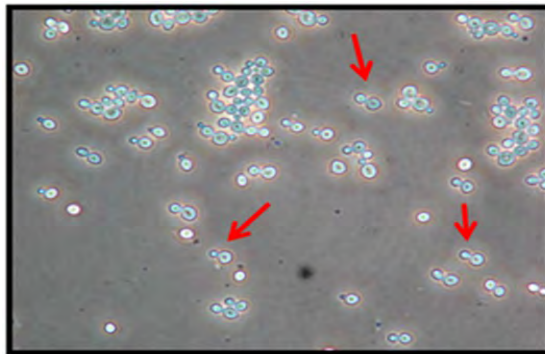


OCTOBER-DECEMBER 2012

FUNGUS AMONG-US

WHAT DO BREAD, PENICILLIN, LICHENS, AND A DEVASTATING BAT CONDITION HAVE IN COMMON? IF YOU GUESSED FUNGI, YOU ARE CORRECT!

When thinking about fungi (pronounced funj-eye), most people might immediately think of mushrooms growing on dead and decaying trees out in the woods. Those mushrooms certainly are fungi; however, fungi come in many more shapes and sizes than simply toadstools. These living organisms are neither plant nor animal, yet they too are intertwined with many aspects of our lives.



Yeast under 400x magnification. The blue color is a result of the lighting in the microscope; yeast are essentially colorless. Each cell is a single organism. Yeast can reproduce by "budding", as shown by the red arrows in the photo.

Yeast, the ingredient that makes bread rise (*Saccharomyces cerevisiae*), is a fungus (coincidentally, so is the mold that grows on bread that has been in your cupboard for too long...). Yeast doesn't look much like a mush-

room at all—in fact, we can't even see individual yeast organisms with the naked eye. Yeast is also used in the fermentation process for beer and wine-making. Interestingly, the genetics of the yeast determine the alcohol content of the beverage.

Used to treat infections, penicillin antibiotics are derived from *Penicillium* fungi. Although Alexander Fleming is given credit for naming the antibiotic substance penicillin, several other scientists at the time were also observing how the *Penicillium* mold, under stressed conditions, prevented certain types bacterial growth. Penicillin, though discovered in the early 1900s, remains one of the most widely used antibiotics to date.



Penicillium fungus from which penicillin is derived, under 100x magnification. Penicillin antibiotic was developed and used during World War II.

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FUNGUS AMONG-US CONT'D

Many of us have seen lichens growing on rocks and tree branches. Lichens, although not entirely fungi themselves, are actually what can be considered a “partnership” between fungi and algae. Fungi provide structural support (i.e. a “home”) for the algae, and the algae convert energy from sunlight into sugars (i.e. “food”) for the fungi. As they have no roots to draw moisture from the ground, lichens must obtain their water and mineral nutrients from the atmosphere. For this reason, biological studies have used lichens as indicators of air quality.



Lichens are “partnerships” between fungi and algae. Fungi provide a structure in which the algae grow. Algae, in turn, convert energy from the sun into sugar (a process known as photosynthesis) for both partners.

It is estimated that over 5.5 million bats across eastern North America have died as a result of White-Nose Syndrome, a condition caused by the fungus *Geomyces destructans*. This fungus grows on noses and other parts of cave-dwelling bat species, interrupting their winter hibernation, causing them to expend valuable energy reserves and ultimately, starve to death. White-Nose Syndrome has caused extensive bat mortality with declines approaching 100 percent in some bat populations. Four of our cave-dwelling Wisconsin bat species (Little Brown Bat, Big Brown Bat, Northern Long-Eared Bat and the Eastern Pipistrelle) are now listed as threatened as White-Nose Syndrome comes closer and closer to our state.

In ecology, some fungi (like the shelf mushrooms you see on dead or dying trees) are known as decomposers. This is because they use enzymes to break down dead and dying plant materials into smaller and pieces until they become nutrient-rich parts of the soil. Other fungi are plant pathogens; that is, they cause plant diseases such as oak wilt, butternut canker and white pine blister rust, among others. Roots of approxi-

mately 95% of all plant species have developed associations with fungi to help them absorb more water and nutrients and to aid against soil-borne plant diseases. These associations are known as mycorrhizae (loose translation: fungus roots).

Fungi play important roles in human life as well. Athlete’s foot and ringworm, contracted in communal, moist areas such as locker rooms, are caused by fungi. Blastomycosis, although rare, can be severe or even fatal when people (or pets) inhale spores of a fungus that grows in the soil and on wood.

Of course, many fungi are also quite tasty. Morel, oyster, and truffle mushrooms, among others, are delicious. **Others are deathly poisonous.** I cannot overstate this enough: **Do NOT eat any fungus unless you are absolutely certain of its edible identity.**

In conclusion, fungi are so much more than just mushrooms. Fungi are a diverse group of organisms that occupy a wide range of habitats (from dead plants and living plants, to animals and humans, and everywhere in between), cure diseases (and cause others), and never fail to amaze us with the beauty of what we find outside after a summer rain...



White Nose Syndrome in bats caused by the fungus *Geomyces destructans*. The fungus grows on the noses and other parts of bats, causing them to prematurely and repeatedly awaken from hibernation thus using up all of their stored energy reserves that they need to survive through the winter.



Fungi!

(From Left to Right, Top to Bottom): Hemlock Polypore, Yellow Morel, Pretzel Slime, Fly Amanita, Giant Puffball, Dog Vomit Slime Mold, Cobalt Crust, Crystal Brain, Apple Bolete, Barometer Earth Star, Bird's Nest, Chantrelle Waxycap

Many fungi are poisonous. Do not eat any fungus unless you are absolutely certain of its identity!!!

NEW AIR POLLUTION PERMITS NOW REQUIRED FOR MINOR POLLUTION SOURCES ON TRIBAL LANDS

Facilities that emit air pollution on the FCPC Reservation will be required to obtain air pollution permits by 2014 based on a new rule titled the Tribal Minor New Source Review. Pollution sources on the FCPC Tribal Lands that may require a permit from the US Environmental Protection Agency (USEPA) would include the C-store gas stations and the Carter Casino/Hotel complex.

Until recently, the only sources on reservations that were issued air pollution permits by the USEPA were very large pollution sources, such as asphalt plants, large boilers used to produce energy, or a large manufacturing facility for example, emitting 250 tons of pollutants per year (tpy) – titled a “major” source. There were no laws in place to allow the USEPA to issue permits to small facilities emitting less than 250 tpy – titled a “minor” source. This became a problem for reservations that contained non-tribally

owned private lands within the reservation’s exterior boundary. If the property owner operated an auto body shop or small manufacturing plant, they would not be required to have a permit or to install any pollution controls, and the Tribe had little power or say to do anything about it.

