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Got Drugs?

Nebraska MEDS Coalition Takes Action to Protect the Environment and Public Health

By Dan King and Ally Lamb, Lincoln-Lancaster County Health Department, Lincoln, Nebraska

Got Drugs?" is the slogan of the Drug Enforcement Administration's (DEA) national campaign to collect unwanted and expired medications from the general public. According to the DEA, "Americans that participated in the DEA's third National Prescription Drug Take-Back Day on October 29, 2011, turned in more than 377,086 pounds (188.5 tons) of unwanted or expired medications for safe and proper disposal at the 5,327 take-back sites that were available in all 50 states and U.S. territories. When the results of the three prior Take-Back Days are combined, the

DEA, and its state, local, and tribal law enforcement and community partners have removed 995,185 pounds of medication from circulation in the past two years." A National Drug Take-Back Day was recently held on Saturday, April 28, 2012.

Medication Take-Back days present a wonderful opportunity for families, grandparents and other concerned citizens to clean out those medicine cabinets. While not the most ideal or cost-effective method to manage potentially dangerous, illicit or hazardous drugs, these one-day, five-hour events remain the only true gold standard in medication waste

management. The reason for this is that medical waste incineration is utilized for the ultimate destruction of the drugs. This preferred method of disposal is protective of both public health and the environment.

Perhaps the more challenging question is who pays for the disposal of excess and unwanted medications? Who carries the financial burden of disposal? The answer currently rests with the DEA, local agencies, nonprofit organizations and pharmacies.

Beyond the issue of drug abuse, unwanted, expired and excess medications pose a myriad

Drugs, continued on page 8 ►

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Mission of The Groundwater Foundation:

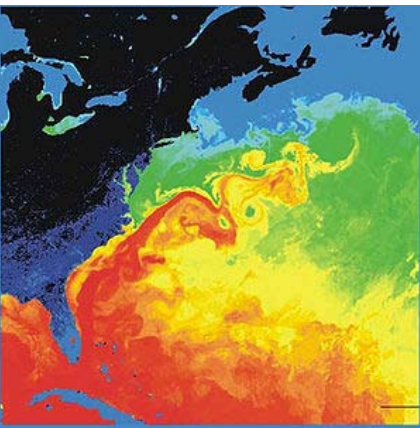
To educate people and inspire action to ensure sustainable, clean groundwater for future generations.

Groundwater Shorts

USGS Using Million-Year-Old Records to Predict Climate Change

How do we understand what's happening today by looking back millions of years? Scientists are looking at what climate conditions were like 3.3 to 3 million years ago, during a geologic period known as the Pliocene, and they are confident in the accuracy of their data.

The Pliocene is the most recent period of sustained global warmth similar to what is projected for the 21st century. Climate during



this time period offers one of the closest analogs to estimate future climate conditions.

"The litmus test of whether a climate model has any predictive power to tell us what future conditions might be on planet Earth in response to both natural and human climate drivers is the ability of that model to accurately predict past climate conditions as preserved in the geologic record," explained U.S. Geological Survey director Marcia McNutt. "Finally we have a paleoclimate dataset against which to test models with accuracy comparable to the accuracy that we need in the models for future planning and decision making."

"Our climate reconstruction will help to determine what happened to cause warm

Pliocene conditions," said USGS scientist Harry Dowsett. "Having confidence in our data is important to evaluate the accuracy of climate models, which are useful tools to understand possible drivers of temperature variability."

The USGS is leading research to reconstruct Pliocene ocean temperatures primarily using fossils contained in sediments from that time period.

Scientists from around the world are using the Pliocene reconstructions to compare climate model simulations from fourteen general circulation models. This is an international effort with models developed by the United States, Japan, France, United Kingdom, China, Germany and Norway.

In a study published in the journal *Nature Climate Change*, an initial comparison was made between four existing models. Conclusions showed that the models are close in agreement with each other and USGS data, except in the North Atlantic where modeled temperatures differ slightly from the Pliocene data and from each other.

Processes that influence North Atlantic Ocean temperatures include ocean circulation, the shape and characteristics of the seafloor, and concentrations of atmospheric CO₂ and other trace gases. The Earth's orbit is another factor to consider because it affects the amount of sunlight and, therefore, heat that reaches the Earth's surface.

This model comparison is organized through the Pliocene Model Intercomparison Project (PlioMIP), with preliminary results from the full 14 model comparison scheduled for later this year.

Research on the mid-Pliocene will be included in the next Intergovernmental Panel on Climate Change (IPCC) report. ♦

EPA Study Will Evaluate Hydraulic Fracturing and Drinking Water

Natural gas plays a key role in our nation's clean energy future and the process known as hydraulic fracturing, or "fracking," is one way of accessing this vital resource. Responsible development of America's shale gas resources offers important economic, energy security, and environmental benefits. However, serious concerns have been raised about the potential impact of fracking on drinking water, human health and the environment. These concerns demand further study. In its FY2010 Appropriations Committee Conference Report, Congress directed EPA to study the relationship between fracking and drinking water, using the best available science, independent sources of information, and to conduct the study in consultation with others using a transparent, peer-reviewed process.

