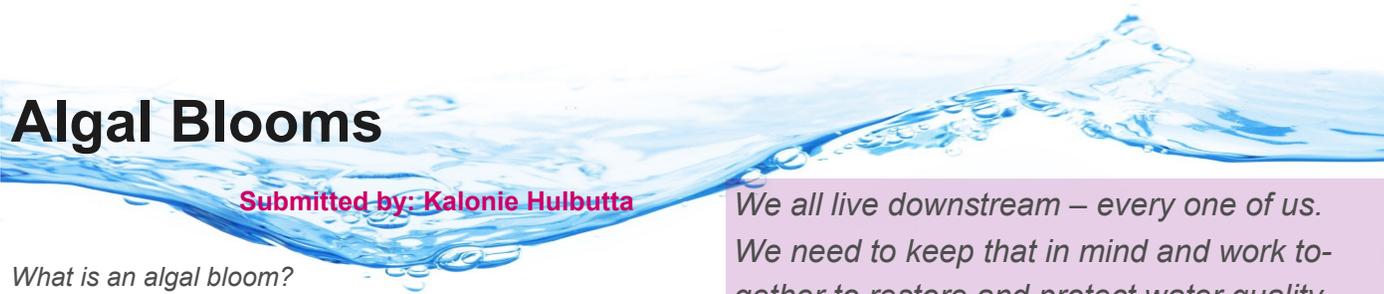
Photo from : <http://www.nps.gov/tapr/index.htm>



Drinking Water Watch

If you would like the results of your local water supply, follow these steps:

1. Go to: www.kdheks.gov/pws/index.html
2. Then click on "Drinking Water Watch".
3. Click on the "Public Access" box, a map will appear.
4. Click on county of interest.



Algal Blooms

Submitted by: Kalonie Hulbutta

What is an algal bloom?

Algae are tiny plant-like organisms that occur naturally in water bodies. Under normal circumstances, algae go unnoticed providing food and oxygen for their surroundings. Nutrients in the water such as nitrogen and phosphorus stimulate the growth of algae. When nutrient levels are high, the number of algae increases dramatically. Dependent on the type of algae present, the water may appear green, brown, yellow, or red.

What are the effects of an algal bloom?

When algae reproduce rapidly, their numbers cloud the water decreasing the amount of available sunlight negatively impacting the growth of aquatic plants. Algae do not live very long and their carcasses accumulate during periods of rapid growth. Bacteria populations in the water begin to increase as they feed on the abundant remains of dead algae and plants. The increasing numbers of bacteria consume the available oxygen in the water creating hardships for fish and aquatic insects.

What is a harmful algal bloom or HAB?

Some types of algae produce neurotoxins - chemicals that poison or damage nerve tissue. Blue green algae (also known as cyanobacteria), *Alexandrium catenella* (causes red tides) and *Karenia brevis* (also causes red tides) are some examples known to produce neurotoxins. These substances are only harmful if ingested but may cause allergic reactions if skin contact occurs. If inhaled when swimming, boating, or skiing, neurotoxins may cause sore throat, cough, wheezing, congestion and difficulty breathing. Use caution if water appears extremely green, has surface scum, a paint-like appearance, or has a foul odor.

At the present time, seven lakes in the State of Kansas have listed public health advisories or warnings. Public Health warnings are more severe, notifying the public that conditions are unsafe and water contact should not occur. The Kansas lakes under warning are: Veteran's Lake in Barton County, Marion Reservoir in Marion County, and South Park Lake in Johnson County. Public Health advisories notify the public that conditions are hazardous and water contact may be unsafe for humans and animals. Lakes under advisory include: Lake Warnock in Atchison County, Logan City Lake in Phillips County, Milford Lake in Clay, Dickinson and Geary Counties, and Old Herington Lake in Dickinson County. For a daily updated listing or more information on harmful algal blooms, visit the Kansas Department of Health and Environment's HAB website at www.kdheks.gov/algae-illness/index.htm.