The new rule, published July 1, 2012, requires that all sources – major and minor, located within reservation boundaries register by March of 2013 with the USEPA. There are many air pollution sources on the Reservation, though it may not be obvious. Not every pollution source has a smoke stack with clouds of smoke billowing out of it. The waste water treatment facilities give off pollution emissions directly into the air; the Potawatomi Casino emits exhaust

from the gas burned to prepare foods and heat the facility; and gas stations emit toxic vapors while customers are filling their gas tanks. Air pollution permits set limits on how much pollution will be allowed, and at what level pollution control equipment or practices need to be put in place to limit pollution emissions.

Not every facility that has emissions will need to be permitted. While commercial/industrial sources are subject to air permitting regulations, residential sources such as wood stoves, furnaces and generators are not. The Air Resources Program has contracted with Rickun Environmental Services to inventory all the commercial/industrial pollution sources on FCPC lands and complete the required registration with the USEPA. It has been determined that the Potawatomi Casino complex and the C-stores are the only sources that will need air pollution permits.

Gasoline vapors are hazardous to breathe but also causes ozone which is damaging to the lungs and to plants, including those used for medicine. Waste water treatment facilities release pollutants including methane which contributes to climate change. The burning of LP gas for heating releases green house gases that contribute to climate change and pollutants that cause ozone. Permitting sources enables the Tribe to identify the types and amounts of pollutants being emitted and determine if pollution controls are necessary thereby protecting the health of the Community and the health of the natural resources that community members depend on.



OTTER CREEK STUDY

In 2012, the Tribe hired Inter-Fluve, Inc. to assist with a comprehensive study of the Otter Creek watershed in southeastern Forest County. Inter-Fluve is an engineering firm based out of Madison, WI that specializes in investigating, designing, and restoring aquatic ecosystems. The main goals of this particular study were to assess the current distribution of brook trout within the watershed, identify all of the factors that may be limiting brook trout production in Otter Creek, and locate and prioritize potential restoration locations that may enhance the population of brook trout within the watershed. The study consisted of several field components, as well as an analysis and reporting stage that each required an extensive time commitment from the Tribe's Water Resources Program and Inter-Fluve staff. The field work began in late-April when Tribal Water staff placed 46 temperature monitors throughout the Otter Creek watershed. These monitors were located throughout Otter Creek, as well as each of its perennial tributaries and were set to collect water temperature readings every 10 minutes throughout the entire summer. All of the monitors were retrieved in October and the data that was derived from these monitors provided an accurate view of the temperature profile throughout the entire watershed. In addition to the temperature monitors, Tribal staff also conducted several electrofishing surveys throughout the watershed in May and again in August to compare the distribution of brook trout throughout the watershed at these periods of extremely different water temperatures. Tribal staff also assisted with a field survey of the entire 22 mile reach of Otter Creek, in addition to an observational survey along portions of each of Otter Creek's tributaries. This survey included the following data collection: a streambed elevation profile, water temperature and stream flow measurements, a survey of all stream crossings and all beaver-made or human-made dams that may be acting as water control structures, stream bed and riparian vegetation observations, etc. The survey began at the mouth of Otter Creek and the Peshtigo River in Marinette County and ended at the very origin of Otter Creek near County Hwy H between Wabe-

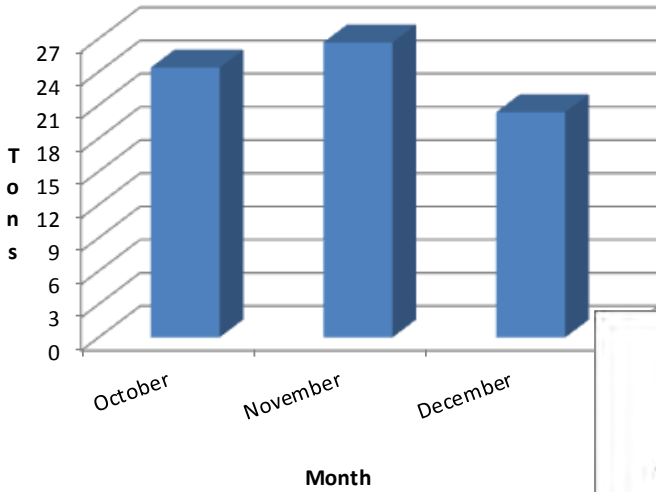


no and Blackwell in Forest County, WI. The survey staff consisted of two, 2-3 person crews (1 individual from Inter-Fluve and 1-2 individuals from FCPC on each crew). Each of the survey crews were able to survey an average approximately 2 miles of stream per day, resulting in the entire 22 mile reach of Otter Creek being surveyed in 5 full days. Inter-Fluve was also able to obtain historical maps of the watershed that allowed us to identify areas that have undergone significant changes since as far back as the 1850's. All of this information proved to be very valuable when completing the assessment of the Otter Creek watershed and provided excellent content for the final report. Inter-Fluve recently completed their final report and presented their findings to FCPC, U.S. Forest Service, and Wisconsin DNR staff. As expected, the study confirmed that there are areas of Otter Creek that currently contain a healthy population of brook trout. The study also identified several areas for potential restoration efforts, particularly those areas that appear to have been mainly impacted by human activities (dam installation, poorly installed road crossings, etc.). Tribal water staff has begun to work with other agencies to prioritize and identify possible funding sources for these restoration projects, in hopes of enhancing the coldwater habitat within portions of Otter Creek and its tributaries. Although several potential restoration locations were identified, the study also concluded that it is likely that much of Otter Creek will continue to be limited to seasonal brook trout habitat even if all of the suggested restoration projects were completed. This is primarily due to the lack of ground water input and the substantial solar heating that occurs throughout the majority of the middle portion of the watershed. Therefore, it remains unlikely that the portion of Otter Creek from Otter Lake to just upstream of the westernmost Old J Rd. crossing will ever be managed as a coldwater fishery, while all of Otter Creek above Otter Lake and much of Otter Creek in Marinette County may continue to be managed as a coldwater fishery.

Please feel free to contact Matt Steinbach at (715) 478-7361 with any questions or for more details regarding the results of the study.



