



What is Lake Turnover and How Does This Affect My Water?

Verna Potts, Environmental Tech

The Rez Recycler

This past fall we have had some concern with our public water supply and its odor. The entire Reservation receives its public water supply from Rural Water District #3, Holton, Kansas. Our drinking water is supplied from ground wells, Banner Creek Reservoir and occasionally purchased from other rural water districts. But the major supply of our water comes from Banner Creek Reservoir. Lake turnover occurs most often during the months of September to October when the water begins to cool due to the drop in air temperature. When the air temperature decreased, so does the temperature of the upper layer of the lake. When water cools, it becomes dense and heavy. Eventually the water becomes heavy and dense enough to sink into the lower layers of the lake, thus "stirring up" the entire body of water. The very lower layer of the lake is considered the "dead zone". The reason it is called this is because there is little to no oxygen and it is here that debris such as foliage, fish and other water species will settle and begin to decay. This layer of water will mix with the upper layer during lake turnover and hence the water will have a foul smell due to this process. One can also identify lake turnover by looking at the water. Upon inspection, the water will appear to look like chocolate milk in color and might smell like rotten eggs. Rural Water District # 3 is required by law to inspect and treat the water under the Safe Water Drinking Act. If you are concerned about your water and are a customer of RWD#3, they will test your water, free of charge.



Banner Creek Reservoir

Seeking Customers

The Division of Planning and Environmental Protection will begin offering curbside waste disposal service to all Reservation residents beginning on March 1, 2012. The service fee is \$15.00/monthly with a weekly (Thursday) curbside pickup. Containers are provided by the Division. In addition to the monthly fee, all customers will be required to participate in the curbside recycling program. Recycling containers are also provided with a weekly (Wednesday) pick up. New customers will now have the opportunity to take responsibility for their own waste practices and set an example for other Reservation residents and the future generations. Call 966-2946 if you're interested!

Gardening Workshop **EVERYONE WELCOME!**

March 29, 2012, 5:00 p.m.

Prairie Band Potawatomi Nation (Rock Building) 16283 Q Road

Topics: Weed control options, improving soil with compost, insect control methods, growing tips for cucumbers, tomatoes, peppers and corn - All workshop attendees will receive a 6' x 12' sheet of floating row cover, to protect tender plants from frost, insects, and wind

Sponsored by: KSU Research and Extension, Haskell Indian Nations University, and PBPN

For more information call Melinda Williamson: 966-8271



THE FIRST TRIBAL WATER QUALITY CONFERENCE @ PUEBLO OF POJOAQUE

Verna Potts, Environmental Tech

There were over 300 participants from across the country, representing Indian Country at the Hilton Buffalo Thunder Resort, Santa Fe, New Mexico, November 13-18, 2011 for the very first tribal water quality conference aimed at protecting and restoring water resources on Indian Land. Events included many workshops, training and field trips to San Ildefonso.

Keynote guest speaker, Dr. Daniel Wildcat of Haskell Indian Nations University, addressed water issues stating: "The 21st century will face water crisis issues unlike any seen before. Population growth of human and climate change, we need to live in a sustainable way with the environment. How did our ancestors live with their environment? Think in terms of nature/nurture nexus and 'Indingenuity' (indigenous ingenuity) when dealing with environmental problems.

Natives are in a position of power, we can exercise leadership, and we can become innovators to make a positive change in water quality. When making positive steps you behave in such a way you promote a system of life enhancement."

"How can we make a positive change locally?"

Healthy watershed initiative, an increased emphasis on preservation and protection of waters before they become impaired, was focused upon and how will tribes protect existing "healthy waters"? How can we make a positive change locally? Think about your drinking water, where does this water come from before we turn on the faucet? Water will travel over the land base, picking up and transferring pollutants and sediment. Eventually, the water will find its way to the streams, creeks, ponds, reservoirs, rivers, wells, and lakes. The majority of local water quality issues arise from herbicides, pesticides, fertilizers, and sediment. Cultivation of cropland, construction activity, poor grazing practices, and removal of trees and vegetation along stream banks will increase the amount of sediment that is sent downstream into ponds, lakes, and rivers. This sediment will have, in most cases, pesticides, and phosphorus attachments and this adds to increased pollutants in our water supply.