Additionally, natural gas from hard-to-extract sources, called "unconventional" sources (such as shale), is expected to account for a growing fraction of natural gas supplies. Water is used throughout the extraction process and anecdotal evidence indicates potential adverse impacts on drinking water resources. This study is intended both to provide data where there is a lack of adequate information and to contribute to resolving scientific uncertainties.

Since EPA first announced its intent to study the potential effects of fracking on drinking water in March 2010, the agency held a series of public meetings across the nation to receive input from states, industry, environmental and public health groups, and individual citizens. The study's design has been reviewed and

supported by the Science Advisory Board, an independent panel of scientists.

The initial research results and study findings will be released to the public in 2012. The final report will be delivered in 2014. To ensure that the study is complete and results are available to the public in a timely manner, EPA initiated some activities during the summer of 2011 that provide a foundation for the full study.

The final study plan looks at the full cycle of water in hydraulic fracturing, from the acquisition of the water, through the mixing of chemicals and actual fracturing, to the postfracturing stage, including the management of flowback and produced or used water as well as its ultimate treatment and disposal. EPA has selected locations for five retrospective case studies, where EPA will investigate reported drinking water contamination due to hydraulic fracturing operations at existing sites, and two prospective case studies, where EPA will monitor key aspects of the hydraulic fracturing process at future hydraulic fracturing sites.

In addition, the agency is working with states and other key stakeholders to help ensure that natural gas extraction does not come at the expense of public health and the environment. The agency's focus and obligations under the law are to provide oversight, guidance and, where appropriate, rulemaking that achieve the best possible protections for the air, water and land where Americans live, work and play. The agency is investing in improving its scientific understanding of hydraulic fracturing, providing regulatory clarity with respect to existing laws, and deploying existing authorities to enhance health and environmental safeguards.

For more information, visit www.epa.gov/hydraulicfracturing. ♦



Intelligence in Conservation

Rain Bird's Outreach Programs Continue to Target Water Conservation

By Dave Johnson, Director of Corporate Marketing, Rain Bird Corporation

Rain Bird Corporation is a proud partner of The Groundwater Foundation. Like the Foundation and its members, Rain Bird spends a considerable amount of time and effort thinking about the challenge of preserving our water supply. While working to increase the recognition of the Groundwater Guardian Green Site program is important to Rain Bird, it is just one of the many things the company does to help promote overall water conservation.

Winners of Rain Bird's Intelligent Use of Water® Awards for 2012 were recently announced on March 22nd, World Water Day. This year, ten different winners received grants ranging from \$1,500 to \$10,000 to fund water conservation projects from Lincoln, Nebraska to Cameroon. For a complete list of projects that are to receive funding, go to www.iuowawards.com. Rain Bird intends to run this important grant program again in 2013 and will begin the call for entries later this year. There are sure to be many great ideas from The Groundwater Foundation community on projects that could use some funding.

Right on the heels of the IUOW Awards, Rain Bird has just kicked off the 2012 version of our popular Intelligent Use of Water Film Competition. Yet another chance to win money in exchange for great water conservation ideas, the Film Competition challenges amateur and experienced filmmakers to produce short

(1-10 minute) films about water conservation. The possibilities for film ideas are endless, and the top prize winner gets \$10,000! If interested, go to www.iuowfilm.com for more information.

Did you know that April was Earth Month? What a perfect time to remind people about the importance of water and what they can do to conserve this precious resource. To help spread the word, Rain Bird has partnered with the popular artist Wyland (www.wyland.com) in his Mayor's Challenge for Water Conservation. The Challenge seeks to conserve water by encouraging Mayors to enroll their city in a water-savings contest. Each Mayor that enters then encourages every citizen to make a pledge to save water at www.mywaterpledge.com. The cities that get the most people to sign up win. When a city is declared a winner, individuals in that community become eligible for prizes. The grand prize is a Toyota Prius. Other prizes include Rain Bird irrigation systems and other water-saving devices. The My Water Pledge website provides simple, yet effective, ways for people to save water. From taking shorter showers, to changing our watering habits, or even driving a different car, everyone can save more water and energy. It also encourages a cleaner lifestyle, which is bound to have a direct impact on the quality of our groundwater supply.