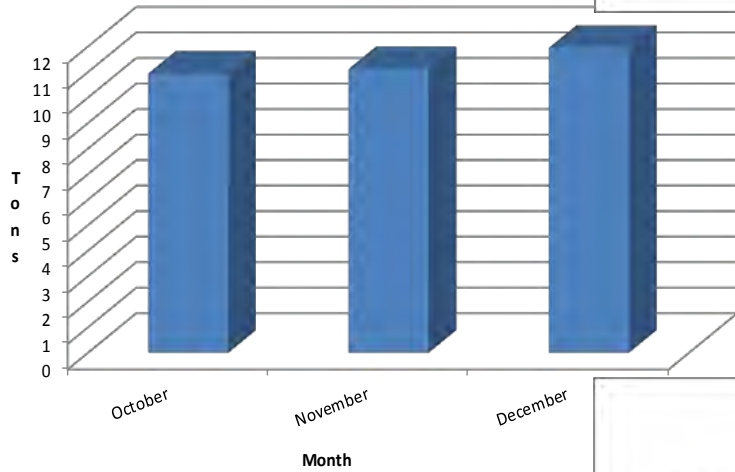
Quarter 4 Solid Waste Tonnages



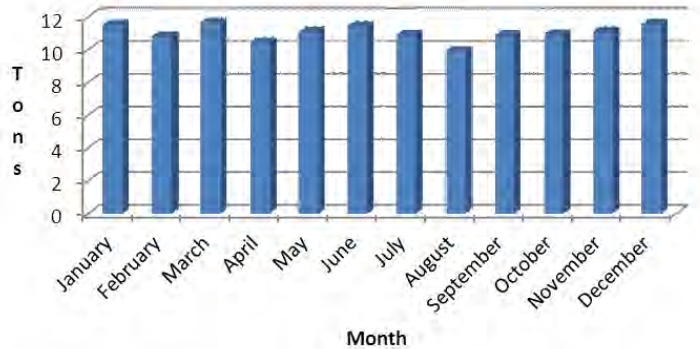
2012 Solid Waste Tonnages



Quarter 4 recycling Tonnages



2012 Recycling Tonnages



THE STATE OF WILDLIFE

A SPECIAL REPORT FROM FCPC WILDLIFE RESOURCES

Many questions come into the FCPC Natural Resources Department regarding wildlife. Populations change, laws change, and sometimes even the species in a given area changes. In 2010, a Wildlife Resources Program was developed within the Forest County Potawatomi Community Natural Resources Department, aimed at monitoring, documenting, and managing wildlife on over 16,000 acres of tribal land and aims to discover the answers to these questions. This is a report on the state of wildlife; the animals in and around FCPC land of interest to tribal members. The short summaries of each species (or group of species) is intended to not only inform members on the “status” and laws regarding these animals, but the biological health of the populations and recommendations on harvest and take. As always, contact the Wildlife Resources Program with any questions or for more detailed reports.

WOLVES

Wolves. An iconic animal of the north woods. Revered and feared, loved and hated. Wolves are an important species in the web of life, consuming old and sick prey species, controlling coyotes, and sometimes even benefitting other wildlife. Wolves have been returning to Wisconsin naturally for the last several decades. Prior to the 2012 hunting season, an estimated 815-880 wolves lived in Wisconsin. In Forest County, there were approximately 5 wolf pack, which accounts for an estimated 20-25 wolves. One pack which resided just north of Highway 8 near Crandon was completely eliminated by poachers in 2011, bringing the total down to 4 packs and approximately 15-21 wolves in Forest County. Final estimates regarding the first legal hunt in 2012 are yet to be calculated, however it is estimated that 20% of the wolf population in Wisconsin was killed from this initial hunt. Fear often surrounds a lack of tolerance for wolves. Fear of personal and human safety, fear of damage to deer populations, and more. Even with the return of wolves to Wisconsin, deer numbers are at or above the WDNR’s population goals. Population goals are often set to reduce the amount of damage done to an ecosystem due to overpopulation. Browse lines and lack of forest regeneration are two common indicators of an over-abundant deer (or other herbivore) population. To date, wolves have not had a significant impact on deer herd size or health in this area. Further, wolves have been in-

volved in only 2 human injury cases in all of North America (United States including Alaska, and Canada) in the last 100 years. By comparison, 4.7 million people, are bitten each year by domestic dogs. In the 1980s and 1990s the US averaged 17 domestic dog attack human fatalities per year, while in the 2000s this has increased to 26 deaths from domestic dogs per year. Wolves, unless sick or habituated to humans, have a deep instinctual fear of humans and will very, very rarely approach a human. FCPC monitors wolf populations through camera surveys and track surveys, although plans exist to begin assisting the WDNR in radio-collaring wolves in the area. Anyone with questions or concerns about wolves should contact the FCPC Wildlife Resources program.



THE STATE OF WILDLIFE

A SPECIAL REPORT FROM FCPC WILDLIFE RESOURCES CONT'D

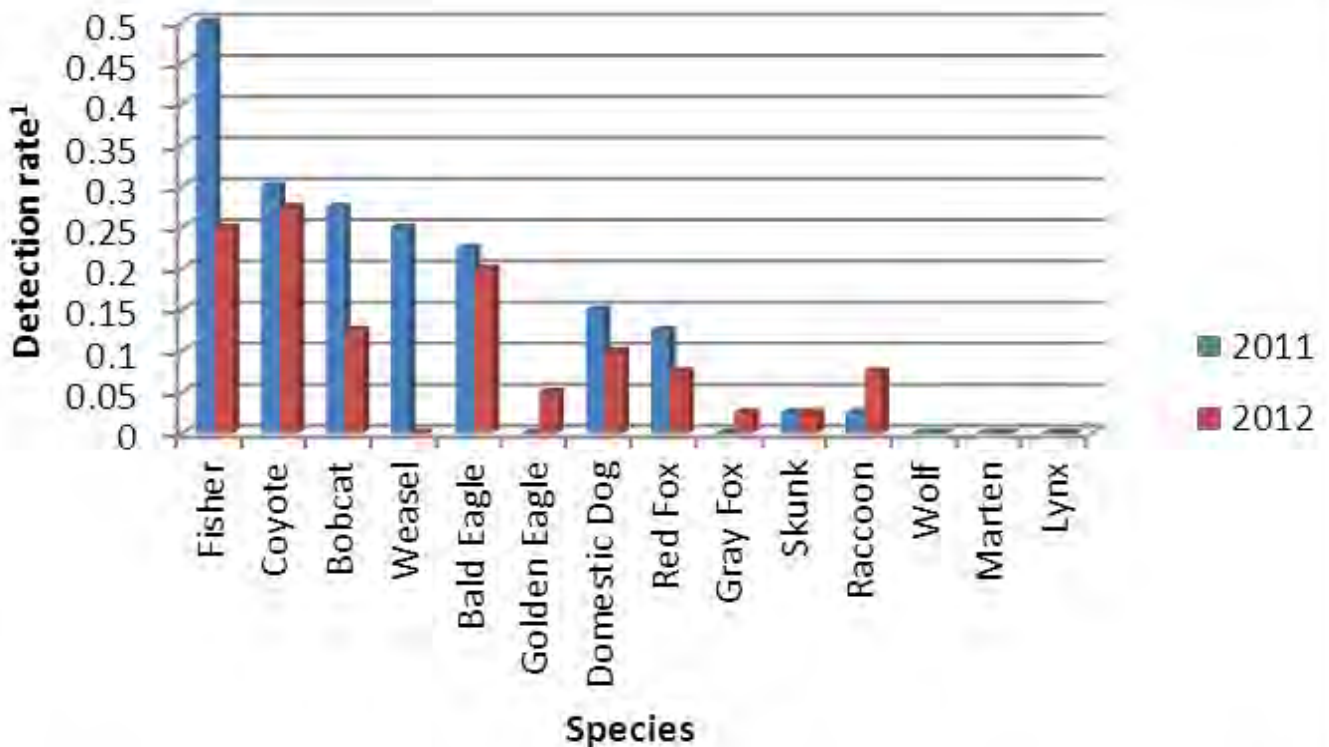
OTHER CARNIVORES

Wisconsin is home to several carnivorous (meat-eating) or omnivorous (plant and meat eating) animals. Many of these animals are valued not only for their fur, but also for their ecological function and innate mystery and beauty. Carnivores are extremely important in northern forest ecosystems, as they control prey species such as cottontail rabbits, squirrels, and deer that, if overpopulated, could have very negative consequences on the forest due to over-browsing and other over-population issues. Extreme losses, increases, or other fluctuations in carnivore species could also suggest an underlying problem in the environment and are therefore often considered “keystone species” of an ecosystem.

