

DCEC Newsletter



published by
the door county environmental council, inc.
p.o. box 114, fish creek, wi 54212

phone 920-743-6003
fax 920-743-6727
email dcec@itol.com

www.dcec.us

Spring 2006

**Environmental News
for Door County**

*Make a Legacy Bequest to
DCEC see page 8 for
details! See page 6 for
Membership Information!*

DCEC Proposes Pumping Treated Sewage to Wetlands! *Aquifer Restoration the Goal.*

A concept new to Wisconsin, but utilized in other parts of the country, involves reclaiming nutrient-laden waste water from small municipal sewage treatment systems rather than discharging it directly into our already nutrient-rich water bodies. In Wisconsin, municipalities are allowed to discharge wastewater containing limited amounts of phosphorus and other nutrients, accumulating in our lakes and bays. These small systems are not the entire cause of our nutrient problem in Door County, but they are a major contributor.

In recent newsletters, we've expressed concern over Door County's well-documented diminishing aquifer. With every new well, new depths are needed to secure suitable and adequate water supplies. The long-approved practice throughout Wisconsin is to draw water from the aquifer (ground water) for municipal supplies and return wastewater to a lake, river or stream (surface water). For this reason and others our aquifer is diminishing. Major changes in our discharge methods need to be made.

In Door County, all of our small municipalities are discharging treated wastewater into either the Lake, Bay or Ahnapee River as surface water originating as groundwater from individual or municipal wells. Along with the treated wastewater there are limited amounts of phosphorus, nitrates, and probably some nuisance toxic heavy metals being discharged. (All within the requirements of archaic Wisconsin regulations.)

This process also contributes to the nutrient increase causing the *green algae, cladophora, and water weed growth* ultimately resulting in the smelly mess on our beaches and bays. Major changes in the way we are

handling our wastewater need to be made.

There are options:

- Muskegon, Michigan uses treated wastewater for inland orchard irrigation
- Petaluma, California has developed a whole new concept of wastewater treatment is sending treated wastewater into large wetland areas. (See story on pg 2)

A very simple but effective way to resolve the problem of our diminishing aquifer could be to follow the lead of other states and discharge small municipal waste water into ***existing large wetland areas.***

The natural filtration process that occurs in a wetland will remove the remaining nutrients from the wastewater, allowing them to be utilized by the native plant growth already in place in these wetlands. The excess wastewater, not consumed or returned directly to the aquifer, will join the natural drainage system of the wetland and become an integrated part of the outflow.

Many of our small municipalities are already adjacent to existing large wetland areas that are of sufficient size to not be adversely impacted by the additional water. Wetlands are nature's best way of consuming the remaining nutrients— *returning groundwater to the original point of withdrawal.*

So, think about it! Isn't this a reasonable way to eliminate direct discharge into our surface waters that also helps us to preserve our natural aquifer supply?



DCEC Incorporated in 1971 under the laws of Wisconsin as a nonprofit, tax-exempt corporation

Carpe Diem?

Invader Threatens Great Lakes

Years ago, operators of fish farms in the South brought in black Asian carp to control snails and other parasites in their fish farm operations. But, some of the fish have escaped fish farms and made their way up the Mississippi River. Now they are literally at the door to the Great Lakes, with the potential to devastate the lakes' fragile ecosystems.

Three years ago, the U.S. Fish and Wildlife Service proposed banning the importation of black Asian carp. However, the federal government hasn't acted on this proposal and the Great Lakes currently remain threatened.

The only possible option to prevent the carp (which can grow to 100 pounds or larger) from getting into our lakes system is an electronic fence barrier near Chicago in the Illinois Sewage Canal—the direct link from the Mississippi to Lake Michigan. The barrier, experimental in design, delivers a non-lethal jolt of electricity, thereby deterring the carp from entering the Great Lakes.

Everett Wilson, deputy assistant director for fisheries and habitat conservation with the Fish and Wildlife Service, said the agency must consider the economic impact of a ban on southern fish farmers' importation of carp. After three years of study, nothing has been done.