As if all that activity isn't enough, immediately following

Earth Month is National Public Gardens Day. This relatively new tradition falls on the Friday before Mother's Day, this year May 11, and recognizes the importance of public gardens and their role in promoting the beauty and benefits of green spaces, while being models of water efficiency. Rain Bird's partnership with the American Public Gardens Association makes this day possible. It reminds people to get outside and enjoy their public garden space and learn more about water conservation. This year's celebration is packed with opportunities for fun and learning. Prior to the day itself, "The Gardener Guy" Paul James, will be hosting a series of chats on Facebook to answer everyone's questions about good gardening practices and water conservation. Paul also filmed a number of public service announcements to educate people about simple things they can do everyday to save water. On May 11, most people will be able to enjoy a FREE day at their favorite garden! Many public gardens are offering free admission to celebrate National Public Gardens Day. You can go to www.bhg.com to see the gardens in your area that are offering free admission, and you can download admission vouchers too. Beginning in May you will also be able to get an absolutely FREE subscription to *Better Homes and Gardens* magazine from Rain Bird, as our thank-you for helping to celebrate National Public Gardens Day. Specially-marked

packages of Rain Bird products will be featured in stores that include the subscription offer. So, you can buy a new money-saving irrigation controller and get *Better Homes and Gardens* every month to boot! Alternatively, you can ask your irrigation contractor about the offer or order something from Rain Bird's online store during the promotion period.

Remember, The Intelligent Use of Water® is serious philosophy of water conservation. But Rain Bird strives to make saving water easy, fun and even profitable. Find out what else the company is doing and learn more about The Intelligent Use of Water® at www.rainbird.com.

Based in Azusa, Calif., Rain Bird Corporation is the leading manufacturer and provider of irrigation products and services. Since its beginnings in 1933, Rain Bird has offered the industry's broadest range of irrigation products for farms, golf courses, sports arenas, commercial developments and homes in more than 130 countries around the world. Rain Bird has been awarded more than 130 patents, including the first in 1935 for the impact sprinkler. Rain Bird and The Intelligent Use of Water™ is about using water wisely. Its commitment extends beyond products to education, training and services for the industry and the community. Rain Bird maintains state-of-the-art manufacturing assembly facilities in the United States, France, Sweden and Mexico.💧

Mark Your Calendars for May 17!

**Give to Lincoln Day Offers Donors a Chance
to Make Their Gift Go Further**



On May 17, 2012, the Lincoln (Nebraska) Community Foundation is

sponsoring a unique giving opportunity in Give to Lincoln Day. On this day, the Lincoln community and beyond will come together for 24 hours of giving from 12:00am to 11:59pm.

Your donation to The Groundwater Foundation on May 17 through its Giving Day website (<http://givetolincoln.razoo.com/story/The-Groundwater-Foundation>) will be matched with a proportional share of a \$200,000 challenge match pool of funds, provided by the Lincoln Community Foundation

and their generous partner sponsors. In addition, the top three organizations that have the greatest number of donors making gifts on May 17 will receive bonus grants of \$2,500, \$1,500 and \$1,000 respectively.

Please mark May 17 on your calendars and plan to donate \$10 or more through the website listed above to enable the Foundation to help fulfill its mission of educating people and inspiring action to ensure sustainable, clean groundwater for future generations here in our home community of Lincoln, Nebraska. Your dollars will go farther thanks to this giving opportunity!



The Lincoln Community Foundation was founded in 1955 with the goal to secure gifts to perpetually enrich and improve the community of Lincoln and the lives of all its citizens. The Foundation does not represent any one institution, and works with donors large and small, who all share a fondness for the Lincoln community and want it

to be successful forever. The Foundation is governed by a Board of Directors drawn from community volunteers and manages nearly \$60 million and works with individuals, families, non-profits and businesses to support a multitude of charitable organizations.

Partner Sponsors for Give to Lincoln Day include the Cooper Foundation, Mapes Industries, T.O. Haas Tire & Auto, Union Bank & Trust Company, West Gate Bank, Woods Charitable Fund, Lincoln Community Foundation Funds, Bea and Glenn Bonacker Fund, Darrin and Lisa Jameson Fund, Lee and Mary Ann Liggett Fund, Joe and Ruth Seacrest Foundation Fund, Mark H. Tallman Fund, W.K. Kellogg Foundation/Cynthia Milligan, Mary S. Wobig Fund, Donna W. Woods Fund, and the Michael and Nancy Young Fund.

Donations will also be accepted at the Lincoln Community Foundation office at 215 Centennial Mall South from 8:00 a.m. to 5:00 p.m. on May 17.

If you have any questions about donating to The Groundwater Foundation on Give to Lincoln Day, please contact Jennifer Wemhoff at jwemhoff@groundwater.org or 402-434-2740 ext. 107.

This issue of *The Aquifer* is proudly sponsored by:

Who We Are
A 501(c) 3 non profit organization, WasteCap Nebraska advances sustainable business practices through facilitation, training, technical assistance and community outreach.

Our Services

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- Green Team Roundtables
- Sustainability Planning
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Our Mission
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It Is All Source Water

By David LaFrance, American Water Works Association

Where does your water come from? And I don't mean "from the faucet." There was a time when the answer could be simplified to "from surface water" (e.g., rivers, lakes, reservoirs) or "from groundwater" (e.g., wells, aquifers). That time has passed, and the answer is no longer limited to one or two types of sources.