FCPC Wildlife Resources monitors carnivores (including eagles) with its annual Carnivore Camera Survey. The data presented here reflects two consecutive years of monitoring with game cameras. Data indicates a greater number of overall detections in 2011, however this does not necessarily imply lower numbers of carnivores or carnivore species in

2012. The 2012 winter weather was much milder than 2011, both in terms of temperature and snowfall. This may have decreased carnivore attraction to bait as natural prey were likely more abundant and easier to catch.

Carnivores that were detected are generally expected to appear in the northern Wisconsin landscape, with the exception of golden eagles which do not generally over-winter in this region. Although gray wolves were not detected on cameras during either year, packs have been confirmed by winter track surveys and WDNR data. While American marten were historically found in this area and still occasionally are detected in areas just north of the study area, marten are an endangered species in Wisconsin and detection rates are therefore likely very low. Lynx, mountain lions, and other rare carnivores have not been detected through camera surveys or any other surveys conducted by FCPC Wildlife Resources.



WHITE-TAILED DEER

The white-tailed deer is one of the most widely distributed species in the western hemisphere and can live in a variety of habitats. When deer are overabundant, drastic reductions in plant biomass and diversity can occur in forest ecosystems. This could include the reduction and loss of culturally significant medicine plants, or rare and endangered species. Unregulated hunting could potentially reduce this overabundance and conserve plant diversity and regeneration. Alternatively, over-harvesting of deer could reduce the herd size to an unsustainable level, or negatively alter the sex and age structure of the local herd. These possible scenarios call a need for effective censusing and management of the local deer herd.

FCPC Wildlife Resources has been collecting data on the white-tailed deer herd in southern Forest County since 2010. This has been done using a combination of techniques, primarily spotlight surveys and fall camera surveys. This data can be used to estimate herd size, density per square mile, buck-to-doe ratios, and more. Eleven survey routes have been established for spotlight surveys and are conducted every year. Surveys in 2011 were conducted primarily during the State gun deer hunt season. Surveys in 2012 were conducted outside of the gun deer hunt season, once before the start of the season and once after. The results of the two surveys conducted in 2012 were then averaged.

The 2011 estimate was approximately 28 deer per square mile, keeping in mind that these are estimates across the entire study area (southern Forest County) and may be locally higher or lower depending on the habitat type. The 2012 pre-gun hunt estimate was 49 deer per square mile and post-gun hunt estimate was 17 deer per square mile. The averaged 2012 estimate is therefore 33 deer per square mile. At these densities, the deer herd in southern Forest County appears to be quite dense and higher than the WDNR population goal (19 deer per square mile). Surveys conducted after the deer gun season are always markedly lower due to both lower numbers from hunt mortality, as well as more secretive behavior due to hunting pressure fears. Populations boom in late summer after fawns are born and moving with adults thereby increasing their detection rates.

Detection of females in this area is much higher than detection of bucks, and this may be for several reasons. One pos-

sibility is that does are in fact much more abundant in southern Forest County than bucks. If this were the case, this would be due to greater hunting pressure on bucks in this area than does. Biologically, normal “un-hunted” populations are generally 50/50 males to females. Alternatively, bucks and does may actually be near a 50/50 ratio, however detection of bucks may be lower due to different behaviors. The true scenario is likely somewhere in the middle of these two theories. In other words, does are detected much more frequently likely because they are both more abundant than bucks *and* because their behaviors make them more visible to researchers (i.e. forage in more open areas, travel more, etc.). At this time, there appears to be no issue with unregulated hunting of white-tailed deer, other than a potential skew in the doe:buck ratio. Hunters are encouraged to harvest only does or mature bucks, leaving “spike bucks” and other young bucks to mature and reproduce.



THE STATE OF WILDLIFE

A SPECIAL REPORT FROM FCPC WILDLIFE RESOURCES CONT'D

ELK

Elk once ranged over most of North America and throughout Wisconsin. They were eliminated from Wisconsin in the mid to late 1800's with the onset of European settlement due to over hunting and a rapid decline in habitat. Historic records show elk once inhabited at least 50 of the state's 72 counties. Elk primarily inhabited the prairie and oak-savannah communities of the southern portion of the state. Today most of the suitable elk habitat is in the northern and central forest regions of the state. The large scale conversion of land in the south from prairie to agriculture has resulted in little to no suitable habitat in this area.

In 1993 the Wisconsin State Legislature authorized the Uni-



versity of Wisconsin-Stevens Point (UWSP) to evaluate the potential for reintroducing elk to the Great Divide District (GDD) of the Chequamegon-Nicolet National Forest (CNNF) near Clam Lake. During February 1995, 25 elk were trapped, held in a quarantine facility for 90 days while undergoing rigorous disease testing, and transported to the Clam Lake release site. As of May 15, 2012, approximately 150 elk were present in the state, comprised of the main herd near Clam Lake and a second smaller herd located near Butternut. The herd has grown at an average rate of 13% annually, however, growth rates have varied from as high as 30% to as low as -16% since 1995. Primary causes of mortality include predation by wolves and bear and vehicle collisions.

Elk have been occasionally spotted in southern Forest County. Elk that have made it to this area are fortunate to have survived the journey without being hit by a car, poached, or mistaken for a deer by a legal hunter. Although FCPC tribal

members can technically shoot and kill an elk as it is not federally protected, it is state protected for a reason. A population of 150 individuals is quite small, both in numbers and in effective gene pool size. Dispersal of elk into new territories and establishment of small "meta-populations" may be critical to elk thriving in this state. As mentioned, while technically legal, FCPC tribal members are highly discouraged from shooting these magnificent animals until a healthy sub-population can be established in this area. FCPC Wildlife is currently working with the WDNR to determine if an elk population can be restored to this area of the Chequamegon-Nicolet National Forest. If a healthy population is restored, hunting opportunities will be ample for current and future generations.