*We all live downstream – every one of us.
We need to keep that in mind and work together to restore and protect water quality*

Billy Frank Jr. (March 9, 1931 – May 5, 2014) of the Nisqually Indian Tribe speaking as the long-time Chairman of the Northwest Indian Fisheries Commission. An environmental leader and activist, Frank was known for his grassroots campaign for fishing rights and for promoting cooperative management of natural resources. His amazing and respected legacy began in the 1960's.

Prairie Band Potawatomi Nation Receives BIA Climate Change Adaptation Grant

The Prairie Band Potawatomi Nation recently received a small competitive grant from the US Department of Interior Bureau of Indian Affairs to build capacity in the area of climate change science and adaptation. Staff will have the opportunity to complete courses that will assist in understanding climate-related vulnerabilities, concerns, adaptation capacities and methods of organizing local traditional knowledge. While the grant focuses on Tribal communities, the PBPB recognizes that Indigenous people are not the only population affected by climate change. Anyone with a dependence upon, and close relationship with the environment and its resources understand the direct consequences of climate change.

Interesting Wetland Facts:

It is estimated that the lower 48 states had around 221 million acres of wetlands in the early 1600's. As of 2009, the lower 48 states had only 110 million acres of wetlands – a decline of over half the pre-Colombian amount.

Alaska has about 170 million acres of wetlands. That's more than the lower 48 states have combined.

Wetlands can be found on every continent with the exception of Antarctica.

Kansas has about 435,000 acres of wetlands, which include sandhill pools along the Arkansas River, playa lakes in western Kansas, freshwater marshes such as those in Cheyenne Bottoms, and salt marshes such as those in Quivira National Wildlife Refuge.

Kansas has lost about one-half its wetlands during the last 200 years, mostly due to conversion to cropland and depletion of surface and ground water due to irrigation withdrawals.

~ from USGS National Water Summary on Wetland Resources, Water Supply Paper 2425



Wetlands on the PBPB Reservation near Big Soldier Creek

What is a Wetland?

Submitted by: Kalonie Hulbutta

Wetlands serve as transition areas between bodies of water and dry land. They can also stand alone in an area of dry land. They absorb excess moisture from rainfall, snowmelt, and flooding. As water passes through wetland soils, it slows down allowing contaminants to be filtered out, thereby decreasing erosion and nonpoint source pollution. In addition to these benefits, wetlands provide necessary resting and nesting habitat for migratory birds.

In order to be called a wetland, an area must meet three criteria. First, the area should contain a majority of plants that are adapted to wet conditions. Wild rice, cattails, and black walnut are examples of the many plants that may be present in a wetland. In addition to vegetation, a wetland must also contain soil that is wet for a period of time. This particular type of soil, called hydric, contains low levels of oxygen. This condition is called anaerobic and only specific plants such as wild rice, cattails, and black walnut can survive in this type of soil. Finally, the area must possess some type of hydrology or water. The water or hydrology doesn't necessarily have to be on the surface – it may also exist underground. Also, water need not have a permanent presence. It only needs to exist for two consecutive weeks on the surface. This means that if an area is flooded or ponded for two weeks straight, it meets the criteria for wetland hydrology. Water that is under the surface must be present within one foot below the ground surface. This can be determined by digging a hole, walking away for about thirty minutes, and returning to measure the distance between the water (if present) and the soil surface. If all three of the above conditions are met, then the area is indeed a wetland.

Why Recycling CFLs Is Important?

Recycling prevents the release of mercury into the environment. CFLs and other fluorescent bulbs often break when thrown into a dumpster, trash can or compactor, or when they end up in a landfill or incinerator. **We can pick up your CFL's on a SPECIAL REQUEST BASIS**

Environmental Heroes!

The Division of Planning and Environmental Protection is hosting four youth workers for the summer. Keith Gaylord, Bob Hester, Keegan Shopteese, and Marcel Jessepe have been assisting the Division with a variety of tasks throughout the summer. They have worked very hard and their assistance is much appreciated during our busiest time of the year. It is our sincere hope that the four youth will continue their work to improve the environment and possibly consider careers in the environmental field.