Among other things, the complexity of the answers to this otherwise simple question is tied to trends in population growth, changes in commercial needs, and evolving environmental requirements. As a result, water management professionals have had to increase the variety of source-of-supply options so that now, if it has H₂O in it, it could be where your water comes from.

Think back to the basics of surface water and groundwater

supplies for a moment. Now think about how today these sources are blended through aquifer recharge programs. Clearly this is an important, accepted, and understood strategy for many communities. Because it relates to source water, the ability to capture surface water and inject it into a well for use later is a relatively new form of where our water comes from. Now think about recycled water. This is an important source that is gaining public acceptance—one purple pipe at a time—as an important part of a community's water supply portfolio. Of course, recycled water is not really new—unplanned indirect nonpotable water has always been the source of supply for anyone who lives downstream from another community. As more and more utilities formally include recycled water as a source-of-supply

strategy—in both potable and nonpotable forms—they move closer to the real source at the wastewater treatment plant. Thus, not only are the various forms of recycled water a relatively new part of the source water portfolio, but the wastewater treatment plant itself is becoming a more integral part of the modern-day water source.

For some, the water source even moves "upstream" of the wastewater treatment plant to the wastewater collection system. In more recent times, scalping plants have emerged to allow a community to skim wastewater from the collection system before it reaches the wastewater treatment plant. The skimmed wastewater can then be treated at a decentralized treatment facility, allowing it to be used locally instead of transporting it to the wastewater treatment plant and then pumping it back to the point of use. Here again, we see an example in which even wastewater in the collection system is a form of source water.

Then there's stormwater. There was a day when stormwater was known simply as rain and runoff. It is, of course, much more complicated than that—and it can also be much more valuable. For many communities, stormwater events present a challenge for their combined stormwater and wastewater collection systems. But for other communities, stormwater is managed as a source of aquifer replenishment or for other water supply purposes. It, too, is being viewed as a component of the portfolio of water sources.

It may be obvious to many—but perhaps not to all—that water conservation, also referred to as demand-side management, is an additional source of water. Developing

community-wide water use awareness and behaviors by educating customers about how to use the correct amount of water and how not to be wasteful allows water providers to use existing sources to serve more customers or build reserve capacity. So, although it's not an increase in the physical supply itself, it is a more efficient use of the existing supplies. And it is where water comes from.

Then there is the ocean (and other brackish water). Even though there is an abundance of saltwater—and many have overcome the technological complications surrounding its use—it does present complicated and expensive challenges. Still, as the need for water grows, dependency on this source will grow as well.

At the other end of the volume spectrum from the ocean is the water in the residence or place of business. Graywater systems, despite some concerns regarding water quality, are gaining traction. In a way, this water is simply another means of scalping water; in this case, before it reaches the wastewater system.

I am certain that there is a water resources professional out there finding more ways to get water from a rock or that there are aerospace professionals who say they are searching for planets with intelligent life—but in reality we know they are searching for a planet with water.

So, now how would you answer the question of where your water comes from? Although the list of possible answers is growing, the basic response can be simplified to one reply—all water is source water. ♦

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Water: What We Worry About Most

By Kelly A. Reynolds, MSPH, Ph.D.

Know what Americans worry about most? Illness? Natural disasters? Terrorism? Not exactly. In fact, the catastrophic event that Americans worry about the most is economic collapse (63 percent recently reported economic collapse as their greatest fear).¹ In numerous polls, some aspect of money loss tops the list of what Americans fear the most. When asked specifically about environmental issues of concern, water quality tops the worry list. The availability of affordable POU drinking water purification technologies, however, provides control for consumers to act on their fears of contaminated source and tap water supplies.

Why the worry?

Worry is defined as feeling or experiencing concern or anxiety; mental distress or agitation resulting from concern, usually for something impending or anticipated.² According to a November/December 2009 article in *Scientific American Mind*, psychologists believe that the act of worrying evolved as a “constructive problem-solving behavior”.³ This makes sense if worriers turn their concerns into actions that lead to an elimination of the offense. Building on the concept that concern leads to action, scientists further believe that chronic worrying ultimately satisfies a craving for control.

For some, having negative thoughts about potential events in the future are debilitating and result in excessive worrying, followed by adverse physical and mental health outcomes, such as stress, depression, insomnia, heart disease and a host of other related problems. Instead of inciting control, chronic worrying “hinders cognitive processing and also causes overstimulation of emotion, and fear-processing areas in the brain.” Left

uncontrolled, such fears can lead to pathological conditions of depression. Considering only non-pathological worrying, one study found that 38 percent of college students and working adults reportedly worry at least once a day.⁴ The majority of respondents indicated that the duration of their worrying lasted less than 10 minutes. This frequency and

level of worrying is considered normal. The good news is that between 48 and 83 percent of this worrying appears to lead to a problem-solving process, or a solution to remedy the concern. Therefore, scientists believe that normal worrying evolved as a way to help us to identify problems that naturally lead to beneficial, problem-solving behavior.