MOOSE

In 2002, after more than a century, state biologists documented the first moose calf birth in Wisconsin. Moose are native to Wisconsin but are now found at much lower numbers than they were historically. There are three reasons for this. The first is a lack of habitat. The second is high deer numbers. Deer carry brainworm which is a parasite that kills many moose. Lastly, global climate change is drastically changing the northern Wisconsin winter to which moose are acclimated to, and the warmer milder winters contribute to an increase in parasites such as ticks. One animal typically can get 30,000 ticks in normal fall weather conditions, but as many as 160,000 ticks during winter in years with a late first snowfall, researchers said. Often the eventual result for moose is malnutrition and death. Moose are at a physiological low when winter ticks are feeding, leading to stresses like reduced blood volume, a thinner coat due to scratching, and an inability to lie down and rest. This combination leaves the moose open to an array of other infections. A high number of ticks is almost a "death sentence" for calves because they can lose their entire blood supply over just a few months. Climate change magnifies the tick problem because the pests live longer and reproduce in greater numbers if there's less snow on the ground by spring.

MOOSE CONT'D

According to the Wisconsin Department of Natural Resources, moose are a very rare animal species in Wisconsin. Despite their size, these moose many times do a good job of being elusive for such a large mammal. The DNR estimates that the Wisconsin population of moose is at 20 to 40 animals (2003). In the 1980's Michigan conducted a reintroduction of moose in the Upper Peninsula. As moose have been reintroduced into the wild and acclimated themselves, the animals have been increasingly sighted in northern Wisconsin. Although Wisconsin has not reintroduced moose, these large and beautiful animals do wander into the state occasionally, and even sometimes take up permanent residency, as a result of a successful reintroduction in the Upper Peninsula of Michigan and a native population of moose in Minnesota. Moose, also a protected species in the state of Wisconsin, are rare in all areas of the state.



LOONS

Loons are another iconic symbol of Wisconsin, with their eerie lonely call and their distinct red eye. Some may say that the call of the wolf and the call of the loon are the two most recognized sounds of the wild north woods. While once common in all the northern forested states, loons are in a bit of trouble. Large numbers of Common Loons were shot in the early to mid-twentieth century because they were erroneously perceived as a threat to the sport fishing industry. This coupled with the impacts of pesticides, contaminants, toxic chemicals, and acid rain led to population declines. Today, the North American population appears to be undergoing some amount of recovery across its range. In Wisconsin, survey results from LoonWatch, a long-term study sponsored by Northland College, suggests a modest increase in the state population since the mid-1980s.

Despite these promising signs, several factors threaten Common Loon populations. Loons are sensitive to elevated mercury levels in lakes. Chronic exposure to mercury via ingestion of contaminated fish can lead to lower reproductive success, increased chick mortality, and behavioral, physiological, and histological changes associated with methylmercury toxicity. Human recreational activity around lakes reduces available nesting habitat and compromises nesting attempts. Lead poisoning through the ingestion of lead sinkers and entanglement in fishing line and nets also are concerns.



THE STATE OF WILDLIFE CONT'D

LOONS CONT'D

Poaching and hunting are not a large cause of mortality for loons, nor is any other form of direct killing. Loons are protected under Federal law, and the direct killing of loons is prohibited. Invasive species in lakes, however, seems to play a much bigger role in loon mortality than originally suspected. For years, botulism has been suspected as a culprit in killing thousands of loons every in Lake Michigan. The source of this botulism was a mystery. It seems, however, that invasive species may be the cause. In an article from Michigan on January 6 of this year:

“Thousands of dead birds, mainly loons, washed ashore — from the Upper Peninsula down to Sleeping Bear Dunes National Lakeshore.

A large percentage of the dead loons had just entered their first year of breeding maturity. The reason for the die-off, which follows similar incidents in 2006 and 2007, isn't fully understood. But it is suspected that it is driven by the food chain linking the loon to invasive species, specifically, the quagga mussel, the zebra mussel and the round goby.

Since 1988, when the first zebra mussels in Michigan were found in Lake St. Clair, the invasive mussels have been clearing and “cleaning” Great Lakes water columns by consuming plankton. While the end result is a more aesthetically pleasing water column, the clearer water has allowed the sun's rays to penetrate deeper, causing larger and larger algae mats to flourish on the bottom. As the algae mat builds upon itself and dies, it becomes anaerobic — depleted of oxygen — and type-E botulism bacteria develops.”

-Don Gardner for The Oakland Press

While this represents a huge challenge in loon conservation and the conservation of the Great Lakes in general, there are several things that can be done to ensure the survival of loons for the next seven generations. To start, federal and state regulatory agencies should enact policies to reduce mercury emissions from coal burning electric generation plants, and municipal waste incinerators. Land-use and watershed programs that promote lake water clarity and quality should be encouraged along with efforts to exclude aquatic invasive species from entering breeding lakes. Programs that encourage use of non-lead fishing tackle

should be promoted.

What you can do:

View loons from a respectful distance of at least 200 feet. Do not approach nests, individual adults, or loon chicks. Do not camp, picnic, or run dogs on islands potentially used as nest sites by loons (esp. from spring ice-out until July 4).

Respect slow-no wake zones and rules. Because loons nest right at the water's edge, wake from boats and personal watercraft can wash eggs out of the loon's nest.

Don't fish next to a loon. Loons can mistake lures and jigs for their live prey items. Every year loons die from swallowing lures and entanglement in fishing line.

Use non-lead fishing tackle. Loons, eagles, swans, and other water birds die from ingesting lead fishing tackle. Small sinkers and jigs seem to be the biggest problem, and only one lead sinker will kill a loon from lead poisoning. Of 12 dead loons turned in by the public to DNR for a new loon health monitoring program in 2006, six died from lead poisoning from lead fishing tackle.

Check your boat for aquatic invasive species. Before you launch your boat or after you trailer it, please check the boat propeller, trailer, and other places for invasive plants such as Eurasian water milfoil and curly-leaf pondweed.

Leave native vegetation and woody debris on the shore and in the water. Removal of woody debris from the water has been documented to cause population crashes in perch populations on a lake. Perch are the primary food for loons so a crash in the perch population may result in less food for chicks and loons abandoning their use of a lake.

Use four-stroke motors or no motors at all. Four-stroke motors contribute less pollution to the water and air. They are more efficient and use less oil-based products compared to older two-stroke motors. Hundreds of loons (for some states this is equal to their entire population) can die in one oil spill.

POWWOW GROUNDS PROJECT

The first phase of the Pow wow grounds project included the Dance Arbor, Shower, Restrooms and Parking areas. The Planning department hosted a Public Informational Session at the Executive building auditorium on December 4th for community members to come and learn about the ongoing construction of Phase I and to view Phase II preliminary plans. Public input tables were set up for community comments. This input provided direction for the design of the remaining elements.

The second phase of the project includes a Fire Pit Arbor, a combination Kitchen/ Social and Storage Arbor as well as Campground improvements located south of the We Care and north of the dance arbor which include electrical provisions. The construction of Phase I and Phase II are sched-

uled for completion on June 30, 2013.