It is wise for us to consider what we do to the land, and think upon this the next time we give a glass of water to our loved ones. Together we can collectively make a BIG difference in our local water supply. You've got the power!

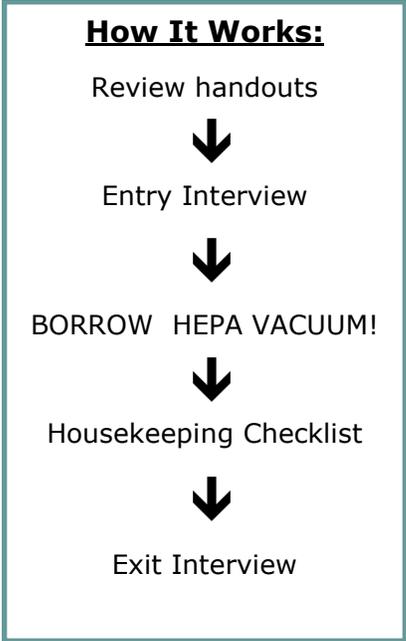
Welcome to Your Healthy Home



The Division of Planning & Environmental Protection is now offering Reservation residents an opportunity to participate in a Healthy Homes Demonstration project. We will provide participants with educational resources to assist with understanding the connection between health and housing and how to take a holistic approach to identify and resolve problems that threaten the health and well-being of residents. After participating in a brief interview, participants may also take

advantage of our new equipment loan program featuring the HEPA (high-efficiency particle air) vacuum. The vacuum is a national consumer favorite and will remove allergens and dust up to .3 microns in size.

The demonstration opportunity is available to all Reservation residents willing to accept resources on “Healthy Homes” practices and complete a short entry and exit interview. Please call us for more information or to participate in the demonstration.



Items Accepted by the Nation’s Recycling Program

The following listing includes examples of common items accepted at our recycling container locations on K Road (next to Boys & Girls Club) and Q Road (Bingo Hall parking lot) – AND through our curbside service:

PLASTICS - Beverage bottles, laundry detergent bottles, empty medicine bottles, milk jugs, shampoo/ soap bottles, *Basically any plastic container with the numbers 1-5 on the bottom*

PAPER - Newspaper, copy paper, magazines, colored paper, phone books, junk mail, notebook paper, envelopes, shredded paper (bagged)

CARDBOARD - Cereal boxes, food boxes, egg cartons, corrugated cardboard, cardboard tubes

ALUMINUM - Beverage cans

TIN - Food cans

HOUSEHOLD BATTERIES

ITEMS NOT ACCEPTED BY NATION’S RECYCLING PROGRAM	
Glass	Aluminum foil
Waxed cardboard	Styrofoam
Waxed paper	Food waste
Plastic wrap	

IS THIS YOU?

Solid Waste Program Staff

Recently, we assessed the weekly waste of three randomly-selected customers. We pulled all the items from their container and separated into categories. The three customer households ranged in size, from 4-8 occupants. Here are some of our findings:

Good news One household appears to recycle multiple materials and likely has a total household effort. We found little aluminum and tin in all three samples. Either each household was successfully collecting and recycling metals on their own, or there wasn't much consumed/utilized for the week.

Bad news Paper, small cardboard products, and textiles (clothing) were not being recycled successfully. Food waste was prevalent in two households. Two households needed to improve their overall efforts to recycle.