Intuitively, playing on people’s fears has emerged as an effective marketing tool, leading people to buy products that address innate concerns.

Water Worries

According to a recent Gallup Poll, Americans rank water quality issues highest among a list of nine environmental issues.⁵

Figure 1. Degree Americans worry about environmental problems⁵

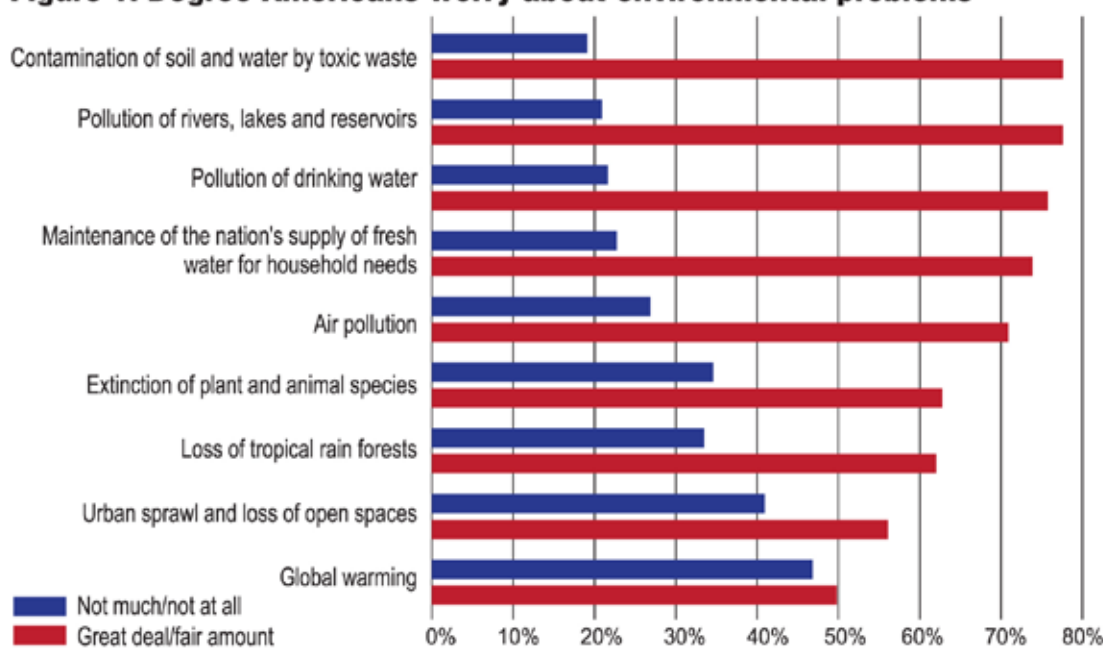
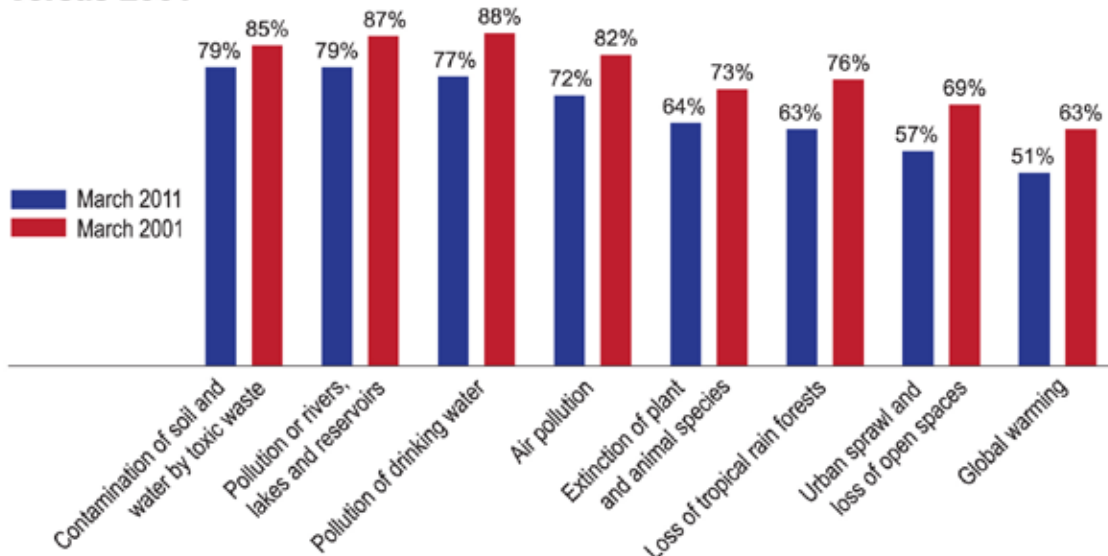