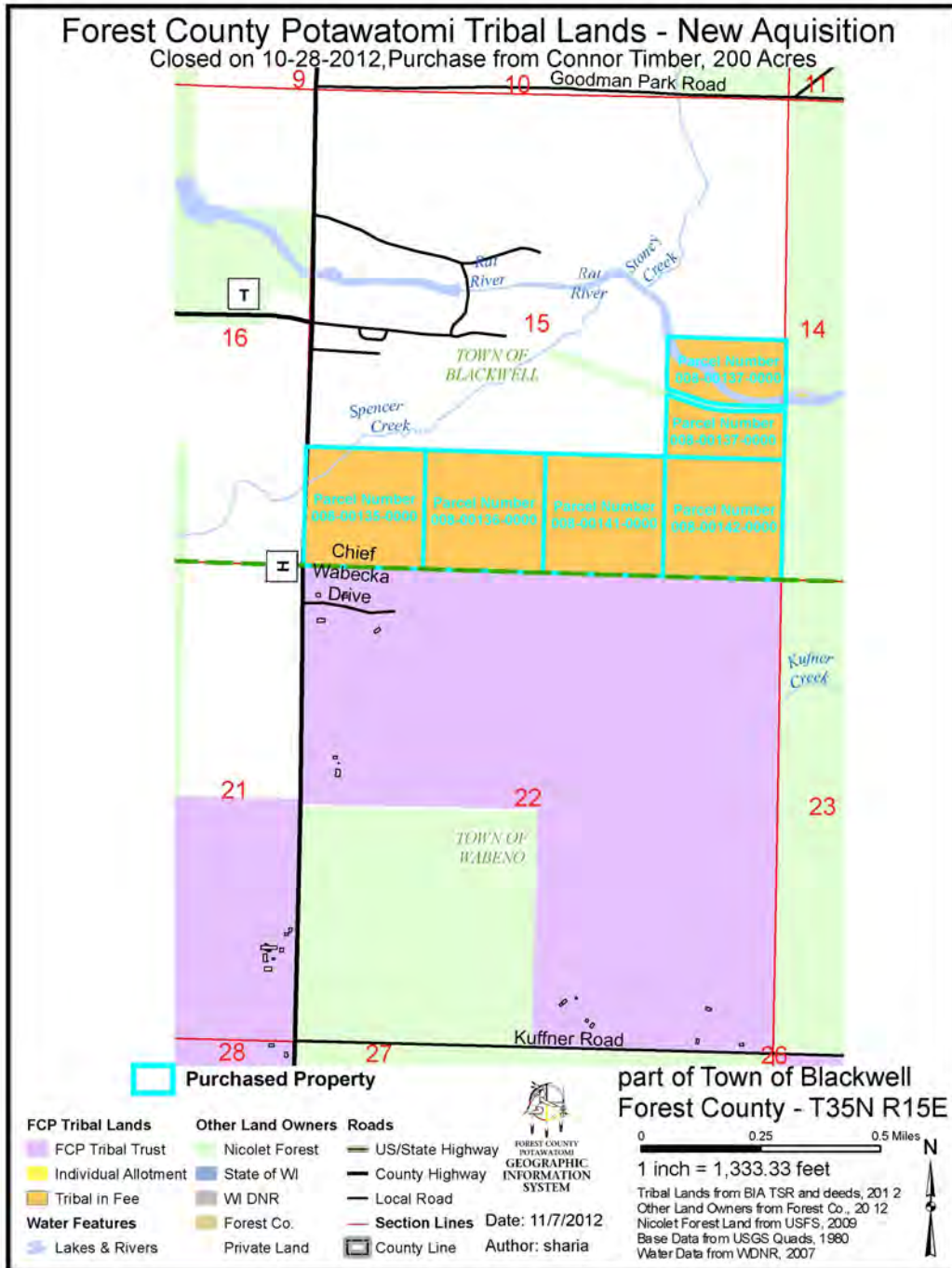
There have been some good ideas regarding integrating cultural components into the grounds by the Health Advisory Committee such as seeing the four directions colors, carvings, the clans and beadwork designs. They would like to know the ideas of others and how they visualize this. We contacted Mike Alloway at the Museum as well for input. So please contact us about your ideas. We would like to make sure there are ongoing improvements such as these once the basic facilities are completed. If you would like to view the plans you may contact the Planning Department at 715-478-4704.



NEW LAND PURCHASES

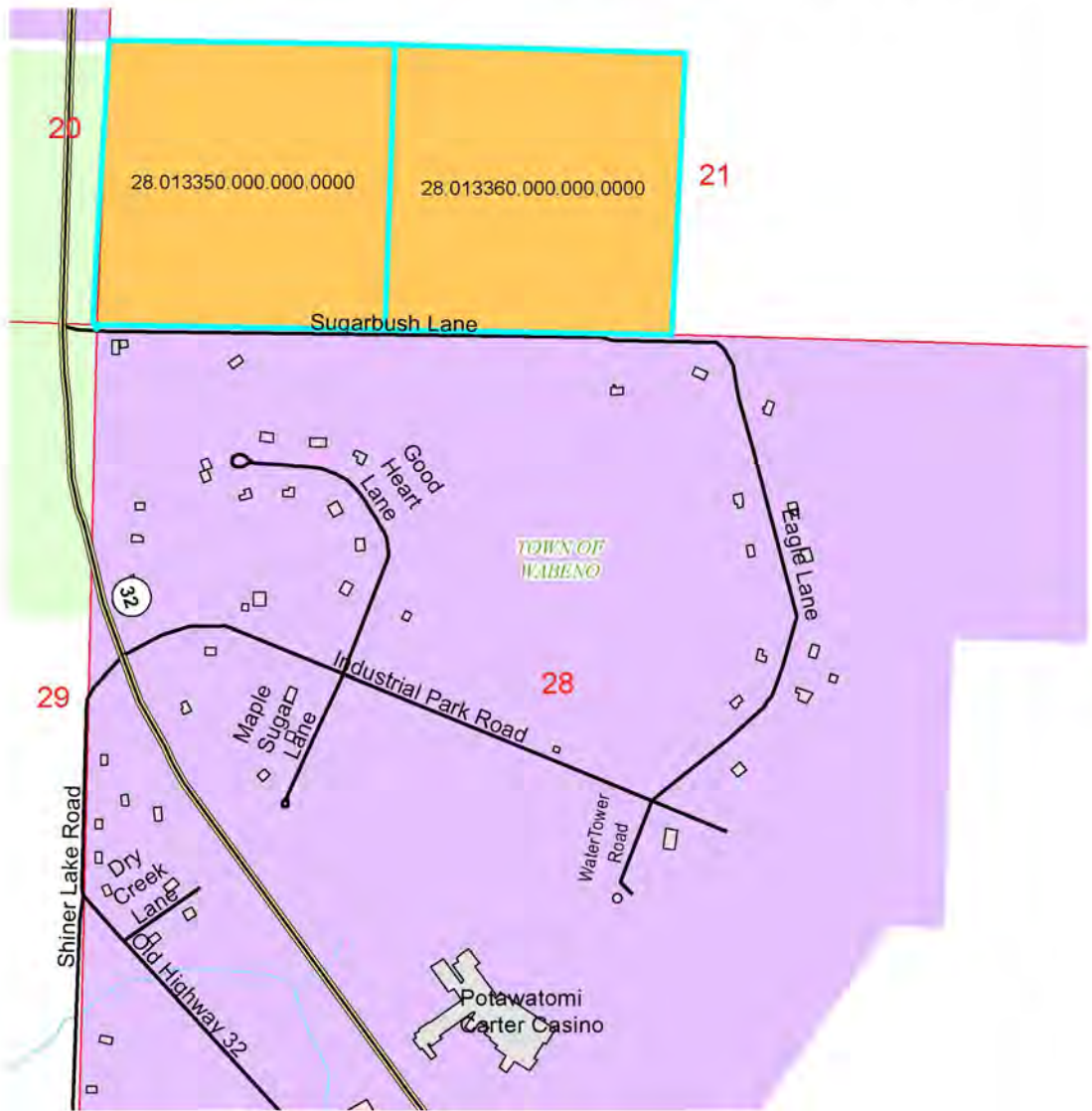
The FCPC is continually expanding their land base and since October the tribe added 960 acres. 400 of these are in the Stone Lake area and came from the settlement with Forest County, the "880 Litigation". 200 acres just north of Chief Wabecka Drive were purchased in the Blackwell area and 280