Late last fall a conference committee of the U.S. Senate and House of Representatives failed to provide the \$250,000 needed to operate a critical Asian Carp barrier. Now, the responsibility falls back on the Council of Great Lakes Governors and the member states that originally provided the \$575,000 to finish the project. The fiscal responsibility for maintaining the integrity of the entire ecosystem of the Great Lakes is seemingly *not a major priority* of the federal government with its **\$2 trillion dollar budget**.

Contributed by Dr. Phil Moi, Wisconsin Sea Grant Institute.

Radon Alert

Radon has been around a long time, but recently have you been hearing of how Radon is affecting many unwary homeowners? Radon is a radioactive chemical element that is found in the air in varying amounts during certain kinds of weather. It's a colorless gas formed by the radioactive decay of existing radium in the earth's crust.

Radon is classified *inert* because it does not readily react with other chemicals, *BUT don't let that fool you*. It is extremely dangerous and with prolonged excessive exposure can cause cancer. It may be in your home right now, down in your basement!

Scientists have determined that radon is present in many basement areas and goes unnoticed because it is odorless and invisible. Radon in your home comes directly from surrounding soil and from below your basement floor. It finds its way upward through fissures or simple drains.

A new home might more likely to have a radon problem. New homes are built with an under-floor drain system designed to keep the basement dry which will funnel the radon gas into your sump system and out into your basement.

This constant process will go without detection unless the air is tested for radon. Test kits are available at most home building supply stores. If the results come back at more than 400, you will need to take corrective measures to ensure that your home is protected from radon gas accumulation.

In most instances, a simply designed small radon gas exhaust blower allowing the gas to escape via your roof outlet can be installed to draw the radon gas directly from the drain system under your basement. (This blower runs constantly—and as it is a small, efficient, quiet motor—your costs are minimal once the installation is complete.)

You can also purchase the entire PVC pipe, blower, and necessary fittings at local home stores, or you can contract with a radon consultant to complete the installation if you are not comfortable doing it yourself. Information is available on line using your browser to find radon information or you can consult with the yellow pages under Radon.

Of Interest to Environmentalists

“Conservation in Common” Actions and Strategies to Protect Your Rivers, Parks and Trails Conference at Holiday Acres Resort near Rhinelander, WI. April 28-29 (Registration \$100 for River Alliance and FWSP members includes lodging. Friday seminars and meal extra.) (608) 266-7617 www.fwsp.org or www.wisconsinrivers.org.

“Hands Across the Waters” Wisconsin

Lakes Convention April 20-22. KI Convention Center/Regency Suites, Green Bay, WI. Thursday optional (\$20) tour of “Shallow Lakes in Door County” or “A Day on the Farm - with 1,400 Cows” Pagel's Ponderosa Farm in Kewaunee County. Workshops and noteworthy speakers on Thursday, Friday and Saturday. (Lodging not included, but meals are for \$175 full convention.) www.uwsp.edu/cnr/uwexlakes/conventions.

DCEC Legislative Reports

Shoreline Protection Needs Your Support

The Wisconsin Department of Natural Resources (DNR) conducted hearings, last August, on proposed changes designed to strengthen existing DNR shoreland protection regulations (NR115). This hearing, part of a statewide series of hearings, brought out the widest imaginable array of arguments for, and against, any changes.

A group of businesses and administrative agencies opposed the changes because of extra work involved in supervision and planning. Some shore/home owners opposed the changes defending property rights as individuals (Not wanting any more restrictions on their land.) The arguments were the same at most hearings throughout the state: "I can take care of my property, I don't need any more regulation," or "We will have to put on extra staff to administer the changes."

Fortunately for the water resources we have in Door County, most of the folks defending their rights as property owners left the local hearings immediately after giving testimony. This allowed a tense atmosphere to change to a more rational common sense discussion for dealing with the problems now facing everyone who is a steward charged with shore land maintenance:

- Current setbacks regulations along rivers and beachfronts do not appear to be doing enough. It's now matter of necessity to keep our surface waters from becoming still more threatened and degraded. The green algae/cladophera/zebra mussel problem is going to become much more severe as the *nutrient load* continues to escalate.
- Maintaining buffers and natural vegetation is a vital part of the total stewardship for our water resources. In addition to filtering and slowing rainwater running off shore/home property, desirable cover will slow erosion, keeping the beach from being affected by wind erosion, even during the periods when the cover is not growing.