Earth Day 2014



OVERVIEW OF THE CLEAN POWER PLAN

CUTTING CARBON POLLUTION FROM POWER PLANTS

On June 2, 2014, the U.S. Environmental Protection Agency, under President Obama's Climate Action Plan, proposed a commonsense plan to cut carbon pollution from power plants. The science shows that climate change is already posing risks to our health and our economy. The Clean Power Plan will maintain an affordable, reliable energy system, while cutting pollution and protecting our health and environment now and for future generations.

Our climate is changing, and we're feeling the dangerous and costly effects right now.

- Average temperatures have risen in most states since 1901, with seven of the top 10 warmest years on record occurring since 1998.
- Climate and weather disasters in 2012 cost the American economy more than \$100 billion.

Although there are limits at power plants for other pollutants like arsenic and mercury, there are currently no national limits on carbon.

- Children, the elderly, and the poor are most vulnerable to a range of climate-related health effects, including those related to heat stress, air pollution, extreme weather events, and others.

Nationwide, the Clean Power Plan will help cut carbon pollution from the power sector by 30 percent from 2005 levels.

- Power plants are the largest source of carbon pollution in the U.S., accounting for roughly one-third of all domestic greenhouse gas emissions.
- The proposal will also cut pollution that leads to soot and smog by over 25 percent in 2030.

Americans will see billions of dollars in public health and climate benefits, now and for future generations.

- The Clean Power Plan will lead to climate and health benefits worth an estimated \$55 billion to \$93 billion in 2030, including avoiding 2,700 to 6,600 premature deaths and 140,000 to 150,000 asthma attacks in children.

States and businesses have already charted the path toward cleaner, more efficient power.

- States, cities and businesses are already taking action.
- The Clean Power Plan puts states in the driver's seat to a cleaner, more efficient power fleet of the future by giving them the flexibility to choose how to meet their goals.

With EPA's flexible proposal, we can cut wasted energy, improve efficiency, and reduce pollution – while still having all the power we need to grow our economy and maintain our competitive edge.

- The agency's proposal is flexible—reflecting the different needs of different states.
- The proposal will put Americans to work making the U.S. electricity system less polluting and our homes and businesses more efficient, shrinking electricity bills by roughly 8 percent in 2030.
- It will keep the United States—and more importantly our businesses—at the forefront of a global movement to produce and consume energy in a better, more sustainable way.

Join the conversation

- In the coming months, we'll be listening to feedback and seeking new ideas about the best ways to reduce carbon pollution from existing power plants: <http://www.epa.gov/cleanpowerplan>

Dumping Off Bridges

Why would people dump trash or dead animals off a bridge? This practice should not be condoned due to the serious nature of potentially hazardous pollution that may occur. If dead animals are disposed of in waterways, this can cause serious pathogenic contamination in water supplies. One should consider downstream residents and the likelihood of kids playing in streams. As a reminder, all public water supplies receive water from surface and ground water. Please take care of water sources, everyone depends upon having clean water supply. Below are recommendations from the Kansas Department of Health & Environment Bureau of Waste Management: Technical Guidance Document SW-1994-G1.

Disposal options for dead animals-

- Take the animal(s) to a permitted municipal solid waste landfill.
- Take the animal(s) to a local veterinarian.
- Take the animal(s) to a pet cemetery or crematory.
- Bury the animal(s) on-site.
- Take the animal(s), with proper packaging, to a transfer station. Proper packaging would include placing each animal in a five-gallon plastic pail with a lid or in a doubled-up plastic trash sack.
- Compost the animal(s) on-site.

On-site burial- the following guidelines should be followed when burying animals on site:

- Bury animals within 48 hours unless otherwise authorized.
- Add quick or slaked lime, if necessary, to control odors and discourage scavenging.
- Cover animals with a minimum of three feet of soil.

SOURCE: Kansas Department of Health and Environment.



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