acres of former State of Wisconsin lands east of Blackwell are now tribal fee lands. And finally, closing on December 31, 80 acres just north of Sugarbush Lane in Carter were purchased.



Forest County Potawatomi Tribal Lands - New Aquisition

Closed on 12-31-2012, Purchase from Ian Connor, 80 Acres



Purchased Property

FCP Tribal Lands

FCP Tribal Trust

Individual Allotment

Tribal in Fee

Water Features

Lakes & Rivers

Other Land Owners

Nicolet Forest

State of WI

WI DNR

Forest Co.

Private Land

Roads

US/State Highway

County Highway

Local Road

Section Lines

County Line



Date: 1/8/2013
Author: sharia

part of Town of Wabeno
Forest County - T34N R15E
S 1/2 of the SW 1/4 Sec. 21

0 0.1 0.2 Miles

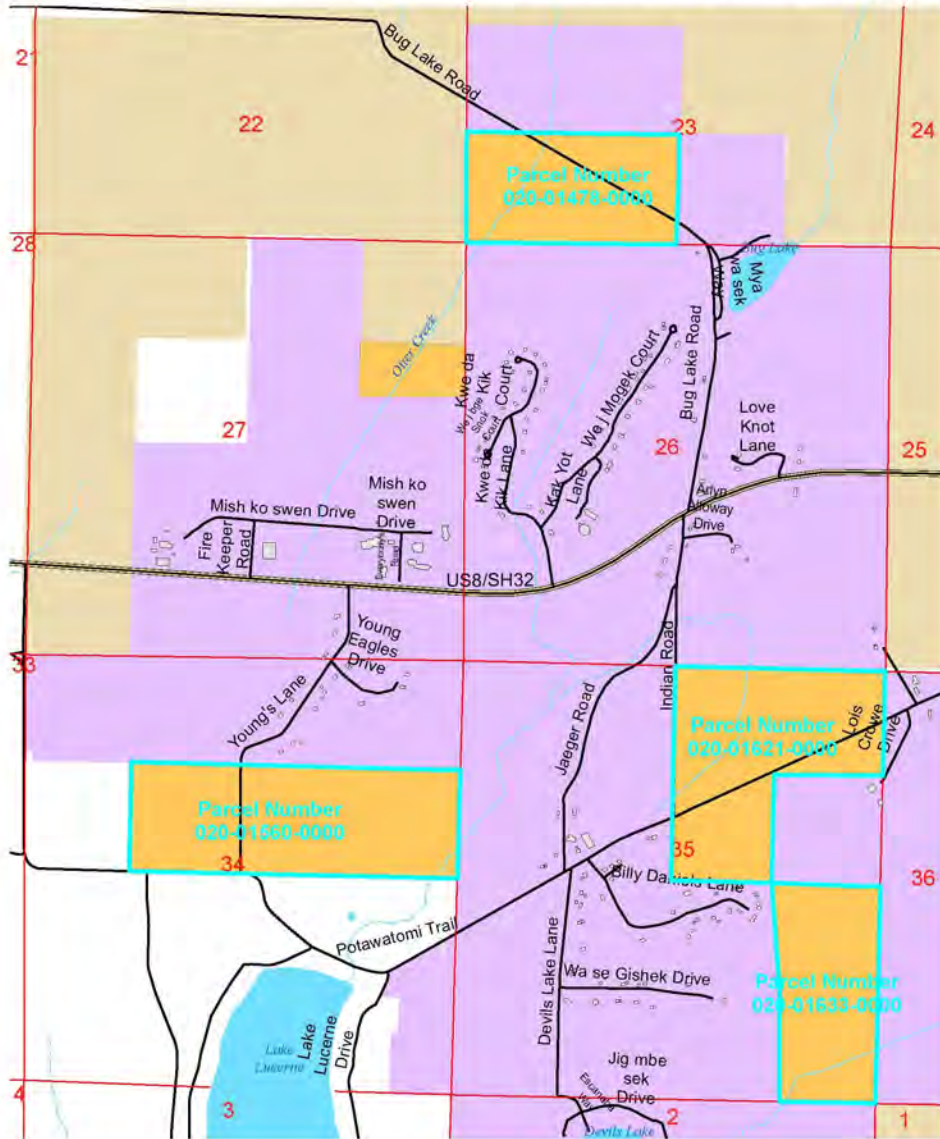
1 inch = 700 feet

Tribal Lands from BIA TSR and deeds, 2012
Other Land Owners from Forest Co., 2012
Nicolet Forest Land from USFS, 2009
Base Data from USGS Quads, 1980
Water Data from WDNR, 2007



Forest County Potawatomi Tribal Lands - New Aquisition

Closed on 10-22-2012, 880 Litigation Settlement FCP v. Forest County , 400 Acres



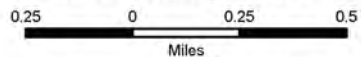
Purchased Property

- | | | |
|-------------------------|--------------------------|------------------|
| FCP Tribal Lands | Other Land Owners | Roads |
| FCP Tribal Trust | Nicolet Forest | US/State Highway |
| Individual Allotment | State of WI | County Highway |
| Tribal in Fee | WI DNR | Local Road |
| Water Features | Forest Co. | County Line |
| Lakes & Rivers | Private Land | Section Lines |



Date: 10/31/2012
Author: sharia

part of Town of Lincoln
Forest County - T36N R13E



1 inch = 1,891.7 feet

Tribal Lands from BIA TSR and deeds, 2012
Other Land Owners from Forest Co., 2012
Nicolet Forest Land from USFS, 2009
Base Data from USGS Quads, 1980
Water Data from WDNR, 2007



LIGHTING

Lighting accounts for 5-10% of the total energy use in the average home and cost \$50 to \$150 per year in electricity. This may not sound like a huge amount, but there are a wide range of benefits that arise from using high-efficiency lighting.