Granted, the problems associated with maintaining a proper inland beach cover to control wind erosion and slow runoff water pose a unique challenge. However, the changes to NR115 are vital to solving the problem of beach contamination by microbes relative to e-coli: a problem affecting every beach area on our Lake and Bay.

Though much attention has been given to urban storm-water runoff as the culprit for bacterial sources, individual homeowners can't escape some of the responsibility. Farm operation (non-point)sources are slowly being addressed and now it's time for shore/home property owners also to accept some responsibility.

Each of us, as property owners, must share in the

Renewable Energy Gets Gov's Nod

With our abundant wind and farmland, Wisconsin has the potential to derive most, if not all, of our energy from clean, renewable sources. Unfortunately, Wisconsin currently gets over 90% of its energy from coal and nuclear power plants. We all know the dangers and problems associated with fossil fuel consumption. It creates premature deaths each year and poisons our lakes with mercury emissions.

Wisconsin needs to shift toward more clean energy by promoting energy *efficiency* and *renewable* energy sources. Our cheapest and cleanest energy isn't produced by burning fossil fuel. Renewable energy, particularly wind power, not only generates energy without pollution, it can also be a source of income for farmers and rural communities.

In 2003, Governor Doyle appointed a *Renewable Energy Task Force* to develop recommendations for Wisconsin's energy future. They recommended Wisconsin start buying 10% of its energy from renewable sources by 2015. On February 21st, 2006, the State Senate voted thirty-two to one in support of **SB 459**, the bill which incorporated these points. Following the Senate vote, on March 7th, the Assembly voted unanimously to adopt the bill. The legislation now will go the Governor Doyle's desk, where he is expected to sign this legislation very soon.

SB 459 is a very good first step to move Wisconsin toward energy independence and a cleaner energy future. The legislation will:

- Protect money for energy efficiency from future budget raids, by keeping those funds out of the state treasury.
- Require that our state utilities move quickly to meet the 10% renewable source requirement, reducing our dependence on energy generated from polluting sources.

We are proud of the progress our own *DCEC Renewable Energy Task Force* has made in the past two years. Most significant is the formation of the "Community Wind Energy" group that is making significant progress in establishing the legal structure needed to create real working wind generation facilities here, powering the needs of Door County.

California Leads the Way!

Petaloma Returns Well Water to Its Aquifer

Petaluma, California officials say a new \$110 million facility utilizing wetlands to treat the city's sewage and storm runoff will benefit critters as well as people. Gerald Moore, chairman of the Petaluma Wetlands Alliance, said the project wouldn't have happened without grassroots activism and determination.

The idea, which has been tried in small towns but never in a city the size of Petaluma, promises to change sewage from a municipal liability to a valuable natural resource that can help restore wildlife habitat. In a typical sewage plant, including Petaluma's current facility, wastewater is treated in giant tanks and ponds and ultimately discharged to a convenient river, bay or the ocean. But in the city's new plant under construction, wastewater will meander through a series of settling marshes where bacteria removes nutrients, heavy metals and pathogens.

In addition to cleaning up sewage, the wetlands provide a rich habitat for a variety of waterfowl, shorebirds, raptors, fish, mammals, reptiles and amphibians. At the same time, the marshes provide flood-control benefits by slowing down and dispersing runoff from storms. Hiking and bike trails allow visitors access to 221 acres of marsh, riparian thickets and uplands. The plant will yield about 4 million gallons of reclaimed water each day, during summer months, to keep local golf courses and city parks green.

The site that is now under construction also addresses aesthetics, as well, and is being designed by New York "eco-artist" Patricia Johanson. Begun last autumn and scheduled for completion in 2009, the facility expands on a concept from the Humboldt County City of Arcata, which constructed a marshland sewage treatment facility in the mid-1980's. This Petaluma facility is about three times the size and confirms that this technology can also be used for larger cities whenever an appropriate site can be found.