Figure 2. Degree Americans worry about environmental problems, 2011 versus 2001⁵



Nearly 80 percent of Americans report having a 'great deal' or 'fair amount' of worry regarding toxic waste contamination of water; pollution of rivers, lakes and reservoirs and pollution of drinking water. In addition, according to the poll, 75 percent of the nation is fairly or greatly worried about maintenance of the fresh water supply for household needs. Air pollution concerns rank the next highest, followed by plant and animal extinction, loss of tropical rain forests and loss of open spaces due to urban sprawl. Surprisingly, given all the media coverage, global warming came in last on the list of environmental concerns among Americans (see Figure 1).

A Steady Trend

The degree of concern over any issue can fluctuate with time and current events or media focus. The data in the March 2011 Gallup Poll on environmental concerns was collected early in the month, prior to the

tsunami and earthquake that led to the nuclear crisis in Japan. A repeated poll would likely measure American concerns rising over environmental (and water) contamination from nuclear power plants.⁵

Although comparison of attitudes a decade ago with today shows a net decrease in worrying on all environmental problems polled (see Figure 2), a similar poll conducted a year ago showed that concern over water quality issues remains unchanged, with more than three-quarters of the population worried about water. In general, the degree to which Americans worry about water fluctuates little with the category of 'worried a great deal', scoring above 53 percent over the last 20 years (see Figure 3).⁶

Eliminating the Worry

Americans are expected to continue worrying about water quality concerns, given the many recognized contaminants, monitoring and risk assessment

studies reported. As psychological worry is expected to promote physical action, it is plausible that the POU drinking water treatment market will continue to be strong into the future.

Our industry mustn't lose sight, however, of the many economic concerns among consumers. It is imperative that cost-effective water treatment options are available so that buyers have the ability to alleviate their water quality worries via the action of a POU treatment device purchase.

Just for Fun

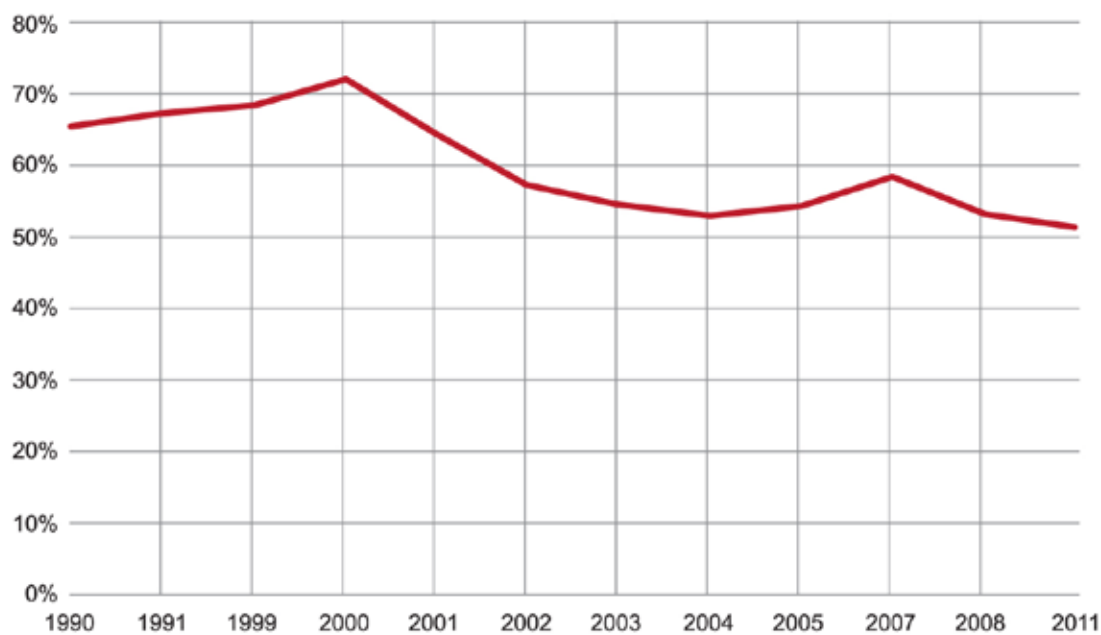
Want to see how much of a worrier you are? In 1990, Dr. Thomas Borkovec and his colleagues developed the Penn State Worry Questionnaire.⁷ You can access this questionnaire online for a self-assessment at: www.serene.me.uk/tests/pswq.pdf. (I won't tell you my score but it is apparent that I need to worry less!)💧

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Figure 3. Americans 'greatly' worried about pollution of drinking water, 1990-2011^{5, 6}



of troubling environmental and societal challenges.