Types

Incandescent lamps (or bulbs) are the most common lighting type currently used and are available in all shapes and sizes. The problem with incandescent lamps is that they are a very inefficiency technology; only 10% of the electricity they use is actually converted into useable light – the rest is wasted.

Compact fluorescent lamps (CFL's are becoming more popular as a highly efficient alternative to the standard incandescent bulbs. A single 20-watt CFL will provide the same amount of light at a 75-watt incandescent bulb and last up to seven times longer. Because CFLs use less energy and last longer, the savings can add up to several times their purchase price each year through reduced electricity bills and fewer replacements.

Models on the market today are comparable in light quality to incandescent lamps and are easily comparable with standard screw-in lamp fixtures of several common styles. For the best compatibility with standard size screw-in fixtures, look for the spiral-shaped mini sub-compact fluorescent lamps, which are smaller than conventional CFL's.

Fluorescent lamps depend on trace amounts of mercury to operate. Mercury is a toxic substance and consumers should be aware of household products that contain it. However, it is important to note that CFLs save 2-10 times more mercury from the environment than they contain by avoiding pollution from coal fired power plants. The amount in each bulb is not significant enough to pose a health risk in your home, but they should be disposed of properly. The Forest County Potawatomi Solid Waste currently has a CFL disposal program and for more information contact Jeff Marshall at 478-4817.



Halogen lighting is the lighting option of choice where high light quality or precise light focusing is required. A halogen lamp is slightly more efficient than a standard incandescent lamp, but not as efficient as a fluorescent. In situations where light is needed on a precise area, halogen lights may be a more effective choice than fluorescent lights due to this tight focusing feature.



Energy Saving Tips

- Make use of Natural Day lighting
Rearrange furniture to maximize daylight useful for reading, cooking or other work. Also consider painting your walls a lighter color so that light is reflected back in to the room instead of being absorbed in to the walls.
- Reduce background light levels and rely more on task lighting

Concentrate light just where it is needed by keeping ceiling lights turned off and by using smaller track lights and table or floor lamps.

- Switch to compact fluorescent lighting (CFLs)
This is the simplest way to shave significant amounts off of electricity bills.
- Switch to LED holiday lights
Decorative LED string lights are now widely available in white and a range of vibrant colors including multi-color sets. These lights provide a more durable and low-energy alternative to traditional holiday lights.
- Turn lights off and/or install sensors

If you can't get in the habit of turning off lights, install occupancy sensors that will turn lights on and off when you enter and leave a room. Other control options include light-sensors (for outdoor fixtures), timers and dimmers.

Currently, energy is there when we need it – so it's easy to not consider where it comes from and how much it costs. Unfortunately, most of the energy sources we depend on, like coal and natural gas, cannot be replaced. Small efforts we make now, can go a long way in to protecting these resources for the future and saving all money now.

USDA APPOINTS NEW MEMBERS TO THE FOREST RESOURCE COORDINATING COMMITTEE

WASHINGTON, Jan. 22, 2013 - Agriculture Secretary Tom Vilsack recently appointed eight new members to the Forest Resource Coordinating Committee, which provides advice on private forestry and USDA's programs that assist landowners in managing their forests to protect, conserve and enhance the values they produce.

"The USDA Forest Resource Coordinating Committee's new members will help us continue to make the right decisions for our rural communities, generating jobs, sustaining economic growth and conserving our working lands for future generations," said Agriculture Under Secretary for Natural Resources and Environment Harris Sherman.

The appointed members are:

- Leda Chahim, Washington, representing conservation organizations
- Anthony Delfin, New Mexico, representing state foresters
- Daniel Forster, Georgia, representing state fish and wildlife agencies
- Allan Murray, Wisconsin, representing tribes
- Tammie Perreault, Washington, representing non-industrial private forest landowners
- Bettina Ring, Virginia, representing conservation organizations
- Steven Sinclair, Vermont, representing state foresters
- Bonnie Stine, Florida, representing USDA-authorized state technical committees

The new committee members join eight previously selected members and the heads of four USDA agencies – the Forest Service, Natural Resources Conservation Service, Farm Service Agency and the National Institute of Food and Agriculture.

USDA has a special interest in assuring that women, minority groups and persons with disabilities are adequately represented on this advisory committee. The Forest Resource Coordinating Committee provides expert counsel on actions and funds allocation that enhance the diversity and public benefits of forests. Important areas of focus include wildfires, natural disasters, insect and disease outbreaks, the economics of forest ownership, air and water quality, public policy related to private forests and wildlife habitat.

The full committee will meet April 11-12, 2013 at the Forest Service headquarters building in Arlington, Va.

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2013 WINTER CARNIVORE CAMERAS



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**LAND & NATURAL
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DEPARTMENT**

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**LAND & NATURAL RESOURCES
BUILDING CONTACTS**

Al Murray	Forest Manager	4973
Ashley Fehrenbach	Botanist Program Manager	4193
Ben Koski	Aquatic Biologist	4436
Bill Alloway	Natural Resources Technician	7210
Casey Swanson	Land Manager	4988
Cheryl Frank	Land Use Office Manager	4982
Danielle Fatla	Land and Natural Resources Administrative Assistant III	4192
Ericka McGeshick	Receptionist/File Clerk	7222
Frank Shepard	Natural Resources Assistant Director	4942
Heather Stricker	Wildlife Program Manager	4196
Jason Spaude	Natural Resources Technician	7207
Jeff Marshall	Waste Management Specialist	4817
Jim Gumm	Forestry Technician	4976
Joe Cebe	Air Quality Specialist	4435
Joe Shepard	Wildlife Technician	4962
Lawrence Daniels	Natural Resources Director	7213
Matt Steinbach	Water Resources Program Manager	7361
Michelle Berdan	Planning Administrative Assistant I	4944
Natalene Cummings	Air Quality Program Manager	7211
Nate Guldán	Land & Natural Resources Division Director	7205
Pat Pete	Tribal Planner	4704
Scott Cleereman	Forestry Sales/Community Forest Coordinator	4974
Shari Alloway	GIS Specialist	7224
Solid Waste Recycling/Collectors	Tony Daniels, Francis Shepard, Greg Kitchell, Phillip Wamego	7330