Margaret Orr, engineering manager for the Petaluma Water Resources Department, said the idea of using wetlands for wastewater treatment "is still considered a little radical by engineers. Typically, they'd be inclined to build more tanks, but the technology is proven and we've had tremendous support from the community. The town is really behind it". The townspeople presented petitions with 3,600 signatures to the city council and the council voted to support the concept.

Most wastewater in the new plant will be treated passively by natural agents and will flow through the system by gravity. When wastewater reaches the main plant, replacing a facility built in 1938, it will be screened to remove large particulate and grit. The water will then languish in oxidation ditches where it will be infused with air to hasten the neutralization of pathogens and contaminants. Solids will be dried, compressed and used as fertilizer on local agricultural land.

During the summer, 65 % of the water will be

filtered and sterilized with ultra-violet light and reclaimed for golf course and park irrigation. The rest of the wastewater is transferred to settling ponds, already in place, with the water slowly trickling through the ponds as algae remove heavy metals and bacteria digest nitrate and nitrite compounds, releasing nitrogen as a gas.

The decontamination process will continue as the water is pumped from the last pond to the top of the marshlands. By the time it flows out the bottom of the marsh, the water will be virtually pure, free of pathogens and any significant chemical contamination.

It's elegant and simple, yet this treatment system isn't suitable for every municipality because it requires a lot of the right kind of land. For environmental advocates, however, the plant is a beacon pointing toward a greener, cleaner future. It appears to have everything — wastewater treatment, habitat restoration, flood control, reclaimed water and recreation.

We applaud California's *Integrated Regional Water Planning* for the future. Perhaps some of these positives steps can also provide benefit to us in Door County.

NO to Big Boxes!

With the advent of new proposals to construct large retail facilities within the city of Sturgeon Bay, possibly extending further into the county, it is imperative to have in place a process to evaluate these projects. To properly assess these proposals, it is necessary to have a requirement (by ordinance) for environmental and sociological impact studies to determine the actual impact this planned operation will have on existing community functions, businesses, and ecological integrity— now and into the future.

Some would view these requirements as being restrictive and contrary to growth, but it is essential that proper investigation is made **prior** to allowing large projects without any real impact study. Finding out after-the-fact would be a big mistake. Proceeding without complete study with the resultant information on a project's impact is bad planning and not a wise use of taxpayer money.

In an area where existing businesses are quite often changing ownership and operating on a limited retail volume, it should be a mandate of city and county governments to create stability for those already invested in business. Small businesses are crucial to our economic stability and are an important asset to the historic character of both Sturgeon Bay and Door County. Once gone, they are lost forever.

We urge that both the city and county adopt ordinances creating a requirement for careful screening of proposals for new construction in excess of **50,000 square-feet**. This should be done through a requirement for independent environmental, economic, and sociological impact studies. New industrial operations, or proposed expansions of present facilities, should also fall under this requirement. Impact studies should be conducted to ensure that all endeavors: manufacturing, recreational, retail and lodging are treated

What You Can Do for Our Earth



This is the 4th in a continuing series of conservation articles, about how we can all do our part to make a difference in our world. This contribution is from DCEC president Eileen Andera.

Spring is almost here, so let's go outside! Even in your own backyard there are things you can do to eliminate chemicals, reduce runoff and save energy.

Lawn Care: Instead of applying commercial chemical fertilizers to your lawn, try organic fertilizers like seaweed, bone meal, manure or minerals. A great resource for organic fertilizers is www.basic-info-4-organic-fertilizers.com. This site also offers advice on

natural products for pest control like garlic for aphids, mothballs, and even pencil shavings for other pests. Various green gardening tips can also be found there.

Fruits & Vegetables: If you don't already grow your own—try it!—enjoy the full, exquisite flavor of homegrown produce. If you're a beginner, much is available at the library can get you started—even if you only have a small balcony outside a second-story apartment. Also, whenever possible, buy locally grown produce, preferably organic. Not only do you support your neighbors, you also reduce pollution from cross-county transportation.

Composting: Save your coffee grounds, vegetable peelings and other table scraps and start a compost pile for the best fertilizer your garden could ever want.

Rain Barrel: Don't waste the water that runs off your house. Use a rain barrel to collect that water and use it around the yard.