Constructing a Solution—Formation of the Nebraska MEDS Coalition and the Local Pharmacy Medication Disposal Pilot Project

In response to the issue of emerging contaminants that include waste pharmaceuticals and personal care products, The Groundwater Foundation organized a workshop for concerned stakeholders in the spring of 2007. Attendees included representatives from government agencies, statewide nonprofit organizations and the private sector.

Consequently, a follow up meeting was organized to determine the next steps to confront the challenge of unwanted and expired medications in Nebraska. This marked the first gathering of the Nebraska MEDS (Medication Education for Disposal Strategies) Coalition, which included representation from the following organizations: Nebraska Pharmacists Association, Nebraska Regional Poison Center, Nebraska Department of Environmental Quality, Lincoln-Lancaster County Health Department and representative from the Nebraska Board of Pharmacy. The initial charge for the coalition was to educate consumers of the need to change behavior, from the historic practice of flushing unwanted medications to that of mixing medications with an undesirable substance prior to trashing them in the normal garbage and eventual landfill. This management practice was seen as the best choice in addressing the concerns of home-based medication poisoning and illegal drug diversion, but it failed to address the issue of potential surface and groundwater

contamination from landfill leachate.

The Maine Department of Environmental Protection (DEP) performed tests on landfill leachate in 2009/10 and was able to determine that, in fact, trace pharmaceuticals were present in the samples.

“These test results back up what we believed to be true and that is that leftover prescription drugs that people throw away really don’t ever go away,” says Mark Hyland, director of the Bureau of Remediation and Waste Management with the Maine DEP. “This is one reason we want pharmaceutical companies to do their part in taking back medication that people are no longer using and dispose of it properly.”

After the conclusion of a year-long education campaign led by the Nebraska Pharmacists Association with the support of Nebraska MEDS, the collective attention of the coalition was turned toward what is now seen as the “gold standard” in managing unwanted and expired medications, notably, medication take-back programs where pharmaceuticals are collected and sent to a medical waste incinerator that reduces possible pollution and, in some cases, turns pharmaceutical waste into usable energy. This coordinated approach gets the products out of our households, off our streets and out of our waterways and drinking-water sources.

The Nebraska MEDS group considered many approaches to these local take-back initiatives and ultimately decided to construct a project that allows Lincoln-Lancaster County residents to return unwanted, unused and expired noncontrolled medications to participating pharmacies. Under this model, which is based on Iowa’s TakeAway Environmental Return System for waste medications, each pharmacy will have a tamper-

resistant box behind their counter. When confronted with a customer who has waste medication, a pharmacist or qualified technician will check to ensure the product being returned is a noncontrolled substance and then will place the drug in the box. No pill counting or paperwork is necessary, and the return is anonymous.

The next step for the Nebraska MEDS Coalition was to seek out funding for the project, and thus the Local Pharmacy Medication Disposal—A Prescription for Public Health project was fully conceptualized and a grant application was submitted to The Nebraska Environmental Trust. The Nebraska MEDS Coalition was subsequently awarded a two-year grant to support the pilot project with the intent that any lessons learned could contribute to an expanded statewide effort.

One of the first steps in establishing the project in pharmacies was to discuss the ideas with actual pharmacists. In December 2011, leading pharmacists and managers from the region gathered for a Pharmacy Forum to give feedback on the overall project and to give suggestions as to how the project should be best implemented. One of the concerns of pharmacists was that the project will require a change in behavior not only from the public but from pharmacists, too. For years pharmacists have been trained to tell customers to not bring medicine back to the pharmacy, but now they will be saying the opposite.

The next step was to meet with a representative from the Drug Enforcement Agency (DEA) and local law enforcement. Current statute states that controlled substances must be destroyed under supervision of a law enforcement officer. In order to adhere to these policies, controlled substances, such as Adderall, Vicodin, Demerol, Hydrocodone, MS Contin and

Ambien, can be taken to a DEA National Take-Back Day collection site. For the Local Pharmacy Medication Disposal project, this means that pharmacies cannot accept controlled substances even though these substances are a large issue in diversion and poisonings, as well as environmental contamination. This meeting helped clarify local and federal regulations concerning returns of controlled substances.

Finally, a medication waste hauler was contracted to assist with the implementation of a turnkey waste medication disposal system in pharmacies, and the project will be promoted in stores and throughout the community beginning in April. Specifically, Nebraska MEDS promoted the project at the Lincoln Earth Day festival on April 22. For the remainder of the year, the project will be modified and adjusted as needed to make it easy for customers to return unwanted noncontrolled medications. The Local Pharmacy Medication Disposal project will be offered to all 80 Lincoln and Lancaster County pharmacies, and each will receive an educational kit that details the best management practices for implementing this pharmaceutical waste disposal system. This will include in-store promotions and staff training to ensure the medication return is a simple process. The pharmacies will also be provided a limited number of one-way disposal devices for noncontrolled substances.