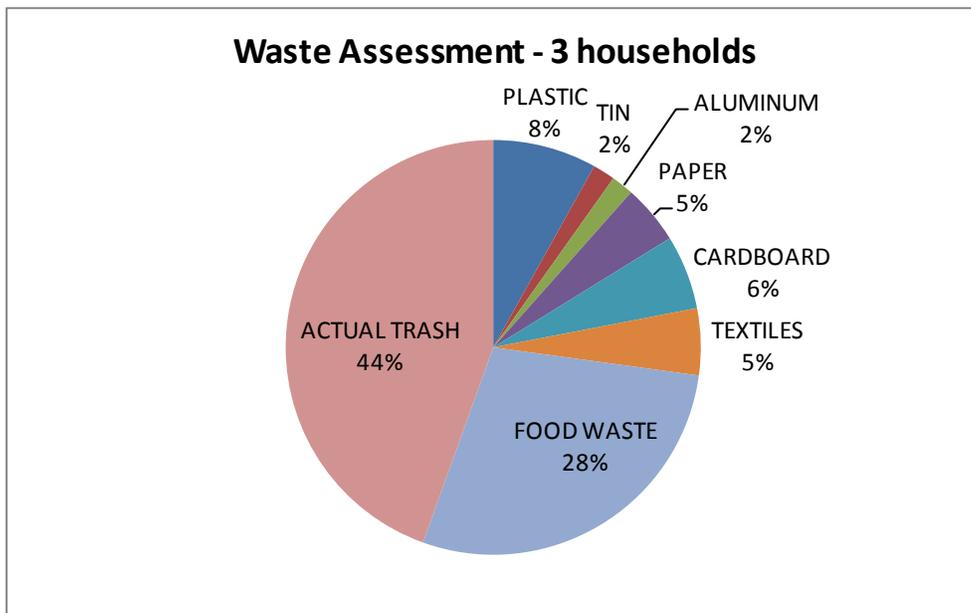
First, we would like to commend the efforts of the households that do a participate in recycling. (We know who you are!) Secondly, by sharing these findings, we hope to encourage all not-so-successful recycling customers to step up their efforts. Your monthly fee is based on the cost required to dispose of all customer's weekly waste. **If you're not doing your share of recycling then YOU are responsible for placing an UNFAIR BURDEN on your neighbors that do participate in recycling activities.**

The Nation's recycling program is so simple. We don't require the sorting or separating of materials. We only ask that all materials be bagged. **There really is no excuse!**

This is just one week's worth of waste from one of our customer households.



A close up of what they SHOULD HAVE recycled!



Fall and Winter Environmental Education Activities



Scenes from October and November camping and hiking events on the Reservation



PBPN Planning & Environmental Protection

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Air Quality Monitoring on the PBPN Reservation

Adam Irvin, GIS/Environmental Technician

The BAM 1020 is a new monitor that has been set up by the Department of Planning and Environmental Protection at the Environment Management Center on 142nd road. It is a Beta Attenuation Monitor (BAM) which automatically measures and records airborne particulate concentration levels using the principle of beta ray attenuation. This method provides a simple determination of the concentration of particulate matter per cubic meter of air. In this process, an external pump on the monitor pulls a measured amount of outside ambient air into the device and through a segment of filter tape installed inside. While the air flows straight through the filter tape, any particles in that air are caught and do not pass through. After the filter tape is loaded with ambient dust from that testing period, it is placed between a carbon source and a detector. The detector reads how many particles were caught on the filter tape by the carbon source emitting a source of high energy, which is blocked from the detector by the particles on the filter tape. The more the source is blocked, the more particles there are on the tape. The machine then takes the known amount of particles on the tape and the known amount of air that was sucked into the device, and computes the mass concentration of particulate matter in our ambient air. This particulate matter can range anywhere from dust and pollen to pollutants that are emitted from cars and power plants.

The size of the particle that is allowed into the machine depends on the inlet head that protrudes out the top of the roof. For this particular monitor, only fine particles 2.5 micrometers and smaller are allowed into the machine. That is 1/30th the size of a human hair! The reason only these particles are monitored is that studies have shown a significant association between particles of 2.5 micrometers or less and premature death from lung and heart disease. This monitoring will be constant, with this process happening every hour. This reason for this monitor is to protect us, and inform us of any precautions we need to take to improve our air quality.

Sources: Met One, EPA Fine Particle (PM 2.5) Designations