Rain Garden: If possible, install a rain garden, downhill from your downspouts, and you will seldom have to water with a hose.

Clothesline: If you don't have one, string one up. Nothing beats the smell of line-dried clothes and it saves lots of energy by not using your dryer.

Car Washing: Don't wash your car on a paved surface—the water runs off and is wasted. Instead, wash your car on your lawn or over a gravel driveway, to returning water to the aquifer.

Less chemicals, less run off, less energy. Little things we can all do to help save our environment.

Do You Love Door County???

Then help us protect it... please.

I support the Door County Environmental Council, working to preserve our heritage of natural resources.
Please enlist me as one of the following: (check enclosed)

<i>Individual Member</i>	\$25	<i>Sustaining Member</i>	\$50-\$99
<i>Family Membership</i>	\$35	<i>Donor</i>	from \$100
		<i>Student/limited Income</i>	\$15

Renewal? _____ New Member? _____ Door County Voter? yes _____ no _____

Name _____

Summer Mailing Address _____

Winter Mailing Address _____

E-mail Address and or Fax number _____

Please name your Door County Municipality (town, village or city) _____

All donations are tax deductible to the extent to the law provides.
DCEC is a nonprofit, tax-exempt organization.
We supply receipts that meet IRS requirements for your gift of \$250 or more.
Thank you for being part of DCEC!

mail to: Door County Environmental Council, Inc. P.O. Box 114, Fish Creek, WI 54212
for more information, call DCEC at 743-6003 email dcec@itol.com

Please contact DCEC if you are interested in volunteering for the Board or special projects.

Visit DCEC on the Internet!
www.dcec.us or
doorcountycompass.com/dcec/

Read the DCEC Column in the *Door Peninsula Voice* (free at many locations.)

Governor James Doyle Room 115E State Capitol Madison WI 53702	Representative Gary Bies PO Box 8952 Madison WI 53708	US Senate Washington DC 20510
Senator Alan Lasee PO Box 7882 Madison WI 53707	WI Senators Russ Feinbold & Herbert Kohl, write them at:	WI Representative Mark Green US House of Representatives Washington DC 20515

DCEC People

PRESIDENT

Eileen Andera
Sturgeon Bay

TREASURER

Bernice Shumway
Sister Bay

1st VICE-PRESIDENT

Jon (Fritz) Renner
Gibraltar

SECRETARIES

Carol Farwell
Ephriam

2nd VICE-PRESIDENT

Phyllis Ingwersen
Sister Bay

Sarah Stuart
Juddville

DIRECTORS

Pat Harris
Fish Creek

James Ingwersen
Sister Bay

Carol Sills
Liberty Grove

Libby Zimmerman
Madison

HONORARY DIRECTORS

Margaret Cowles
Tony Haswell
Flora Langlois
John Wilson
Karen Wilson

STAFF

Executive Director
Jerry Viste
Sturgeon Bay

Membership Coordinator
Ray Kostiuk
Fish Creek

Outreach Coordinator
Ralph Valatka*
Sturgeon Bay

* Newsletter Editor

Net Energy Analysis Things Need to Add Up

Net Energy Analysis is exciting because it demonstrates that we can produce *more energy* with *less pollution*, to the benefit of both the environment and the economy.

“Net Energy Analysis” is the way to figure the *lifetime* power production of various energy sources, compared to the *lifetime* energy to build, run, fuel and dispose of them. **And the winner is ... renewable energy!** This is great news for citizens concerned about the long-term damage done to health, the environment and the economy, from fossil and nuclear fuels.

It's very simple, really. *Net Energy Analysis* adds up all the energy it takes to build a generation system, mine and transport the fuel, operate the plant during its useful life and dispose of the plant and its waste when it's retired. That number is then compared to the useful power generated by the plant over its lifetime to determine its net energy output.

For a power plant burning fuel (coal or natural gas), the *best possible* return is the actual combustion efficiency (approximately 35% for coal, and up to 40% for natural gas) but that percentage is further reduced by energy required to build the plant, transport the fuel and dispose of waste.