The Local Pharmacy Medication Disposal system as a pilot project will continue to evolve over the next year. Program participants should expect a successful program that will lead to a statewide effort to avoid diversion, poisoning and environmental contamination. ♦

This article was originally published in the April 2012 edition of Prairie Fire newspaper. www.prairiefirenewspaper.com.



Rain Bird Renews Partnership to Protect the Nation's Groundwater Supply

The world's largest irrigation company, Rain Bird, has renewed its partnership with The Groundwater Foundation in support of the Groundwater Guardian Green Site Program. As a partner in the program, Rain Bird will continue to coordinate with the Groundwater Foundation to assist green-space managers in identifying and implementing groundwater-friendly practices.

"Over their nearly 80 year history, Rain Bird has become not only a leader in the irrigation industry, but has also taken a leadership role in promoting the conservation of water and preservation of green spaces, making the irrigation manufacturer a natural partner for the Groundwater Guardian Green Site program," said Jane Griffin, Groundwater Foundation president. "Our continued partnership with Rain Bird on promoting groundwater-friendly practices to turf and green space professionals is an important part of the process and we look forward to another year of fruitful collaboration and continued success in raising awareness of groundwater issues."

"At Rain Bird, we understand that a comprehensive approach is needed to protect the Earth's most precious resource," said Dave Johnson, Rain Bird's director of corporate marketing. "Efficient water use is a critical contribution to the preservation of groundwater and doing so results in more access to the vital resource, not only for our green spaces and homes, but for our food supply

and natural environment. We are proud to partner with a program that brings awareness to the complexities of water conservation and the importance of preserving green spaces by supporting long-term protection and access of groundwater."

See page three of *The Aquifer* for more information about Rain Bird and its Intelligent Use of Water. ♦



New Project to Work with Girl Scouts

The Groundwater Foundation is excited to be working with Girl Scouts Spirit of Nebraska on a collaborative project to improve environmental education through hands-on and experience-based learning opportunities throughout Nebraska.

This project includes the development of new badge books for all levels of Girl Scouts from Daisy to Ambassadors. The new Let's Keep It Clean badges will correlate with the Girl Scouts' It's Your Planet: Love it! Journey and serve as great stand-alone projects as well. In addition to the badge books, the project will provide extension activities, how to webinars and videos, and other resources online for Girl Scouts and their troops.

Don't forget about camp! Water education kits will be provided to all of the Girl Scout camps in Nebraska, all of which are located next to water. These kits will include resources to allow girls attending camp to explore local water resources and

expand their learning through first-hand experiences.

Girl Scout personnel, camp staff, and troop leaders will have opportunities to learn more about the new badges through workshops provided by The Groundwater Foundation. Tips and tools on how to best incorporate hands-on water education activities into their existing Girl Scout programs will be included in these workshops.

The first badge available will be for the Brownie level. Girl Scouts troops in Nebraska will have the opportunity to preview the new badge, Brownies: Let's Keep It Clean in the summer of 2012.

Funding for this project is provided by Nebraska Environmental Trust, Nebraska Department of Environmental Quality, and the Pacific Life Foundation. If you are interested in further updates on the Let's Keep It Clean badge or more information about this project please contact Jamie Kelley at The Groundwater Foundation, 402-434-2740, ext. 105 or jkelly@groundwater.org. ♦

New Technology Abounds at The Groundwater Foundation

It is 2012 and the world of technology continues to grow by leaps and bounds. Smart phones, mobile apps, Facebook, Twitter, and the like are all the rage and, if not already, will soon be the way the world communicates. The Groundwater Foundation realized the need to review all of its technology-based work and determine how newer technology can be used to better suit the needs of our constituents, in other words, you. This

conversation became much like a snowball rolling down hill.

It started with the idea of a mobile app for smart phones. As Groundwater Foundation staff explored the world of mobile apps it became apparent our website would also need to be updated to be more mobile-friendly and expand content. In turn, that conversation led to discussions about moving The Groundwater Foundation from an in-house server to the Cloud. Wow! Where to start?

In true Groundwater Foundation fashion we jumped in with both feet and determined we could and should do it all. After all, why let grass grow under our feet? So in mid-March the Foundation began the migration to the Cloud by moving email to cyberspace. The biggest challenge so far is the change in platforms - goodbye Microsoft Outlook, hello Google Mail. Change can be tough, and unfortunately, there are glitches when technology changes are made. So, if you are emailing anyone at The Groundwater Foundation and not getting a response, please pick up the phone and give us a call. While the telephone, especially a desk model, is quickly becoming an outdated mode of communication, it is one that is working during this transition. This month The Groundwater Foundation will take the leap and move its documents to the Cloud for what will surely be another learning experience.

As for the website and the mobile app, the process is started for making each of those a reality as well. Stay tuned as The Groundwater Foundation moves forward - catching up with the world of technology. If you have any questions or suggestions, please feel free to contact us at info@groundwater.org. ♦



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