For wind and solar electric, the energy input comes free from nature, so the energy cost is only what it takes to build and install the system and to dispose of it when its life is over. For wind turbines, maintenance additionally requires a very small amount of energy. For solar, there is hardly any additional energy required. The power output from wind and solar continues over the life of the plant, and greatly exceeds energy that went into building and operating it.

Today a state-of-the-art wind system produces approximately 30 times more energy than it takes to build, operate and dispose of it. Current technology for solar systems has them

producing about eight times more than their energy cost. *Both are enormous energy gains!*

Looking to the future, we can expect wind and solar to have *increased* net energy output as their technologies continue to improve—perhaps achieving 50 to 80 times their energy cost. Coal and gas energy returns will continue to drop, as they become even more difficult to extract requiring even more energy for extraction and transportation.

The considerations above are all about energy used versus power output. But there are dollar consequences as well. A shocking fact is that Wisconsin spends *billions* of dollars purchasing energy outside the state. In 2003, there was an \$8 billion dollar deficit, according to the Wisconsin Department of Administration.

For 2005, the deficit was projected to be \$15 billion. These are dollars that could stay in Wisconsin for its own economy. Coal is the predominant fuel for producing electricity in Wisconsin. It is dependent on increasingly scarce oil for transport—about 60% of its cost is for transportation. (Coal transportation costs are included in the above numbers.)

Add the cost of cleaning up pollution and health care expense. The balance sheet for renewable energy keeps looking better and better.

By Karen Wilson, member of DCEC's Renewable Energy Task Force (RETF). Information also provided by Mark Daugherty of Wisconsin Focus on Energy, based on statistics compiled by Focus on Energy and the State of Wisconsin.

For more information about, or to participate in RETF, contact Don Pardonner at donpardonner@dcwis.com or PO Box 260, Sister Bay, WI 54234.

Shoreline—from page 4

battle to bring down the nutrient load present in our waters. Green Bay has been documented as exceeding the recommended phosphorus load by 4 to 5 times in the southern areas of the Bay. Direct natural currents bring that excess load to our entire Door County shoreline. Responsibility to restore our Bay and Lake to proper levels rests with people having control over the input—whether property owner or those responsible for regulating industries and farm operations.

Now, nearly a half-year later, there is still no update on the existing rules to make them more effective. Governor Doyle, Representative Bies and Senator Lasee can help reverse his water quality problem before it gets more severe. They must endeavor to enact new and better regulations that lessen, not increase, the discharge permit allocations for industry on the Fox River and they must be encouraged to put their full support behind the proposed changes to NR115.

Please write to them today, expressing your support of strengthening NR 115.°

Big Box—from page 4

equally eliminating possible claims or challenges of discrimination.

If there is no anticipated negative impact by these studies, there should be no need to fear doing them. Their cost is not prohibitive when compared with long-term negative impacts. It's only when *problems are anticipated* by permit-seekers, that a reluctance exists to do proper assessments.

With further consideration over impact, we also urge city and county-wide adoption of a **80,000 square-foot** maximum limitation on any construction planned throughout the county. Take the time to do some basic length/width calculations, you will realize that any 80,000 square-foot construction is an extremely large project. Any proposal larger than this limitation is entirely out of character for Door County and the city of Sturgeon Bay, having a serious impact on our future perception as a tourism destination. Let's save what remains of the historical small-town and village personality of our County.



door county
environmental council, inc.
p.o. box 114
fish creek, wi 54212

Non-Profit Org.
U.S. Postage
PAID
Fish Creek WI 54212
Permit No. 15

DCEC Proposes Pumping Treated Sewage to Wetlands!



Leave A Legacy to DCEC!

Many individuals and families are making plans to support volunteer organizations such as DCEC when they legalize their estate and asset transfers at this time of year.

We have on-going programs such as our ***Annual Essay Contest*** that could be underwritten by a legacy, or supportive grant, to ensure your funding would receive wide recognition in our community.

The DCEC Endowment Fund, established in 1985, is a growing secure account to ensure the long-range functions of your organization.

Either of these funding opportunities would be a perfect show of support for the environmental protection of our county now and far into the future.

The fight for Door County's Environment **starts today, every day!**

...and, after you read this newsletter, please pass it along to a friend.